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Informing the Implementation and Use of Person-Centred Quality Indicators: A Mixed Methods study on the Readiness, Barriers, and Facilitators to Implementation in Canada

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Title: Informing the Implementation and Use of Person-Centred Quality Indicators: A Mixed Methods study on the Readiness, Barriers, and Facilitators to Implementation in Canada

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Abstract

Importance: Increasingly, healthcare organizations are implementing measures for Person-Centred Care (PCC). However, the factors that influence their uptake and use are not often considered.

Objective: To ensure optimal implementation of Person-Centred Quality Indicators (PC-QIs), we assessed the readiness of healthcare organizations across Canada and explored their perceived barriers and facilitators to implementing and using PC-QIs.

Methods: We conducted a survey with representatives of healthcare organizations that guide the development and/or implementation of PCC measurement in Canada. The survey comprised two sections that: 1. assessed readiness for using PC-QIs, and 2. was based on the Organizational Readiness for Change Assessment tool. We summarized the survey results using descriptive statistics. We then conducted follow-up interviews with organizations representing system and clinical-level perspectives to further explore barriers and facilitators to implementing PC-QIs. The interviews were informed by and analyzed using the Consolidated Framework for Implementation Research.

Results: 33 Canadian regional healthcare organizations, across all 13 provinces/territories, participated in the survey. Only five of 26 PC-QIs were considered highly feasible to implement for 75% of organizations and included: coordination of care, communication, structures to report performance, engaging patients and caregivers, and overall experience. A representative
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A sample of 10 system-level organizations and 11 primary care organizations/clinics participated in interviews. Key barriers identified were: resources and staff capacity for quality improvement, a shift in focus to COVID-19, and health provider motivation. Facilitators included: prioritization of PCC measurement, leadership and champion engagement at all levels, alignment with ongoing provincial strategic direction and measurement efforts, and the use of technology for data collection, management, and reporting.

Conclusions: Despite high interest and policy alignment to use PC-QIs “readiness” to implement them effectively remains a challenge. Efforts are needed to ensure organizations are supported to collect, use, and report PCC data to make the needed improvements that matter to patients.

Article Summary

Strengths and Limitations of this Study:

- This study uses a rigorous, theory, and evidence-informed implementation science approach to assess readiness, barriers, and facilitators to PC-QI implementation from both a system-level perspective and clinical perspective.

- Our mixed methods study design enabled us to enhance the generalizability of our findings by surveying healthcare organizations across Canada, while obtaining a more in-depth understanding of the barriers and facilitators of PC-QI implementation.

- Study participants may be those who may be most interested in using the PC-QIs or have greater capacity to implement them, which may impact our overall assessment of readiness for implementation.
Background

Person-centred care (PCC) is a model of care that remains aspirational for many healthcare jurisdictions and sectors of care. PCC is a key component of high quality healthcare, which actively engages patients and their caregivers in care decisions and considers patient needs, preferences, and values.[1, 2] However, in practice it has been challenging to implement as it requires changes in healthcare structures and processes.[3, 4]

Person-Centred Quality Indicators (PC-QIs) offer an opportunity to drive changes needed to improve the delivery of PCC.[5] Developed by Santana et al. and based on the Donabedian model for quality of care, these generic indicators (non-sector specific) are classified based on their evaluation of healthcare “structures” (e.g. policies or programs, physical structures for providing care), “processes” (interactions between patients, caregivers, healthcare providers, and the healthcare system) and “outcomes” (e.g. patient and health system outcomes).[6]

Quality indicators are used to help national and provincial/regional organizations and health facilities monitor and evaluate the quality of care provided. They provide a quantitative measure that identifies gaps in care to guide healthcare providers and quality improvement (QI) staff in making targeted improvements.[7, 8] While indicators are routinely implemented to enhance healthcare system performance, little research has been done to understand the readiness of organizations to use them and other factors that influence implementation.[9] This has important implications for adoption of the indicators, effective use for QI, as well as patient care and outcomes.
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Although factors that influence quality indicator implementation have been studied in intensive care,[10] dementia,[11] and palliative care settings,[12] the use of generic quality indicators intended for use by diverse organizations (e.g. national/regional governments, QI organizations), and across various care settings, have not been explored. The use of PC-QIs also introduces another layer of complexity as it requires the engagement of patients to collect their experiences with care (mainly through Patient-Reported Experience Measures (PREMS)). As such, with increasing interest to measure and improve PCC, there is a need to identify and evaluate effective strategies that will promote uptake and use of PC-QIs for wide application.

The assessment of barriers and facilitators to implementation is critical to identifying implementation strategies.[13, 14] While barriers and facilitators have typically been assessed at the individual level, there is growing recognition that for large-scale organizational change efforts, such as for QI initiatives (involving multiple team members), it is critical to understand factors that influence the collective behaviour change that results in systems re-design.[15]

Understanding aspects of readiness allows one to determine an organization’s capacity and willingness to implement evidence-based interventions, such as PC-QIs, into practice.[16] Moreover, an exploration of the implementation context is also important for identifying barriers and facilitators to change.[17]

As part of a program of research developing and implementing PC-QIs for system-level use in Canada, our study aimed to assess readiness of organizations to implement PC-QIs and explore barriers and facilitators to implementation, from the perspective of Canadian provincial/regional/territorial quality improvement leads (representing a “system-level” perspective) and health care providers (clinical perspective). The specific objectives included: 1.
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115 assessing readiness of system-level organizations to implement PC-QIs, and 2. exploring
116 potential barriers and facilitators to implementing PC-QIs for use at both system and clinical
117 levels. This study was approved by the University Health Research Ethics Boards (REB15-2846)
118 at the University of Calgary.

Methods

Study Design

To optimize the implementation of PC-QIs using a theory and evidence-based approach,
124 we chose a mixed methods design to attain more generalizable findings regarding system-level
125 readiness for implementation as well as obtain an in-depth understanding of the readiness,
126 barriers, and facilitators to implementing PC-QIs. We conducted an explanatory sequential
127 priorities mixed methods design, where the findings from our first quantitative objective
128 assessing readiness of organizations informed our second qualitative objective to explore the
129 potential barriers and facilitators to implementing these indicators.[18] The “Guidelines for
130 conducting and reporting mixed research in the field of counseling and beyond” were used to
131 guide the design and reporting of this study.[19]

Patient and Public Involvement

134 Patient and community partners are involved as part of the study team for this program of
135 research on developing and implementing PC-QIs.[5] For this particular study, a patient partner
136 was involved in the development of the interview guide, to ensure that the patient perspective
137 is reflected in the questions asked. Patient and community partners will also be involved in the
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co-creation of knowledge dissemination materials and in stakeholder meetings regarding the application of this study’s findings into practice.

Organizational Readiness Survey for Implementing and Using PC-QIs

Study design and setting: We conducted a web-based survey to assess system level readiness for implementing and using PC-QIs. Representatives of healthcare delivery and coordinating organizations that guide the development and/or implementation of person-centred care measurement in Canada completed the survey.

Survey development: Guided by organizational readiness theory,[16] we co-developed and piloted a web-based survey with study collaborators to ensure face validity. The survey included two components. The first assessed: 1) Motivation - organizational interest in implementing PC-QIs; 2) Content and construct validity - perceived “measurability”; 3) Intervention specific capacity - whether the data could be interpreted and used as part of their organization’s QI processes to improve PCC.

The second component of the survey included an assessment of general capacity for implementation, measuring domains such as: general availability of resources and needed infrastructure, organizational climate, staff capacity, etc. We used an adapted (shortened to minimize respondent fatigue) version of the validated Organizational Readiness for Change (ORC) tool.[20] Participants were asked to provide qualitative feedback regarding their readiness to implement the PC-QIs and to confirm their willingness to be contacted for a future interview. Survey development and data collection was supported via a web-based platform called ‘Qualtrics.’[21] A copy of the survey is available [see Supplementary File 1].
Participant recruitment: We identified representatives from Canadian healthcare organizations that lead QI and/or PCC measurement initiatives from a previous environmental scan we conducted.[22] We also identified potential contacts through our collaborator, the Canadian Institute for Health Information. A sample frame of 55 eligible organizations across Canada was compiled.

Data collection: Potential participants were invited to participate via email invitation. Once participants confirmed their ability to respond to questions regarding their organization’s readiness to use PC-QIs and consented, they received a monograph with the technical specifications and evidence supporting the PC-QIs, and a link to the survey. Participants who consented received reminders in two-week intervals until survey completion or until at least a 60% response rate was achieved (determined by the study team to be acceptable) and representation was obtained from all 13 Canadian provinces/territories.

Data analysis: We analyzed the survey data using STATA15 to obtain a descriptive summary of all organizations that participated, including organization type; whether the organization has or could obtain data for the needed PC-QI (already have/could obtain); were interested in implementing the PC-QI (somewhat/interested/very interested); have processes in place to make changes to improve the indicator (yes), and whether the indicator measured what it is supposed to measure (yes). We calculated the respondents’ assessment of organizational readiness for each section and compared differences in responses between groups for organization type and region of Canada (Atlantic, Central, Northern territories, Pacific, and Prairies). We conducted content analysis for the qualitative feedback to identify
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emerging themes as well as patterns across organization types or regions.[23] The survey
findings were summarized and sent to participants for their review and feedback.

Interviews to Explore Barriers and Facilitators to Implementing and Using PC-QIs

Study design and setting: For our second objective, we used a qualitative descriptive
approach to describe the experiences and perceptions regarding PC-QI implementation and to
contrast and compare differences between participant groups.[24] We conducted both
individual and group interviews with survey respondents (system-level perspective), as well as
primary care providers (including physicians, clinic administrators, nursing staff), and Primary
Care Network (PCN) staff (offer QI support to clinics) providing a clinic-level perspective. The
clinical perspective was limited to primary care in Alberta for feasibility. While individual
interviews would allow for more in-depth exploration of perceived barriers and facilitators,
group interviews with multiple participants from one organization or clinic provide “a greater
sense of shared social meanings, or norms, and how these are enacted” [25] and contribute to
enhanced understanding of context.[26]

Interview guide development: Interview guide development was informed by the
survey findings and the Consolidated Framework for Implementation Research (CFIR).[27] The
CFIR provides a comprehensive perspective on the factors that influence implementation,
particularly regarding implementation context and from an organizational perspective,
consistent with the organizational readiness lens that guides our study.[27] The survey findings
allowed us to identify specific constructs from the CIFR that would be important to further
explore through our interviews. The interview guide was developed by the study authors in
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consultation with a patient partner and pre-tested with study collaborators [see Supplementary File 2].

Participant recruitment and inclusion criteria: We strived to conduct ten system-level interviews and ten clinical primary care interviews. Purposive sampling was used to obtain a variety of perspectives, striving for maximum variation with regards to participant’s role/position in the organization or clinic, type of organization or clinic, geographic region represented, and self-identified gender.[18] For primary care participants, we aimed for representation from all five health zones in Alberta (North, Edmonton, Central, Calgary, and South). We identified system-level participants from the organizational readiness survey and recruited primary care participants through referral by our study primary care collaborators and previous interview participants, and a review of PCN websites with public contact information listed for QI staff. Participants were invited via email.

Data collection: All interviews took place through videoconference (Zoom) or by telephone, based on the preference of the participant(s) and in consideration of safety during the COVID-19 pandemic. Interviews were audio-recorded and field notes collected. Interviews lasted between 30 and 60 minutes. Members of the study team met monthly to review data collected to date, discuss emerging themes, and data saturation.

Data transcription and analysis: An external transcription service transcribed all audio recordings were transcribed verbatim. The transcripts were reviewed, corrected as needed, and anonymized by the study team. Transcripts were also sent to all interview participants for their review and feedback.
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226 KM conducted the qualitative data analysis, which included a reading of each transcript and the field notes to become familiarized with the data.[25] We used a deductive qualitative content analysis approach to code the data in Nvivo12, with the CFIR as the guiding framework to categorize data according to factors (constructs) influencing implementation.[23, 27] The CIFR was used with the intention of mapping the identified barriers and facilitators to evidence-based implementation strategies, using the Expert Recommendations for Implementing Change (ERIC) tool following this study (identification of strategies to be published elsewhere).[28] To enhance trustworthiness,[29] three other members of the study team (MJS, CS, MOB) collectively analyzed 25% of the transcripts, along with the KM, to compare coding and discuss potential discrepancies in the interpretation of the CFIR constructs (and codebook). The codes/CFIR constructs were summarized and organized as “facilitators” or “barriers” to PC-QI implementation. The study team discussed the codes and grouped them into larger categories, where they could be distilled into broader themes and sub-themes of facilitators and barriers until data saturation was reached and no new themes were observed in the data.[25]

240 **Data interpretation and integration:** To enhance the value of the integration between our qualitative and quantitative methods, we developed a joint display (summary table) to support the interpretation and reporting of this mixed methods study.[30] Key survey findings were integrated with the themes and sub-themes identified from the interviews to facilitate the interpretation of the data and refine our themes. The integrated findings from the survey and the interviews were summarized and sent to all survey and interview participants for their review and feedback. Additional details regarding the methods can be found in Supplementary File 3.
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Results

Organizational Readiness Survey:

The organizational readiness survey was conducted between November 2019 to March 2020. A total of 33 of 55 Canadian “system-level” organizations that were contacted participated. We attained representation from all 13 provinces and territories across Canada, with a total response rate for 60% (33/55 organizations). 27.3% (15/55) of organizations were lost to follow-up after initial contact and/or consent to participate and 12.7% (7/55) of organizations declined to participate due to transitions within the provincial healthcare system (no time, staff attrition), shifting responsibilities due to COVID-19, or use of PC-QIs not being a focus of their organization.

Most representation came from Ontario and B.C who have the greatest number of eligible organizations, each representing 21% of responses. About half of organizations were regional coordinating organizations (51.6%), followed by health service delivery organizations (29.0%). See Table 1 for a summary of the survey participant organizations.
Table 1: Survey Participant Organizations, by % (n)

| Organization Demographics                                      | % (n)       | Response Rate % (N=55) |
|-----------------------------------------------------------------|-------------|------------------------|
| Provinces/Territories Represented (N=13)                       | 100 % (13/13)|                       |
| Organizations Surveyed by Province/Territory (N=33)            |             |                        |
| Alberta                                                         | 6.1% (2)    | 100% (2/2)             |
| British Columbia                                               | 21.2% (7)   | 63.6% (7/11)           |
| Manitoba                                                       | 15.2% (5)   | 62.5% (5/8)            |
| New Brunswick                                                  | 6.1% (2)    | 66.7% (2/3)            |
| Newfoundland & Labrador                                       | 6.1% (2)    | 50.0% (2/4)            |
| Northwest Territories                                          | 3.0% (1)    | 100% (1/1)             |
| Nova Scotia                                                    | 6.1% (2)    | 100% (2/2)             |
| Nunavut                                                        | 3.0% (1)    | 100% (1/1)             |
| Ontario                                                        | 21.2% (7)   | 36.8% (7/19)           |
| Prince Edward Island                                           | 3.0% (1)    | 100% (1/1)             |
| Québec                                                         | 3.0% (1)    | 100% (1/1)             |
| Saskatchewan                                                   | 3.0% (1)    | 50.0% (1/2)            |
| Yukon                                                          | 3.0% (1)    | 100% (1/1)             |

Type of Organization (N=33)

| Health Service Delivery Organization                          | 29.0% (9)  |
| Regional Coordinating Organization                           | 51.6% (16) |
| Both                                                          | 6.1% (2)   |
| Other (Provincial government/Ministry of Health)              | 12.1% (4)  |

Interviews to Explore Barriers and Facilitators to Implementing and Using PC-QIs

**Interview Participants:** We conducted interviews between September 2020 to April 2021. 21 individual and group interviews were conducted (N=42 participants). Ten interviews were conducted with system-level health care organizations across Canada (n=13 participants) and 11 with primary care clinics/health centres and PCNs in Alberta (n=29 participants). While 85.7% (36/42) of interview participants identified as women, 100% of participants providing a
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System-level perspective identified as women (no men had consented to a follow up interview).

Positions held by system-level interview participants included: Leads, Coordinators, or (Executive) Directors of Patient/Client Experience or Engagement (9), Directors of departments related to quality, safety, and clinical metrics (4), and Epidemiologist (1), and a Practice Consultant (1).

Among primary care interview participants, all five zones were represented across Alberta, close to half representing urban areas (45%) and most affiliated with academic centres (63.6%). The majority of participants represented primary care clinics or organizations that served diverse populations (e.g. Indigenous populations, newcomers, homeless populations, and both adults and children). Participants held a variety of roles (some more than one), including physicians (8), primary care network staff (12, comprised of QI/evaluation leads or managers, practice facilitators, data quality leads), clinic nurses (3), clinic QI staff (6), a medical director (1), and clinic support assistant (1). See Table 2 for a summary of the participant and organization/clinic demographics.

Table 2: Summary of Interview Participant & Organization Demographics, by % (n)

| Participants (N= 42) |
|---------------------|
| System-level perspective: 31% (13) |
| Primary care perspective (Alberta): 69% (29) |
| Identify as a woman: 85.7% (36) |
| Length of time with organization/clinic |
| <1-5 years: 35.7% (15) |
| 5+ years: 57.1% (24) |
| No answer: 7.1% (3) |

| Canadian Regional/Provincial/Territorial Organizations (10 interviews; 13 participants) |
|---------------------------------------------|
| Alberta: 10% (1) |
| British Columbia: 20% (2) |
| Manitoba: 10% (1) |
| New Brunswick: 10% (1) |
| Nova Scotia: 10% (1) |
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| Province      | Percentage | Number |
|---------------|------------|--------|
| Ontario       | 20%        | 2      |
| Saskatchewan  | 10%        | 1      |
| Yukon         | 10%        | 1      |

**Primary Care Networks and Clinics in Alberta**

(11 interviews; 29 participants)

- Primary Care Network: 36.4% (4)
- Primary Care Clinic/Health Centre: 63.6% (7)
- Teaching site/affiliated with academic institutions: 63.6% (7)

Main populations served:

- Urban: 45.5% (5)
- Rural: 36.45 (4)
- Mixed: 27.3% (3)

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**Survey and Interview Findings:** The findings are presented as four main themes and sub-themes. These include: the organizations’ interest in implementation of the PC-QIs, motivation to implement PC-QIs, resources and capacity needed to collect and use data for improvements, and the organizational climate for implementation of the PC-QIs. See Table 3 displaying key survey and interview themes, sub-themes, and illustrative quotes, as well as **Supplementary File 4** for detailed findings.
Table 3: Summary of Factors to Consider for Implementing PC-QIs

| Facilitators | Barriers |
|--------------|----------|
| **Theme 1: Interest in implementation of the PC-QIs** | |
| Stakeholders perceive value in using PC-QIs | PC-QIs have limitations for understanding context |
| “The one thing that they do that we haven’t been able to do, and that’s why I’m really interested in what you have, is looking at patient satisfaction and looking at sort of quality indicator that shows a patient is better today than they were 12 months ago…That’s the kind of piece that we have been missing and that I’ve been hunting for the best sort of way to do it, because we haven’t done that very well yet.” – Primary Care Organization 2 | “I think we have to be careful with all of these that we don’t try to quantify the human context. So somehow that needs to be considered.” – System-Level Organization 6 |
| There is provincial/territorial alignment for PCC measurement | There is a need for tailoring and prioritization of the PC-QIs |
| “And I think that would be a good indication for you on which ones have been identified as a priority within [organization name]… if we are collecting it, I would say that that has been prioritized within the organization.” – System Level Organization 4 | “Where I get nervous and where we’ve experienced some challenges in the past with those bodies [national organizations] being involved is there needs to be a certain level of flexibility in what is being dictated around the measurement pieces. The information that is most interesting at that national level, or that is feasible at that national level is sometimes not meaningful at all at the unit level.” – System-Level Organization 4 |
| Actionability and effectiveness of the PC-QIs to stimulate change | |
| “So if there’s an area that was really a lot lower than the others then that kind of just would help to guide the work that we’re doing…And it also then opens up that communication with the providers as far as what they’re offering in the clinics and maybe what areas again could be improved…” – Primary Care Organization 10 | |
| **Theme 2: Motivation to implement PC-QIs** | |
| Organizations respond to patients and policies | Strength of the evidence for PC-QIs is unclear |
| “If Primary Care Networks get a hold of this in itself, and they consider very valuable measures, they can then start to demand…this is a requirement…that’s one of the very beneficial roles of the Primary Care Networks is to lead clinics down that path to say look these are some measures that you should be doing to provide optimal care.” – Primary Care Organization 5 | “So, patient experience, yes, it’s important. But should it rule? I’m not convinced about the clinical outcomes and the downstream savings for costs in healthcare, [or] reduced morbidity for that patient – as long as they get the right clinical care, even if they’re bitching and complaining the whole way.” – Primary Care Organization 4 |
| Standardization and alignment of measurement efforts are important | The need for training keeps motivation low |
| “I think if you’re able to build a power in a Pan Canadian process, it will make it easier for each jurisdiction independently to get buy-in.” – System-Level Organization 7 | “It’s not something that a lot of clinics are comfortable with or know what to do about, and so I think we personally still have a lot of growth to do in terms of how we capture this information, and act on it, and engage with patients and design person-centred processes.” – Primary Care Organization 6 |
### Engagement of provincial/territorial leadership and champions is critical

“It comes down to the leadership and their vision for the organisation and how PFCC indicators fit into that vision. And there are a lot of competing priorities in healthcare...And leadership has to make that a priority.” – System-Level Organization 9

### Surveys can be a potential patient burden

“I guess one of the challenges is just overburdening patients with surveys. And when we are serving patients wanting to keep those surveys quite brief.” – Primary Care Organization 9

### Theme 3: Resources and capacity needed to collect and use data for improvements

#### There is strong capacity for QI for most system-level or higher-resourced primary care organizations

“...We have a fairly robust framework of measurement that we’ve had implemented for quite some time...but our next next step forward is expanding to measures of greatest significance directly to patients.” – Primary Care Organization 2

#### Technology supports implementation and use of PC-QIs

“It’s not quite as slick as I would like it to be but what it does allow is for you to use your cell phone, scan the QR code, do the survey, send it in and you’re done and it’s real-time. So for example, if you’re laying in your hospital bed, you scan the poster on the wall in the hallway and send in your feedback.” – System-Level Organization 2

#### Staff are time and resource-constrained

“I think in addition to that just the current environment that we’re in in Ontario we are resource constrained... actually having people to be able to do the work is certainly a challenge...” – System-level Organization 7

#### PC-QIs can conflict with priorities for patient care and other measurement

“...Given the stuff resources we have, it’s hard to start collecting something new that isn’t already collected without dropping something else off...what can we actually drop?” – System-Level Organization 4

#### COVID-19 has impacted PCC measurement

“But you have frontline staff who are exhausted, overwhelmed, have COVID fatigue, and it’s like, “Don’t ask me to, like, now collect this data on top of everything else I’m doing.” – System-Level Organization 1

### Theme 4: Organizational climate for implementation of PC-QIs

#### PCC is part of the culture in most organizations/clinics

“There’s going to be an engagement with the community to understand what matters to them, and what they think we should focus measuring, and also an engagement strategy with patient family advisors.” – System-Level Organization 5

#### PC-Qi implementation should fit with the workflow

“I think just getting everybody’s buy in, like all the stakeholders, especially the ones that will be doing the work. Just make sure that it’s...impactful, but just that doesn’t take over their daily operations...” – Primary Care Organization 3

#### Most organizations have a culture of learning

“It’s a no-blame culture. So, if somebody does something that may be not the right thing, we certainly have a no blame culture. And I think people feel comfortable bringing forward concerns...There’s no repercussions to them.” – System-Level Organization 10

#### Primary care funding models do not support PC-QI implementation

“It’s difficult to schedule time with them because they have to meet their quotas, right. And they have to be available to their patients too...I think the biggest hurdle is just finding time that the physicians are able to give towards that” – Primary Care Organization 3

#### Variability among health provider and leadership readiness in terms of PCC

“I guess it’s the dismissing this data as not being legitimate because it’s only people who want to complain that fill these surveys out...the quality department has done a lot of work to really focus on the science and the evidence that this is a validated survey...” - System-Level Organization 9
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Theme One: Interest in implementation of the PC-QIs

Facilitators:

Survey respondents agreed that most PC-QIs “measure what they are supposed to measure.”

Most system-level organizations and primary care organizations saw value in using the PC-QIs to improve PCC, the patient experience, and quality of care. Provincial and territorial alignment was an important factor for interest in using the PC-QIs among survey respondents. Both system-level and primary care organizations/clinics would like to see that it is feasible to address the indicator and make meaningful changes.

Barriers:

Some participants were less interested in implementing the PC-QIs as they perceived the PC-QIs to have limitations for understanding context, particularly considering the measurement of cultural competency. Organizations/clinics also saw a need to prioritize and tailor the PC-QIs as the generic (non-sector specific) nature of the PC-QIs may not be appropriate for their context.

Theme Two: Motivation to implement PC-QIs

Facilitators:

Stakeholders were motivated to implement PC-QIs if they perceived a need from patients (69% survey respondents) and pressures from accreditation bodies (83.2%). For most provinces or organizations, they saw PC-QIs as aligning with existing policy and measurement priorities. Standardization of measurement efforts was also a facilitator in motivating organizations/clinics
Informing Person-Centred Quality Indicator Implementation

to use PC-QIs. Among system-level organizations, some expressed a need for a Pan-Canadian
effort, while primary care stakeholders would like to see alignment of measurement efforts
provincially to avoid duplication or siloed efforts across stakeholders. Engagement of leadership
at all levels was seen as an important facilitator for buy-in and for motivating staff to measure
PCC.

Barriers:

Other factors that influenced motivation to use PC-QIs was the lack of clarity around the
strength of the evidence. Among survey respondents, while most PC-QIs were considered valid,
some PC-QIs could be further refined. Additionally, some interview participants questioned
whether the PC-QIs would lead to improved outcomes; previous experience among primary care
stakeholders indicate that they did not find using Patient Reported Experience Measures
(PREMs) to be helpful in facilitating improvements. System-level organizations (65.5%) and
interview participants indicated more training is needed for new methods/developments in
measurement/QI. Finally, some participants noted that surveys may be too long for patients to
complete.

Theme Three: Resources and capacity needed to collect and use data for improvements

Facilitators:

Most system-level and some primary care organizations (generally urban, academic/teaching
clinics) described having strong capacity for QI. They have dedicated staff or partners to
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361 support QI by providing training, help to manage, analyze, report, and interpret data. Among
362 survey respondents, five PC-QIs were considered highly feasible to implement by system-level
363 organizations (75% of organizations could get information for the PC-QI and have processes to
364 make changes) included: Structures to report PCC performance; Communication between
365 patient and nurse; Coordination of care; Patient and caregiver involvement in decisions about
366 care; and Overall experience. Technology (e.g. use of tablets, QR codes, e-mailing patients
367 surveys, Electronic Medical/Health Records) was also considered an important facilitator for
368 helping with data collection and real-time reporting to use for QI.

369
370 Barriers:
371 Many participants described time and resource constraints, which may impact PC-QI
372 implementation. Some lower resourced organizations/clinics do not have strong capacity for QI
373 due to a lack of funding and dedicated staff to support QI. Additionally, participants were
374 challenged by competing priorities. COVID-19 has also had an impact on PCC measurement, as
375 it has diverted resources away from patient experience measurement. Staff feel like they had
376 no additional capacity to undertake more measurement efforts.

377 Theme Four: Organizational climate for implementation of PC-QIs
378 Facilitators:
379 PCC is part of the culture in most organizations/clinics, where the patient perspective in
380 healthcare quality is valued. Most system-level organizations, some primary care organizations
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(mainly PCNs), and larger clinics had well established programs around patient engagement and
obtaining patient feedback. Some system-level organizations and primary care clinics also spoke
about having a positive culture of learning. Among primary care stakeholders, another
important factor to consider was designing PC-QI implementation to fit with the existing clinic
workflow and processes as much as possible.

Barriers:

One of the key barriers in primary care is that primary care funding models do not support PC-QI
implementation. Additional data collection is especially challenging for physicians due to time
and funding models (fee-for-service) that do not allow for dedicated time for QI. Participants
also described variability among health provider and leadership readiness in terms of PCC,
where not all health providers and leadership see PCC as a priority and there is variability in
understanding what PCC means.

Discussion

We conducted a mixed methods study to assess the readiness of organizations in Canada to
implement and use PC-QIs, and to identify specific barriers and facilitators to implementation.
Our survey findings highlighted variability in system-level readiness for implementation. While
most organizations were interested in using the PC-QIs, some were more ready to implement,
given the organization’s capacity to collect the data and to use the data to stimulate
improvements in PCC. Notably, only 5 of 26 PC-QIs were considered highly feasible to
implement. These PC-QIs included: ‘Structures to report PCC performance’; ‘Communication
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between patient and nurse; ‘Coordination of care’; ‘Patient and caregiver involvement in
decisions about care’ and ‘Overall experience.’ Regarding general capacity for implementation,
survey respondents indicated staff time to be a major constraint, a need for training in new
methods/QI, and dissatisfaction with electronic data systems.

Our interviews allowed us to further explore these aspects of readiness, corroborate our
survey findings around readiness, and provide a more enhanced understanding of the barriers
and facilitators. Facilitators identified included: a culture of PCC and patient engagement exists
in most organizations, PC-QIs are aligned with national and provincial measurement efforts,
and that leadership engagement, and the use of technology (EMRs, QR codes, dashboards,
email, etc.) are important for implementation. Barriers identified were: challenges with
resources and workload, limited QI capacity in lower-resourced settings (especially family
practices and rural clinics), and the COVID-19 pandemic, which has diverted resources,
processes for collecting patient experiences, and impacted patient flow.

While very few studies have explored the factors that influence the implementation and use
of quality indicators, our findings are consistent with previous research on quality indicator
implementation in various care settings and studies on the implementation of patient-reported
experience and outcome measures (PREMs and PROMs).[10-12, 31-33] Challenges associated
with knowledge, skills (need for training), time constraints, and motivation around
measurement have been widely reported. Important facilitators to support quality indicator
implementation that have also been reported include the need for administrative support for
clinicians,[10] the importance of electronic data systems,[12, 31] and alignment with national
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and regional priorities,[11] the need to integrate measurement within established workflows to
minimize patient care disruptions as well as the uncertainty around the benefits of using
patient-reported data.[31]

Our study identified some unique factors perceived to influence implementation by
including both system and clinical level perspectives, such as the role of external organizations
and partners in supporting implementation to enhance capacity for QI, the variability in
provider and leadership readiness around PCC and measurement, organizational culture in
terms of patient engagement and QI, and specific implementation challenges in Canadian
primary care contexts (fee-for-service models). Furthermore, our study identified barriers
associated with planning for PC-QI implementation during COVID-19, where the pandemic
negatively affected the ability for organizations and clinics to continue collecting patient-
reported data.

This study is the first to assess the readiness of Canadian organizations and explore barriers
and facilitators to implementing PC-QIs. Our mixed methods study design enabled us to
enhance the generalizability of our findings by surveying healthcare organizations across
Canada, while obtaining a more in-depth understanding of the barriers and facilitators of PC-QI
implementation. Moreover, this research contributes to the limited body of evidence regarding
quality indicator implementation by using and evidence and theory informed approach
(organizational readiness lens, CIFR) and obtaining diverse perspectives at the local clinical level
as well as a regional/provincial/territorial system level. With increased interest in measuring
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450 PCC globally and leveraging ongoing measurement efforts in Canada, this research can provide
451 guidance for PCC measurement moving forward.

452 Several limitations of this research should be acknowledged. First, there is a risk of selection
453 bias, where those potentially most interested in the PC-QI implementation and have resources
454 available to support implementation were most likely to participate in the survey and
455 interviews. This was the case for our most of our interview participants in primary care, who
456 tended to be “early adopters” with respect to PCC measurement and QI. In addition, we
457 attained a relatively low response rate for the provinces of Ontario and British Columbia in our
458 survey. We were also limited in sampling participants from the province of Quebec (did not
459 sample regionally) due to French language limitations. These limitations may influence the
460 generalizability of our findings. Despite this, efforts were made to ensure a diversity of
461 perspectives through purposive sampling to attain greater representativeness.

462 Future research includes mapping these barriers and facilitators to evidence-based
463 implementation strategies and engaging key stakeholders in PCC measurement in Canada and
464 in primary care in Alberta to inform future implementation efforts.

Conclusions

467 The findings of this study suggest that PC-QI implementation can leverage the high level
468 of interest in their use, alignment with existing policy and initiatives in PCC measurement, and
469 opportunities to integrate technology to support implementation. Despite this, organizational
470 readiness to implement is variable across contexts; it will require resource investment, capacity
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development, and sustained leadership engagement at all levels to support organizations to
collect, use, and report data on PCC. This study provides a foundational basis for identifying
implementation strategies that will optimize PC-QI implementation and facilitate the
incorporation of the patient perspective in improving their quality of care.

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Author Contributions

KM, M-JS, BH, CMS, and MOB contributed to the study concept, study design, interpretation of
the data, and provided critical review and revision of the manuscript for intellectual content.
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MOB provided support in identifying and contacting potential interview participants in primary care. KM collected the survey and interview data. KM, CMS, MOB, and M-JS conducted data analysis. KM, M-JS, BH, CMS, and MOB also provided their final approval of this publication and agree to be accountable for all aspects of the work to ensure both accuracy and integrity of this research.

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Competing interests

All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

Patient consent for publication

Not required.
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515  **Ethics approval**

516  Ethics approval was granted from the University Health Research Ethics Boards [(REB15-2846)]

517  at the University of Calgary.

518

519  **Provenance and peer review**

520  Not commissioned; externally peer reviewed.

521

522  **Transparency statement**

523  The lead author affirms that this manuscript is an honest, accurate, and transparent account of

524  the study being reported; that no important aspects of the study have been omitted; and that

525  any discrepancies from the study as planned (and, if relevant, registered) have been explained.

526

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PC-QI Readiness Survey

Start of Block: Introduction + Screening

Welcome

Before we begin, do you feel able to provide answers for this survey?

- Yes
- No

Display This Question:
If Before we begin, do you feel able to provide answers for this survey? = No

Do you know of anyone who would be more appropriate?

___________________________________________________________

___________________________________________________________

___________________________________________________________

___________________________________________________________

End of Block: Introduction + Screening

Start of Block: Respondent Profile

Who is filling out this survey?

________________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

What are your title(s) in the organization?

________________________________________

I am answering this question as a representative of a:

- Regional/coordinating organization that supports health service delivery (ex: AHS, PCN/LHIN, health quality improvement council, etc)
- Health service delivery organization (clinical points of care such as hospitals, clinics)
- Other (please describe) ____________________________________________________________

End of Block: Respondent Profile

Start of Block: Organizational Profile
Supplementary File 1: PC-QI Organizational Readiness Survey

What province or territory is your organized based in?

- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland and Labrador
- Northwest Territories
- Nova Scotia
- Nunavut
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Yukon
- National

What is the name of the organization you represent?

__________________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

What type of services does your organization support? Check one or more that apply.

☐ Acute care services (e.g. hospitals)

☐ Community health services (e.g. out-patient clinics, primary care, long-term, etc.)

☐ Other - Please describe:

________________________________________________

☐ Not applicable

Your organization serves the following population?

☐ Adults only

☐ Children only

☐ Both adults and children

End of Block: Organizational Profile

Start of Block: Org readiness screen

The PC-QIs have been developed with the intention of system-level application, to guide healthcare organizations across various sectors of care in measuring and improving Person-Centred Care.

A secondary section of the survey asks for your assessment of the readiness of your organization in adopting and using these indicators to measure Person-Centred Care, regional / coordinating health organization or health service delivery organization.

Before we begin, do you feel able to provide answers for this aspect of the survey?

☐ Yes

☐ No
Supplementary File 1: PC-QI Organizational Readiness Survey

Display This Question:

If The PC-QIs have been developed with the intention of system-level application, to guide healthcare... = No

Do you know of anyone who would be more appropriate?

________________________________________________________________

________________________________________________________________

________________________________________________________________

________________________________________________________________

________________________________________________________________

End of Block: Org readiness screen

Start of Block: QIs

Structure Indicator 1: Policy on Person-centred Care

Definition: Regional/provincial/national policy (or policies) that guides and supports the provision of PCC

Numerator: Number of hospitals and healthcare centres/organizations that have a policy (or policies) for PCC which includes the following five components:
1) Establishment of an operational definition for PCC;
2) Inclusion of PCC in the organization’s Mission and Vision;
3) Inclusion of PCC as part of the organization’s Core Values;
4) Allocation of resources to support and implement PCC;
5) Evaluation of PCC protocol and program implementation with the perspective of patients

Denominator: Number of all audited hospital and healthcare centres/organizations

Which of the following statements is most true for the organization you support?
Supplementary File 1: PC-QI Organizational Readiness Survey

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?
- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?
- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

Do you have any other feedback about this indicator?

Structure Indicator 2: **Educational Programs on Person-centred Care**

**Definition:** Educational program(s) in place describing PCC and how to practice PCC for all healthcare personnel (e.g. staff, physicians, nurses, allied health care professionals, caregivers).

Training includes providing care that promotes co-design and partnership with patients, collaboration among the healthcare team, in addition to anti-discriminatory care, cultural competence and humility.

Quality of training should be assessed by healthcare personnel and by patients to inform necessary gaps and improvements needed in educational programs.

Process and outcome indicators can provide a patient perspective on the delivery of PCC.

**Numerator:** Number of hospitals and healthcare centres, community-based organizations that have an educational program(s) for PCC

**Denominator:** Number of all audited hospital and healthcare centres, and community-based
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

Do you have any other feedback about this indicator?

Structure Indicator 3: Culturally Competent Care

**Definition**: Percentage of healthcare facilities using a survey to assess organizational cultural competence

**Numerator**: Number of healthcare systems (hospitals and healthcare centres) assessing organizational cultural competence

**Denominator**: Number of all audited hospital and healthcare centres/organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information
Supplementary File 1: PC-QI Organizational Readiness Survey

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

__________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Do you have any other feedback about this indicator?

________________________________________________________________________

Page Break

________________________________________________________________________
Structure Indicator 4: Providing a Supportive and Accommodating Person-centred Care Environment

**Definition:** Healthcare systems with a protocol(s) for co-developing a supportive and accommodating physical PCC environment in healthcare facilities with patients

**Numerator:** Number of hospitals and healthcare centres/organizations with a protocol(s) for co-developing a PCC environment with patients

**Denominator:** Number of all audited hospitals and healthcare centres/organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

__________________________________________________________________________

Do you have any other feedback about this indicator?

__________________________________________________________________________

Structure Indicator 5: Co-designing Care in Partnership with Communities

Definition: Healthcare systems should have a protocol(s) guiding development of partnerships with communities for co-designing care, and should provide an opportunity for partners to evaluate the partnership regularly.

Numerator: Number of hospital and healthcare centres/organizations with a protocol guiding the development of partnerships with communities for co-designing care.

Denominator: Number of all audited hospital and healthcare centres/organizations.
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this indicator?

________________________________________________________________

Page Break
Structure Indicator 6: Healthcare Information System to Support Person-Centred Care

Definition: Healthcare systems using health information technology to support and monitor PCC by:
- Supporting patient-healthcare professional communication
- Providing patients with information about their health and care
- Supporting the coordination, continuity and transitions of care

Numerator: Number of hospital and healthcare centres/organizations using healthcare information technology to support and monitor PCC

Denominator: Number of all audited hospitals and healthcare centres/organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

--------------------------------------------------------------------------------------------------------------------------

Do you have any other feedback about this indicator?

--------------------------------------------------------------------------------------------------------------------------

Structure Indicator 7: Structures to Report Person-centred Care Performance

**Definition:** Healthcare systems should report PCC performance based on feedback from patients and healthcare staff

**Numerator:** Number of hospital and healthcare centres / organizations reporting on PCC performance based on feedback from patients and healthcare staff

**Denominator:** Number of all audited hospitals and healthcare centres / organizations
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: __________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- [ ] Yes
- [ ] Somewhat
- [ ] No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this indicator?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

Process Indicator 1: Compassionate Care

**Definition:** Percentage of patients that reported receiving compassionate care during their visit with a healthcare professional (e.g. doctors, nurses, allied health professionals) across healthcare settings and home care

**Numerator:** Total number of patients reporting receiving compassionate care during their visit with a healthcare professional (e.g. doctors, nurses, allied health professionals) across healthcare settings and home care

**Denominator:** Total number of patients responding to the question(s) who reported receiving compassionate care

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ____________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 2: Equitable Care

Definition: Percentage of patients that reported that they received inequitable access to care and treatment because of their race/ethnicity, education level, gender, language, religion, and/or sexual orientation

Numerator: Total number of patients reporting that they received equitable access to care and treatment

Denominator: Total number of patients responding to the questions assessing equitable
Supplementary File 1: PC-QI Organizational Readiness Survey

access to care and treatment

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

____________________________________________________________________

Do you have any other feedback about this measure?

____________________________________________________________________

Process Indicator 3: Trusting Relationship with Healthcare Provider

**Definition**: Percentage of patients that reported a high level of trust with their healthcare provider

**Numerator**: Total number of patients responding highly to the questions assessing trust

**Denominator**: Total number of patients responding to the questions assessing trust

Which of the following statements is most true for the organization you support?
Supplementary File 1: PC-QI Organizational Readiness Survey

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

Process Indicator 4: Accessing Interpreter Services

Definition: Percentage of patients that reported access to interpreter services in multiple languages across health care settings

Numerator: Total number of patients reporting receiving access to interpreter services

Denominator: Total number of patients responding to the questions assessing access to interpreter services

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ______________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 5: Communication with Healthcare System

Definition: Percentage of patients that reported a high level of communication between patients and healthcare staff (e.g. health-line operators (#811), office assistants, associated healthcare staff) at the time of accessing healthcare and throughout patient and family interactions with the healthcare system

Numerator: Total number of patients responding positively to the question(s) assessing communication with healthcare staff

Denominator: Total number of patients responding to the overall questions assessing communication
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: __________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 6: Communication between Patient and Healthcare Provider – Nurse

Definition: Percentage of patients that reported a high level of communication between patient and nurses

Numerator: Total number of patients responding positively to questions assessing overall communication with nurses

Denominator: Total number of patients responding to questions assessing communication with nurses

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information
Supplementary File 1: PC-QI Organizational Readiness Survey

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: __________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Do you have any other feedback about this measure?

--------------------------------------------------------------------------------------------------

Process Indicator 7: Communication between Patient and Healthcare Provider - Physician

Definition: Percentage of patients that reported a high level of communication between patient and physicians

Numerator: Total number of patients responding positively to the questions assessing communication with physicians

Denominator: Total number of patients responding to the questions assessing communication with physicians

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

--------------------------------------------------------------------------------------------------

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: __________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

Process Indicator 8: Information about Taking Medication

**Definition:** Percentage of patients responding that the healthcare provider explained to them their medication, including the purpose, side effects, and potential changes to the treatment.

**Numerator:** Total number of patients responding that the healthcare provider explained to them about their medication, including the purpose, side effects, and potential changes to the treatment

**Denominator:** Total number of patients responding to the question(s)

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 9: Communicating Test Results

Definition: Percentage of patients that responded that they received and understood information about their test results

Numerator: Total number of patients responding that they received and understood information about their test results
Supplementary File 1: PC-QI Organizational Readiness Survey

**Denominator:** Total number of patients responding to the question(s) about receiving and understanding information about their test results

Which of the following statements is most true for the organization you support?

- ☐ We already have the information for this indicator
- ☐ We can obtain this information
- ☐ We cannot obtain this information

How interested would your organization be in implementing this indicator?

- ☐ Not interested
- ☐ Somewhat interested
- ☐ Interested
- ☐ Very interested
- ☐ Other: ________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- ☐ Yes
- ☐ No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- [ ] Yes
- [ ] Somewhat
- [ ] No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 10: Coordination of Care

**Definition:** Percentage of patients that reported that their care was coordinated well. Care coordination means that patient care activities and information is shared among all of the participants concerned with a patient's care, and collaborating in a shared plan of care which includes the patient and family as part of the team.

**Numerator:** Total number of patients responding to having received coordinated care

**Denominator:** Total number of patients responding to the questions assessing coordination of care
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- [ ] Yes
- [ ] Somewhat
- [ ] No

If you selected "somewhat" or "no", please provide additional feedback.

__________________________________________________________________________

Do you have any other feedback about this measure?

__________________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Process Indicator 11: Patient and Caregiver Involvement in Decisions about Their Care and Treatment

**Definition**: The percentage of patients/caregivers that reported their healthcare provider involved them as much as they wanted in decisions about their care and treatment

**Numerator**: Number of survey respondents who reported that their healthcare provider involved them as much as they wanted in decisions about their care and treatment

**Denominator**: Number of respondents who answered the survey question(s) on involvement in decisions about their care and treatment

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

○ Yes

○ No

Does this indicator measure what it is supposed to measure?

○ Yes

○ Somewhat

○ No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 12: Engaging Patients in Managing their Own Health

Definition: Percentage of patients and caregivers that report being engaged in self-managing their condition, which includes:
1. Shared decision-making;
2. Goal-setting;
3. Supporting self-care management; and
4. Care plans being accessible to patients/caregivers/healthcare providers
Supplementary File 1: PC-QI Organizational Readiness Survey

**Numerator:** Total number of patients and caregivers that responded positively to being engaged in self-management

**Denominator:** Total number of patients and caregivers that responded to the question(s) assessing engagement of self-management

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 13: Timely Access to a Primary Care Provider

**Definition:** Percentage of patients and clients able to see a doctor or nurse practitioner on the same day or next day, when needed

**Numerator:** The number of respondents who answered "same day" and "next day" in response to the following patient and client survey question: “The last time you were sick or were concerned you had a health problem, how many days did it take from when you first tried to see your doctor or nurse practitioner to when you actually saw him/her or someone else in their office?”

**Denominator:** The number of respondents who registered an answer of the following patient and client survey question: “The last time you were sick or were concerned you had a health problem, how many days did it take from when you first tried to see your doctor or nurse practitioner to when you actually saw him/her or someone else in their office?”
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

Do you have any other feedback about this measure?

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

Process Indicator 14: Patient Preparation for a Care Plan at a Healthcare Facility

**Definition:** This indicator measures the percentage of patients reporting that they had enough information about their care and treatment when admitted into a healthcare facility (e.g. homecare, hospital, mental health institution)

**Numerator:** Number of patients reporting that they had enough information about their care and treatment when admitted into a healthcare facility

**Denominator:** Number of patients admitted into the healthcare facility

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 15: Transition Planning

Definition: Percentage of patients that reported receiving information and discussing their needs to manage their condition in preparation for care transition across care sectors

Numerator: Number of patients that reported receiving information and discussing their needs to manage their condition in preparation for care transition across care sectors

Denominator: Number of patients admitted into the healthcare facility
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

Do you have any other feedback about this measure?

Process Indicator 16: Using Patient-reported Outcome Measures (PROMs) to Deliver Person Centered Care

**Definition:** Percentage of clinics/hospitals/health centres using PROMs in healthcare decision making including point of care management and policy

**Numerator:** Number of clinics/hospitals/health centres in a jurisdiction using PROMs in clinical care

**Denominator:** Total number of clinics/hospitals/health centres in a jurisdiction
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

○ Yes

○ Somewhat

○ No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

**Outcome Indicator 1: Overall Experience**

**Definition:** Percentage of patients reporting their overall experience within the facility

**Numerator:** Number of patients rating their overall experience within the facility as “Very good” (top box)

**Denominator:** Total number of patients rating the hospital their overall experience within the facility

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________________

Outcome Indicator 2: Cost of Care – Affordability

**Definition:** Percentage of patients reporting that they can afford the cost of their healthcare treatment (e.g. medications, treatment program, equipment)

**Numerator:** Number of patients reporting that they can afford the cost of their healthcare treatment

**Denominator:** Total number of patients reporting the cost of their healthcare treatment
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Global Indicator – Friends and Family Test

Definition: Percentage of patients reporting recommending the hospital/health facility to friends and family

Numerator: Number of patients answering ‘Definitely yes’ when asked if they would recommend the hospital/health facility to friends and family

Denominator: Number of patients answering the question asking if they would recommend the hospital/health facility to friends and family
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

〇 Yes

〇 Somewhat

〇 No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

End of Block: QIs

Start of Block: Organizational Readiness (DISPLAY IF)

The following questions aim to assess the readiness of Canadian healthcare organizations/agencies to adopt and use PC-QIs to measure and improve Person-Centred Care across various sectors of care.

Please answer the following questions based on your perspective as a regional or coordinating healthcare organization/agency that provides support to healthcare service delivery organizations/facilities. While we recognize that healthcare organizations/facilities within your region can vary considerably, we encourage you to provide your general assessment of these organizations.

Your healthcare organizations need additional guidance in setting specific goals

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Your healthcare organization needs additional guidance in evaluating staff performance.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Your healthcare organizations need more training for new methods/developments in your area of responsibility.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Current pressures to make changes in your healthcare organizations come from patients and family/caregivers.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Current pressures to make changes in your healthcare organizations come from accreditation or licensing authorities.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff in your healthcare organizations have the skills they need to do their jobs.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

More support staff are needed for getting tasks completed.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Frequent staff turnover in your healthcare organizations is a problem.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff in your healthcare organizations usually have enough time to complete assigned duties.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

There are enough staff in your healthcare organizations to meet organizational needs.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Staff in your healthcare organizations are qualified for their duties.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff training and continuing education are priorities in your healthcare organizations.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Staff receive regular in-service training in your healthcare organizations.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

The workload and pressures in your healthcare organizations keep motivation for new training low.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Most records in your healthcare organizations are computerized.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Staff are satisfied with the health data/information systems in your healthcare organizations.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Management in your healthcare organizations have a clear plan for accomplishing the goals.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

The staff in your healthcare organizations work together effectively as a team.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff in your healthcare organizations are free to try out different ideas or techniques.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

The staff in your healthcare organizations are kept well informed by management.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

The heavy workload reduces staff effectiveness.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

It is easy to change routine procedures to meet new conditions.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Management decisions in your healthcare organizations are well planned.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Do you have any other thoughts about your healthcare organizations’ readiness to adopt these indicators?

- No
- Yes

End of Block: Organizational Readiness (DISPLAY IF)

Start of Block: Contact survey (Kim)
Supplementary File 1: PC-QI Organizational Readiness Survey

Thank you for taking the time to complete this survey. Please do not hesitate to contact the Primary Investigator, Dr. Maria Santana (mjsantan@ucalgary.ca), or the Study Coordinator, Kimberly Manalili (kmanalil@ucalgary.ca), should you have any questions about the study.

Our research team is also conducting a series of phone or face-to-face individual interviews with a diverse sample of organizational representatives across Canada, who will be identified through their participation in this survey. The aim of the interviews is to obtain an in-depth understanding of the potential barriers and facilitators to implementing the PC-QIs to measure and evaluate PCC across different sectors of care.

The interviews will be approximately 30-45 minutes in length.

Would you be willing to be contacted for a follow-up interview?

- Yes
- No

End of Block: Contact survey
Supplementary File 2: PC-QI Implementation Interview Guides

PC-QI Implementation Interview Guide
Regional/Provincial/Territorial Organizations: System-level Perspective

Interview Questions

1. Tell me about your work/role(s) at ________. (warm-up question)

2. From your experience, how do organizations decide what to measure and whether to measure something? (your organization, at the regional/provincial level; hospitals/health centres)?
   a. How has COVID-19 influenced decisions around measurement?
   b. How are patients and the public (families, communities) involved in healthcare measurement?
      Probes: What has your experience been with involving patients? Has COVID-19 impacted the extent to which they can be involved?

3. From your perspective, what would it take for your organization to implement or use these PC-QIs?
   a. What are some barriers or challenges to adopt/implement/use them to make changes in how care is delivered?
   b. How has/will COVID-19 affect your capacity to measure person-centred care?
      Probes:
      o Are there any organizational factors that will support implementation and use?
         Specific probes: Resources, motivations - interest in QI and/or PCC, leadership engagement, capacity/knowledge/skills to do QI, existing QI processes and data collection (including existing PREMs used), comfort with data, reporting, PCC as a priority, policies (e.g. Patient Medical Home model) and measurement frameworks, teamwork, work flow implications, patient engagement, culture of learning and innovation, etc.
      o Individual level factors?
         Specific probes: Motivations - interest in QI and/or PCC, ownership, etc.
      o Specific factors related to the indicators?
         Specific probes: validity, measurability, number of PC-QIs
      o Others?
         Specific probes: potential for integration, storage, data systems, linkage capacity to administrative databases, etc.
Supplementary File 2: PC-QI Implementation Interview Guides

PC-QI Implementation Interview Guide
Primary Care Providers: Clinical-level Perspective

Interview Questions

1. Tell me about your work/role(s) at ________. (warm-up question)

2. From your experience, how does your clinic decide what to measure and whether to measure something?
   a. How has COVID-19 influenced decisions around measurement?
   b. How are patients and the public (families, communities) involved in healthcare measurement?
      i. *Probes:* What has your experience been with involving patients? Has COVID-19 impacted the extent to which they can be involved?

3. From your perspective, what would it take for your clinic to implement or use these PC-QIs?
   a. What are some barriers or challenges to adopt/implement/use them to make changes in how care is delivered?
   b. How has/will COVID-19 affect your capacity to measure person-centred care?
   c. *Probes:
   d. Are there any organizational factors that will support implementation and use?
      i. *Specific probes:* Resources, motivations - interest in QI and/or PCC, leadership engagement, capacity/knowledge/skills to do QI, existing QI processes and data collection (including existing PREMs used), comfort with data, reporting, PCC as a priority, policies (e.g. Patient Medical Home model) and measurement frameworks, teamwork, work flow implications, patient engagement, culture of learning and innovation, etc.
   e. Individual level factors?
      i. *Specific probes:* Motivations - interest in QI and/or PCC, ownership, etc.
   f. Specific factors related to the indicators?
      i. *Specific probes:* validity, measurability, number of PC-QIs
   g. Others?
      i. *Specific probes:* potential for integration, storage, data systems, linkage capacity to administrative databases, etc.
Supplementary File 3: Detailed Methods

Study Methods

Study Design

To optimize the implementation of PC-QIs using a theory and evidence-based approach, we chose a mixed methods design to allow us to attain more generalizable findings regarding system-level readiness for implementation as well as to obtain an in-depth understanding of the readiness, barriers, and facilitators to implementing PC-QIs. We conducted an explanatory sequential priorities mixed methods design. We used our findings from our first quantitative objective assessing readiness of system-level organizations (using a survey) to inform a second qualitative objective to explore the potential barriers and facilitators to implementing these indicators for use at both the system-level and the clinical level via individual and group interviews.[1] We identified system-level organizational representatives to interview from those who completed the readiness survey.[2] Results from the survey allowed us to identify specific implementation factors to further explore through the interviews.[2] Taken together, the interpretation of the results provided us with the opportunity to enhance our understanding of the factors that influence PC-QI implementation from both system and clinical perspectives. The “Guidelines for conducting and reporting mixed research in the field of counseling and beyond” were used to guide the design and reporting of this study.[3]

Organizational Readiness Survey for Implementing and Using PC-QIs

Study design and setting: We conducted a web-based survey to assess system level readiness for implementing and using PC-QIs. Representatives of healthcare delivery and
Supplementary File 3: Detailed Methods

Coordinating organizations that guide the development and/or implementation of person-centred care measurement in Canada completed the survey.

**Survey development:** Guided by organizational readiness theory,[4] we co-developed and piloted a web-based survey with study collaborators to ensure face validity. The two-part survey included two components. The first component assessed: 1) Motivation - organizational interest in implementing the PC-QIs; 2) Content and construct validity - perceived “measurability”; 3) Intervention specific capacity - whether the data could be interpreted and used as part of their organization’s quality improvement processes to improve PCC. This survey component was developed *de novo* with the study team.

The second component of the survey included an assessment of general capacity for implementation of the PC-QIs, measuring domains such as: general availability of resources and needed infrastructure, organizational climate, staff capacity, etc. We identified an existing measure through a systematic review of instruments to assess organizational readiness for knowledge translation in healthcare.[5] We adapted a version of the Organizational Readiness for Change (ORC) tool.[6] The ORC is a valid and reliable survey that measures key variables of interest related to organizational readiness and cognitive psychology.[5, 6] Adaptations to this version included shortening the measure to mitigate respondent fatigue.[7] The research team identified 1-2 priority items for each relevant domain on the ORC and minor modifications to language to reflect the context of implementation. Participants were asked to provide overall feedback regarding their readiness to implement the PC-QIs.

We collected participant demographics including organization type and position/role. The survey also included a question about willingness to be contacted for a future interview. Survey
Supplementary File 3: Detailed Methods

development and data collection was supported via a web-based platform called ‘Qualtrics.’ [8]

We tested the survey for face and content validity and revised it over four rounds with the research team and then two rounds with study collaborators. The revisions included improvements to the wording of the questions for component one and general flow. A copy of the survey is available [see Supplementary File 1].

**Participant recruitment:** We identified representatives from Canadian healthcare organizations that lead QI and/or PCC measurement initiatives from a previous environmental scan that our study team conducted.[9] We conducted a google search to confirm contacts previously identified as well as any new potential contacts from published website content. Google search words included the names of provincial or regional healthcare organizations (e.g. Edmonton Oliver Primary Care Network, Vancouver Coastal Health), as well words such as “quality improvement,” “patient or person-centred care measurement,” “staff,” or “team.” We also identified potential contacts through collaborators, such as the Canadian Institute for Health Information, as well as through various national or provincial organizations (e.g. Strategy for Patient-Oriented Research). If contact information for potential participants was not available, we sent an email invitation to the organization to seek a referral to the most appropriate contact in the organization. A sample frame of 55 eligible organizations across Canada was compiled based on our search.

**Data collection:** Potential participants received an email cover letter and formal invitation letter explaining the purpose of the study, ethical approvals, and contact information for investigators. There were asked to provide their consent to participate in the study and confirm that they could comment adequately on organization’s readiness for PC-QI
Supplementary File 3: Detailed Methods

Implementation. Participation was voluntary. Once participants confirmed and provided
consent, they received a copy of the monograph that included the technical specifications and
evidence supporting the PC-QIs, as well as a link providing access to the survey. If the
participant confirmed they were not the appropriate contact, they were asked to provide an
alternative contact for their organization. For those who provided their consent to participate,
email reminders to complete the survey were sent in two-week intervals until survey
completion or until at least a 60% response rate (determined by the study team to be
acceptable) was achieved and representation was obtained from all 13 Canadian
provinces/territories.

Responses were exported into an excel file and de-identified. To avoid duplicate
responses, a “web-link collector” option used cookies to restrict one unique response per
device, and responses were reviewed by the research team.

Data analysis: We analyzed the survey data using STATA15 to obtain a descriptive
summary of all organizations that participated, including type of organization; whether the
organization has or could obtain data for the needed PC-QI (already have/could obtain); were
interested in implementing the PC-QI (somewhat/interested/very interested); have processes
in place to make changes to improve the indicator (yes), and whether the indicator measured
what it is supposed to measure (yes); calculate the respondents’ assessment of organizational
readiness for each section, according to three grouped categories of agree/strongly agree,
neither agree nor disagree, disagree/strongly disagree; and compare differences in responses
for both the PC-QI assessment and organizational readiness between groups for organization
type and region of Canada (Atlantic – Nova Scotia, Prince Edward Island, New Brunswick,
Newfoundland and Labrador, Central – Ontario, Quebec, Northern territories – Yukon, Nunavut, Northwest Territories, Pacific – British Columbia, and Prairies – Alberta, Saskatchewan, Manitoba).

We conducted content analysis for the qualitative feedback to identify emerging themes as well as patterns across organization types or regions.[10] The survey findings were summarized into a two-page document and sent to participants for their review and feedback. No changes were suggested by participants.

Interviews to Explore Barriers and Facilitators to Implementing and Using PC-QIs

**Study design and setting:** For our second objective, we used a qualitative descriptive approach to describe the experiences and perceptions regarding PC-QI implementation, as well as to contrast and compare differences between participant groups.[11] A qualitative descriptive approach has utility in identifying practical improvements to healthcare settings.[12] We conducted both individual and group interviews with survey respondents including system-level stakeholders, primary care providers (including physicians, clinic administrators, nursing staff), and Primary Care Network (PCN) staff. While individual interviews would allow for more in-depth exploration of perceived barriers and facilitators, group interviews with multiple participants from one organization or clinic provided “a greater sense of shared social meanings, or norms, and how these are enacted” [13] and contributed to enhanced understanding of contextual factors that may influence implementation.[14]

With regards to the clinical perspective, for feasibility purposes, we focussed on the specific barriers and facilitators in primary care in Alberta. PCN staff provide quality improvement support to clinics within their regional network. The clinical perspective was not
Supplementary File 3: Detailed Methods

included as part of the organizational readiness survey that was conducted due to foreseen challenges with recruitment of a representative sample of primary care organizations.

**Interview guide development:** Interview guide development was informed by the survey findings as well as the Consolidated Framework for Implementation Research (CFIR).

[15] As a meta-framework, the CFIR provides a comprehensive perspective on the factors that influence implementation, particularly with regards to the context of implementation and from an organizational perspective.[15] This is consistent with the organizational readiness lens that guides our study. The survey findings allowed us to identify specific constructs from the CIFR that would be important to further explore through our interviews (as interview probes). We developed an interview guide for participants providing a system-level perspective and adapted for those with a clinical (primary care perspective) from Alberta to ensure appropriate terminology was used (e.g. clinic vs. organization, etc.). The interview guide was developed by the study authors in consultation with patient partners [see Supplementary File 2]. We pre-tested the interview guide with three study collaborators, two of whom provided a system-level perspective and one a clinical primary care perspective. The interview guides were improved for question clarity and addition of specific prompts (supporting clarifications) and responses options.

**Participant recruitment and inclusion criteria:** We strived to conduct ten system-level interviews and another ten providing a clinical primary care perspective. Purposive sampling was used to obtain a variety of perspectives on barriers and facilitators to PC-QI implementation, striving for maximum variation with regards to participant’s role/position in the organization or clinic, type of organization (government, regional coordinating organization,
Supplementary File 3: Detailed Methods

or health service delivery organization) or clinic (academic, non-academic), geographic region represented, and self-identified gender.[1] For primary care participants, we aimed to obtain representation from all five health zones in Alberta (North, Edmonton, Central, Calgary, and South).

We identified system-level participants from the organizational readiness survey, among those who consented to being contacted for a follow-up interview. We recruited primary care participants through multiple strategies, including referral by our study primary care collaborators, by previous interview participants, and through a review of PCN websites with public contact information listed for quality improvement staff or generic inquiries. Initial contact was made via email and phone to inquire about potential participation from the quality improvement PCN staff and/or referrals to clinical staff working with the PCN. We formally invited potential participants via email and provided with information about the study, the study consent form, and monograph of the PC-QIs. Participants were contacted two times via email, two weeks apart, before discontinuing contact.

**Data collection:** All interviews took place through videoconference (Zoom) or by telephone, based on the preference of the participant(s) and in consideration of participant and researcher safety during the COVID-19 pandemic. One member of the study team conducted interviews throughout the data collection period. Prior to starting each interview, the consent form was reviewed, and participants were provided with the opportunity to ask questions about the consent form and/or the study. Interviews were audio-recorded using a separate digital recorder (not on Zoom), in compliance with University of Calgary research ethics requirements at the time, and field notes were collected. Interviews lasted between 30 and 60
Supplementary File 3: Detailed Methods

Minutes to minimize the burden on participant’s time. Members of the study team met monthly to review data collected to date, discuss emerging themes, and data saturation.

**Data transcription and analysis:** We used Microsoft Excel to summarize interview participant demographics, by proportion, based on self-identified gender, years worked with the organization/clinic, region represented, and type of organization/clinic.

An external transcription service transcribed all audio recordings were transcribed verbatim. The transcripts were reviewed, corrected as needed, and anonymized by the study team. Transcripts were also sent to all interview participants for their review and feedback. Two participants confirmed their review and provided feedback; minor changes were made to one transcript to clarify the description of a QI initiative.

One member of the research team conducted the qualitative data analysis, which included a reading of each transcript and the field notes to become familiarized with the data [13]. We used a deductive qualitative content analysis approach to code the data in NVivo12, with the CFIR as the guiding framework to categorize data according to factors (constructs) influencing implementation.[10, 15] The CIFR was used with the intention of mapping the identified barriers and facilitators to evidence-based implementation strategies, using the Expert Recommendations for Implementing Change (ERIC) tool following this study (identification of strategies to be published elsewhere).[16] The online CFIR codebook ([https://cfirguide.org/tools/](https://cfirguide.org/tools/)) was used to ensure consistency in coding. To enhance trustworthiness,[17] three other members of the study team collectively analyzed 25% of the transcripts, along with the main analyst, to compare coding and discuss potential discrepancies in the interpretation of the CFIR constructs (and/or codebook). An audit trail was created to
Supplementary File 3: Detailed Methods

track decisions around coding and any additions made to the inclusion/exclusion criteria outlined in the CFIR codebook.[17] The codes/CFIR constructs were summarized and organized as “facilitators” or “barriers” to PC-QI implementation. Principles of constant comparison were employed to identify similarities and differences across groups of participants (e.g. system-level vs. clinical level, regions represented, etc.).[18] The study team discussed the codes and grouped them into larger categories, where they could be distilled into broader themes and sub-themes of facilitators and barriers until data saturation was reached and no new themes were observed in the data.[13]

Data interpretation and integration: To enhance the value of the integration between our qualitative and quantitative methods, we developed a joint display (summary table) to support the interpretation and reporting of this mixed methods study.[19] Key survey findings were integrated with the themes and sub-themes identified from the interviews to facilitate the interpretation of the data and refine our themes. The integrated findings from the survey and the interviews were summarized into a two-page document to all survey and interview participants for their review and feedback. No changes were suggested by participants.

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## Supplementary File 4: Summary of Factors to Consider for Implementing PC-QIs

### Facilitators

| Theme 1: Interest in implementation of the PC-QIs |
| --- |
| **Stakeholders perceive value in using PC-QIs** |
| • Most system-level and primary care organizations saw value in using the PC-QIs and in measuring PCC to improve the patient experience and quality of care |
| • Some participants expressed an appreciation for the development of the PC-QIs as gaps were acknowledged in PCC measurement |
| • Participants also expressed a need for these measures to improve PCC |

> “I mean, the indicators you guys have identified, a ton of work that is very obvious. And I would say for the most part, they’re very, very good, like the justification for them and everything else. I think makes sense” – System Level Organization 3

> “The one thing that they do that we haven’t been able to do, and that’s why I’m really interested in what you have, is looking at patient satisfaction and looking at sort of quality indicator that shows a patient is better today than they were 12 months ago, whether it’s mentally, whether it’s physically. That’s the kind of piece that we have been missing and that I’ve been hunting for the best sort of way to do it, because we haven’t done that very well yet.” – Primary Care Organization 2

| **There is provincial/territorial alignment for PCC measurement** |
| • 85% of system-level organizations were interested in most PC-QIs |
| • Interest for system-level organizations depended on alignment with provincial/territorial directions and measurement priorities |
| • This was a particular concern by survey and interview participants from the province of Ontario, where there have been major transitions with regards to organizational structures and development of new policies |

> “And I think that would be a good indication for you on which ones have been identified as a priority within [organization name]. And that’s not to say that others wouldn’t be, like some of them may not be on our list yet, just because we haven’t been able to collect the information required for it yet. But if we

### Barriers

| **PC-QIs have limitations for understanding context** |
| • Understanding context is limited and some system-level and primary care clinics question how meaningful the measurement will be |
| • Some system-level and primary care clinics question how meaningful the measurement will be without understanding the context, which they see is important for PCC |
| • Patient stories were also suggested as a more compelling way promote improvements care and should complement quantitative measures |

> “I think we have to be careful with all of these that we don’t try to quantify the human context. So somehow that needs to be considered.” – System-Level Organization 6

> “I think a lot of people, like, with the humanity in us, we connect to patient stories. So, I think if you find a way to make this about, like, a patient story and them telling their story and how this data helps reflect that, then I think it gets people thinking more about the person and how this data is going to benefit the person and their story.” – Primary Care Organization 1

| **There is a need for tailoring and prioritization of the PC-QIs** |
| • System-level organizations and primary care clinics/organizations (especially) would be more interested in the PC-QIs if there was an opportunity to tailor/adapt them to their specific setting/context (e.g. urban vs. rural, specific populations) |
| • The number of PC-QIs was considered many, where organizations would like to pick and choose which ones to implement |
| • Not all PC-QIs were of interest to organizations, especially if there were not seen as actionable (e.g. Timely access to a primary care provider or the “Friends and Family Test” indicator, where patients indicate whether they would recommend a facility to others) |
| • Survey comments indicate that there was partial measurement of indicators - either different terminology was used, or all components of the PC-QI were not measured |

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are collecting it, I would say that that has been prioritized within the organization.” – System Level Organization 4

**Actionability and effectiveness of the PC-QIs to stimulate change**

- Survey respondents agreed that most PC-QIs “measure what they are supposed to measure”
- Both system-level and primary care organizations/clinics would like to see that the PC-QIs are “actionable”
- Participants suggested existing resources, such as those developed by the Alberta Medical Association (Accelerating for Change Transformation Team) or Accreditation Canada that could help identify effective initiatives to improve PCC if the PC-QIs identify gaps
- The PC-QIs were also seen as a useful tool for communicating with providers about needed improvements

“So if there’s an area that was really a lot lower than the others then that kind of just would help to guide the work that we’re doing as far as that panel management goes. And it also then opens up that communication with the providers as far as what they’re offering in the clinics and maybe what areas again could be improved for in-clinic offers, and then implementing that as well to outreach screening.” – Primary Care Organization 10

**Theme 2: Motivation to implement PC-QIs**

**Organizations respond to patients and policies**

- Current pressures for system-level organizations come from patients (69% agree) and accreditation bodies (83.2%), indicating a responsiveness to patient needs as well as standards that their organizations are required to follow
- Improving PCC is part of strategic plans for most provinces or organizations and alignment with existing policy and measurement priorities is important
- In Alberta, the government and PCNs were considered key organizations for facilitating PC-QI implementation by asking clinics measure PCC

“If Primary Care Networks get a hold of this in itself, and they consider very valuable measures, they can then start to demand of their member this is a requirement – first a recommendation and then ultimately a requirement and help rollout those processes. There aren’t those kind of clinics that are like ours, where we are really driven to do it on our own, and many need to be led

**Strength of the evidence for PC-QIs is unclear**

- While survey respondents agreed that most PC-QIs “measure what they are supposed to measure,” PC-QIs where there were a higher proportion of “no” responses (9-12%) and could be further refined included: Policy on PCC; Culturally competent care; Use of Patient-Reported Outcome Measures (PROMs); Equitable care
- Some participants questioned the demonstrated effectiveness/evidence around measuring PCC and that they would lead to improved outcomes, particularly among primary care clinics and organizations
- Previous implementation of Patient Reported Experience Measures (PREMs) has not been helpful to facilitate improvements in primary care. Data collected seen more as “nice to know,” and delays in reporting make data less useful to act on

“So, patient experience, yes, it’s important. But should it rule? I’m not convinced about the clinical outcomes and the downstream savings for costs
Supplementary File 4: Detailed Summary of Factors to Consider for Implementing PC-QIs

| to that – that’s one of the very beneficial roles of the Primary Care Networks is to lead clinics down that path to say look these are some measures that you should be doing to provide optimal care.” – Primary Care Organization 5 |
|-----------------|-----------------|
| **Standardization and alignment of measurement efforts** | **The need for training keeps motivation low** |
| • Among system-level organizations, some expressed a need for a Pan-Canadian effort for PCC measurement for standardization, where organizations like the Canadian Institute for Health Information, Accreditation Canada, and the Canadian Patient Safety Institute could identify core PC-QIs that all jurisdictions should measure | • 65.5% of system-level organizations agreed that more training is needed for new methods/developments in measurement/QI |
| • Primary care organizations/clinics would like to see some alignment of measurement efforts provincially to avoid duplication or siloed efforts across stakeholders (government, Health Quality Councils, researchers, PCNs, and clinics) | • Some system-level organization, particularly those that are lower-resourced, and primary care organizations confirmed the need for training in QI among staff. |

“I think if you’re able to build a power in a Pan Canadian process, it will make it easier for each jurisdiction independently to get buy-in.” – System-Level Organization 7

“Helping – making it – embed it in things that they might already have to do, so, for instance, if the PCNs need to ask this Schedule B (measurement required by provincial government) question about “Are you satisfied with the experience at your visit today?” You know, that all should be embedded so that we can all get this information that we need, right?” – Primary Care Organization 9

**Surveys can be a potential patient burden**

- Surveys were seen to be too long for patients to complete

“Helping – making it – embed it in things that they might already have to do, so, for instance, if the PCNs need to ask this Schedule B (measurement required by provincial government) question about “Are you satisfied with the experience at your visit today?” You know, that all should be embedded so that we can all get this information that we need, right?” – Primary Care Organization 9

“Engagement of provincial/territorial leadership and champions is critical”

- Engagement of leadership at all levels was seen as an important facilitator for buy-in and for motivating staff to measure PCC.
- Relationships were seen as essential for QI initiatives. From the perspective of PCNs, having strong relationships with the clinics, providers, and managers was essential to support QI efforts.
- Having champions at the local level (unit or clinic) was seen as a key facilitator for uptake and use; physicians value the experience and recommendations of their peers.
- Engaging physicians requires discussing how the PC-QIs would benefit them and their patients

“Engaging physicians requires discussing how the PC-QIs would benefit them and their patients in healthcare, [or] reduced morbidity for that patient – as long as they get the right clinical care, even if they’re bitching and complaining the whole way.” – Primary Care Organization 4

“In one particular clinic, a few of the patients that I work with expressed concern about kind of their front-end experience, not with the physician...just felt they weren’t treated well, felt they weren’t heard and expressed that they’d expressed those concerns to their physician, and nothing ever changed.” – Primary Care Organization 10

**The need for training keeps motivation low**

- 65.5% of system-level organizations agreed that more training is needed for new methods/developments in measurement/QI
- Some system-level organization, particularly those that are lower-resourced, and primary care organizations confirmed the need for training in QI among staff.

“It’s not something that a lot of clinics are comfortable with or know what to do about, and so I think we personally still have a lot of growth to do in terms of how we capture this information, and act on it, and engage with patients and design person-centred processes.” – Primary Care Organization 6

“Engagement of leadership at all levels was seen as an important facilitator for buy-in and for motivating staff to measure PCC.” – Primary Care Organization 5

“I guess one of the challenges is just overburdening patients with surveys. And when we are serving patients wanting to keep those surveys quite brief.” – Primary Care Organization 9
Supplementary File 4: Detailed Summary of Factors to Consider for Implementing PC-QIs

- Champions to target in primary care were those considered to be “early adopters” or “innovators”
- The College of Physicians and Surgeons and the Medical Association were two organizations that primary care organizations/clinics saw as important to engage for PC-QI implementation

“It comes down to the leadership and their vision for the organisation and how PFCC indicators fit into that vision. And there are a lot of competing priorities in healthcare...And leadership has to make that a priority.” – System-Level Organization 9

“For physicians, a little bit of healthy sort of comparison or competition has, I think, usually been found to stimulate interest and change when you actually see how you compare to others in your cohort. So, I think that some degree of reasonable comparison is sometimes a good thing.” – Primary Care Organization 4

| Theme 3: Resources and capacity needed to collect and use data for improvements | Staff are time and resource-constrained |
|---|---|
| There is strong capacity for QI for most system-level or higher-resourced primary care organizations | • 0% of system-level organizations agreed that staff usually have enough time to complete assigned duties |
| Among system-level organizations, provincial/regional governments and coordinating organizations had the strongest capacity to collect and use data for PC-QIs (especially Prairie and Atlantic provinces) compared to health service delivery organizations | • 70.4% of system-level organizations disagreed that staff were satisfied with the health data/information systems, which has implications for collecting, managing, and reporting on PC-QI data |
| Most system-level and some primary care organizations (generally urban, academic/teaching clinics) have dedicated people or partners to support QI by providing training, help to manage, analyze, report, and interpret data | • Lower resourced organizations/clinics and Northern territory government representatives described less capacity to collect, report, and act on data for PC-QIs |
| Most organizations had strong networks with partners, including with the provincial government in some provinces, namely Ontario, New Brunswick, and British Columbia. In primary care in Alberta, some clinics were supported by the PCNs and the Health Quality Council | • Some participants discussed the lack of funding for QI and attributed it to challenging fiscal and political environment in their provinces |
| Five PC-QIs considered highly feasible to implement by system-level organizations (75% of organizations could get information for the PC-QI and have processes to make changes) included: Structures to report PCC performance; Communication between patient and nurse; Coordination of care; Patient and caregiver involvement in decisions about care; Overall experience | • Primary care participants in Alberta noted the lack of dedicated QI staff in most clinics, particularly family practices and rural clinics |

“I think in addition to that just the current environment that we’re in in Ontario we are resource constrained...And so even just from the perspective of actually having people to be able to do the work is certainly a challenge, even outside of the Ontario Health service system and structure.” – System-Level Organization 7
Supplementary File 4: Detailed Summary of Factors to Consider for Implementing PC-QIs

“...We have a fairly robust framework of measurement that we’ve had implemented for quite some time...but our next next step forward is expanding to measures of greatest significance directly to patients. And that includes, again, probably direct patient engagement in evaluating and helping to determine those measures as well.” – Primary Care Organization 2

Technology supports implementation and use of PC-QIs

- Technology was considered an important facilitator for helping with data collection (tablets, QR codes, e-mail) and more real-time reporting (dashboards)
- Regions or clinics with Electronic Medical/Health Records are better able to integrate data for PC-QIs

“It’s not quite as slick as I would like it to be but what it does allow is for you to use your cell phone, scan the QR code, do the survey, send it in and you’re done and it’s real-time. So for example, if you’re laying in your hospital bed, you scan the poster on the wall in the hallway and send in your feedback.” – System-Level Organization 2

“We have all the emails for our patients on file. When we choose to do a survey, we ask people, as they come in, if they would be OK receiving an email survey, and then we send – it sends it out via email to them, and then the Health Quality Council of Alberta kind of collates all the data and gives us the report back in the end.” – Primary Care Organization 6

PC-QIs can conflict with priorities for patient care and other measurement

- While PCC measurement was seen as important by most participants, participants were challenged by competing priorities, including patient care and other required measurement and projects

“...Given the stuff resources we have, it’s hard to start collecting something new that isn’t already collected without dropping something else off. And then the question becomes, what can we actually drop?” – System-Level Organization 4

COVID-19 has impacted PCC measurement

- COVID-19 has diverted resources away from patient experience measurement and have caused staff (especially in primary care) to feel like they had no additional capacity to undertake more measurement efforts. Some have continued to collect patient experiences or began to capture patient experiences with virtual care
- Less in person patient flow and inability to use paper surveys in the clinics have challenged efforts to measure PCC

“But you have frontline staff who are exhausted, overwhelmed, have COVID fatigue, and it’s like, “Don’t ask me to, like, now collect this data on top of everything else I’m doing.” – System-Level Organization 1

“I felt it was difficult to engage staff at this time... [before] with our patient experience surveys, we had the support nurses highly involved, and the clinic staff, and everybody kind of knew, but right now it’s hard to go in and say can you add this onto your plate right now.” – Primary Care Organization 10

| Theme 4: Organizational climate for implementation of PC-QIs |
|------------------------------------------------------------|
| **PCC is part of the culture in most organizations/clinics** |
| In primary care, PCC aligns with the Patient Medical Home model, as promoted by the Canadian College of Family Physicians |
| **Primary care funding models do not support PC-QI implementation** |

For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml
Supplementary File 4: Detailed Summary of Factors to Consider for Implementing PC-QIs

- Most system-level organizations and some primary care organizations (mainly PCNs) and clinics had well established programs around patient engagement and obtaining patient feedback (e.g. patient advisory groups, conducting focus groups in the community)

“There’s going to be an engagement with the community to understand what matters to them, and what they think we should focus measuring, and also an engagement strategy with patient family advisors.” – System-Level Organization 5

“...For our patient engagement group, I’m the liaison with them...So we ask them for feedback. So if they happen to come up with something that, “Oh, I think it would be a good idea to also do this”, we definitely consider that to incorporate it into what we’re working on.” – Primary Care Organization 2

PC-QI implementation should fit with the workflow
- Primary care organizations/clinics emphasized the need engage stakeholders to ensure implementation of the PC-QIs fits with the existing clinic workflow and processes as much as possible to minimize disruption to patient care

“I think just getting everybody’s buy in, like all the stakeholders, especially the ones that will be doing the work. Just make sure that it’s, I mean, most of the stuff are impactful, but just that doesn’t take over their daily operations, I suppose.” – Primary Care Organization 3

Most organizations have a culture of learning
- Some system-level organizations and primary care clinics spoke about having positive environments for learning, where staff are encouraged to bring in new ideas

“It’s a no-blame culture. So, if somebody does something that may be not the right thing, we certainly have a no blame culture. And I think people feel comfortable bringing forward concerns...There’s no repercussions to them.” – System-Level Organization 10

“...Anybody in our clinic is able to sort of bring ideas forward and initiate things.” – Primary Care Organization 5

- Additional data collection is especially challenging for physicians due to time and funding models (fee for service) that do not allow for dedicated time for QI
- There is a need to design implementation in a way that requires as little physician time as possible to support PC-QI adoption and use. Two physicians suggested financial incentive models to support use of the PC-QIs

“It’s difficult to schedule time with them because they have to meet their quotas, right. And they have to be available to their patients too...I think the biggest hurdle is just finding time that the physicians are able to give towards that” – Primary Care Organization 8

“And so if I have help with it, it makes it a heck of a lot easier. But I do admit, I have to be strong armed a little bit and I have to think about it and I have to be pushed and prodded and even though I know it’s good right?” – Primary Care Organization 7

Variability among health provider and leadership readiness in terms of PCC
- System-level and primary care interview participants noted that not all health providers and leadership see PCC as a priority
- There is some variability across sectors. For example, primary care, pediatrics, cancer care, and palliative care as seen to be the most person-centred sectors
- There is a lack of understanding around PCC, with different ideas about what it means

“I guess it’s the dismissing this data as not being legitimate because it’s only people who want to complain that fill these surveys out. So, I know the quality department has done a lot of work to really focus on the science and the evidence that this is a validated survey and they have all of that information to indicate that no, that’s not the case.” - System-Level Organization 9

“I guess that’s the thing of person-centered. Like, for every person, is they come with a slightly different lens.” - System-Level Organization 8
Informing Person-Centred Quality Indicator Implementation

Mixed Methods Study Reporting Checklist

From: Leech NL, Onwuegbuzie AJ. Guidelines for conducting and reporting mixed research in the field of counseling and beyond. Journal of Counseling & Development. 2010 Jan;88(1):61-9.

1. Research Formulation

1.1.1. Treat each relevant article as data that generate both qualitative (e.g., qualitative findings, literature review of source article, source article author’s conclusion) and quantitative (e.g., p values, effect sizes, sample size score reliability, quantitative results) information that yield a mixed research synthesis. Pg. 5

1.1.2. Subject each document selected as part of the literature review to summarization, analysis, evaluation, and synthesis. Pg. 5

1.1.3. Provide literature reviews that are comprehensive, current, and rigorous; that have been compared and contrasted adequately; and that contain primary sources that are relevant to the research problem under investigation, with clear connections being made between the sources presented and the present study. Pg. 4-5

1.1.4. Present clearly the theoretical/conceptual framework. Pg. 6-7; Pg. 9

1.1.5. Assess the findings stemming from each individual study and the emergent synthesis for trustworthiness, credibility, dependability, legitimization, validity, plausibility, applicability, consistency, neutrality, reliability, objectivity, confirmability, and/or transferability. Pg. 5

1.1.6. Present the goal of the study (i.e., predict; add to the knowledge base; have a personal, social, institutional, and/or organizational impact; measure change; understand complex phenomena; test new ideas; generate new ideas; inform constituencies; and examine the past). Pg. 5-6

1.2.1. Specify the objective(s) of the study (i.e., exploration, description, explanation, prediction, and influence). Pg. 5-6

1.3.1. Specify the rationale of the study. Pg. 6; Supplementary File 3

1.3.2. Specify the rationale for combining qualitative and quantitative approaches (i.e., participant enrichment, instrument fidelity, treatment integrity, and significance enhancement). Pg. 6

1.4.1. Specify the purpose of the study. Pg. 5-6

1.4.2. Specify the purpose for combining qualitative and quantitative approaches (e.g., identify representative sample members, conduct member check, validate individual scores on outcome measures, develop items for an instrument, identify barriers and/or facilitators within intervention condition, evaluate the fidelity of implementing the intervention and how it worked, enhance findings that are not significant, compare results from the quantitative data with the qualitative findings). Pg. 6; Pg. 11
Informing Person-Centred Quality Indicator Implementation

1.5.1. Avoid asking research questions that lend themselves to yes/no responses. **Research objectives are presented rather than research questions in consideration of manuscript length, however objectives were designed to not illicit only yes/no responses.**

1.5.2. Present mixed research questions (i.e., questions that embed both a quantitative research question and a qualitative research question within the same question) when possible. **See note above.**

### 2. Research Planning

2.1.1. Specify the initial and final sample sizes for all quantitative and qualitative phases of the study. **Pg. 8; Pg. 10; Pg. 12**

2.1.2. Present all sample size considerations made for the quantitative phase(s) (i.e., a priori power) and qualitative phases (e.g., information-rich cases). **Pg. 8; Pg. 10; Pg. 12-14**

2.1.3. Present the sampling scheme for both the quantitative and qualitative phases of the study. **Pg. 8-10**

2.1.4. Describe the mixed sampling scheme (i.e., concurrent–identical, concurrent–parallel, concurrent–nested, concurrent–multilevel, sequential–identical, sequential–parallel, sequential–nested, and sequential–multilevel). **Pg. 6**

2.1.5. Clarify the type of generalization to be made (i.e., statistical generalization, analytic generalization, and case-to-case transfer) and link it to the selected sampling design, sampling scheme, and sample size(s). **Pg. 7-9**

2.2.1. Outline the mixed research design. **Pg. 6**

2.2.2. Specify the quantitative research design (i.e., historical, descriptive, correlational, causal–comparative/quasi-experimental, and experimental). **The design is descriptive – Pg. 7**

2.2.3. Specify the qualitative research design (e.g., biography, ethnographic, auto-ethnography, oral history, phenomenological, case study, grounded theory). **Pg. 9**

### 3. Research Implementation

3.1.1. Outline the mixed data collection strategy. **Pg. 8; Pg. 10**

3.1.2. Present information about all quantitative and qualitative instruments and the process of administration. **Pg. 7-10**

3.2.1. Outline the mixed data collection strategy (i.e., data reduction, data display, data transformation, data correlation, data consolidation, data comparison, and data integration). **Pg. 11**

3.2.2. Provide relevant descriptive and inferential statistics for each statistical analysis. **Pg. 12, Table 1; Pg. 14; Table 2**

3.2.3. Discuss the extent to which the assumptions (e.g., normality, independence, equality of variances) that underlie the analyses were met, as well as any observations that might have distorted the findings (e.g., missing data, outliers). **Pg. 24 (limitations)**

3.2.4. Specify the statistical software used. **Pg. 8**
Informing Person-Centred Quality Indicator Implementation

3.2.5. Specify where the responsibility or authority for the creation of categories resided (i.e., participants, programs, investigative, literature, or interpretive), what the grounds were on which one could justify the existence of a given set of categories (i.e., external, rational, referential, empirical, technical, or participative), what was the source of the name used to identify a given category (i.e., participants, programs, investigative, literature, or interpretive), and at what point during the research process the categories were specified (i.e., a priori, a posteriori, or iterative). Pg. 7; Supplementary File 3, Pg. 2

3.2.6. Specify the name of the technique used to analyze the qualitative data (e.g., content analysis method of constant comparison, discourse analysis, componential analysis, keywords in context, analytic induction, word count, domain analysis, taxonomic analysis). Pg. 10-11

3.2.7. Specify the qualitative software used. Pg. 11

3.3.1. Discuss the threats to internal validity, external validity, and measurement validity and outline the steps taken to address each of these threats to internal validity, external validity, and measurement validity. Pg. 23-24 (strengths and limitations)

3.3.2. Discuss the threats to trustworthiness, credibility, dependability, authenticity, verification, plausibility, applicability, confirmability, and/or transferability of data and outline all verification procedures used. Pg. 23-24 (strengths and limitations)

3.3.3. Discuss mixed research legitimation types (i.e., sample integration legitimation, insider–outsider legitimation, weakness minimization legitimation, sequential legitimation, conversion legitimation, commensurability legitimation, multiple validities legitimation, and political legitimation). Not specifically mentioned, but the study uses sample integration legitimation and weakness minimization legitimation

3.4.1. Interpret relevant types of significance of the quantitative findings (i.e., statistical significance, practical significance, clinical significance, and economic significance). Pg. 21

3.4.2. Conduct post hoc power analysis for all statistically nonsignificant findings. N/A

3.4.3. Interpret the significance (i.e., meaning) of qualitative findings. Pg. 21

3.4.4. Discuss criteria for evaluating findings in mixed research studies (e.g., within-design consistency, conceptual consistency, interpretive agreement, interpretive distinctiveness, design suitability, design fidelity, analytic adequacy, interpretive consistency, theoretical consistency, integrative efficacy). Not specifically discussed criteria, but assessed on Pg. 23-24

3.5.1. Describe all steps of the mixed research process. Pg. 6-11

3.5.2. Describe the context in which the mixed research study took place. Pg. 7-10

3.5.3. Ensure that the mixed research report is accurate and complete; does not distort differences within and among individuals and groups; is free from plagiarism or misrepresentation of the ideas and conceptualizations of other scholars; and contains findings that are adequately accessible for reanalysis, further analysis, verification, or replication. Confirmed

3.5.4. Present all ethical considerations that were addressed in the study (e.g., informed consent, confidentiality, incentives, funding sources, potential conflicts of interest, biases). Pg. 26-28
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3.5.5. Specify study approval in accordance with an institutional review board either in the report or in the cover letter submitted to the editor. Pg. 6
3.5.6. Present recommendations for future research that culminate in a validation, replication, or extension of the underlying study. Pg. 24
Informing the Implementation and Use of Person-Centred Quality Indicators: A Mixed Methods study on the Readiness, Barriers, and Facilitators to Implementation in Canada

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Informing Person-Centred Quality Indicator Implementation

**Title:** Informing the Implementation and Use of Person-Centred Quality Indicators: A Mixed Methods study on the Readiness, Barriers, and Facilitators to Implementation in Canada

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Abstract

Importance: Increasingly, healthcare organizations are implementing measures for Person-Centred Care (PCC). However, the factors that influence their uptake and use are not often considered.

Objective: To ensure optimal implementation of Person-Centred Quality Indicators (PC-QIs), we assessed the readiness of healthcare organizations across Canada and explored their perceived barriers and facilitators to implementing and using PC-QIs.

Methods: We conducted a survey with representatives of healthcare organizations that guide the development and/or implementation of PCC measurement in Canada. The survey comprised two sections that: 1. assessed readiness for using PC-QIs, and 2. was based on the Organizational Readiness for Change Assessment tool. We summarized the survey results using descriptive statistics. We then conducted follow-up interviews with organizations representing system and clinical-level perspectives to further explore barriers and facilitators to implementing PC-QIs. The interviews were informed by and analyzed using the Consolidated Framework for Implementation Research.

Results: 33 Canadian regional healthcare organizations, across all 13 provinces/territories, participated in the survey. Only five of 26 PC-QIs were considered highly feasible to implement for 75% of organizations and included: coordination of care, communication, structures to report performance, engaging patients and caregivers, and overall experience. A representative
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48 sample of 10 system-level organizations and 11 primary care organizations/clinics participated in interviews. Key barriers identified were: resources and staff capacity for quality improvement, a shift in focus to COVID-19, and health provider motivation. Facilitators included: prioritization of PCC measurement, leadership and champion engagement at all levels, alignment with ongoing provincial strategic direction and measurement efforts, and the use of technology for data collection, management, and reporting.

54

Conclusions: Despite high interest and policy alignment to use PC-QIs “readiness” to implement them effectively remains a challenge. Efforts are needed to ensure organizations are supported to collect, use, and report PCC data to make the needed improvements that matter to patients.

58 Article Summary

59 Strengths and Limitations of this Study:

61 • This study uses a rigorous, theory, and evidence-informed implementation science approach to assess readiness, barriers, and facilitators to PC-QI implementation from both a system-level perspective and clinical perspective.

64 • Our mixed methods study design enabled us to enhance the generalizability of our findings by surveying healthcare organizations across Canada, while obtaining a more in-depth understanding of the barriers and facilitators of PC-QI implementation.

67 • Study participants may be those interested in using the PC-QIs or have greater capacity to implement them, which may impact our overall assessment of readiness for implementation.
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Background

Person-centred care (PCC) is a key component of high quality healthcare, which actively engages patients and their caregivers in care decisions and considers patient needs, preferences, and values.[1, 2] A focus on “person-centredness” as opposed to “patient-centredness” promotes a more holistic perspective on care, which is not limited to a person’s disease or illness, but also acknowledges the factors that influence a person’s well-being.[1]

PCC is a model of care that remains aspirational for many healthcare jurisdictions and sectors of care. However, in practice it has been challenging to implement as it requires changes in healthcare structures and processes.[3, 4]

Person-Centred Quality Indicators (PC-QIs) offer an opportunity to drive changes needed to improve the delivery of PCC.[5] Developed by Santana et al. and based on the Donabedian model for quality of care, these generic indicators (non-sector specific) are classified based on their evaluation of healthcare “structures” (e.g. policies or programs, physical structures for providing care), “processes” (interactions between patients, caregivers, healthcare providers, and the healthcare system) and “outcomes” (e.g. patient and health system outcomes).[6] Examples of PC-QIs that assess healthcare structures include whether organizations have a policy for PCC or health information technology to support PCC. Processes PC-QIs include indicators that measure patient experiences related to compassionate care, communication with their healthcare providers, and patient involvement in decisions about their care. PC-QIs that evaluate outcomes of PCC include patient perceptions around the affordability of care and their overall experience with their care.
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Quality indicators are used to help national and provincial/regional organizations and health facilities monitor and evaluate the quality of care provided. They provide a quantitative measure that identifies gaps in care to guide healthcare providers and quality improvement (QI) staff in making targeted improvements.[7, 8] While indicators are routinely implemented to enhance healthcare system performance, little research has been done to understand the readiness of organizations to use them and other factors that influence implementation.[9] This has important implications for adoption of the indicators, effective use for QI, as well as patient care and outcomes.

Although factors that influence quality indicator implementation have been studied in intensive care,[10] dementia, [11] and palliative care settings, [12] the use of generic quality indicators intended for use by diverse organizations (e.g. national/regional governments, QI organizations), and across various care settings, have not been explored. The use of PC-QIs also introduces another layer of complexity as it requires the engagement of patients to collect their experiences with care (mainly through Patient-Reported Experience Measures (PREMS)). As such, with increasing interest to measure and improve PCC, there is a need to identify and evaluate effective strategies that will promote uptake and use of PC-QIs for wide application.

The assessment of barriers and facilitators to implementation is critical to identifying implementation strategies.[13, 14] While barriers and facilitators have typically been assessed at the individual level, there is growing recognition that for large-scale organizational change efforts, it is critical to understand factors that influence the collective behaviour change that results in systems re-design.[15] This is particularly relevant to QI initiatives, which involve multiple interdisciplinary team members, such as physicians, nurses, administrative staff, and
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data managers. Understanding aspects of readiness allows one to determine an organization’s
capacity and willingness to implement evidence-based interventions, such as PC-QIs, into
practice.[16] Moreover, an exploration of the implementation context is also important for
identifying barriers and facilitators to change.[17]

As part of a program of research developing and implementing PC-QIs for system-level use
in Canada, our study aimed to assess readiness of organizations to implement PC-QIs and
explore barriers and facilitators to implementation, from the perspective of Canadian
provincial/regional/territorial quality improvement leads (representing a “system-level”
perspective) and health care providers (clinical perspective). The specific objectives included: 1.
assessing readiness of system-level organizations to implement PC-QIs, and 2. exploring
potential barriers and facilitators to implementing PC-QIs for use at both system and clinical
levels. This study was approved by the University Health Research Ethics Boards (REB15-2846)
at the University of Calgary.

Methods

Study Design

To optimize the implementation of PC-QIs using a theory and evidence-based approach,
we chose a mixed methods design to attain more generalizable findings regarding system-level
readiness for implementation as well as obtain an in-depth understanding of the readiness,
barriers, and facilitators to implementing PC-QIs. We conducted an explanatory sequential
priorities mixed methods design, where the findings from our first quantitative objective
assessing readiness of organizations informed our second qualitative objective to explore the
potential barriers and facilitators to implementing these indicators.[18] The “Guidelines for
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... conducting and reporting mixed research in the field of counseling and beyond” were used to

guide the design and reporting of this study.[19]

Patient and Public Involvement

Patient and community partners are involved as part of the study team for this program of

research on developing and implementing PC-QIs.[5] For this particular study, a patient partner

was involved in the development of the interview guide, to ensure that the patient perspective

is reflected in the questions asked. Patient and community partners will also be involved in the

coop-creation of knowledge dissemination materials and in stakeholder meetings regarding the

application of this study’s findings into practice.

Organizational Readiness Survey for Implementing and Using PC-QIs

Study design and setting: We conducted a web-based survey to assess system level

readiness for implementing and using PC-QIs. Representatives of healthcare delivery and

coordinating organizations that guide the development and/or implementation of PCC

measurement in Canada completed the survey.

Survey development: Guided by organizational readiness theory,[16] we co-developed

and piloted a web-based survey with study collaborators to ensure face validity. The survey

included two components. The first assessed: 1) Motivation - organizational interest in

implementing PC-QIs; 2) Content and construct validity - perceived “measurability”; 3)
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160 Intervention specific capacity - whether the data could be interpreted and used as part of their organization’s QI processes to improve PCC.

162 The second component of the survey included an assessment of general capacity for implementation, measuring domains such as: general availability of resources and needed infrastructure, organizational climate, and staff capacity. We used an adapted version of the validated Organizational Readiness for Change (ORC) tool [20], whereby the tool was shortened to minimized respondent fatigue. Questions under each domain were prioritized based on relevancy to the context of QI. Participants were asked to provide qualitative feedback regarding their readiness to implement the PC-QIs and to confirm their willingness to be contacted for a future interview. Survey development and data collection was supported via a web-based platform called ‘Qualtrics.’[21] A copy of the survey is available [see Supplementary File 1].

Participant recruitment: We identified representatives from Canadian healthcare organizations that lead QI and/or PCC measurement initiatives from a previous environmental scan we conducted.[22] We also identified potential contacts through our collaborator, the Canadian Institute for Health Information. A sample frame of 55 eligible organizations across Canada was compiled. Participant details are included in the Results section below.

Data collection: Potential participants were invited to participate via email invitation. Once participants confirmed their ability to respond to questions regarding their organization’s readiness to use PC-QIs and consented, they received a monograph with the technical specifications and evidence supporting the PC-QIs, and a link to the survey. Participants who consented received reminders in two-week intervals until survey completion or until at least a
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60% response rate was achieved (determined by the study team to be acceptable) and representation was obtained from all 13 Canadian provinces and territories.

Data analysis: We analyzed the survey data using STATA15 to obtain a descriptive summary of all organizations that participated, including:

- Organization type (health service delivery organization, regional coordinating organization, both and health service delivery organization and regional coordinating organization, and other – provincial or territorial government/Ministry of Health)
- Whether the organization has or could obtain data for the needed PC-QI (already have/could obtain)
- Whether the organization was interested in implementing the PC-QI (somewhat/interested/very interested)
- Whether the organization have processes in place to make changes to improve the indicator (yes); and
- Whether the indicator measured what it is supposed to measure (yes).

We calculated the respondents’ assessment of organizational readiness for each section and compared differences in responses between groups for organization type and region of Canada.

The regions of Canada were defined as: Atlantic, comprised of the provinces of Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland and Labrador; Central, including the provinces of Ontario and Quebec; Northern territories, including Yukon, Northwest Territories, and Nunavut; Pacific, comprising the province of British Columbia; and Prairies, including the provinces of Alberta, Saskatchewan, and Manitoba). We conducted content analysis for the
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204 qualitative feedback to identify emerging themes as well as patterns across organization types
205 or regions.[23] The survey findings were summarized and sent to participants for their review
206 and feedback.

207 Interviews to Explore Barriers and Facilitators to Implementing and Using PC-QIs

208 Study design and setting: For our second objective, we used a qualitative descriptive
209 approach to describe the experiences and perceptions regarding PC-QI implementation and to
210 contrast and compare differences between participant groups. Groups compared included
211 those that provided a system-level perspective, a clinical primary care perspective, different
212 types of organizations, including health service delivery organizations, regional coordinating
213 organizations, provincial or territorial governments, as well as different types of primary care
214 clinics and organizations, such as academic centres and those serving primarily rural
215 populations.[24] We conducted both individual and group interviews with survey respondents
216 to obtain a system-level perspective, as well as primary care providers and Primary Care
217 Network (PCN) staff who provided a clinic-level perspective. Primary care providers who were
218 interviewed included physicians, clinic administrators, QI managers, and nursing staff. Primary
219 Care Networks were interviewed as they offer QI support to primary care clinics, such as
220 helping to facilitate discussions with physicians and clinic staff to make improvements in
221 processes of care. Primary Care Networks also support data management, analysis and
222 reporting back to the clinics. The clinical perspective was limited to primary care in the province
223 of Alberta for feasibility, as the University of Calgary is situated within Alberta. Furthermore,
224 future research is focused on piloting and studying the implementation of the PC-QIs in primary
225 care in Alberta.
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While individual interviews would allow for more in-depth exploration of perceived barriers and facilitators, group interviews with multiple participants from one organization or clinic provide “a greater sense of shared social meanings, or norms, and how these are enacted” [25] and contribute to enhanced understanding of context.[26]

**Interview guide development**: Interview guide development was informed by the survey findings and the Consolidated Framework for Implementation Research (CFIR).[27] The CFIR provides a comprehensive perspective on the factors that influence implementation, particularly regarding implementation context and from an organizational perspective, consistent with the organizational readiness lens that guides our study.[27] The survey findings allowed us to identify specific constructs from the CFIR that would be important to further explore through our interviews. The interview guide was developed by the study authors in consultation with a patient partner and pre-tested with study collaborators [see Supplementary File 2].

**Participant recruitment and inclusion criteria**: We strived to conduct ten system-level interviews and ten clinical primary care interviews. Purposive sampling was used to obtain a variety of perspectives, striving for maximum variation with regards to participant’s role/position in the organization or clinic, type of organization or clinic, geographic region represented, and self-identified gender.[18] For primary care participants, we aimed for representation from all five health service zones in the province of Alberta defined as North, Edmonton, Central, Calgary, and South zones. We identified system-level participants from the organizational readiness survey and recruited primary care participants through referral by our study primary care collaborators and previous interview participants, and a review of Primary
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250 Care Network websites with public contact information listed for QI staff. Participants were
251 invited via email. Participant details are included in the Results section below.

252 **Data collection:** All interviews took place through videoconference (Zoom) or by
253 telephone, based on the preference of the participant(s) and in consideration of safety during
254 the COVID-19 pandemic. Interviews were audio-recorded and field notes collected. Interviews
255 lasted between 30 and 60 minutes, whereby individual interviews were 38 minutes on average
256 and group interviews 45 minutes on average. Members of the study team met monthly to
257 review data collected to date, discuss prominent themes, and data saturation.

258 **Data transcription and analysis:** An external transcription service transcribed all audio
259 recordings verbatim. The transcripts were reviewed, corrected as needed, and anonymized by
260 the study team. Transcripts were also sent to all interview participants for their review and
261 feedback.

262 KM conducted the qualitative data analysis, which included a reading of each transcript
263 and the field notes to become familiarized with the data.[25] We used a deductive qualitative
264 content analysis approach to code the data in Nvivo12, with the CFIR as the guiding framework
265 to categorize data according to factors (constructs) influencing implementation.[23, 27] The
266 CIFR was used with the intention of mapping the identified barriers and facilitators to evidence-
267 based implementation strategies, using the Expert Recommendations for Implementing Change
268 (ERIC) tool following this study.[28] The strategies identified from this barrier and facilitator
269 assessment will be published elsewhere. To enhance trustworthiness,[29] three other
270 members of the study team (MJS, CS, MOB) collectively analyzed 25% of the transcripts, along
271 with the KM, to compare coding and discuss potential discrepancies in the interpretation of the
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CFIR constructs and codebook. The codes/CFIR constructs were summarized and organized as “facilitators” or “barriers” to PC-QI implementation. The study team discussed the codes and grouped them into larger categories, where they could be distilled into broader themes and sub-themes of facilitators and barriers until data saturation was reached and no new themes were observed in the data.[25]

Data interpretation and integration: To enhance the value of the integration between our qualitative and quantitative methods, we developed a joint display to support the interpretation and reporting of this mixed methods study.[30] Key survey findings were integrated with the themes and sub-themes identified from the interviews to facilitate the interpretation of the data and refine our themes. The integrated findings from the survey and the interviews were summarized and sent to all survey and interview participants for their review and feedback. Additional details regarding the methods can be found in Supplementary File 3.

Results

Organizational Readiness Survey:

The organizational readiness survey was conducted between November 2019 to March 2020. A total of 33 of 55 Canadian “system-level” organizations that were contacted participated. We attained representation from all 13 provinces and territories across Canada, with a total response rate for 60% (33/55 organizations). 27.3% (15/55) of organizations were lost to follow-up after initial contact and/or consent to participate and 12.7% (7/55) of organizations declined to participate due to transitions within the provincial healthcare system.
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That resulted in challenges in available staff time and staff attrition, shifting responsibilities due to COVID-19, or use of PC-QIs not being a focus of their organization.

Most representation came from the provinces of Ontario and British Columbia who have the greatest number of eligible organizations, each representing 21% of responses. About half of organizations were regional coordinating organizations (51.6%), followed by health service delivery organizations (29.0%). See Table 1 for a summary of the survey participant organizations.

Table 1: Survey Participant Organizations, by % (n)

| Organization Demographics | % (n) | Response Rate % (N=55) |
|---------------------------|------|------------------------|
| Provinces/Territories Represented (N=13) | 100 % (13/13) | |
| Organizations Surveyed by Province/Territory (N=33) | | 60% (33/55) |
| Alberta | 6.1% (2) | 100% (2/2) |
| British Columbia | 21.2% (7) | 63.6% (7/11) |
| Manitoba | 15.2% (5) | 62.5% (5/8) |
| New Brunswick | 6.1% (2) | 66.7% (2/3) |
| Newfoundland & Labrador | 6.1% (2) | 50.0% (2/4) |
| Northwest Territories | 3.0% (1) | 100% (1/1) |
| Nova Scotia | 6.1% (2) | 100% (2/2) |
| Nunavut | 3.0% (1) | 100% (1/1) |
| Ontario | 21.2% (7) | 36.8% (7/19) |
| Prince Edward Island | 3.0% (1) | 100% (1/1) |
| Québec | 3.0% (1) | 100% (1/1) |
| Saskatchewan | 3.0% (1) | 50.0% (1/2) |
| Yukon | 3.0% (1) | 100% (1/1) |
| Type of Organization (N=33) | | |
| Health Service Delivery Organization | 29.0% (9) | |
| Regional Coordinating Organization | 51.6% (16) | |
| Both | 6.1% (2) | |
| Other (Provincial government/Ministry of Health) | 12.1% (4) | |

Table 2 provides a summary of the key survey findings for each PC-QI assessed by the organizations and their reported readiness to implement the PC-QIs. These results are also...
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integrated with the interview findings below. The survey identified a further need to explore specific facilitators and barriers to implementation through interviews, particularly with regards to organizational readiness and the perspective of clinical staff, who would be collecting and using the data for QI. These factors for implementation further explored through the interviews included: the importance of aligning with provincial directions for PCC measurement as well as other motivations for implementation, whether organizations and clinics had the capacity to collect and use the data, what resources are needed to support PC-QI implementation, and what organizational cultures or environments support PC-QI implementation. The detailed descriptive survey results are also available in Supplementary file 4.

Table 2: Key Survey Findings

| Motivation – “Interest in implementing the PC-QIs” |
|--------------------------------------------------|
| • 85%+ organizations were interested in implementing most indicators |
| • Interest was lower for PC-QIs related to “Timely access to a primary care provider” as it was not seen as valuable for some organizations to aim for same day access, and the “Friends and Family test” (whether health facility would be recommended to friends and family), where participants did not see that the data would result in meaningful changes |
| • Interest depended on alignment with province directions, particularly in the province of Ontario where there have been major transitions |

| Feasibility – “Have or could obtain info” |
|-----------------------------------------|
| • Provincial/territorial organizations had highest capacity to obtain data for structure indicators relative to other types of organizations |
| • 100% of organizations could get data for the following PC-QIs: ‘Policy on PCC’; ‘Educational programs for PCC’; ‘Healthcare information system to support PCC’; and ‘Structures to report PCC performance’ |
| • 100% of regional coordinating organizations, provincial/territorial organizations, and organizations that were both health service delivery/coordinating could get data for PC-QI on ‘Overall experience’ |
| • Organizations reported partial measurement of PC-QIs – either different terminology was used, or all components of the PC-QI were not measured |

| Actionability – “Have the processes to make changes” |
|------------------------------------------------------|
| • More than 75% of organizations agreed for these PC-QIs: |
|   • ‘Structures to report PCC performance’; ‘Communication between patient and nurse’; ‘Coordination of care’; ‘Patient and caregiver involvement in decisions about care’; and ‘Overall experience’ |
|   ▪ Most organizations also report having the data or could obtain the data for these indicators, indicating they may be the most feasible to implement |
| • Provincial/territorial organizations were most likely to have processes to make changes relative to other types of organizations for “structure” PC-QIs |
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**Validity - “Measures what it is supposed to measure”**

- Four PC-QIs received a relatively high proportion of “no” responses (9-12%) and could be further refined:
  - ‘Policy on PCC’; ‘Culturally competent care’; ‘Use of Patient Reported Outcome Measures’; ‘Equitable care’
- Comments indicate that a more clear definition or other refinements to how the data would be collected would improve the PC-QIs

**Readiness of organizations to implement PC-QIs**

- Motivation for Change:
  - 65.5% of organizations agree that more training is needed for new methods/developments in measurement/QI
  - Current pressures to change come from patients (69% agree) and accreditation bodies (83.2%)
- Resources:
  - 0% of provinces/territories agreed that staff usually have enough time to complete assigned duties
  - 74.1% of organizations reported that workload and pressures keep motivation for new training low
  - 70.4% of organizations disagreed that staff were satisfied with the health data/information systems
- Organizational climate:
  - 75% of organizations indicated that their staff are qualified
  - 63.0% of organizations reported heavy workload reduces staff effectiveness

**Interviews to Explore Barriers and Facilitators to Implementing and Using PC-QIs**

*Interview Participants:* We conducted interviews between September 2020 to April 2021. Twenty-one individual and group interviews were conducted (N=42 participants). Ten interviews were conducted with system-level health care organizations across Canada (n=13 participants) and 11 with primary care clinics/health centres and Primary Care Networks in Alberta (n=29 participants). While 85.7% (36/42) of interview participants identified as women, 100% of participants providing a system-level perspective identified as women. No men had consented to a follow up interview. Positions held by system-level interview participants included: Leads, Coordinators, or (Executive) Directors of Patient/Client Experience or Engagement (n=9), Directors of departments related to quality, safety, and clinical metrics (n=4), and Epidemiologist (n=1), and a Practice Consultant (n=1).
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Among primary care interview participants, all five zones were represented across Alberta, close to half representing urban areas (45%) and most affiliated with academic centres (63.6%). The majority of participants represented primary care clinics or organizations that served diverse populations (e.g. Indigenous populations, newcomers, homeless populations, and both adults and children). Participants held a variety of roles (some more than one), including physicians (n=8), primary care network staff (n=12, comprised of QI/evaluation leads or managers, practice facilitators, data quality leads), clinic nurses (n=3), clinic QI staff (n=n=6), a medical director (n=1), and clinic support assistant (n=1). See Table 3 for a summary of the participant and organization/clinic demographics.

Table 3: Summary of Interview Participant & Organization Demographics, by % (n)

| Participants (N= 42) |  |
|----------------------|---|
| System-level perspective: 31% (13) |
| Primary care perspective (Alberta): 69% (29) |
| Identify as a woman: 85.7% (36) |
| Length of time with organization/clinic |
| <1-5 years: 35.7% (15) |
| 5+ years: 57.1% (24) |
| No answer: 7.1% (3) |

| Canadian Regional/Provincial/Territorial Organizations (10 interviews; 13 participants) |  |
|---------------------------------|---|
| Alberta: 10% (1) |
| British Columbia: 20% (2) |
| Manitoba: 10% (1) |
| New Brunswick: 10% (1) |
| Nova Scotia: 10% (1) |
| Ontario: 20% (2) |
| Saskatchewan: 10% (1) |
| Yukon: 10% (1) |

| Primary Care Networks and Clinics in Alberta (11 interviews; 29 participants) |  |
|---------------------------------|---|
| Primary Care Network: 36.4% (4) |
| Primary Care Clinic/Health Centre: 63.6% (7) |
| Teaching site/affiliated with academic institutions: 63.6% (7) |
| Main populations served: |
| Urban: 45.5% (5) |
| Rural: 36.45 (4) |
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Mixed: 27.3% (3)

Integrated Survey and Interview Findings: The findings are presented as four main themes and sub-themes. These include: the organizations’ interest in implementation of the PC-QIs, motivation to implement PC-QIs, resources and capacity needed to collect and use data for improvements, and the organizational climate for implementation of the PC-QIs. See Table 4 displaying integrated key survey and interview themes, sub-themes, and illustrative quotes, as well as Supplementary File 5 for detailed findings.
### Table 4: Summary of Factors to Consider for Implementing PC-QIs

| Facilitators                                                                 | Barriers                                                                 |
|------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| **Theme 1: Interest in implementation of the PC-QIs**                        | **PC-QIs have limitations for understanding context**                    |
| Stakeholders perceive value in using PC-QIs                                 | “I think we have to be careful with all of these that we don’t try to quantify the human context. So somehow that needs to be considered.” – System-Level Organization 6 |
| “The one thing that they do that we haven’t been able to do, and that’s why I’m really interested in what you have, is looking at patient satisfaction and looking at sort of quality indicator that shows a patient is better today than they were 12 months ago...That’s the kind of piece that we have been missing and that I’ve been hunting for the best sort of way to do it, because we haven’t done that very well yet.” – Primary Care Organization 2 |
| There is provincial/territorial alignment for PCC measurement                | **There is a need for tailoring and prioritization of the PC-QIs**        |
| “And I think that would be a good indication for you on which ones have been identified as a priority within [organization name]... if we are collecting it, I would say that that has been prioritized within the organization.” – System Level Organization 4 |
| Actionability and effectiveness of the PC-QIs to stimulate change            | “Where I get nervous and where we’ve experienced some challenges in the past with those bodies [national organizations] being involved is there needs to be a certain level of flexibility in what is being dictated around the measurement pieces. The information that is most interesting at that national level, or that is feasible at that national level is sometimes not meaningful at all at the unit level.” – System-Level Organization 4 |
| “So if there’s an area that was really a lot lower than the others then that kind of just would help to guide the work that we’re doing...And it also then opens up that communication with the providers as far as what they’re offering in the clinics and maybe what areas again could be improved...” – Primary Care Organization 10 |
| **Theme 2: Motivation to implement PC-QIs**                                  | **Strength of the evidence for PC-QIs is unclear**                       |
| Organizations respond to patients and policies                              | “So, patient experience, yes, it’s important. But should it rule? I’m not convinced about the clinical outcomes and the downstream savings for costs in healthcare, [or] reduced morbidity for that patient – as long as they get the right clinical care, even if they’re bitching and complaining the whole way.” – Primary Care Organization 4 |
| “If Primary Care Networks get a hold of this in itself, and they consider very valuable measures, they can then start to demand...this is a requirement...that’s one of the very beneficial roles of the Primary Care Networks is to lead clinics down that path to say look these are some measures that you should be doing to provide optimal care.” – Primary Care Organization 5 |
| Standardization and alignment of measurement efforts are important          | **The need for training keeps motivation low**                           |
| “I think if you’re able to build a power in a Pan Canadian process, it will make it easier for each jurisdiction independently to get buy-in.” – System-Level Organization 7 |
| “It’s not something that a lot of clinics are comfortable with or know what to do about, and so I think we personally still have a lot of growth to do in terms of how we capture this information, and act on it, and engage with patients and design person-centred processes.” – Primary Care Organization 6 |
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**Engagement of provincial/territorial leadership and champions is critical**

“It comes down to the leadership and their vision for the organisation and how PFCC indicators fit into that vision. And there are a lot of competing priorities in healthcare...And leadership has to make that a priority.” – System-Level Organization 9

**Surveys can be a potential patient burden**

“I guess one of the challenges is just overburdening patients with surveys. And when we are serving patients wanting to keep those surveys quite brief.” – Primary Care Organization 9

**Theme 3: Resources and capacity needed to collect and use data for improvements**

There is strong capacity for QI for most system-level or higher-resourced primary care organizations

“...We have a fairly robust framework of measurement that we’ve had implemented for quite some time...but our next our next step forward is expanding to measures of greatest significance directly to patients.” – Primary Care Organization 2

Staff are time and resource-constrained

“I think in addition to that just the current environment that we’re in in Ontario we are resource constrained... actually having people to be able to do the work is certainly a challenge...” – System-level Organization 7

PC-QIs can conflict with priorities for patient care and other measurement

“...Given the stuff resources we have, it's hard to start collecting something new that isn't already collected without dropping something else off...what can we actually drop?” – System-Level Organization 4

COVID-19 has impacted PCC measurement

“But you have frontline staff who are exhausted, overwhelmed, have COVID fatigue, and it's like, “Don't ask me to, like, now collect this data on top of everything else I'm doing.”” – System-Level Organization 1

**Technology supports implementation and use of PC-QIs**

“It's not quite as slick as I would like it to be but what it does allow is for you to use your cell phone, scan the QR code, do the survey, send it in and you're done and it's real-time. So for example, if you’re laying in your hospital bed, you scan the poster on the wall in the hallway and send in your feedback.” – System-Level Organization 2

**Theme 4: Organizational climate for implementation of PC-QIs**

PCC is part of the culture in most organizations/clinics

“There’s going to be an engagement with the community to understand what matters to them, and what they think we should focus measuring, and also an engagement strategy with patient family advisors.” – System-Level Organization 5

PC-QI implementation should fit with the workflow

“I think just getting everybody’s buy in, like all the stakeholders, especially the ones that will be doing the work. Just make sure that it’s...impactful, but just that doesn’t take over their daily operations...” – Primary Care Organization 3

Primary care funding models do not support PC-QI implementation

“It’s difficult to schedule time with them because they have to meet their quotas, right. And they have to be available to their patients too...I think the biggest hurdle is just finding time that the physicians are able to give towards that” - Primary Care Organization 8

Variability among health provider and leadership readiness in terms of PCC

“I guess it’s the dismissing this data as not being legitimate because it’s only people who want to complain that fill these surveys out...the quality department has done a lot of work to really focus on the science and the evidence that this is a validated survey...” - System-Level Organization 9

Most organizations have a culture of learning

“It’s a no-blame culture. So, if somebody does something that may be not the right thing, we certainly have a no blame culture. And I think people feel comfortable bringing forward concerns...There’s no repercussions to them.” – System-Level Organization 10
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Theme One: Interest in implementation of the PC-QIs

Facilitators:

Survey respondents agreed that most PC-QIs “measure what they are supposed to measure.” Most system-level organizations and primary care organizations saw value in using the PC-QIs to improve PCC, the patient experience, and quality of care. 85% of organizations surveyed were interested in implementing most PC-QIs. Provincial and territorial alignment was an important factor for interest in using the PC-QIs among survey respondents. Both system-level and primary care organizations/clinics would like to see that it is feasible to address the indicator and make meaningful changes.

Barriers:

Some participants were less interested in implementing the PC-QIs as they perceived the PC-QIs to have limitations for understanding context, particularly considering the measurement of cultural competency. Patient stories were seen as a potentially more compelling way to promote improvements and should complement quantitative measures. Organizations/clinics also saw a need to prioritize and tailor the PC-QIs as the generic (non-sector specific) nature of the PC-QIs may not be appropriate for their context. Not all PC-QIs were of interest to organizations, especially if they were not seen as actionable. For example, interest was lower for PC-QIs the PC-QI related to ‘Timely access to a primary care provider’ as it was not seen as valuable for some organizations to aim for same day access.
Theme Two: Motivation to implement PC-QIs

Facilitators:

Stakeholders were motivated to implement PC-QIs if they perceived a need from patients (69% of survey respondents) and pressures from accreditation bodies (83.2% of survey respondents).

For most provinces or organizations, they saw PC-QIs as aligning with existing policy and measurement priorities, including their provincial/territorial health strategic plans.

Standardization of measurement efforts was also a facilitator in motivating organizations/clinics to use PC-QIs. Among system-level organizations, some expressed a need for a Pan-Canadian effort, while primary care stakeholders would like to see alignment of measurement efforts provincially to avoid duplication or siloed efforts across stakeholders. Engagement of leadership at all levels was seen as an important facilitator for buy-in and for motivating staff to measure PCC. Furthermore, having champions at the local level (unit or clinic) was seen as a key facilitator for uptake and use; physicians value the experience and recommendations of their peers.

Barriers:

Other factors that influenced motivation to use PC-QIs was the lack of clarity around the strength of the evidence. Among survey respondents, while most PC-QIs were considered valid, four PC-QIs in particular could be further refined. These included: ‘Policy on PCC’; ‘Culturally competent care’; ‘Use of Patient Reported Outcome Measures (PROMs)’; and ‘Equitable care.’ These PC-QIs received a high proportion of “no” responses (9-12%) to the question about PC-
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QI validity. Additionally, some interview participants questioned whether the PC-QIs would lead to improved outcomes; previous experience among primary care stakeholders indicate that they did not find using Patient Reported Experience Measures (PREMs) to be helpful in facilitating improvements. System-level organizations (65.5% of survey respondents) and interview participants indicated more training is needed for new methods/developments in measurement/QI. Finally, some participants noted that surveys may be too long for patients to complete.

Theme Three: Resources and capacity needed to collect and use data for improvements

Facilitators:

Most system-level and some primary care organizations described having strong capacity for QI. They have dedicated staff or partners to support QI by providing training, help to manage, analyze, report, and interpret data. For primary care organizations, those with the strongest capacity tended to be urban and academic/teaching clinics. Among survey respondents, five PC-QIs were considered highly feasible to implement by system-level organizations, where 75% of organizations could get information for the PC-QI and have processes to make changes. These included: ‘Structures to report PCC performance’; ‘Communication between patient and nurse’; ‘Coordination of care’; ‘Patient and caregiver involvement in decisions about care’; and ‘Overall experience.’ Technology was also considered an important facilitator for helping with data collection and real-time reporting to use for QI. This includes the use of tablets, QR codes, e-mailing patients surveys, Electronic Medical/Health Records.
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Barriers:

Many participants described time and resource constraints, which may impact PC-QI implementation. Among survey respondents, 0% of provinces/territories agreed that staff usually have enough time to complete assigned duties. Additionally, 74.1% of organizations reported that workload pressures keep motivation for training low, indicating potential challenges with training for the collection and use of PC-QIs. Some lower resourced organizations/clinics do not have strong capacity for QI due to a lack of funding and dedicated staff to support QI. In particular, the organizations in the Northern Territories of Canada and smaller and rural clinics reported having less capacity for QI. Additionally, participants were challenged by competing priorities. COVID-19 has also had an impact on PCC measurement, as it has diverted resources away from patient experience measurement. Staff described feeling like they had no additional capacity to undertake more measurement efforts. Some system-level organization staff were seconded to COVID-19 surveillance and measurement, while clinic staff incorporated additional processes and policies related to infection control as well as staffing shortages due to school closures and isolation requirements.

Theme Four: Organizational climate for implementation of PC-QIs

Facilitators:

PCC is part of the culture in most organizations/clinics, where the patient perspective in healthcare quality is valued. Most system-level organizations, some primary care organizations (mainly Primary Care Networks), and larger clinics had well established programs around
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patient engagement and obtaining patient feedback. Some system-level organizations and primary care clinics also spoke about having a positive culture of learning. Among primary care stakeholders, another important factor to consider was designing PC-QI implementation to fit with the existing clinic workflow and processes as much as possible to minimize disruption to patient care.

Barriers:

One of the key barriers in primary care is that primary care funding models do not support PC-QI implementation. Additional data collection is especially challenging for physicians due to time constraints. In the province of Alberta, the fee-for-service model of funding, where physicians bill for each service provided, was seen as a barrier to providing dedicated time for QI as physicians may want to prioritize patient visits over QI initiatives. Participants also described variability among health provider and leadership readiness in terms of PCC, where not all health providers and leadership see PCC as a priority and there is variability in understanding what PCC means. For example, some may see PCC as giving patients what they want and ensuring they are satisfied versus engaging patients as partners in their care.

Discussion

We conducted a mixed methods study to assess the readiness of organizations in Canada to implement and use PC-QIs, and to identify specific barriers and facilitators to implementation. Our survey findings highlighted variability in system-level readiness for implementation. While most organizations were interested in using the PC-QIs, some were more ready to implement,
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given the organization’s capacity to collect the data and to use the data to stimulate improvements in PCC. Notably, only five of 26 PC-QIs were considered highly feasible to implement. These PC-QIs included: ‘Structures to report PCC performance’; ‘Communication between patient and nurse’; ‘Coordination of care’; ‘Patient and caregiver involvement in decisions about care’ and ‘Overall experience.’ Regarding general capacity for implementation, survey respondents indicated staff time to be a major constraint, a need for training in new methods/QI, and dissatisfaction with electronic data systems.

Our interviews allowed us to further explore these aspects of readiness, corroborate our survey findings around readiness, and provide a more enhanced understanding of the barriers and facilitators. Facilitators identified included: a culture of PCC and patient engagement exists in most organizations, PC-QIs are aligned with national and provincial measurement efforts, and that leadership engagement, and the use of technology, such as Electronic Medical Records, QR codes, dashboards, and email are important for implementation. Barriers identified were: challenges with resources and workload, limited QI capacity in lower-resourced settings, especially family practices and rural clinics, and the COVID-19 pandemic, which has diverted resources, disrupted processes for collecting patient experiences, and impacted patient flow.

Our previous research found that while many organizations across Canada and in many other countries, including England, Sweden, Australia, and New Zealand, measure PCC using patient experience measures, few organizations use quality indicators to monitor and evaluate PCC.[22] Furthermore, in a 2019 scoping review of the literature, we also found scarce evidence
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on the implementation of PC-QIs and evaluation of their use, highlighting a significant gap in
the literature.[31] However, some studies have explored the factors that influence the
implementation and use of quality indicators, albeit not specifically focused on measuring PCC.

Our findings are consistent with previous research on quality indicator implementation in
various care settings and studies on the implementation of patient-reported experience and
outcome measures (PREMs and PROMs).[10-12, 32-34] Challenges associated with knowledge,
skills (need for training), time constraints, and motivation around measurement have been
widely reported. Important facilitators to support quality indicator implementation that have
also been reported include the need for administrative support for clinicians,[10] the
importance of electronic data systems,[12, 32] and alignment with national and regional
priorities,[11] the need to integrate measurement within established workflows to minimize
patient care disruptions as well as the uncertainty around the benefits of using patient-
reported data.[32]

Our findings also suggest inequitable uptake of person-centred QI, where organizations that
are least resourced may also be in most need of improved quality of care that is person-
centred. This includes organizations in Canada’s Northern Territories, which are home to a
larger proportion of Indigenous communities, relative to other areas of Canada, as well as rural
primary care clinics, where people experience challenges with remote access to services.

Rolnitsky et al. conducted a 2018 mapping review of the literature to measure the
representation of vulnerable populations in quality improvement studies.[35] They found that
while one-third of quality improvement research is focused on vulnerable populations, some
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populations are under-represented (less than 2%), including rural residents, the poor, visible
minorities, the terminally ill, adolescents, and prisoners.[35] Moreover, in Canada, as well as
Australia, New Zealand, and the United States, inequities related to the quality of care for
Indigenous people are well-documented.[36] These gaps that have been identified in research,
including this study, suggest a need for increased attention to more equitable implementation
of QI, especially focused on promoting PCC.

Our study identified some unique factors perceived to influence implementation by
including both system and clinical level perspectives, such as the role of external organizations
and partners in supporting implementation to enhance capacity for QI, the variability in
provider and leadership readiness around PCC and measurement, organizational culture in
terms of patient engagement and QI, and specific implementation challenges in Canadian
primary care contexts (fee-for-service models). Furthermore, our study identified barriers
associated with planning for PC-QI implementation during COVID-19, where the pandemic
negatively affected the ability for organizations and clinics to continue collecting patient-
reported data.

This study is the first to assess the readiness of Canadian organizations and explore barriers
and facilitators to implementing PC-QIs. Our mixed methods study design enabled us to
enhance the generalizability of our findings by surveying healthcare organizations across
Canada, while obtaining a more in-depth understanding of the barriers and facilitators of PC-QI
implementation. Moreover, this research contributes to the limited body of evidence regarding
quality indicator implementation by using and evidence and theory informed approach

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(organizational readiness lens, CIFR) and obtaining diverse perspectives at the local clinical level as well as a regional/provincial/territorial system level. With increased interest in measuring PCC globally and leveraging ongoing measurement efforts in Canada, this research can provide guidance for PCC measurement moving forward.

Several limitations of this research should be acknowledged. First, there is a risk of selection bias, where those potentially most interested in the PC-QI implementation and have resources available to support implementation were most likely to participate in the survey and interviews. This was the case for our most of our interview participants in primary care, who tended to be “early adopters” with respect to PCC measurement and QI. In addition, we attained a relatively low response rate for the provinces of Ontario and British Columbia in our survey. We were also limited in sampling participants from the province of Quebec as we did not sample regionally due to French language limitations. These limitations may influence the generalizability of our findings. Despite this, efforts were made to ensure a diversity of perspectives through purposive sampling to attain greater representativeness.

Future research includes mapping these barriers and facilitators to evidence-based implementation strategies and engaging key stakeholders in PCC measurement in Canada and in primary care in Alberta to inform future implementation efforts.

Conclusions

The findings of this study suggest that PC-QI implementation can leverage the high level of interest in their use, alignment with existing policy and initiatives in PCC measurement, and
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opportunities to integrate technology to support implementation. Despite this, organizational readiness to implement is variable across contexts; it will require resource investment, capacity development, and sustained leadership engagement at all levels to support organizations to collect, use, and report data on PCC. This study provides a foundational basis for identifying implementation strategies that will optimize PC-QI implementation and facilitate the incorporation of the patient perspective in improving their quality of care.

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Author Contributions
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KM, M-JS, BH, CMS, and MOB contributed to the study concept, study design, interpretation of the data, and provided critical review and revision of the manuscript for intellectual content. MOB provided support in identifying and contacting potential interview participants in primary care. KM collected the survey and interview data. KM, CMS, MOB, and M-JS conducted data analysis. KM, M-JS, BH, CMS, and MOB also provided their final approval of this publication and agree to be accountable for all aspects of the work to ensure both accuracy and integrity of this research.

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**Competing interests**

All authors have completed the ICMJE uniform disclosure form at [www.icmje.org/coi_disclosure.pdf](http://www.icmje.org/coi_disclosure.pdf) and declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

**Patient consent for publication**

Not required.
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Ethics approval

Ethics approval was granted from the University Health Research Ethics Boards [(REB15-2846)] at the University of Calgary.

Provenance and peer review

Not commissioned; externally peer reviewed.

Transparency statement

The lead author affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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Data sharing statement Some materials and documentation may be available to other
researchers. Please contact the corresponding author with a detailed request.

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Supplementary File 1: PC-QI Organizational Readiness Survey

PC-QI Readiness Survey

Start of Block: Introduction + Screening

Welcome

Before we begin, do you feel able to provide answers for this survey?

○ Yes

○ No

Display This Question:
If Before we begin, do you feel able to provide answers for this survey? = No

Do you know of anyone who would be more appropriate?

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

End of Block: Introduction + Screening

Start of Block: Respondent Profile

Who is filling out this survey?

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

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Supplementary File 1: PC-QI Organizational Readiness Survey

What are your title(s) in the organization?

________________________________________________________________

I am answering this question as a representative of a:

- Regional/coordinating organization that supports health service delivery (ex: AHS, PCN/LHIN, health quality improvement council, etc)

- Health service delivery organization (clinical points of care such as hospitals, clinics)

- Other (please describe) __________________________________________

End of Block: Respondent Profile

Start of Block: Organizational Profile
Supplementary File 1: PC-QI Organizational Readiness Survey

What province or territory is your organized based in?

- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland and Labrador
- Northwest Territories
- Nova Scotia
- Nunavut
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Yukon
- National

What is the name of the organization you represent?

________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

What type of services does your organization support? Check one or more that apply.

☐ Acute care services (e.g. hospitals)

☐ Community health services (e.g. out-patient clinics, primary care, long-term, etc.)

☐ Other - Please describe:

______________________________________________________________________________

☐ Not applicable

Your organization serves the following population?

☐ Adults only

☐ Children only

☐ Both adults and children

End of Block: Organizational Profile

Start of Block: Org readiness screen

The PC-QIs have been developed with the intention of system-level application, to guide healthcare organizations across various sectors of care in measuring and improving Person-Centred Care.

A secondary section of the survey asks for your assessment of the readiness of your organization in adopting and using these indicators to measure Person-Centred Care, regional / coordinating health organization or health service delivery organization.

Before we begin, do you feel able to provide answers for this aspect of the survey?

☐ Yes

☐ No
Supplementary File 1: PC-QI Organizational Readiness Survey

Display This Question:
If The PC-QIs have been developed with the intention of system-level application, to guide healthcare... = No

Do you know of anyone who would be more appropriate?

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

End of Block: Org readiness screen

Start of Block: QIs

Structure Indicator 1: Policy on Person-centred Care
 Definition: Regional/provincial/national policy (or policies) that guides and supports the provision of PCC

Numerator: Number of hospitals and healthcare centres/organizations that have a policy (or policies) for PCC which includes the following five components:
1) Establishment of an operational definition for PCC;
2) Inclusion of PCC in the organization’s Mission and Vision;
3) Inclusion of PCC as part of the organization’s Core Values;
4) Allocation of resources to support and implement PCC;
5) Evaluation of PCC protocol and program implementation with the perspective of patients

Denominator: Number of all audited hospital and healthcare centres/organizations

Which of the following statements is most true for the organization you support?
Supplementary File 1: PC-QI Organizational Readiness Survey

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this indicator?

________________________________________________________________

Structure Indicator 2: **Educational Programs on Person-centred Care**

**Definition:** Educational program(s) in place describing PCC and how to practice PCC for all healthcare personnel (e.g. staff, physicians, nurses, allied health care professionals, caregivers).

Training includes providing care that promotes co-design and partnership with patients, collaboration among the healthcare team, in addition to anti-discriminatory care, cultural competence and humility.

Quality of training should be assessed by healthcare personnel and by patients to inform necessary gaps and improvements needed in educational programs.

Process and outcome indicators can provide a patient perspective on the delivery of PCC.

**Numerator:** Number of hospitals and healthcare centres, community-based organizations that have an educational program(s) for PCC

**Denominator:** Number of all audited hospital and healthcare centres, and community-based
Supplementary File 1: PC-QI Organizational Readiness Survey

organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

____________________________________________________________________

Do you have any other feedback about this indicator?

____________________________________________________________________

Structure Indicator 3: Culturally Competent Care

**Definition:** Percentage of healthcare facilities using a survey to assess organizational cultural competence

**Numerator:** Number of healthcare systems (hospitals and healthcare centres) assessing organizational cultural competence

**Denominator:** Number of all audited hospital and healthcare centres/organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information
Supplementary File 1: PC-QI Organizational Readiness Survey

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

____________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Do you have any other feedback about this indicator?

________________________________________________________________________

Page Break

________________________________________________________________________
Structure Indicator 4: Providing a Supportive and Accommodating Person-centred Care Environment

**Definition**: Healthcare systems with a protocol(s) for co-developing a supportive and accommodating physical PCC environment in healthcare facilities with patients

**Numerator**: Number of hospitals and healthcare centres/organizations with a protocol(s) for co-developing a PCC environment with patients

**Denominator**: Number of all audited hospitals and healthcare centres/organizations

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ____________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this indicator?

________________________________________________________________

Structure Indicator 5: Co-designing Care in Partnership with Communities

**Definition:** Healthcare systems should have a protocol(s) guiding development of partnerships with communities for co-designing care, and should provide an opportunity for partners to evaluate the partnership regularly

**Numerator:** Number of hospital and healthcare centres/organizations with a protocol guiding the development of partnerships with communities for co-designing care

**Denominator:** Number of all audited hospital and healthcare centres/organizations
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

☐ Yes

☐ Somewhat

☐ No

________________________________________________________________________

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________________

________________________________________________________________________

Do you have any other feedback about this indicator?

________________________________________________________________________

Page Break
Structure Indicator 6: Healthcare Information System to Support Person-Centred Care

Definition: Healthcare systems using health information technology to support and monitor PCC by:
- Supporting patient-healthcare professional communication
- Providing patients with information about their health and care
- Supporting the coordination, continuity and transitions of care

Numerator: Number of hospital and healthcare centres/organizations using healthcare information technology to support and monitor PCC

Denominator: Number of all audited hospitals and healthcare centres/organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this indicator?
________________________________________________________________

Structure Indicator 7: Structures to Report Person-centred Care Performance

**Definition:** Healthcare systems should report PCC performance based on feedback from patients and healthcare staff

**Numerator:** Number of hospital and healthcare centres / organizations reporting on PCC performance based on feedback from patients and healthcare staff

**Denominator:** Number of all audited hospitals and healthcare centres / organizations
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: __________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________
________________________________________________________________

Do you have any other feedback about this indicator?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

**Process Indicator 1: Compassionate Care**

**Definition:** Percentage of patients that reported receiving compassionate care during their visit with a healthcare professional (e.g. doctors, nurses, allied health professionals) across healthcare settings and home care

**Numerator:** Total number of patients reporting receiving compassionate care during their visit with a healthcare professional (e.g. doctors, nurses, allied health professionals) across healthcare settings and home care

**Denominator:** Total number of patients responding to the question(s) who reported receiving compassionate care

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 2: Equitable Care

**Definition:** Percentage of patients that reported that they received inequitable access to care and treatment because of their race/ethnicity, education level, gender, language, religion, and/or sexual orientation

**Numerator:** Total number of patients reporting that they received equitable access to care and treatment

**Denominator:** Total number of patients responding to the questions assessing equitable
Supplementary File 1: PC-QI Organizational Readiness Survey

access to care and treatment

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________
________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________
________________________________________________________________

Process Indicator 3: Trusting Relationship with Healthcare Provider

Definition: Percentage of patients that reported a high level of trust with their healthcare provider

Numerator: Total number of patients responding highly to the questions assessing trust

Denominator: Total number of patients responding to the questions assessing trust

Which of the following statements is most true for the organization you support?
Supplementary File 1: PC-QI Organizational Readiness Survey

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?
- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?
- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

**Process Indicator 4: Accessing Interpreter Services**

**Definition:** Percentage of patients that reported access to interpreter services in multiple languages across health care settings

**Numerator:** Total number of patients reporting receiving access to interpreter services

**Denominator:** Total number of patients responding to the questions assessing access to interpreter services

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 5: Communication with Healthcare System

**Definition:** Percentage of patients that reported a high level of communication between patients and healthcare staff (e.g. health-line operators (#811), office assistants, associated healthcare staff) at the time of accessing healthcare and throughout patient and family interactions with the healthcare system

**Numerator:** Total number of patients responding positively to the question(s) assessing communication with healthcare staff

**Denominator:** Total number of patients responding to the overall questions assessing communication
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

_________________________________________________________________________________

Do you have any other feedback about this measure?

_________________________________________________________________________________

Process Indicator 6: Communication between Patient and Healthcare Provider – Nurse

Definition: Percentage of patients that reported a high level of communication between patient and nurses

Numerator: Total number of patients responding positively to questions assessing overall communication with nurses

Denominator: Total number of patients responding to questions assessing communication with nurses

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information
Supplementary File 1: PC-QI Organizational Readiness Survey

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ___________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 7: Communication between Patient and Healthcare Provider - Physician

Definition: Percentage of patients that reported a high level of communication between patient and physicians

Numerator: Total number of patients responding positively to the questions assessing communication with physicians

Denominator: Total number of patients responding to the questions assessing communication with physicians

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: _____________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes

- No

Does this indicator measure what it is supposed to measure?

- Yes

- Somewhat

- No

If you selected "somewhat" or "no", please provide additional feedback.

------------------------------------------------------------------------------------------------------------------

Do you have any other feedback about this measure?

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Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

**Process Indicator 8: Information about Taking Medication**

**Definition**: Percentage of patients responding that the healthcare provider explained to them their medication, including the purpose, side effects, and potential changes to the treatment.

**Numerator**: Total number of patients responding that the healthcare provider explained to them about their medication, including the purpose, side effects, and potential changes to the treatment.

**Denominator**: Total number of patients responding to the question(s)

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 9: Communicating Test Results

**Definition:** Percentage of patients that responded that they received and understood information about their test results

**Numerator:** Total number of patients responding that they received and understood information about their test results
Supplementary File 1: PC-QI Organizational Readiness Survey

**Denominator:** Total number of patients responding to the question(s) about receiving and understanding information about their test results

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- [ ] Yes
- [ ] No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________________

Process Indicator 10: Coordination of Care

**Definition:** Percentage of patients that reported that their care was coordinated well. Care coordination means that patient care activities and information is shared among all of the participants concerned with a patient's care, and collaborating in a shared plan of care which includes the patient and family as part of the team.

**Numerator:** Total number of patients responding to having received coordinated care

**Denominator:** Total number of patients responding to the questions assessing coordination of care
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

__________________________________________________________

__________________________________________________________

Do you have any other feedback about this measure?

__________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

**Process Indicator 11: Patient and Caregiver Involvement in Decisions about Their Care and Treatment**

**Definition:** The percentage of patients/caregivers that reported their healthcare provider involved them as much as they wanted in decisions about their care and treatment

**Numerator:** Number of survey respondents who reported that their healthcare provider involved them as much as they wanted in decisions about their care and treatment

**Denominator:** Number of respondents who answered the survey question(s) on involvement in decisions about their care and treatment

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

---
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

______________________________________________________________________________

Do you have any other feedback about this measure?

______________________________________________________________________________

Process Indicator 12: Engaging Patients in Managing their Own Health

**Definition**: Percentage of patients and caregivers that report being engaged in self-managing their condition, which includes:
1. Shared decision-making;
2. Goal-setting;
3. Supporting self-care management; and
4. Care plans being accessible to patients/caregivers/healthcare providers
Supplementary File 1: PC-QI Organizational Readiness Survey

**Numerator**: Total number of patients and caregivers that responded positively to being engaged in self-management

**Denominator**: Total number of patients and caregivers that responded to the question(s) assessing engagement of self-management

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

Do you have any other feedback about this measure?

Process Indicator 13: Timely Access to a Primary Care Provider

**Definition:** Percentage of patients and clients able to see a doctor or nurse practitioner on the same day or next day, when needed

**Numerator:** The number of respondents who answered "same day" and "next day" in response to the following patient and client survey question: “The last time you were sick or were concerned you had a health problem, how many days did it take from when you first tried to see your doctor or nurse practitioner to when you actually saw him/her or someone else in their office?”

**Denominator:** The number of respondents who registered an answer of the following patient and client survey question: “The last time you were sick or were concerned you had a health problem, how many days did it take from when you first tried to see your doctor or nurse practitioner to when you actually saw him/her or someone else in their office?”
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- [ ] Yes
- [ ] No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

__________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

Process Indicator 14: Patient Preparation for a Care Plan at a Healthcare Facility

**Definition:** This indicator measures the percentage of patients reporting that they had enough information about their care and treatment when admitted into a healthcare facility (e.g. homecare, hospital, mental health institution)

**Numerator:** Number of patients reporting that they had enough information about their care and treatment when admitted into a healthcare facility

**Denominator:** Number of patients admitted into the healthcare facility

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: __________________________________________________________

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For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 15: Transition Planning

**Definition:** Percentage of patients that reported receiving information and discussing their needs to manage their condition in preparation for care transition across care sectors

**Numerator:** Number of patients that reported receiving information and discussing their needs to manage their condition in preparation for care transition across care sectors

**Denominator:** Number of patients admitted into the healthcare facility
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 16: Using Patient-reported Outcome Measures (PROMs) to Deliver Person Centered Care

**Definition:** Percentage of clinics/hospitals/health centres using PROMs in healthcare decision making including point of care management and policy

**Numerator:** Number of clinics/hospitals/health centres in a jurisdiction using PROMs in clinical care

**Denominator:** Total number of clinics/hospitals/health centres in a jurisdiction
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

**Outcome Indicator 1: Overall Experience**

**Definition:** Percentage of patients reporting their overall experience within the facility

**Numerator:** Number of patients rating their overall experience within the facility as “Very good” (top box)

**Denominator:** Total number of patients rating the hospital their overall experience within the facility

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Outcome Indicator 2: Cost of Care – Affordability

Definition: Percentage of patients reporting that they can afford the cost of their healthcare treatment (e.g. medications, treatment program, equipment)

Numerator: Number of patients reporting that they can afford the cost of their healthcare treatment

Denominator: Total number of patients reporting the cost of their healthcare treatment
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.
________________________________________________________________

Do you have any other feedback about this measure?
________________________________________________________________

Global Indicator – Friends and Family Test

**Definition:** Percentage of patients reporting recommending the hospital/health facility to friends and family

**Numerator:** Number of patients answering ‘Definitely yes’ when asked if they would recommend the hospital/health facility to friends and family

**Denominator:** Number of patients answering the question asking if they would recommend the hospital/health facility to friends and family
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: __________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

End of Block: QIs

Start of Block: Organizational Readiness (DISPLAY IF)

The following questions aim to assess the readiness of Canadian healthcare organizations/agencies to adopt and use PC-QIs to measure and improve Person-Centred Care across various sectors of care.

Please answer the following questions based on your perspective as a regional or coordinating healthcare organization/agency that provides support to healthcare service delivery organizations/facilities. While we recognize that healthcare organizations/facilities within your region can vary considerably, we encourage you to provide your general assessment of these organizations.

Your healthcare organizations need additional guidance in setting specific goals

- [ ] Strongly disagree
- [ ] Somewhat disagree
- [ ] Neither agree nor disagree
- [ ] Somewhat agree
- [ ] Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Your healthcare organization needs additional guidance in evaluating staff performance.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Your healthcare organizations need more training for new methods/developments in your area of responsibility.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Current pressures to make changes in your healthcare organizations come from patients and family/caregivers.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Current pressures to make changes in your healthcare organizations come from accreditation or licensing authorities.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff in your healthcare organizations have the skills they need to do their jobs.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

More support staff are needed for getting tasks completed.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Frequent staff turnover in your healthcare organizations is a problem.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff in your healthcare organizations usually have enough time to complete assigned duties.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

There are enough staff in your healthcare organizations to meet organizational needs.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Staff in your healthcare organizations are qualified for their duties.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff training and continuing education are priorities in your healthcare organizations.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Staff receive regular in-service training in your healthcare organizations.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

The workload and pressures in your healthcare organizations keep motivation for new training low.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Most records in your healthcare organizations are computerized.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Staff are satisfied with the health data/information systems in your healthcare organizations.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Management in your healthcare organizations have a clear plan for accomplishing the goals.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

The staff in your healthcare organizations work together effectively as a team.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff in your healthcare organizations are free to try out different ideas or techniques.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

The staff in your healthcare organizations are kept well informed by management.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

The heavy workload reduces staff effectiveness.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

It is easy to change routine procedures to meet new conditions.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Management decisions in your healthcare organizations are well planned.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Do you have any other thoughts about your healthcare organizations’ readiness to adopt these indicators?

- No
- Yes ____________________________________________________________________________

End of Block: Organizational Readiness (DISPLAY IF)

Start of Block: Contact survey (Kim)
Supplementary File 1: PC-QI Organizational Readiness Survey

Thank you for taking the time to complete this survey. Please do not hesitate to contact the Primary Investigator, Dr. Maria Santana (mjsantan@ucalgary.ca), or the Study Coordinator, Kimberly Manalili (kmanalil@ucalgary.ca), should you have any questions about the study.

Our research team is also conducting a series of phone or face-to-face individual interviews with a diverse sample of organizational representatives across Canada, who will be identified through their participation in this survey. The aim of the interviews is to obtain an in-depth understanding of the potential barriers and facilitators to implementing the PC-QIs to measure and evaluate PCC across different sectors of care.

The interviews will be approximately 30-45 minutes in length.

Would you be willing to be contacted for a follow-up interview?

- [ ] Yes
- [ ] No

End of Block: Contact survey
Supplementary File 2: PC-QI Implementation Interview Guides

PC-QI Implementation Interview Guide
Regional/Provincial/Territorial Organizations: System-level Perspective

Interview Questions

1. Tell me about your work/role(s) at ________. (warm-up question)

2. From your experience, how do organizations decide what to measure and whether to measure something? (your organization, at the regional/provincial level; hospitals/health centres)?
   a. How has COVID-19 influenced decisions around measurement?
   b. How are patients and the public (families, communities) involved in healthcare measurement?
      Probes: What has your experience been with involving patients? Has COVID-19 impacted the extent to which they can be involved?

3. From your perspective, what would it take for your organization to implement or use these PC-QIs?
   a. What are some barriers or challenges to adopt/implement/use them to make changes in how care is delivered?
   b. How has/will COVID-19 affect your capacity to measure person-centred care?
      Probes:
      o Are there any organizational factors that will support implementation and use?
         • Specific probes: Resources, motivations - interest in QI and/or PCC, leadership engagement, capacity/knowledge/skills to do QI, existing QI processes and data collection (including existing PREMs used), comfort with data, reporting, PCC as a priority, policies (e.g. Patient Medical Home model) and measurement frameworks, teamwork, work flow implications, patient engagement, culture of learning and innovation, etc.
      o Individual level factors?
         • Specific probes: Motivations - interest in QI and/or PCC, ownership, etc.
      o Specific factors related to the indicators?
         • Specific probes: validity, measurability, number of PC-QIs
      o Others?
         • Specific probes: potential for integration, storage, data systems, linkage capacity to administrative databases, etc.
PC-QI Implementation Interview Guide
Primary Care Providers: Clinical-level Perspective

Interview Questions

1. Tell me about your work/role(s) at ________. (warm-up question)

2. From your experience, how does your clinic decide what to measure and whether to measure something?
   a. How has COVID-19 influenced decisions around measurement?
   b. How are patients and the public (families, communities) involved in healthcare measurement?
      i. Probes: What has your experience been with involving patients? Has COVID-19 impacted the extent to which they can be involved?

3. From your perspective, what would it take for your clinic to implement or use these PC-QIs?
   a. What are some barriers or challenges to adopt/implement/use them to make changes in how care is delivered?
   b. How has/will COVID-19 affect your capacity to measure person-centred care?
   c. Probes:
   d. Are there any organizational factors that will support implementation and use?
      i. Specific probes: Resources, motivations - interest in QI and/or PCC, leadership engagement, capacity/knowledge/skills to do QI, existing QI processes and data collection (including existing PREMs used), comfort with data, reporting, PCC as a priority, policies (e.g. Patient Medical Home model) and measurement frameworks, teamwork, work flow implications, patient engagement, culture of learning and innovation, etc.
   e. Individual level factors?
      i. Specific probes: Motivations - interest in QI and/or PCC, ownership, etc.
   f. Specific factors related to the indicators?
      i. Specific probes: validity, measurability, number of PC-QIs
   g. Others?
      i. Specific probes: potential for integration, storage, data systems, linkage capacity to administrative databases, etc.
Supplementary File 3: Detailed Methods

Study Methods

Study Design

To optimize the implementation of PC-QIs using a theory and evidence-based approach, we chose a mixed methods design to allow us to attain more generalizable findings regarding system-level readiness for implementation as well as to obtain an in-depth understanding of the readiness, barriers, and facilitators to implementing PC-QIs. We conducted an explanatory sequential priorities mixed methods design. We used our findings from our first quantitative objective assessing readiness of system-level organizations (using a survey) to inform a second qualitative objective to explore the potential barriers and facilitators to implementing these indicators for use at both the system-level and the clinical level via individual and group interviews.[1] We identified system-level organizational representatives to interview from those who completed the readiness survey.[2] Results from the survey allowed us to identify specific implementation factors to further explore through the interviews.[2] Taken together, the interpretation of the results provided us with the opportunity to enhance our understanding of the factors that influence PC-QI implementation from both system and clinical perspectives. The “Guidelines for conducting and reporting mixed research in the field of counseling and beyond” were used to guide the design and reporting of this study.[3]

Organizational Readiness Survey for Implementing and Using PC-QIs

Study design and setting: We conducted a web-based survey to assess system level readiness for implementing and using PC-QIs. Representatives of healthcare delivery and
Supplementary File 3: Detailed Methods

coordinating organizations that guide the development and/or implementation of person-centred care measurement in Canada completed the survey.

**Survey development:** Guided by organizational readiness theory,[4] we co-developed and piloted a web-based survey with study collaborators to ensure face validity. The two-part survey included two components. The first component assessed: 1) Motivation - organizational interest in implementing the PC-QIs; 2) Content and construct validity - perceived “measurability”; 3) Intervention specific capacity - whether the data could be interpreted and used as part of their organization’s quality improvement processes to improve PCC. This survey component was developed *de novo* with the study team.

The second component of the survey included an assessment of general capacity for implementation of the PC-QIs, measuring domains such as: general availability of resources and needed infrastructure, organizational climate, staff capacity, etc. We identified an existing measure through a systematic review of instruments to assess organizational readiness for knowledge translation in healthcare.[5] We adapted a version of the Organizational Readiness for Change (ORC) tool.[6] The ORC is a valid and reliable survey that measures key variables of interest related to organizational readiness and cognitive psychology.[5, 6] Adaptations to this version included shortening the measure to mitigate respondent fatigue.[7] The research team identified 1-2 priority items for each relevant domain on the ORC and minor modifications to language to reflect the context of implementation. Participants were asked to provide overall feedback regarding their readiness to implement the PC-QIs.

We collected participant demographics including organization type and position/role. The survey also included a question about willingness to be contacted for a future interview. Survey
Supplementary File 3: Detailed Methods

development and data collection was supported via a web-based platform called ‘Qualtrics.’ [8]

We tested the survey for face and content validity and revised it over four rounds with the
research team and then two rounds with study collaborators. The revisions included
improvements to the wording of the questions for component one and general flow. A copy of
the survey is available [see Supplementary File 1].

**Participant recruitment:** We identified representatives from Canadian healthcare
organizations that lead QI and/or PCC measurement initiatives from a previous environmental
scan that our study team conducted.[9] We conducted a google search to confirm contacts
previously identified as well as any new potential contacts from published website content.
Google search words included the names of provincial or regional healthcare organizations (e.g.
Edmonton Oliver Primary Care Network, Vancouver Coastal Health), as well words such as
“quality improvement,” “patient or person-centred care measurement,” “staff,” or “team.” We
also identified potential contacts through collaborators, such as the Canadian Institute for
Health Information, as well as through various national or provincial organizations (e.g. Strategy
for Patient-Oriented Research). If contact information for potential participants was not
available, we sent an email invitation to the organization to seek a referral to the most
appropriate contact in the organization. A sample frame of 55 eligible organizations across
Canada was compiled based on our search.

**Data collection:** Potential participants received an email cover letter and formal
invitation letter explaining the purpose of the study, ethical approvals, and contact information
for investigators. There were asked to provide their consent to participate in the study and
confirm that they could comment adequately on organization’s readiness for PC-QI
Supplementary File 3: Detailed Methods

implementation. Participation was voluntary. Once participants confirmed and provided consent, they received a copy of the monograph that included the technical specifications and evidence supporting the PC-QIs, as well as a link providing access to the survey. If the participant confirmed they were not the appropriate contact, they were asked to provide an alternative contact for their organization. For those who provided their consent to participate, email reminders to complete the survey were sent in two-week intervals until survey completion or until at least a 60% response rate (determined by the study team to be acceptable) was achieved and representation was obtained from all 13 Canadian provinces/territories.

Responses were exported into an excel file and de-identified. To avoid duplicate responses, a “web-link collector” option used cookies to restrict one unique response per device, and responses were reviewed by the research team.

Data analysis: We analyzed the survey data using STATA15 to obtain a descriptive summary of all organizations that participated, including type of organization; whether the organization has or could obtain data for the needed PC-QI (already have/could obtain); were interested in implementing the PC-QI (somewhat/interested/very interested); have processes in place to make changes to improve the indicator (yes), and whether the indicator measured what it is supposed to measure (yes); calculate the respondents’ assessment of organizational readiness for each section, according to three grouped categories of agree/strongly agree, neither agree nor disagree, disagree/strongly disagree; and compare differences in responses for both the PC-QI assessment and organizational readiness between groups for organization type and region of Canada (Atlantic – Nova Scotia, Prince Edward Island, New Brunswick,
Supplementary File 3: Detailed Methods

Newfoundland and Labrador, Central – Ontario, Quebec, Northern territories – Yukon, Nunavut, Northwest Territories, Pacific – British Columbia, and Prairies – Alberta, Saskatchewan, Manitoba).

We conducted content analysis for the qualitative feedback to identify emerging themes as well as patterns across organization types or regions.[10] The survey findings were summarized into a two-page document and sent to participants for their review and feedback. No changes were suggested by participants.

Interviews to Explore Barriers and Facilitators to Implementing and Using PC-QIs

Study design and setting: For our second objective, we used a qualitative descriptive approach to describe the experiences and perceptions regarding PC-QI implementation, as well as to contrast and compare differences between participant groups.[11] A qualitative descriptive approach has utility in identifying practical improvements to healthcare settings.[12] We conducted both individual and group interviews with survey respondents including system-level stakeholders, primary care providers (including physicians, clinic administrators, nursing staff), and Primary Care Network (PCN) staff. While individual interviews would allow for more in-depth exploration of perceived barriers and facilitators, group interviews with multiple participants from one organization or clinic provided “a greater sense of shared social meanings, or norms, and how these are enacted”[13] and contributed to enhanced understanding of contextual factors that may influence implementation.[14]

With regards to the clinical perspective, for feasibility purposes, we focussed on the specific barriers and facilitators in primary care in Alberta. PCN staff provide quality improvement support to clinics within their regional network. The clinical perspective was not
Supplementary File 3: Detailed Methods

included as part of the organizational readiness survey that was conducted due to foreseen challenges with recruitment of a representative sample of primary care organizations.

Interview guide development: Interview guide development was informed by the survey findings as well as the Consolidated Framework for Implementation Research (CFIR).

[15] As a meta-framework, the CFIR provides a comprehensive perspective on the factors that influence implementation, particularly with regards to the context of implementation and from an organizational perspective.[15] This is consistent with the organizational readiness lens that guides our study. The survey findings allowed us to identify specific constructs from the CFIR that would be important to further explore through our interviews (as interview probes). We developed an interview guide for participants providing a system-level perspective and adapted for those with a clinical (primary care perspective) from Alberta to ensure appropriate terminology was used (e.g. clinic vs. organization, etc.). The interview guide was developed by the study authors in consultation with patient partners [see Supplementary File 2]. We pre-tested the interview guide with three study collaborators, two of whom provided a system-level perspective and one a clinical primary care perspective. The interview guides were improved for question clarity and addition of specific prompts (supporting clarifications) and responses options.

Participant recruitment and inclusion criteria: We strived to conduct ten system-level interviews and another ten providing a clinical primary care perspective. Purposive sampling was used to obtain a variety of perspectives on barriers and facilitators to PC-QI implementation, striving for maximum variation with regards to participant’s role/position in the organization or clinic, type of organization (government, regional coordinating organization,
Supplementary File 3: Detailed Methods

For primary care participants, we aimed to obtain representation from all five health zones in Alberta (North, Edmonton, Central, Calgary, and South).

We identified system-level participants from the organizational readiness survey, among those who consented to being contacted for a follow-up interview. We recruited primary care participants through multiple strategies, including referral by our study primary care collaborators, by previous interview participants, and through a review of PCN websites with public contact information listed for quality improvement staff or generic inquiries. Initial contact was made via email and phone to inquire about potential participation from the quality improvement PCN staff and/or referrals to clinical staff working with the PCN. We formally invited potential participants via email and provided with information about the study, the study consent form, and monograph of the PC-QIs. Participants were contacted two times via email, two weeks apart, before discontinuing contact.

Data collection: All interviews took place through videoconference (Zoom) or by telephone, based on the preference of the participant(s) and in consideration of participant and researcher safety during the COVID-19 pandemic. One member of the study team conducted interviews throughout the data collection period. Prior to starting each interview, the consent form was reviewed, and participants were provided with the opportunity to ask questions about the consent form and/or the study. Interviews were audio-recorded using a separate digital recorder (not on Zoom), in compliance with University of Calgary research ethics requirements at the time, and field notes were collected. Interviews lasted between 30 and 60
Supplementary File 3: Detailed Methods

minutes to minimize the burden on participant’s time. Members of the study team met monthly to review data collected to date, discuss emerging themes, and data saturation.

**Data transcription and analysis:** We used Microsoft excel to summarize interview participant demographics, by proportion, based on self-identified gender, years worked with the organization/clinic, region represented, and type of organization/clinic.

An external transcription service transcribed all audio recordings were transcribed verbatim. The transcripts were reviewed, corrected as needed, and anonymized by the study team. Transcripts were also sent to all interview participants for their review and feedback. Two participants confirmed their review and provided feedback; minor changes were made to one transcript to clarify the description of a QI initiative.

One member of the research team conducted the qualitative data analysis, which included a reading of each transcript and the field notes to become familiarized with the data [13]. We used a deductive qualitative content analysis approach to code the data in Nvivo12, with the CFIR as the guiding framework to categorize data according to factors (constructs) influencing implementation.[10, 15] The CIFR was used with the intention of mapping the identified barriers and facilitators to evidence-based implementation strategies, using the Expert Recommendations for Implementing Change (ERIC) tool following this study (identification of strategies to be published elsewhere).[16] The online CFIR codebook ([https://cfirguide.org/tools/](https://cfirguide.org/tools/)) was used to ensure consistency in coding. To enhance trustworthiness,[17] three other members of the study team collectively analyzed 25% of the transcripts, along with the main analyst, to compare coding and discuss potential discrepancies in the interpretation of the CFIR constructs (and/or codebook). An audit trail was created to
Supplementary File 3: Detailed Methods

track decisions around coding and any additions made to the inclusion/exclusion criteria outlined in the CFIR codebook.[17] The codes/CFIR constructs were summarized and organized as “facilitators” or “barriers” to PC-QI implementation. Principles of constant comparison were employed to identify similarities and differences across groups of participants (e.g. system-level vs. clinical level, regions represented, etc.).[18] The study team discussed the codes and grouped them into larger categories, where they could be distilled into broader themes and sub-themes of facilitators and barriers until data saturation was reached and no new themes were observed in the data.[13]

Data interpretation and integration: To enhance the value of the integration between our qualitative and quantitative methods, we developed a joint display (summary table) to support the interpretation and reporting of this mixed methods study.[19] Key survey findings were integrated with the themes and sub-themes identified from the interviews to facilitate the interpretation of the data and refine our themes. The integrated findings from the survey and the interviews were summarized into a two-page document to all survey and interview participants for their review and feedback. No changes were suggested by participants.

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### Table 1: Summary of PC-QI Assessment, by % (N=33)

| PC-QI | Interested in implementing (Yes = somewhat/interested/very interested): | Have or could obtain the info needed (Yes = already have/could obtain data): | Have processes in place to make changes: | PC-QI measures what it is supposed to measure: | Feedback |
|-------|-------------------------------------------------|-------------------------------------------------|---------------------------------|---------------------------------|----------|
| Structure | S1 – Policy on Person-Centred Care | Yes: 84.9% (28) No: 6.1% (2) Other: 9.1% (3) | Yes: 88.9% (29) No: 12.1% (4) | Yes: 72.3% (24) No: 27.3% (9) | Yes: 75.8% (25) Somewhat: 15.2% (5) No: 9.1% (3) |
| | | | | | • Uncertainty around use or purpose of this indicator and meaningful improvements for PCC |
| | | | | | • One organization noted that is already used as part of the accreditation process |
| | | | | | • There were suggestions that this may not be used as an indicator but the other mechanisms to assess the five elements (e.g. self-report, audit; not necessarily as one overarching policy) |
| | | | | | • Indicator seen as too simplistic, other feedback indicates that it may be too prescriptive, with implications for resources that are lacking |
| | | | | | • One provincial network found that it would be a challenge to influence |
Supplementary File 4: Detailed Survey Results

| S2 – Educational Programs on Person-Centred Care | Policies of the regional health authorities |
|-----------------------------------------------|---------------------------------------------|
| Yes: 84.9 (28) No: 3.0 (1) Other: 12.1% (4)   | It is more important to look at training effectiveness and/or quality rather than whether training was provided in order to solicit change |
| Yes: 81.8 (27) No: 18.2 (6)                   | There is a need to clarify what is meant by educational program and/or to broaden what is meant by educational programs; some organizations may not have programs but access external training or participate in educational activities |
| Yes: 69.7 (23) No: 30.3 (10)                  | Resources are limited for educational programs |
| Yes: 66.7% (22) Somewhat: 27.3% (9) No: 6.0% (2) |

| S3 – Culturally Competent Care | |
|--------------------------------|---------------------------------------------|
| Yes: 90.9% (30) No: 3.0 (1) Other: 6.0 (2) | Consider terminology and goals and expectations of different organizations e.g. cultural safety may be the goal, where cultural competency is a lower goal. This measure may not be comparable across organizations. |
| Yes: 72.3% (24) No: 27.3% (9) | Cultural competency is unattainable; organizations should strive for cultural awareness and sensitivity |
| Yes: 66.7% (22) Somewhat: 30.3% (10) No: 9.1% (3) | Seen as potentially more meaningful at a broader healthcare system level |
| Yes: 60.6% (20) | Indicator should measure whether care is culturally competent (change |
### Supplementary File 4: Detailed Survey Results

| S4— Providing a Supportive and Accommodating Person-Centred Environment | Yes: 87.9% (29)  
No: 9.1% (3)  
Other: 3.0 (1) | Yes: 75.8%  
(25)  
No: 24.2%  
(8) | Yes: 57.6%  
(19)  
No: 42.4%  
(14) | Yes: 75.8% (25)  
Somewhat: 18.2% (6)  
No: 6.1% (2) |
|---|---|---|---|---|
| **• More clarity is needed around the definition of the physical PCC environment as well as what is meant by protocol (i.e. if the protocol would include the use of tools or toolkits)** |
| **• Some aspects of the PCC environment are not within the jurisdiction of organizations** |
| **• The use of a survey to assess the co-development of a supportive and accommodation person-centred environment may not be appropriate** |

| S5— Co-designing Care in Partnership with Communities | Yes: 90.9% (30)  
No: 3.0% (1)  
Other: 6.1% (2) | Yes: 72.7%  
(24)  
No: 27.3%  
(9) | Yes: 51%  
(17)  
No: 48.5%  
(16) | Yes: 84.6% (28)  
Somewhat: 12.1% (4)  
No: 3.0% (1) |
|---|---|---|---|---|
| **• More clarity is needed with regards to the purpose of the indicator and defining what the goals of the partnerships** |
| **o Would this indicator measure co-design of patient care or health care services? (broader health system improvements)** |
| **• Some clarity is needed by what is meant by “communities” – there may be differences in terminology/opportunities to align** |
### Supplementary File 4: Detailed Survey Results

| Question                                                                 | Yes (%) | No (%) | Other (%) | Comments                                                                                                                                 |
|--------------------------------------------------------------------------|---------|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|
| **S6– Healthcare Information System to Support Person-Centred Care**    | Yes: 87.9% (29) No: 6.1% (2) Other: 6.1% (2) | Yes: 66.7% (22) No: 33.3% (11) | Yes: 51% (17) No: 48.5% (16) | Yes: 69.7% (23) Somewhat: 24.4% (8) No: 6.1% (2) • Aligns with digital health strategy for Ontario Health • Part of ongoing development in various provinces or organizations • There are some concerns about resources required for health information systems • Some clarity and further refinement is needed around the measure:  ○ What is considered “IT” for coordinating care?  ○ Rather than a “yes” or “no” response, needs to be more specific (e.g. scale, identify specific elements to assess); broad indicator may not be helpful for hospitals  ○ There is a lack of clarity around how monitoring of PCC will be achieved by the presence of health information systems |
| **S7– Structures to Report Person-centred Care Performance**             | Yes: 84.9% (28) No: 6.1% (2) Other: 9.1% (3) | Yes: 87.9% (29) No: 12.1% (4) | Yes: 75.8% (25) No: 24.2% (8) | Yes: 78.8% (26) Somewhat: 18.2% (6) No: 3.0% (1) • More clarity needed on whether this includes patient/provider experiences or just outcomes • Organizations/provinces report this as ongoing development, but there |
Supplementary File 4: Detailed Survey Results

| Process          | Percentage for P1 | Percentage for P2 | Percentage for P3 | Percentage for P4 |
|------------------|-------------------|-------------------|-------------------|-------------------|
| P1– Compassionate Care | Yes: 90.9% (30) No: 6.1% (2) Other: 3.0% (1) | Yes: 72.7% (24) No: 27.3% (9) | Yes: 66.7% (22) No: 33.3% (11) | Yes: 87.9% (29) Somewhat: 9.1% (3) No: 3.0% (1) |
| P2– Equitable Care | Yes: 87.9% (29) No: 3.0% (1) Other: 9.1% (3) | Yes: 45.45% (15) No: 54.55% (18) | Yes: 66.7% (22) Somewhat: 24.2% (8) No: 9.1% (3) | Yes: 66.7% (22) Somewhat: 24.2% (8) No: 9.1% (3) |

There are some challenges with sharing this information across organizations:

- Some work being done with CIHI, but currently limited to acute care
- Suggestion for including both qualitative and quantitative data to know where to improve for PCC

• Currently being included in some patient experience surveys that are used
• Some variation in terminology used (e.g. courtesy, respect, what matters to use); clarity on what is meant by “compassionate care” is needed
• This may be challenging for assessment at system level as surveys are often designed and administered by health service providers
• Improvement in this indicator requires a culture change

• More appropriate as a system-level indicator as it would be challenging for either healthcare providers or patients to assess; may be interpreted as discrimination vs. inequitable treatment
Supplementary File 4: Detailed Survey Results

| P3 – Trusting Relationship with Healthcare Provider | Yes: 90.9% (30) No: 3.0% (1) Other: 6.1% (2) | Yes: 54.55% (18) No: 45.45% (15) | Yes: 54.55% (18) Somewhat: 15.2% (5) No: 3.0% (1) | • Different terminology seen in various surveys that may be easier to interpret (e.g. took values/preferences into account; treated unfairly, questions related to access) • Indicator could be interpreted with other population health data, stratified with appropriate variables • Could be met with resistance from patients in answering honestly as it may be seen to impact future care • Could be incorporated into the measure around cultural competency

| P4 – Accessing Interpreter Services | Yes: 84.9% (28) No: 9.1% (3) Other: 6.1% (2) | Yes: 54.55% (18) No: 45.45% (15) | Yes: 63.6% (21) Somewhat: 12.1% (4) No: 6.1% (2) | • The current measure looks at whether a relationship of trust is established but not the level of trust • Some measures already exist, but do not explicitly assess trust; questions may assess reliability, whether the patient feels heard/understood • Examples given for the indicator are focused on the doctor; it is unclear with the healthcare team fits in this indicator • The practice varies widely across organizations and provinces, so it may be uncertain how possible it is to offer interpreter services – some
Supplementary File 4: Detailed Survey Results

| P5– Communication with Healthcare System | Yes: 84.9% (28) | Yes: 72.7% (24) | Yes: 69.7% (23) | Yes: 69.7% (23) |
|-----------------------------------------|----------------|----------------|----------------|----------------|
|                                          | No: 9.1% (3)   | No: 27.3% (9)  | Somewhat: 24.2% (8) | Somewhat: 24.2% (8) |
|                                          | Other: 6.1% (2)| No: 30.3% (10)| No: 6.1% (2)    | No: 6.1% (2)    |

No: 45.55% (15)

- have in-person interpreters, where others primarily use a call service
  - This indicator may be more meaningfully measured at the local hospital level
- One organization assesses language as an area around whether they were “treated unfairly,”
- Some organizations track utilization and awareness of services
- Two organizations reported being able to get the data but it is either not regularly reported or will require new data collection
- Survey data collected is limited to either English or French

- Seen as more suited to a service provider organization by one organization, while another uses a similar measure at system level
- Two organizations report capturing this data as part of assessing general experience
- “High level of communication” should be further defined to clarify what aspects of communication are being measured
- Clarity needed on the goals of the indicator – that patients communicate with support staff or
### Supplementary File 4: Detailed Survey Results

**P6—Communication between Patient and Healthcare Provider—Nurse**

|   | Yes: 90.9% (30) | No: 84.85% (27) | Somewhat: 24.2% (8) |
|---|-----------------|------------------|---------------------|
|   | Other: 3.0% (1) | No: 18.2% (6)    | No: 3.0% (1)        |
|   |                 |                  |                     |

- There is a question about whether it would be helpful to understand where the gaps are in communication with respect to the care journey/points of discharge.
- Experience from Ontario home care shows that patients are not always able to distinguish between a nurse and other providers.
- Already being collected in acute care in Ontario through CPES.
- Indicator was seen as general and not specific.
- Some clarifications are needed on what is meant by:
  - “high levels of communication”
  - Nurse (RN? RPN? LPN? NP?)
- Organizations questioned whether this should be limited to one type of healthcare provider; the indicator emphasize more team-based models of care. One organization reported using the more generic “healthcare provider” term.

**P7—Communication between Patient and**

|   | Yes: 90.9% (30) | No: 69.7% (23) |
|---|-----------------|----------------|
|   | Other: 6.1% (2) |                 |

- Similar feedback to P6:
### Supplementary File 4: Detailed Survey Results

| Healthcare Provider – Physician | Other: 3.0% (1) | No: 30.3% (10) | No: 30.3% (10) | Somewhat: 24.2% (8) No: 3.0% (1) |
|---------------------------------|----------------|----------------|----------------|----------------------------------|
|                                 |                |                |                | o Already collected in acute care in Ontario through CPES |
|                                 |                |                |                | o One organization looks generally at “healthcare providers,” not limiting to the physician |
|                                 |                |                |                | o Clarity needed for “high levels of communication” |
|                                 |                |                |                | • Most responsible health care provider is not always the physician (may be NP, Midwife, Dentist) |
|                                 |                |                |                | • One organization saw this more suited to health providers; not applicable to LHIN delivered services (home care) |
|                                 |                |                |                | • One organization reported that this is only collected through provincial surveys, not across all patient/client care services |

| P8– Information about Taking Medication | Yes: 84.9% (28) No: 9.1% (3) Other: 6.1% (2) | Yes: 72.7% (24) No: 27.3% (9) | Yes: 81.8% (27) No: 18.2% (6) | Yes: 90.9% (30) Somewhat: 9.1% (3) No: 0.0% (0) |
|----------------------------------------|-------------------------------------------|-------------------------------|---------------------------------|-------------------------------------------------|
|                                        | Limited applicability to LHIN delivered services, but more appropriate to a health service provider |
|                                        | Already being measured by some organizations, mainly in acute in-patient care or limited to provincial reporting (reported as infrequent by one organization – every 3-5 years); some work currently being done with CIHI and primary care |
### P9— Communicating Test Results

| Yes: 84.9% (28) | No: 9.1% (3) | Other: 6.1% (2) | Yes: 57.6% (19) | No: 42.4% (14) | Yes: 63.6% (21) | No: 36.4% (12) | Yes: 87.9% (29) | Somewhat: 9.1% (3) | No: 3.0% (1) |
|----------------|-------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|------------|

- There are some measures about explaining mediation, but not specific changes to treatment
- Not applicable to LHIN delivered services
- One organization reported that this data is currently collected through the introduction of the electronic health record
- Other organizations reported that this data is not collected in all sectors (one noted it is only collected in the Emergency Department)
- Another organization indicated that this data is collected through a general patient experience survey (not asking specifically about test results)
- It was suggested that an additional question could be added about understanding results

### P10— Coordination of Care

| Yes: 90.9% (30) | No: 3.0% (1) | Other: 6.1% (2) | Yes: 75.8% (25) | No: 24.2% (8) | Yes: 75.8% (25) | Somewhat: 21.2% (7) | No: 3.0% (1) |
|----------------|-------------|----------------|----------------|---------------|----------------|----------------|------------|

- There is interest in this indicator as part of future directions for Ontario Health; some data is already available regarding coordination of care
- One organization reported surveying about some aspects of coordination of care, but not globally
Supplementary File 4: Detailed Survey Results

| P11– Patient and Caregiver Involvement in Decisions about Their Care and Treatment | Yes: 90.9% (30) No: 3.0% (1) Other: 6.1% (2) | Yes: 90.9% (30) No: 9.1% (3) | Yes: 81.8% (27) No: 18.2% (6) | Yes: 90.9% (30) Somewhat: 9.1% (3) No: 0.0% (0) |
| --- | --- | --- | --- | --- |

- This indicator would require processes/collaboration with other jurisdictions as care is often provided outside of the territories
- Indicator is seen as too broad to capture complexity; suggestion to break up the concept into continuity (informational, relational, managerial) and coordination
- Question about whether this is patient-centred – it positions the patient as the receiver versus the partner in care; it may not be easy for the patient to assess. Suggestion by another organization to include a separate question about whether the patient was involved as a partner in the team
- Numerator needs to include the word 'well' to give context on patient satisfaction

- While this is available for LHIN delivered services, may not be available for all services in the region
- The indicator may be more clear for some sectors than others (e.g. for hospitals, specialists, and primary care), but challenging for home care
- This is measured by some organizations, but it is not
### Supplementary File 4: Detailed Survey Results

| Question                                                                 | Yes (%)   | No (%)   | Other (%) | Comments                                                                                                                                                  |
|--------------------------------------------------------------------------|-----------|----------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| **P12—Engaging Patients in Managing their Own Health**                     | 90.9% (30)| 3.0% (1) | 6.1% (2)  | **Yes:** 90.9% (30)  
**No:** 3.0% (1)  
**Other:** 6.1% (2)  
---  
- Seen as similar to P11, with comments about potential overlap.  
- One organization suggested prioritizing 11 over 12.  
- Suggestion to add series of specific questions to yield meaningful responses in guiding improvement  
- This indicator is “touched on” by a number of organizations, but not asked about specifically. One organization reports having standards for self-management, shared decision-making, but this indicator is not used |
| **P13—Timely Access to a Primary Care Provider**                         | 75.8% (25)| 15.2% (5)| 9.1% (3)  | **Yes:** 75.8% (25)  
**No:** 15.2% (5)  
**Other:** 9.1% (3)  
---  
- Primary care is out of scope for some organizations and/or primary care tends to be independent in some jurisdictions  
- Already collected by some organizations, but not across all sectors. One organization reported measuring this as part of the experience care survey for the emergency department |
Supplementary File 4: Detailed Survey Results

| Question                                                                 | Yes: Percentage (%) | No: Percentage (%) | Other: Percentage (%) |
|-------------------------------------------------------------------------|----------------------|--------------------|-----------------------|
| P14—Patient Preparation for a Care Plan at a Healthcare Facility       | 87.9% (29)           | 6.0% (2)           | 6.0% (2)              |
|                                                                          | 60.6% (20)           | 39.4% (13)         |                       |
|                                                                          | 66.7% (22)           | 33.3% (11)         |                       |
|                                                                          | 84.85% (28)          | 15.15% (5)         | 0.0% (0)              |

- Concern for patient’s ability to answer as expected; they may refer to their own family practitioner, but not to the ability to access walk-in clinics
- Some suggested refinements to indicator:
  - Specify “urgent” health problem as it is appropriate to receive an appointment at a later date for some cases. Same day access isn’t always the goals
  - Potentially change to measuring percentage of patients who are able to see their healthcare provider when they prefer
  - Include “community health nurse” as another option for primary care provider
- One organization reports no plans to obtain this information from all patients, but those with specific trajectories (e.g. hospital stay for surgery)
- Suggested changes to the indicator:
  - Question about whether indicator should be “at discharge” rather than “at
## Supplementary File 4: Detailed Survey Results

| Indicator | Yes: 87.9% (29) | No: 3.0% (1) | Other: 9.1% (3) | Yes: 66.7% (22) | No: 33.3% (11) | Yes: 75.8% (25) | Somewhat: 21.2% (7) | No: 3.0% (1) | Percentages and Counts |
|-----------|-----------------|--------------|----------------|-----------------|----------------|-----------------|-------------------|--------------|-----------------------|
| P15—Transition Planning | | | | | | | | | |

- Admission” – Diagnosis may not be known until after they have been admitted
  - Wording to be adjusted for outpatient setting
  - Challenging to understand what is meant by “enough”
  - Need to clarify goal of the indicator – whether for improving health literacy/health system literacy or both
  - Indicator does not break down type of information (service, who to contact, etc.)
- Seen as having overlap with other process indicator
- There is alignment in the direction for Ontario Health Teams
- One organization is unclear about their own organization’s interest
- Some organizations would be limited in obtaining data – only available for cancer treatment centers/hospitals or for discharged patients
- Topic is seen as being broad – themes in the area may be more useful to operationalize; challenges may be information based, logistical/practical, emotional. There
Supplementary File 4: Detailed Survey Results

| P16—Using Patient-reported Outcome Measures (PROMs) to Deliver Person Centered Care | Yes: 87.9% (29) No: 6.1% (2) Other: 6.1% (2) | Yes: 51.5% (17) No: 48.5% (16) | Yes: 51.5% (17) No: 48.5% (16) | Yes: 66.7% (22) Somewhat: 21.2% (7) No: 12.1% (4) |
| --- | --- | --- | --- | --- |
| Outcome | | | | |

- May also be multiple stakeholders involved in transition planning, especially with pediatric patients (parents, caregivers).
- One organization noted that there may be two questions that are part of this indicator: receiving information and having the opportunity to discuss. For the denominator, it would be the total number who have undergone recent transition.
- Seen has having some overlap with P10 and P11; suggested to combine to reduce measurement burden.
- The use of PROMs is in development for a number of organizations/jurisdictions; it is not yet reported on, or the data would be limited to certain sectors.
- Using PROMs is different than using them for decision-making.
- It may be helpful to distinguish between generic PROMs and those for specific conditions to target certain sectors/health care teams.
- May be more of a structural indicator than process.
### Supplementary File 4: Detailed Survey Results

| ID | Question                  | Yes (%) | No (%) | Other (%) | (Count) |
|----|---------------------------|---------|--------|-----------|---------|
| O1 | Overall Experience        | 87.9%   | 3.0%   | 9.1%      | (29)    |
|    |                           | 93.9%   | 6.1%   | 6.1%      | (31)    |
|    |                           | 93.9%   | 6.1%   | 0.0%      | (31)    |
|    | **Note**                  |         |        |           |         |
|    | This is collected by a number of organizations, but it may not be easy to aggregate since different service providers collect this data in different ways |
|    | Currently, mainly limited to acute care/hospitals, but there is interest in expanding to all facilities |
|    | It is challenging to action; it would be important to understand what drives overall experience across sectors. One organization noted that it would need to be combined with other measures to be meaningful |
|    | Agreement on the use of top box scoring that is proposed |
| O2 | Cost of Care – Affordability | 81.8%   | 12.1%  | 6.1%      | (27)    |
|    |                           | 21.2%   | 78.8%  | 6.1%      | (7)     |
|    |                           | 27.3%   | 72.7%  | 9.1%      | (9)     |
|    |                           | 84.9%   | 15.1%  | 6.1%      | (28)    |
|    | **Note**                  |         |        |           |         |
|    | Organizations report not currently collecting this data or having the processes to make changes. Two organizations reported having some data available – one through the client relations office (questions about finances) and the other through an evaluation of an inner-city primary care group |
|    | The indicator may be too simplistic to measure complex social constructs through quantitative measures |
Supplementary File 4: Detailed Survey Results

| Global |
|--------|

- This information may be available through a different government department
- There is a question about the purpose of the measurement if there is no influence on what constitutes universal health care
- Uncertainty about whether this indicator fits with the others; it is less about individual care experience but more about coverage within the province
- There is uncertainty about how the numerator and denominator could be populated
- The data could be collected from a sample, but it may not be generalizable
- Almost all services in the territory are covered by NIHB. Costs for cross-jurisdictional medical travel would be valuable to measure as there are costs associated with travel for patients (lost wages and time away from home)
- The question could be asked in conjunction with a demographic question on income level to guide improvement
Supplementary File 4: Detailed Survey Results

| G1– Friends and Family Test | Yes: 78.8% (26)  
|                           | No: 12.1% (4)  
|                           | Other: 9.1% (3)  
| Yes: 75.8% (25)  
|                           | No: 24.2% (8)  
| Yes: 57.6% (19)  
|                           | No: 42.4% (14)  
| Yes: 72.7% (24)  
|                           | Somewhat: 21.2% (7)  
|                           | No: 6.1% (2)  

- Some organizations report not liking this measure
- One organization reported dropping it from their metrics. It was noted that in the UK they encountered problems with this indicator. This may be more relevant to certain sectors where patients have a choice (e.g. home care or long-term care)
- The measure is limited – it may not apply across all settings and patients do not always have a choice in the facility they attend; not seen as relevant for the Canadian context and for specific jurisdictions (i.e. Nunavut, PEI)
- Recommending a hospital may not be associated with the care experience; the purpose of measurement is questioned
- Difficult to act on this indicator

Table 1b: Summary of PC-QIs Assessment of Feasibility by Region, % (N=33)

Atlantic: New Brunswick, Newfoundland & Labrador, Nova Scotia, Prince Edward Island (n = 7)
Central: Ontario, Quebec (n = 8)
Northern: Nunavut, Northwest Territories, Yukon (n= 3)
Pacific: British Columbia (n = 7)
Prairie: Alberta, Manitoba, Saskatchewan (n = 8)
## Supplementary File 4: Detailed Survey Results

| PC-QI | Have or could obtain the info needed (Yes = already have/could obtain data) | Have processes in place to make changes |
|-------|---------------------------------------------------------------------------|----------------------------------------|
|       |                                                                           | All                                    |
| S1 – Policy on Person-Centred Care | All | Yes: 88.9% (29) No: 12.1% (4) | Yes: 72.3% (24) No: 27.3% (9) |
|       | Atlantic | Yes: 100% (7) No: 0% (0) | Yes: 85.7% (6) No: 14.3% (1) |
|       | Central | Yes: 87.5% (7) No: 12.5% (1) | Yes: 62.5% (5) No: 37.5% (3) |
|       | Northern | Yes: 66.7% (2) No: 33.3% (1) | Yes: 33.3% (1) No: 66.7% (2) |
|       | Pacific | Yes: 100% (7) No: 0% (0) | Yes: 85.7% (6) No: 14.3% (1) |
|       | Prairie | Yes: 75.0% (6) No: 25.0% (2) | Yes: 75.0% (6) No: 25.0% (2) |
| S2 – Educational Programs on Person-Centred Care | All | Yes: 81.8 (27) No: 18.2 (6) | Yes: 69.7 (23) No: 30.3 (10) |
Supplementary File 4: Detailed Survey Results

| Region          | Yes: % (N) | No: % (N) |
|-----------------|------------|-----------|
| Atlantic        | 100% (7)   | 0% (0)    |
| Central         | 75.0% (6)  | 25.0% (2) |
| Northern        | 66.7% (2)  | 33.3% (1) |
| Pacific         | 85.7% (6)  | 14.3% (1) |
| Prairie         | 75.0% (6)  | 25.0% (2) |

| Region          | Yes: % (N) | No: % (N) |
|-----------------|------------|-----------|
| All             | 72.3% (24) | 27.3% (9) |
| Atlantic        | 85.7% (6)  | 14.3% (1) |
| Central         | 87.5% (7)  | 12.5% (1) |

S3 – Culturally Competent Care

| Region          | Yes: % (N) | No: % (N) |
|-----------------|------------|-----------|
| Atlantic        | 71.4% (5)  | 28.6% (2) |
| Central         | 62.5% (5)  | 37.5% (3) |
| Northern        | 33.3% (1)  | 66.7% (2) |
| Pacific         | 71.4% (5)  | 28.6% (2) |
| Prairie         | 87.5% (7)  | 12.5% (1) |
**Supplementary File 4: Detailed Survey Results**

| Region  | Yes          | No          |
|---------|--------------|-------------|
| Northern| Yes: 33.3% (1) | No: 66.7% (2) |
|         | Yes: 66.7% (2) | No: 33.3% (1) |
| Pacific | Yes: 57.1% (4) | No: 42.9% (3) |
|         | Yes: 57.1% (4) | No: 42.9% (3) |
| Prairie | Yes: 75.0% (6) | No: 25.0% (2) |
|         | Yes: 62.5% (5) | No: 37.5% (3) |

| Region  | Yes          | No          |
|---------|--------------|-------------|
| All     | Yes: 75.8% (25) | No: 24.2% (8) |
|         | Yes: 57.6% (19) | No: 42.4% (14) |
| Atlantic| Yes: 100% (7)  | No: 0% (0)   |
|         | Yes: 71.4% (5)  | No: 28.6% (2) |
| Central | Yes: 75.0% (6)  | No: 25.0% (2) |
|         | Yes: 37.5% (3)  | No: 62.5% (5) |
| Northern| Yes: 33.3% (1)  | No: 66.7% (2) |
|         | Yes: 33.3% (1)  | No: 66.7% (2) |
| Pacific | Yes: 57.1% (4)  | No: 42.9% (3) |
Supplementary File 4: Detailed Survey Results

| S5— Co-designing Care in Partnership with Communities | No: 42.9% (3) | No: 57.1% (4) |
|-----------------------------------------------------|---------------|---------------|
| Prairie                                             | Yes: 87.5% (7)| Yes: 87.5% (7)|
|                                                     | No: 12.5% (1) | No: 12.5% (1) |
| All                                                 | Yes: 72.7% (24)| Yes: 51‰% (17)|
|                                                     | No: 27.3% (9)  | No: 48.5% (16)|
| Atlantic                                            | Yes: 85.7% (6)| Yes: 71.4% (5)|
|                                                     | No: 14.3% (1)  | No: 28.6% (2)  |
| Central                                             | Yes: 87.5% (7)| Yes: 37.5% (3)|
|                                                     | No: 12.5% (1)  | No: 62.5% (5)  |
| Northern                                            | Yes: 33.3% (1)| Yes: 33.3% (1)|
|                                                     | No: 66.7% (2)  | No: 66.7% (2)  |
| Pacific                                             | Yes: 57.1% (4)| Yes: 57.1% (4)|
|                                                     | No: 42.9% (3)  | No: 42.9% (3)  |
| Prairie                                             | Yes: 75.0% (6)| Yes: 50.0% (4)|
|                                                     | No: 25.0% (2)  | No: 50.0% (4)  |
### S6– Healthcare Information System to Support Person-Centred Care

| Region  | All          |                      |                      |
|---------|--------------|----------------------|----------------------|
|         | Yes: 66.7% (22) | No: 33.3% (11)    |                      |
| Atlantic| Yes: 57.1% (4)  | No: 42.9% (3)       |                      |
| Central | Yes: 87.5% (7)  | No: 12.5% (1)       |                      |
| Northern| Yes: 66.7% (2)  | No: 33.3% (1)       |                      |
| Pacific | Yes: 57.1% (4)  | No: 42.9% (3)       |                      |
| Prairie | Yes: 62.5% (5)  | No: 36.5% (3)       |                      |

### S7– Structures to Report Person-centred Care Performance

| Region  | All          |                      |                      |
|---------|--------------|----------------------|----------------------|
|         | Yes: 87.9% (29) | No: 12.1% (4)       |                      |
| Atlantic| Yes: 100% (7)   | No: 0% (0)          |                      |

### Atlantic    | Yes: 100% (7)   | No: 0% (0)          |                      |

### Central    | Yes: 100% (7)   | No: 0% (0)          |                      |

### Northern   | Yes: 66.7% (2)  | No: 33.3% (1)       |                      |

### Pacific    | Yes: 100% (7)   | No: 0% (0)          |                      |

### Prairie    | Yes: 100% (7)   | No: 0% (0)          |                      |
## Supplementary File 4: Detailed Survey Results

| Region     | Yes (%) | No (%) |
|------------|---------|--------|
| **Central**|         |        |
| Yes        | 87.5%   | 12.5%  |
| No         | 12.5%   | 87.5%  |
| **Northern**|        |        |
| Yes        | 66.7%   | 33.3%  |
| No         | 33.3%   | 66.7%  |
| **Pacific**|         |        |
| Yes        | 71.4%   | 28.6%  |
| No         | 28.6%   | 71.4%  |
| **Prairie**|         |        |
| Yes        | 100%    | 0%     |
| No         | 0%      | 100%   |
| **All**    |         |        |
| Yes        | 72.7%   | 27.3%  |
| No         | 27.3%   | 72.7%  |
| **Atlantic**|        |        |
| Yes        | 85.7%   | 14.3%  |
| No         | 14.3%   | 85.7%  |
| **Central**|         |        |
| Yes        | 87.5%   | 12.5%  |
| No         | 12.5%   | 87.5%  |
| **Northern**|        |        |
| Yes        | 66.7%   | 33.3%  |
| No         | 33.3%   | 66.7%  |

P1 – Compassionate Care
Supplementary File 4: Detailed Survey Results

| Region | Yes: | No: |
|--------|------|-----|
| Pacific | 57.1% (4) | 42.9% (3) |
| Prairie | 62.5% (5) | 37.5% (3) |

| Region | Yes: | No: |
|--------|------|-----|
| Pacific | 71.4% (5) | 28.6% (2) |
| Prairie | 75.0% (6) | 25.0% (2) |

| Region | Yes: | No: |
|--------|------|-----|
| Pacific | 57.1% (4) | 42.9% (3) |
| Prairie | 71.4% (5) | 28.6% (2) |

| Region | Yes: | No: |
|--------|------|-----|
| Pacific | 42.9% (3) | 57.1% (4) |
| Prairie | 37.5% (3) | 62.5% (5) |

| Region | Yes: | No: |
|--------|------|-----|
| Pacific | 42.9% (3) | 57.1% (4) |
| Prairie | 37.5% (3) | 62.5% (5) |

| Region | Yes: | No: |
|--------|------|-----|
| Pacific | 66.7% (2) | 33.3% (1) |
| Prairie | 66.7% (2) | 33.3% (1) |

| Region | Yes: | No: |
|--------|------|-----|
| Pacific | 66.7% (2) | 33.3% (1) |
| Prairie | 71.4% (5) | 28.6% (2) |

| Region | Yes: | No: |
|--------|------|-----|
| Pacific | 42.9% (3) | 57.1% (4) |
| Prairie | 75.0% (6) | 25.0% (2) |

| Region | Yes: | No: |
|--------|------|-----|
| Pacific | 42.9% (3) | 57.1% (4) |
| Prairie | 75.0% (6) | 25.0% (2) |
### Supplementary File 4: Detailed Survey Results

|                          | Yes: 37.5% (3) | No: 62.5% (5) | Yes: 87.5% (7) | No: 12.5% (1) |
|--------------------------|----------------|---------------|----------------|---------------|
| **P3— Trusting Relationship with Healthcare Provider** |                |               |                |               |
| All                      | Yes: 54.55% (18) | No: 45.45% (15) | Yes: 54.55% (18) | No: 45.45% (15) |
| Atlantic                 | Yes: 57.1% (4)  | No: 42.9% (3)  | Yes: 57.1% (4)  | No: 42.9% (3)  |
| Central                  | Yes: 75.0% (6)  | No: 25.0% (2)  | Yes: 50.0% (4)  | No: 50.0% (4)  |
| Northern                 | Yes: 33.3% (1)  | No: 66.7% (2)  | Yes: 33.3% (1)  | No: 66.7% (2)  |
| Pacific                  | Yes: 42.9% (3)  | No: 57.1% (4)  | Yes: 42.9% (3)  | No: 57.1% (4)  |
| Prairie                  | Yes: 50.0% (4)  | No: 50.0% (4)  | Yes: 75.0% (6)  | No: 25.0% (2)  |
| **P4— Accessing Interpreter Services** |                |               |                |               |
| All                      | Yes: 54.55% (18) | No: 45.55% (15) | Yes: 63.6% (21) | No: 36.4% (12) |
### Supplementary File 4: Detailed Survey Results

| Region         | Yes:       | No:        |
|----------------|------------|------------|
| Atlantic       | 42.9% (3)  | 57.1% (4)  |
| Central        | 87.5% (7)  | 12.5% (1)  |
| Northern       | 33.3% (1)  | 66.7% (2)  |
| Pacific        | 28.6% (2)  | 71.4% (5)  |
| Prairie        | 62.5% (5)  | 37.5% (3)  |

| Region         | Yes:       | No:        |
|----------------|------------|------------|
| Atlantic       | 71.4% (5)  | 28.6% (2)  |
| Central        | 62.5% (5)  | 37.5% (3)  |
| Northern       | 66.7% (2)  | 33.3% (1)  |
| Pacific        | 42.9% (3)  | 57.1% (4)  |
| Prairie        | 75.0% (6)  | 25.0% (2)  |

### PS—Communication with Healthcare System

| Category            | Yes:       | No:        |
|---------------------|------------|------------|
| All                 | 72.7% (24) | 27.3% (9)  |
| Atlantic            | 85.7% (6)  | 14.3% (1)  |
| Central             | 75.0% (6)  | 25.0% (2)  |

| Category            | Yes:       | No:        |
|---------------------|------------|------------|
| All                 | 698% (23)  | 30.3% (10) |
| Atlantic            | 85.7% (6)  | 14.3% (1)  |
| Central             | 50.0% (4)  | 50.0% (4)  |
Supplementary File 4: Detailed Survey Results

| Region     | Yes       | No       |
|------------|-----------|----------|
| Northern   | 33.3% (1) | 66.7% (2) |
| Pacific    | 71.4% (5) | 28.6% (2) |
| Prairie    | 75.0% (6) | 25.0% (2) |
| Northern   | 66.7% (2) | 33.3% (1) |
| Pacific    | 57.1% (4) | 42.9% (3) |
| Prairie    | 87.5% (7) | 12.5% (1) |

P6– Communication between Patient and Healthcare Provider – Nurse

| Region         | Yes       | No       |
|----------------|-----------|----------|
| All            | 84.85% (18) | 15.15% (5) |
| Atlantic       | 85.7% (6) | 14.3% (1) |
| Central        | 100% (8) | 0% (0) |
| Northern       | 33.3% (1) | 66.7% (2) |
| Pacific        | 85.7% (6) |          |
| Atlantic       | 100% (7) | 0% (0) |
| Central        | 75.0% (6) | 25.0% (2) |
| Northern       | 66.7% (2) | 33.3% (1) |
| Pacific        | 71.4% (5) |          |
Supplementary File 4: Detailed Survey Results

| Region      | Yes: | No:  |
|-------------|------|------|
| **Prairie** | 87.5% (7) | 12.5% (1) |
| **Atlantic** | 71.4% (5) | 28.6% (2) |
| **Central** | 50.0% (4) | 50.0% (4) |
| **Northern** | 33.3% (1) | 66.7% (2) |
| **Pacific** | 85.7% (6) | 14.3% (1) |
| **Prairie** | 87.5% (7) | 12.5% (1) |

| Region      | Yes: | No:  |
|-------------|------|------|
| **All**     | 69.7% (23) | 30.3% (10) |
| **Atlantic** | 100% (7) | 0% (0) |
| **Central** | 50.0% (4) | 50.0% (4) |
| **Northern** | 33.3% (1) | 66.7% (2) |
| **Pacific** | 71.4% (5) | 28.6% (2) |
| **Prairie** | 75.0% (6) | 25.0% (2) |
### P8—Information about Taking Medication

| Region       | All                      |      |          |          |
|--------------|--------------------------|------|----------|----------|
|              | All                      | Yes  | 72.7%   | 24       |
|              |                          | No   | 27.3%   | 9        |
| Atlantic     | All                      | Yes  | 100%    | 7        |
|              |                          | No   | 0%      | 0        |
| Central      | All                      | Yes  | 62.5%   | 5        |
|              |                          | No   | 37.5%   | 3        |
| Northern     | All                      | Yes  | 33.3%   | 1        |
|              |                          | No   | 66.7%   | 2        |
| Pacific      | All                      | Yes  | 71.4%   | 5        |
|              |                          | No   | 28.6%   | 2        |
| Prairie      | All                      | Yes  | 75.0%   | 6        |
|              |                          | No   | 25.0%   | 2        |

### P9—Communicating Test Results

| Region       | All                      |      |          |          |
|--------------|--------------------------|------|----------|----------|
|              | All                      | Yes  | 57.6%   | 19       |
|              |                          | No   | 42.4%   | 14       |
| Atlantic     | All                      | Yes  | 71.4%   | 5        |
|              |                          | No   | 28.6%   | 2        |
| Atlantic     | All                      | Yes  | 85.7%   | 6        |
|              |                          | No   | 14.3%   | 1        |
### Supplementary File 4: Detailed Survey Results

| Region   | Yes:           | No:           |
|----------|---------------|---------------|
| Central  | Yes: 50.0% (4)| No: 50.0% (4) |
| Northern | Yes: 33.3% (1)| No: 66.7% (2) |
| Pacific  | Yes: 57.1% (4)| No: 42.9% (3) |
| Prairie  | Yes: 62.5% (5)| No: 37.5% (3) |
| All      | Yes: 75.8% (25)| No: 24.2% (8) |
| Atlantic | Yes: 85.7% (6)| No: 14.3% (1) |
| Central  | Yes: 87.5% (7)| No: 12.5% (1) |
| Northern | Yes: 33.3% (1)| No: 66.7% (2) |
### Supplementary File 4: Detailed Survey Results

| Region | All | Pacific | Prairie |
|--------|-----|---------|---------|
| Yes: 90.9% (30) | Yes: 85.7% (6) | Yes: 87.5% (6) |
| No: 9.1% (3) | No: 14.3% (1) | No: 37.5% (3) |
| Atlantic | Yes: 100% (7) | Yes: 71.4% (5) |
| No: 0% (0) | No: 28.6% (2) |
| Central | Yes: 100% (8) | Yes: 62.5% (5) |
| No: 0% (0) | No: 37.5% (3) |
| Northern | Yes: 66.7% (2) | Yes: 62.5% (5) |
| No: 33.3% (1) | No: 37.5% (3) |
| Pacific | Yes: 85.7% (6) | Yes: 71.4% (5) |
| No: 12.5% (1) | No: 28.6% (2) |
| Prairie | Yes: 87.5% (7) | Yes: 87.5% (7) |
## Supplementary File 4: Detailed Survey Results

| P12– Engaging Patients in Managing their Own Health | No: 12.5% (1) | No: 12.5% (1) |
|---------------------------------------------------|---------------|---------------|
| **All** | Yes: 63.6% (21) | Yes: 72.7% (24) |
| **No** | No: 36.4% (12) | No: 27.3% (9) |
| **Atlantic** | Yes: 71.4% (5) | Yes: 57.1% (4) |
| **No** | No: 28.6% (2) | No: 42.9% (3) |
| **Central** | Yes: 50.0% (4) | Yes: 75.0% (6) |
| **No** | No: 50.0% (4) | No: 25.05% (2) |
| **Northern** | Yes: 66.7% (2) | Yes: 66.7% (2) |
| **No** | No: 33.3% (1) | No: 33.3% (1) |
| **Pacific** | Yes: 85.7% (6) | Yes: 85.7% (6) |
| **No** | No: 14.3% (1) | No: 14.3% (1) |
| **Prairie** | Yes: 50.0% (4) | Yes: 75.0% (6) |
| **No** | No: 50.0% (4) | No: 25.0% (2) |

| P13– Timely Access to a Primary Care Provider | All | All |
|-----------------------------------------------|-----|-----|
| **All** | Yes: 54.55% (18) | Yes: 39.4% (13) |
| **No** | No: 45.45% (15) | No: 60.6% (20) |
| **Atlantic** | | |

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Supplementary File 4: Detailed Survey Results

| Region     | Yes:     | No:      |
|------------|----------|----------|
| Central    | 75.0% (6) | 25.0% (2) |
| Northern   | 66.7% (2) | 33.3% (1) |
| Pacific    | 28.6% (2) | 71.4% (5) |
| Prairie    | 50.0% (4) | 50.0% (4) |
| Atlantic   | 57.1% (4) | 42.9% (3) |
| Central    | 62.5% (5) | 37.5% (3) |

P14–Patient Preparation for a Care Plan at a Healthcare Facility

| Region     | Yes:     | No:      |
|------------|----------|----------|
| Atlantic   | 57.1% (4) | 42.9% (3) |
| Central    | 62.5% (5) | 37.5% (3) |
| All        | 60.6% (20) | 39.4% (13) |

Yes: 57.1% (4)  No: 42.9% (3)
Yes: 75.0% (6)  No: 25.0% (2)
Yes: 66.7% (2)  No: 33.3% (1)
Yes: 28.6% (2)  No: 71.4% (5)
Yes: 50.0% (4)  No: 50.0% (4)
Yes: 62.5% (5)  No: 37.5% (3)
Yes: 66.7% (22) No: 33.3% (11)
Supplementary File 4: Detailed Survey Results

| Region      | Yes | No |
|-------------|-----|----|
| Northern    | 33.3% (1) | 66.7% (2) |
| Pacific     | 57.1% (4) | 42.9% (3) |
| Prairie     | 75.0% (6) | 25.0% (2) |
| All         | 66.7% (22) | 33.3% (11) |
| Atlantic    | 85.7% (6) | 14.3% (1) |
| Central     | 75.0% (6) | 25.0% (2) |
| Northern    | 33.3% (1) | 66.7% (2) |
| Pacific     | 71.4% (5) | 28.6% (2) |
| All         | 75.8% (25) | 24.2% (8) |
| Atlantic    | 100% (7) | 0% (0) |
| Central     | 75.0% (6) | 25.0% (2) |
| Northern    | 66.7% (2) | 33.3% (1) |
| Pacific     | 57.1% (4) | 42.9% (3) |
## Supplementary File 4: Detailed Survey Results

| Region       | Outcome Measure                                                                 | Yes   | No    |
|--------------|----------------------------------------------------------------------------------|-------|-------|
| **Prairie**  | P16— Using Patient-reported Outcome Measures (PROMs) to Deliver Person Centered Care | 50.0% (4) | 50.0% (4) |
|              | All                                                                              | 51.5% (17) | 48.5% (16) |
|              | Atlantic                                                                         | 28.6% (2) | 71.4% (5) |
|              | Central                                                                          | 37.5% (3) | 62.5% (5) |
|              | Northern                                                                         | 100% (3) | 0% (0) |
|              | Pacific                                                                          | 57.1% (4) | 42.9% (3) |
|              | Prairie                                                                          | 62.5% (5) | 37.5% (3) |
| **Prairie**  | All                                                                              | 75.0% (6) | 25.0% (2) |
|              | Atlantic                                                                         | 28.6% (2) | 71.4% (5) |
|              | Central                                                                          | 50.0% (4) | 50.0% (4) |
|              | Northern                                                                         | 66.7% (2) | 33.3% (1) |
|              | Pacific                                                                          | 42.9% (3) | 57.1% (4) |
|              | Prairie                                                                          | 62.5% (5) | 37.5% (3) |

| Region       | O1— Overall Experience                                                            | Yes   | No    |
|--------------|----------------------------------------------------------------------------------|-------|-------|
|              | All                                                                              | 93.9% (31) | |
Supplementary File 4: Detailed Survey Results

| Region         | Yes | No  |
|---------------|-----|-----|
| Atlantic      | 100% (7) | 0% (0) |
| Central       | 100% (8) | 0% (0) |
| Northern      | 100% (3) | 0% (0) |
| Pacific       | 85.7% (6) | 14.3% (1) |
| Prairie       | 87.5% (7) | 12.5% (1) |

| Region         | Yes | No  |
|---------------|-----|-----|
| Atlantic      | 100% (7) | 0% (0) |
| Central       | 87.5% (7) | 12.5% (1) |
| Northern      | 100% (3) | 0% (0) |
| Pacific       | 100% (7) | 0% (0) |
| Prairie       | 87.5% (7) | 12.5% (1) |

| O2 - Cost of Care - Affordability | All | Atlantic | Central |
|----------------------------------|-----|----------|---------|
| Yes                              | 21.2% (7) | 14.3% (1) | 14.3% (1) |
| No                               | 78.8% (26) | 85.7% (6) | 85.7% (6) |

| O2 - Cost of Care - Affordability | All | Atlantic | Central |
|----------------------------------|-----|----------|---------|
| Yes                              | 27.3% (9) | 14.3% (1) | 14.3% (1) |
| No                               | 72.7% (24) | 85.7% (6) | 85.7% (6) |
## Supplementary File 4: Detailed Survey Results

| Region      | G1 – Friends and Family Test | Northern | Pacific |
|-------------|------------------------------|----------|---------|
| Atlantic    | Yes: 75.8% (25) No: 24.2% (8) | Yes: 71.4% (5) No: 28.6% (2) | Yes: 85.7% (6) No: 14.3% (1) |
| Central     | Yes: 87.5% (7) No: 12.5% (1)  |          |         |
| Northern    | Yes: 66.7% (2) No: 33.3% (1)  | Yes: 33.3% (1) No: 66.7% (2) |
| Pacific     | Yes: 50.0% (4) No: 50.0% (4)  | Yes: 28.6% (2) No: 71.4% (5) |

| Region      | All | Northern | Pacific |
|-------------|-----|----------|---------|
| All         | Yes: 75.8% (25) No: 24.2% (8) | Yes: 12.5% (1) No: 87.5% (7) |
| Atlantic    | Yes: 85.7% (6) No: 14.3% (1)  | Yes: 33.3% (1) No: 66.7% (2) |
| Central     | Yes: 50.0% (4) No: 50.0% (4)  | Yes: 28.6% (2) No: 71.4% (5) |
| Northern    | Yes: 66.7% (2) No: 33.3% (1)  | Yes: 33.3% (1) No: 66.7% (2) |
| Pacific     | Yes: 50.0% (4) No: 50.0% (4)  | Yes: 28.6% (2) No: 71.4% (5) |
Supplementary File 4: Detailed Survey Results

| PC-QI                  | Have or could obtain the info needed (Yes = already have/ could obtain data) | Have processes in place to make changes |
|-----------------------|-----------------------------------------------------------------------------|----------------------------------------|
| **S1 – Policy on Person-Centred Care** | All  
Yes: 88.9% (29)  
No: 12.1% (4) | All  
Yes: 72.3% (24)  
No: 27.3% (9) |
| **Regional Coordinating Organization** | Yes: 81.3% (13)  
No: 18.8% (3) | Yes: 68.8% (11)  
No: 31.3% (5) |
| **Health Service Delivery Organization** | Yes: 100% (9)  
No: 0% (0) | Yes: 88.9% (8)  
No: 11.1% (1) |
| **Both** | | **Both** |

Table 1c: Summary of PC-QIs Assessment of Feasibility by Type of Organization, % (N=33; by organization N=31)
## Supplementary File 4: Detailed Survey Results

| Survey Question | Yes | No |
|-----------------|-----|----|
| **S2 – Educational Programs on Person-Centred Care** | | |
| All | Yes: 81.8% (27) | No: 18.2% (6) |
| Regional Coordinating Organization | Yes: 75.0% (12) | No: 25.0% (4) |
| Health Service Delivery Organization | Yes: 88.9% (8) | No: 11.1% (1) |
| Both | Yes: 50.0% (1) | No: 50.0% (1) |
| Provincial/Territorial Government | Yes: 100% (4) | No: 0% (0) |
| **S3 – Culturally Competent Care** | | |
| All | Yes: 72.3% (24) | No: 27.3% (9) |
| **Provincial/Territorial Government** | Yes: 100% (4) | No: 0% (0) |
| **Provincial/Territorial Government** | Yes: 100% (4) | No: 0% (0) |
### Supplementary File 4: Detailed Survey Results

|                                | Regional Coordinating Organization                      | Regional Coordinating Organization                      |
|--------------------------------|--------------------------------------------------------|--------------------------------------------------------|
|                                | Yes: 68.8% (11)                                        | Yes: 43.8% (7)                                         |
|                                | No: 31.3% (5)                                          | No: 56.3% (9)                                          |
| Health Service Delivery Organization | Yes: 77.8% (7)                                      | Health Service Delivery Organization                   |
|                                | No: 22.2% (2)                                          | Yes: 77.8% (7)                                         |
| Both                           | Yes: 50.0% (1)                                         | Both                                                   |
|                                | No: 50.0% (1)                                          | Yes: 100.0% (2)                                        |
|                                |                                                        | No: 0% (0)                                             |
| Provincial/Territorial Government | Yes: 75.0% (3)                                      | Provincial/Territorial Government                      |
|                                | No: 25.0% (1)                                          | Yes: 100% (4)                                          |
|                                |                                                        | No: 0% (0)                                             |

**S4– Providing a Supportive and Accommodating Person-Centred Environment**

|                                | All                                                     | All                                                     |
|                                | Yes: 75.8% (25)                                        | Yes: 57.6% (19)                                         |
|                                | No: 24.2% (8)                                          | No: 42.4% (14)                                          |
| Regional Coordinating Organization | Yes: 75.0% (12)                                  | Regional Coordinating Organization                      |
|                                | No: 25.0% (4)                                          | Yes: 50.0% (8)                                          |
|                                |                                                        | No: 50.0% (8)                                          |
| Health Service Delivery Organization | Yes: 77.8% (7)                              | Health Service Delivery Organization                    |
|                                | No: 22.2% (2)                                          | Yes: 55.6% (5)                                          |
| Both                           | Yes: 50.0% (1)                                         | Both                                                   |
|                                | No: 50.0% (1)                                          | Yes: 50.0% (1)                                          |
|                                |                                                        | No: 50.0% (1)                                          |
### Supplementary File 4: Detailed Survey Results

| **S5— Co-designing Care in Partnership with Communities** | **All** | **Regional Coordinating Organization** | **Health Service Delivery Organization** | **Both** | **Provincial/Territorial Government** |
|----------------------------------------------------------|--------|--------------------------------------|----------------------------------------|---------|--------------------------------------|
|                                                          | Yes: 72.7% (24) | Yes: 75.0% (12) | Yes: 77.8% (7) | Yes: 50.0% (1) | Yes: 75.0% (3) |
|                                                          | No: 27.3% (9)   | No: 25.0% (4)   | No: 22.2% (2)  | No: 50.05% (1) | No: 25.0% (1)  |

| **S6— Healthcare Information System to Support Person-Centred Care** | **All** | **Regional Coordinating Organization** | **Provincial/Territorial Government** |
|---------------------------------------------------------------------|--------|--------------------------------------|--------------------------------------|
|                                                                      | Yes: 66.7% (22) | Yes: 50.0% (8) | Yes: 75.0% (3) |
|                                                                      | No: 33.3% (11)  | No: 50.0% (8)  | No: 25.0% (1)  |
Supplementary File 4: Detailed Survey Results

| Structures to Report Person-centred Care Performance | Health Service Delivery Organization | Provincial/Territorial Government |
|------------------------------------------------------|--------------------------------------|----------------------------------|
| No: 50.0% (8)                                        | Yes: 88.9% (8)                       | No: 11.1% (1)                    |
| Health Service Delivery Organization                  | Both: 50.0% (1)                      | Both: 50.0% (1)                  |
| No: 11.1% (1)                                        | Yes: 55.6% (5)                       | No: 44.4% (4)                    |
| Provincial/Territorial Government                     | Yes: 100% (4)                        | No: 0% (0)                       |
| Yes: 100% (4)                                        | Both: 0% (0)                         | Both: 100% (2)                   |
| No: 0% (0)                                            | All: 87.9% (29)                      | All: 75.8% (25)                  |
| Yes: 87.9% (29)                                       | Regional Coordinating Organization   | Yes: 75.0% (12)                  |
| No: 12.1% (4)                                         | Yes: 87.5% (14)                      | No: 25.0% (4)                    |
| Health Service Delivery Organization                  | No: 12.5% (2)                        | Yes: 77.8% (7)                   |
| Yes: 88.9% (8)                                        | Both: 50.0% (1)                      | No: 22.2% (2)                    |
| No: 11.1% (1)                                        | Yes: 50.0% (1)                       | No: 50.0% (1)                    |
| Provincial/Territorial Government                     | Both: 50.0% (1)                      | Both: 50.0% (1)                  |
## Supplementary File 4: Detailed Survey Results

| P1 – Compassionate Care | Yes: 100% (4) No: 0% (0) | Yes: 75.0% (3) No: 25.0% (1) |
|-------------------------|--------------------------|-----------------------------|
| All                     | All                      |                             |
| Yes: 72.7% (24)         | Yes: 66.7% (22)          |                             |
| No: 27.3% (9)           | No: 33.3% (11)           |                             |
| Regional Coordinating Organization | Yes: 81.3% (13) No: 18.8% (3) | Yes: 68.8% (11) No: 31.3% (5) |
| Health Service Delivery Organization | Yes: 66.7% (6) No: 33.3% (3) |                             |
| Both                    | Both                     |                             |
| Yes: 50.0% (1)          | Yes: 0% (0)              |                             |
| No: 50.0% (1)           | No: 100% (2)             |                             |
| Provincial/Territorial Government | Yes: 75.0% (3) No: 25.0% (1) | Yes: 100% (4) No: 0% (0) |

| P2 – Equitable Care     | Yes: 45.45% (15) No: 54.55% (18) | Yes: 66.7% (22) No: 33.3% (11) |
|-------------------------|----------------------------------|---------------------------------|
| All                     | All                              |                                |
| Yes: 45.45% (15)        | Yes: 66.7% (22)                  |                                |
| No: 54.55% (18)         | No: 33.3% (11)                   |                                |
| Regional Coordinating Organization | Yes: 50.0% (8) No: 50.0% (8) | Yes: 68.8% (11) No: 31.3% (5) |
### Supplementary File 4: Detailed Survey Results

|                          | Health Service Delivery Organization | Provincial/Territorial Government |
|--------------------------|---------------------------------------|----------------------------------|
| **Yes**                  | 55.6% (5)                             | 25% (1)                          |
| **No**                   | 44.4% (4)                             | 75.0% (3)                        |
| **Both**                 |                                       |                                  |
| **Yes**                  | 0% (0)                                |                                  |
| **No**                   | 100% (2)                              |                                  |
|                          | Health Service Delivery Organization  | Provincial/Territorial Government |
| **Yes**                  | 66.7% (6)                             | 75.0% (3)                        |
| **No**                   | 33.3% (3)                             | 25.0% (1)                        |
|                          |                                       |                                  |
| **P3— Trusting Relationship with Healthcare Provider** | **All** | **All** |
|                          | **Health Service Delivery Organization** | **Regional Coordinating Organization** |
| **Yes**                  | 54.55% (18)                           | 56.3% (9)                        |
| **No**                   | 45.45% (15)                           | 43.8% (7)                        |
|                          | **Both**                              | **Yes**                          |
| **Yes**                  | 50.0% (0)                             | 62.5% (10)                       |
| **No**                   | 50.0% (0)                             | 37.5% (6)                        |
|                          | **Health Service Delivery Organization** | **Provincial/Territorial Government** |
| **Yes**                  | 33.3% (3)                             | 50.0% (2)                        |
| **No**                   | 66.7% (6)                             | 50.0% (2)                        |
|                          | **Both**                              | **Yes**                          |
| **Yes**                  | 0% (0)                                | 75.0% (3)                        |
| **No**                   | 100% (2)                              | 25.0% (1)                        |
|                          | **Provincial/Territorial Government** |                                  |
| P4– Accessing Interpreter Services | All | All |
|----------------------------------|-----|-----|
|                                 | Yes: 54.55% (18) | Yes: 63.6% (21) |
|                                 | No: 45.55% (15) | No: 36.4% (12) |
| **Regional Coordinating Organization** | | |
|                                 | Yes: 31.3% (5) | Yes: 43.8% (7) |
|                                 | No: 68.8% (11) | No: 56.3% (9) |
| **Health Service Delivery Organization** | | |
|                                 | Yes: 66.7% (6) | Yes: 77.8% (7) |
|                                 | No: 33.3% (3) | No: 22.2% (2) |
| **Both** | | |
|                                 | Yes: 100% (2) | Yes: 50.0% (1) |
|                                 | No: 0% (0) | No: 50.0% (1) |
| **Provincial/Territorial Government** | | |
|                                 | Yes: 75.0% (3) | Yes: 100% (4) |
|                                 | No: 25.0% (1) | No: 0% (0) |

| P5– Communication with Healthcare System | All | All |
|----------------------------------------|-----|-----|
|                                 | Yes: 72.7% (24) | Yes: 69.8% (23) |
|                                 | No: 27.3% (9) | No: 30.3% (10) |
| **Regional Coordinating Organization** | | |
|                                 | Yes: 75.0% (12) | Yes: 62.5% (10) |
|                                 | No: 25.0% (4) | No: 37.5% (6) |
| **Health Service Delivery Organization** | | |
|                                 | Yes: 88.9% (8) | Yes: 66.7% (6) |
Supplementary File 4: Detailed Survey Results

| Section | All | Regional Coordinating Organization | Health Service Delivery Organization | Provincial/Territorial Government |
|---------|-----|------------------------------------|--------------------------------------|----------------------------------|
| P6– Communication between Patient and Healthcare Provider – Nurse | Yes: 84.85% (18) | Yes: 87.5% (14) | Yes: 77.8% (7) | Yes: 75.0% (3) |
| | No: 15.15% (5) | No: 12.5% (2) | No: 22.2% (2) | No: 25.0% (1) |
| | Yes: 100% (2) | Yes: 100% (4) | Yes: 100% (4) | |
| | No: 0% (0) | No: 0% (0) | No: 0% (0) | |
| | Yes: 50.0% (1) | Yes: 50.0% (1) | Yes: 50.0% (1) | |
| | No: 50.0% (1) | No: 50.0% (1) | No: 50.0% (1) | |
# Supplementary File 4: Detailed Survey Results

## P7– Communication between Patient and Healthcare Provider – Physician

|                      | All                          | Regional Coordinating Organization | Health Service Delivery Organization | Both                          | Provincial/Territorial Government |
|----------------------|------------------------------|------------------------------------|--------------------------------------|-------------------------------|----------------------------------|
| **Yes**              | 69.7% (23)                   | 68.8% (11)                         | 66.7% (6)                            | 50.0% (1)                    | 75.0% (3)                        |
| **No**               | 30.3% (10)                   | 31.3% (5)                          | 33.3% (3)                            | 50.0% (1)                    | 25.0% (1)                        |

## P8– Information about Taking Medication

|                      | All                          | Regional Coordinating Organization | Health Service Delivery Organization |
|----------------------|------------------------------|------------------------------------|--------------------------------------|
| **Yes**              | 72.7% (24)                   | 81.3% (13)                         | 66.7% (6)                            |
| **No**               | 27.3% (9)                    | 18.8% (3)                          | 33.3% (3)                            |

|                      | All                          | Regional Coordinating Organization |
|----------------------|------------------------------|------------------------------------|
| **Yes**              | 81.8% (27)                   | 81.3% (13)                         |
| **No**               | 18.2% (6)                    | 18.8% (3)                          |
Supplementary File 4: Detailed Survey Results

| P9—Communicating Test Results | Both | Provincial/Territorial Government | Both | Provincial/Territorial Government |
|-------------------------------|------|-----------------------------------|------|-----------------------------------|
|                               | Yes: 0% (0) No: 100% (2) | Yes: 75.0% (3) No: 25.0% (1) | Yes: 100% (2) No: 0% (0) | Yes: 75.0% (3) No: 25.0% (1) |
| All                           | Yes: 57.6% (19) No: 42.4% (14) | Yes: 43.8% (7) No: 56.3% (9) | Yes: 63.6% (21) No: 36.4% (12) | Yes: 56.3% (9) No: 43.8% (7) |
| Regional Coordinating Organization | Yes: 77.8% (7) No: 22.2% (2) | | Regional Coordinating Organization | Yes: 66.7% (6) No: 33.3% (3) |
| Health Service Delivery Organization | Yes: 50.0% (1) No: 50.0% (1) | Yes: 50.0% (1) No: 50.0% (1) | Yes: 50.0% (1) No: 50.0% (1) |
| Provincial/Territorial Government | Yes: 50.0% (2) No: 50.0% (2) | Yes: 75.0% (3) No: 25.0% (1) |

| P10—Coordination of Care | All | All |
|--------------------------|-----|-----|
| Yes: 75.8% (25) | Yes: 75.8% (25) |
### Supplementary File 4: Detailed Survey Results

| Component | Yes | No |
|-----------|-----|----|
| **Regional Coordinating Organization** | 81.2% (13) | 18.8% (3) |
| **Health Service Delivery Organization** | 77.8% (7) | 22.2% (2) |
| **Both** | 50.0% (1) | 50.0% (1) |
| **Provincial/Territorial Government** | 75.0% (3) | 25.0% (1) |

| Component | Yes | No |
|-----------|-----|----|
| **Regional Coordinating Organization** | 87.5% (14) | 12.5% (2) |
| **Health Service Delivery Organization** | 55.6% (5) | 44.4% (4) |
| **Both** | 50.0% (1) | 50.0% (1) |
| **Provincial/Territorial Government** | 100% (4) | 0% (0) |

**P11 – Patient and Caregiver Involvement in Decisions about Their Care and Treatment**

| Component | Yes | No |
|-----------|-----|----|
| **All** | 90.9% (30) | 9.1% (3) |
| **Regional Coordinating Organization** | 100% (16) | 0% (0) |
| **Health Service Delivery Organization** | 77.8% (7) | 22.2% (2) |
| **Both** | 81.8% (27) | 18.2% (6) |
| **Regional Coordinating Organization** | 87.5% (14) | 12.5% (2) |
| **Health Service Delivery Organization** | 66.7% (6) | 33.3% (3) |
| **Both** | 81.8% (27) | 18.2% (6) |
### Supplementary File 4: Detailed Survey Results

|                                | Yes: 100% (2) | No: 0% (0) |
|--------------------------------|----------------|------------|
| **Provincial/Territorial Government** |                |            |
| Yes: 75.0% (3)                  |                |            |
| No: 25.0% (1)                   |                |            |

|                                | Yes: 100% (2) | No: 0% (0) |
|--------------------------------|----------------|------------|
| **Provincial/Territorial Government** |                |            |
| Yes: 75.0% (3)                  |                |            |
| No: 25.0% (1)                   |                |            |

|                                | Yes: 63.6% (21) | No: 36.4% (12) |
|--------------------------------|-----------------|----------------|
| **Regional Coordinating Organization** |                     |               |
| Yes: 68.8% (11)                  |                  |               |
| No: 31.3% (5)                    |                  |               |

|                                | Yes: 66.7% (6) | No: 33.3% (3) |
|--------------------------------|----------------|---------------|
| **Health Service Delivery Organization** |                   |               |
| Yes: 88.9% (8)                  |                  |               |
| No: 11.1% (1)                   |                  |               |

|                                | Yes: 50.0% (1) | No: 50.0% (1) |
|--------------------------------|----------------|---------------|
| **Both**                       |                |               |

|                                | Yes: 50.0% (2) | No: 50.0% (2) |
|--------------------------------|----------------|---------------|
| **Provincial/Territorial Government** |                     |               |

|                                | Yes: 100% (4) | No: 0% (0) |
|--------------------------------|----------------|------------|
| **Provincial/Territorial Government** |                |            |
| Yes: 100% (4)                  |                |            |
| No: 0% (0)                     |                |            |

|                                | Yes: 72.7% (24) | No: 27.3% (9) |
|--------------------------------|-----------------|---------------|
| **Regional Coordinating Organization** |                     |               |
| Yes: 62.5% (10)                  |                  |               |
| No: 37.5% (6)                    |                  |               |

|                                | Yes: 50.0% (1) | No: 50.0% (1) |
|--------------------------------|----------------|---------------|
| **Both**                       |                |               |

|                                | Yes: 54.55% (18) | No: 45.45% (15) |
|--------------------------------|-----------------|----------------|
Supplementary File 4: Detailed Survey Results

| Organization Type                          | Yes (%) | No (%) |
|--------------------------------------------|---------|--------|
| **Regional Coordinating Organization**     |         |        |
| Yes                                        | 62.5%   | 37.5%  |
| No                                         |         |        |
| **Health Service Delivery Organization**   |         |        |
| Yes                                        | 44.4%   | 55.6%  |
| No                                         |         |        |
| **Both**                                   |         |        |
| Yes                                        | 100%    | 0%     |
| No                                         |         |        |
| **Provincial/Territorial Government**      |         |        |
| Yes                                        | 50.0%   | 50.0%  |
| No                                         |         |        |

| Organization Type                          | Yes (%) | No (%) |
|--------------------------------------------|---------|--------|
| **Regional Coordinating Organization**     |         |        |
| Yes                                        | 43.75%  | 56.25% |
| No                                         |         |        |
| **Health Service Delivery Organization**   |         |        |
| Yes                                        | 22.2%   | 77.9%  |
| No                                         |         |        |
| **Both**                                   |         |        |
| Yes                                        | 50.0%   | 50.05% |
| No                                         |         |        |
| **Provincial/Territorial Government**      |         |        |
| Yes                                        | 75.0%   | 25.0%  |
| No                                         |         |        |

| Question                                    | Yes (%) | No (%) |
|---------------------------------------------|---------|--------|
| P14–Patient Preparation for a Care Plan at a Healthcare Facility |         |        |
| All                                         | 60.6%   | 39.4%  |
| **Regional Coordinating Organization**      |         |        |
| Yes                                        | 68.8%   | 31.3%  |
| No                                         |         |        |
| **Health Service Delivery Organization**    |         |        |
| Yes                                        | 55.6%   | 44.4%  |
| No                                         |         |        |
| **Both**                                   |         |        |
| Yes                                        | 0%      | 100%   |
| No                                         |         |        |
| **All**                                    |         |        |
| Yes                                        | 66.7%   | 33.3%  |
| No                                         |         |        |
## Supplementary File 4: Detailed Survey Results

|                                | Provincial/Territorial Government | Provincial/Territorial Government |
|--------------------------------|-----------------------------------|-----------------------------------|
|                                | Yes: 75.0% (3)                    | Yes: 75.0% (3)                    |
|                                | No: 25.0% (1)                     | No: 25.0% (1)                     |

### P15 – Transition Planning

|                                | All |                                |
|                                | Yes: 66.7% (22)                    | Yes: 75.8% (25)                   |
|                                | No: 33.3% (11)                     | No: 24.2% (8)                     |
|                                | Regional Coordinating Organization | Regional Coordinating Organization |
|                                | Yes: 56.3% (9)                     | Yes: 75.0% (12)                   |
|                                | No: 43.8% (7)                      | No: 25.0% (4)                     |
|                                | Health Service Delivery Organization | Health Service Delivery Organization |
|                                | Yes: 77.8% (7)                     | Yes: 55.6% (5)                    |
|                                | No: 22.2% (2)                      | No: 44.4% (4)                     |

|                                | Both |                                |
|                                | Yes: 50.0% (1)                      | Yes: 100% (2)                     |
|                                | No: 50.0% (1)                       | No: 0% (0)                        |

|                                | Provincial/Territorial Government | Provincial/Territorial Government |
|                                | Yes: 75.0% (3)                    | Yes: 100% (4)                     |
|                                | No: 25.0% (1)                     | No: 0% (0)                        |

### P16 – Using Patient-reported Outcome Measures (PROMs) to Deliver Person Centered Care

|                                | All |                                |
|                                | Yes: 51.5% (17)                    | Yes: 51.5% (17)                   |
|                                | No: 48.5% (16)                     | No: 48.5% (16)                    |
|                                | Regional Coordinating Organization | Regional Coordinating Organization |
|                                | Yes: 68.8% (11)                    | Yes: 56.3% (9)                    |
Supplementary File 4: Detailed Survey Results

| | Health Service Delivery Organization | Provincial/Territorial Government |
|---|---|---|
| No | 31.3% (5) | No: 43.8% (7) |
| Yes | 22.2% (2) | Yes: 11.1% (1) |
| No | 77.8% (7) | No: 88.9% (8) |
| Both | No: 0% (0) | Both | Yes: 50.0% (1) |
| | No: 100% (2) | | No: 50.0% (1) |
| Provincial/Territorial Government | Yes: 75.0% (3) | Provincial/Territorial Government | Yes: 100% (4) |
| No | 25.0% (1) | No: 0% (0) |

| O1– Overall Experience | All | Regional Coordinating Organization | Health Service Delivery Organization | Both | Provincial/Territorial Government |
|---|---|---|---|---|---|
| Yes | 93.9% (31) | Yes: 100% (16) | Yes: 77.8% (7) | Yes: 100% (2) | Yes: 100% (4) |
| No | 6.1% (2) | No: 0% (0) | No: 22.2% (2) | No: 0% (0) | No: 0% (0) |
| Regional Coordinating Organization | Yes: 93.8% (15) | No: 6.3% (1) |
| Health Service Delivery Organization | Yes: 88.9% (8) | No: 11.1% (1) |
| Both | Yes: 100% (2) | No: 0% (0) |
| Provincial/Territorial Government | Yes: 100% (4) | No: 0% (0) |
## Supplementary File 4: Detailed Survey Results

### O2– Cost of Care – Affordability

|                      | All                           | Regional Coordinating Organization | Health Service Delivery Organization | Both                          | Provincial/Territorial Government |
|----------------------|-------------------------------|------------------------------------|--------------------------------------|-------------------------------|-----------------------------------|
| Yes: 100% Yes        | 100% (4)                      | Yes: 25.0% (4)                     | Yes: 11.1% (1)                       | Yes: 0% (0)                   | Yes: 25.0% (1)                   |
| No: 0% No            | 0% (0)                        | No: 75.0% (12)                     | No: 88.9% (8)                        | No: 100% (2)                  | No: 75.0% (3)                    |

### G1– Friends and Family Test

|                      | All                           | Regional Coordinating Organization | Both                          | Provincial/Territorial Government |
|----------------------|-------------------------------|------------------------------------|-------------------------------|-----------------------------------|
| Yes: 100% Yes        | 100% (4)                      | Yes: 75.0% (12)                    | Yes: 50.0% (1)                 | Yes: 50.0% (2)                   |
| No: 0% No            | 0% (0)                        | No: 25.0% (4)                      | No: 50.0% (1)                  | No: 50.0% (2)                    |
Supplementary File 4: Detailed Survey Results

| Health Service Delivery Organization | Provincial/Territorial Government |
|-------------------------------------|----------------------------------|
| Yes: 66.7% (6)                      | Yes: 75.0% (3)                   |
| No: 33.3% (3)                       | No: 25.0% (1)                    |
| Both                                | Both                             |
| Yes: 100% (2)                       | Yes: 50.0% (1)                   |
| No: 0% (0)                          | No: 50.0% (1)                    |

Table 2: Organizational Readiness (Adapted from Organizational Readiness for Change Scale – TCU ORC), by % (n/d)

*Respondents provided perspective based on the health organization(s) they support/provide guidance to for quality improvement and/or person-centred measurement*

| Categories                                                                 | % (n)                                |
|---------------------------------------------------------------------------|--------------------------------------|
| Motivation for Change                                                     |                                      |
| Program needs                                                             |                                      |
| *Healthcare organizations need additional guidance in setting specific goals. (N=29)* | Agree: 41.4% (12) Disagree: 41.4% (12) Neither agree nor disagree: 17.2% (5) |
| *Healthcare organizations need additional guidance in evaluating staff performance. (N=29)* | Agree: 34.5% (10) Disagree: 34.5% (10) Neither agree nor disagree: 31.0% (9) |
Supplementary File 4: Detailed Survey Results

| Training needs                                                                 | Agree: 65.5% (19) | Disagree: 17.2% (5) | Neither agree nor disagree: 17.2% (5) |
|---------------------------------------------------------------------------------|--------------------|----------------------|----------------------------------------|
| Healthcare organizations need more training for new methods/developments in your |                     |                      |                                        |
| area of responsibility. (N=29)                                                  |                     |                      |                                        |

| Pressures for change                                                             | Agree: 69.0% (20)  | Disagree: 6.9% (2)  | Neither agree nor disagree: 24.1% (7)  |
|---------------------------------------------------------------------------------|--------------------|----------------------|----------------------------------------|
| Current pressures to make changes come from patients and family/caregivers. (N=29)|                     |                      |                                        |
| Current pressures to make changes come from accreditation or licensing authorities. (N=29) | Agree: 86.2% (25) | Disagree: 6.9% (2)  | Neither agree nor disagree: 6.9% (2)  |

| Resources                                                                        | Agree: 62.1% (18) | Disagree: 10.3% (3) | Neither agree nor disagree: 27.6% (8) |
|---------------------------------------------------------------------------------|--------------------|----------------------|----------------------------------------|
| Staffing                                                                        |                     |                      |                                        |
| Staff have the skills they need to do their jobs. (N=29)                        |                     |                      |                                        |
| More support staff are needed for getting tasks completed. (N=28)               | Agree: 42.9% (12)  | Disagree: 3.6% (1)  | Neither agree nor disagree: 42.9% (12) |
| Frequent staff turnover is a problem. (N=28)                                    | Agree: 60.7% (17)  | Disagree: 25.0% (7) | Neither agree nor disagree: 14.3% (4)  |
### Supplementary File 4: Detailed Survey Results

| **Staff usually have enough time to complete assigned duties. (N=28)** | Agree: 21.4% (6)  
Disagree: 35.7% (10)  
Neither agree nor disagree: 42.9% (12) |
|---|---|
| **There are enough staff to meet organizational needs. (N=28)** | Agree: 10.7% (3)  
Disagree: 46.4% (13)  
Neither agree nor disagree: 42.9% (12) |
| **Staff are qualified for their duties. (N=28)** | Agree: 75.0% (21)  
Disagree: 7.1% (2)  
Neither agree nor disagree: 17.9% (5) |

### Training

| **Staff training and continuing education are priorities. (N=28)** | Agree: 50.0% (14)  
Disagree: 25% (7)  
Neither agree nor disagree: 25% (7) |
|---|---|
| **Staff receive regular inservice training in your healthcare organizations. (N=27)** | Agree: 40.7% (11)  
Disagree: 25.9% (7)  
Neither agree nor disagree: 33.3% (9) |
| **The workload and pressures in your healthcare organizations keep motivation for new training low. (N=27)** | Agree: 74.1% (20)  
Disagree: 7.4% (2)  
Neither agree nor disagree: 18.5% (5) |

### Equipment

| **Most records are computerized. (N=28)** | Agree: 21.4% (6)  
Disagree: 35.7% (10) |
### Supplementary File 4: Detailed Survey Results

| Survey Question                                                                 | Agreement           | Disagreement      | Neither Agree nor Disagree |
|---------------------------------------------------------------------------------|---------------------|-------------------|-----------------------------|
| **Staff are satisfied with the health data/information systems in your healthcare organizations. (N=27)** | Neither agree nor disagree: 42.9% (12) | Agree: 11.1% (3) | Disagree: 70.4% (19)       | Neither agree nor disagree: 18.5% (5) |

#### Organizational Climate

| Survey Question                                                                 | Agreement           | Disagreement      | Neither Agree nor Disagree |
|---------------------------------------------------------------------------------|---------------------|-------------------|-----------------------------|
| **Mission**<br>Management in your healthcare organizations have a clear plan for accomplishing the goals. (N=27)** | Agree: 55.6% (15)   | Disagree: 25.9% (7) | Neither agree nor disagree: 18.5% (5) |
| **Cohesion**<br>The staff in your healthcare organizations work together effectively as a team. (N=27)** | Agree: 66.7% (18)   | Disagree: 11.1% (3) | Neither agree nor disagree: 22.2% (6) |
| **Autonomy**<br>Staff in your healthcare organizations are free to try out different ideas or techniques. (N=27)** | Agree: 55.6% (15)   | Disagree: 11.1% (3) | Neither agree nor disagree: 33.3% (9) |
| **Communication**<br>The staff in your healthcare organizations are kept well informed by management. (N=27)** | Agree: 59.3% (16)   | Disagree: 25.9% (7) |                             |
Supplementary File 4: Detailed Survey Results

| Category                  | Option                                      | Percentage   |
|---------------------------|---------------------------------------------|--------------|
| Stress                    | The heavy workload reduces staff effectiveness. (N=27) | Agree: 63.0% (17) Disagree: 0.0% (0) Neither agree nor disagree: 37.0% (10) |
| Change                    | It is easy to change routine procedures to meet new conditions. (N=27) | Agree: 18.5% (5) Disagree: 55.6% (15) Neither agree nor disagree: 25.9% (7) |
| Leadership                | Management decisions in your healthcare organizations are well planned. (N=27) | Agree: 55.6% (15) Disagree: 22.2% (6) Neither agree nor disagree: 22.2% (6) |

Table 2b: Organizational Readiness, by Region (Adapted from Organizational Readiness for Change Scale – TCU ORC), by % (n/d)
*Respondents provided perspective based on the health organization(s) they support/provide guidance to for quality improvement and/or person-centred measurement
**Select readiness factors were chosen based on most divergence in responses
Supplementary File 4: Detailed Survey Results

| Program needs | Agreement | Disagreement | Neither agree nor disagree |
|---------------|-----------|--------------|---------------------------|
| Healthcare organizations need additional guidance in setting specific goals. (N=29) | Agree: 41.4% (12) | Disagree: 41.4% (12) | Neither agree nor disagree: 17.2% (5) |
| Atlantic      | Agree: 28.2% (2) | Disagree: 71.4% (5) | Neither agree nor disagree: 0% (0) |
| Central       | Agree: 14.3% (1) | Disagree: 42.9% (3) | Neither agree nor disagree: 42.9% (3) |
| Northern      | Agree: 100% (2) | Disagree: 0% (0) | Neither agree nor disagree: 0% (0) |
| Pacific       | Agree: 80.0% (4) | Disagree: 0% (0) | Neither agree nor disagree: 20.0% (1) |
| Prairie       | Agree: 37.5% (3) | Disagree: 50.0% (4) | Neither agree nor disagree: 12.5% (1) |

Healthcare organizations need additional guidance in evaluating staff performance. (N=29)

| Agreement | Disagreement | Neither agree nor disagree |
|-----------|--------------|---------------------------|
| Agree: 34.5% (10) | Disagree: 34.5% (10) | Neither agree nor disagree: 31.0% (9) |
| Agree: 42.9% (3) | | |
Supplementary File 4: Detailed Survey Results

| Region      | Agree | Disagree | Neither agree nor disagree |
|-------------|-------|----------|----------------------------|
| Atlantic    |       | 42.9% (3)| 14.3% (1)                  |
| Central     |       | 14.3% (1)| 42.9% (3)                  |
| Northern    |       |          | 42.9% (3)                  |
| Pacific     |       | 20.0% (1)| 20.0% (1)                  |
| Prairie     |       | 37.5% (3)| 37.5% (3)                  |

| Resources   | Agree | Disagree | Neither agree nor disagree |
|-------------|-------|----------|----------------------------|
| Staffing    |       |          |                            |
| Staff usually have enough time to complete assigned duties. (N=28) |       |          |                            |
| Atlantic    |       | 21.4% (6)| 35.7% (10)                 |
|             |       |          | 42.9% (12)                |
Supplementary File 4: Detailed Survey Results

| Region  | Agree:  | Disagree: | Neither agree nor disagree: |
|---------|---------|-----------|-----------------------------|
| Central | 16.7% (1) | 33.3% (2) | 50.0% (3) |
| Northern | 0% (0) | 100% (2) | 0% (0) |
| Pacific | 40.0% (2) | 40.0% (2) | 20% (1) |
| Prairie | 12.5% (1) | 25.0% (2) | 62.5% (5) |

**Training**

Staff receive regular inservice training in your healthcare organizations. (N=27)

| Region  | Agree:  | Disagree: | Neither agree nor disagree: |
|---------|---------|-----------|-----------------------------|
| Atlantic | 40.7% (11) | 25.9% (7) | 33.3% (9) |
| Central | 57.1% (4) | 28.6% (2) | 14.3% (1) |
| Northern | 33.3% (2) | 16.7% (1) | 50.0% (3) |
| Prairie | 0% (0) | | |
### Supplementary File 4: Detailed Survey Results

| Region   | Agree                  | Disagree               | Neither agree nor disagree |
|----------|------------------------|------------------------|-----------------------------|
| **Pacific** |                        |                        |                             |
|          | 20.0% (1)              | 40.0% (2)              | 40.0% (2)                    |
| **Prairie** |                        |                        |                             |
|          | 57.1% (4)              | 14.3% (1)              | 28.6% (2)                    |
| **Equipment** |                        |                        |                             |
| *Most records are computerized. (N=28)* |                |                        |                             |
| **Atlantic** |                        |                        |                             |
|          | 21.4% (6)              | 35.7% (10)             | 42.9% (12)                   |
| **Central** |                        |                        |                             |
|          | 16.7% (1)              | 0% (0)                 | 83.3% (5)                    |
| **Northern** |                        |                        |                             |
|          | 50.0% (1)              | 50.0% (1)              | 0% (0)                       |
| **Pacific** |                        |                        |                             |
|          | 40.0% (2)              | 40.0% (2)              |                             |
Supplementary File 4: Detailed Survey Results

|   | Neither agree nor disagree: 20.0% (1) |
|---|-------------------------------------|
|   | Agree: 0% (0)                         |
|   | Disagree: 50.0% (4)                  |
|   | Neither agree nor disagree: 50.0% (4) |

Prairie

Table 2c: Organizational Readiness, by Organizational Type (Adapted from Organizational Readiness for Change Scale – TCU ORC), by % (n/d)

*Respondents provided perspective based on the health organization(s) they support/provide guidance to for quality improvement and/or person-centred measurement*

| Categories                                                                 | % (n)     |
|---------------------------------------------------------------------------|-----------|
| Motivation for Change                                                     |           |
| Program needs                                                             |           |
| Healthcare organizations need additional guidance in setting specific goals. (N=29) |           |
| Agree: 41.4% (12)                                                        |           |
| Disagree: 41.4% (12)                                                     |           |
| Neither agree nor disagree: 17.2% (5)                                     |           |
| Regional Coordinating Organization                                         |           |
| Agree: 23.08% (3)                                                         |           |
| Disagree: 53.85% (7)                                                     |           |
| Neither agree nor disagree: 23.08% (3)                                    |           |
| Health Service Delivery Organization                                       |           |
| Agree: 50.0% (4)                                                         |           |
| Disagree: 50.0% (4)                                                      |           |
| Neither agree nor disagree: 0% (8)                                        |           |
| Both                                                                       |           |
| Agree: 50.0% (1)                                                         |           |
Supplementary File 4: Detailed Survey Results

| Healthcare organizations need additional guidance in evaluating staff performance. (N=29) |
|--------------------------------------------------------------------------------------------|
| **Provincial/Territorial Government**                                                       |
| Disagree: 50.0% (1)                                                                          |
| Neither agree nor disagree: 0% (0)                                                           |
| Agree: 75.0% (3)                                                                              |
| Disagree: 0% (0)                                                                              |
| Neither agree nor disagree: 25.0% (1)                                                         |
| **Regional Coordinating Organization**                                                       |
| Agree: 34.5% (10)                                                                             |
| Disagree: 34.5% (10)                                                                          |
| Neither agree nor disagree: 31.0% (9)                                                         |
| **Health Service Delivery Organization**                                                      |
| Agree: 23.0% (3)                                                                              |
| Disagree: 38.5% (5)                                                                            |
| Neither agree nor disagree: 38.5% (5)                                                         |
| **Both**                                                                                      |
| Agree: 37.5% (3)                                                                              |
| Disagree: 37.5% (3)                                                                            |
| Neither agree nor disagree: 25.0% (2)                                                         |
| **Provincial/Territorial Government**                                                         |
| Agree: 50.0% (2)                                                                              |
| Disagree: 0% (0)                                                                              |
| Neither agree nor disagree: 50.0% (2)                                                         |

| Resources |
|-----------|
| Staffing  |
## Supplementary File 4: Detailed Survey Results

### Staff usually have enough time to complete assigned duties. \((N=28)\)

| Organization                     | Agree: | Disagree: | Neither agree nor disagree: |
|----------------------------------|--------|-----------|----------------------------|
| **Regional Coordinating Organization** | 21.4%  | 35.7%     | 42.9%                      |
| **Health Service Delivery Organization** | 33.3%  | 33.3%     | 33.3%                      |
| **Both**                         | 12.5%  | 50.0%     | 37.5%                      |
| **Provincial/Territorial Government** | 50.0%  | 0%        | 50.0%                      |

### Training

### Staff receive regular inservice training in your healthcare organizations. \((N=27)\)

| Organization                     | Agree: | Disagree: | Neither agree nor disagree: |
|----------------------------------|--------|-----------|----------------------------|
| **Regional Coordinating Organization** | 40.7%  | 25.9%     | 33.3%                      |
| **Both**                         | 54.55% | 18.2%     | 27.3%                      |
### Supplementary File 4: Detailed Survey Results

#### Health Service Delivery Organization

| Agreement | Proportion | Count |
|-----------|------------|-------|
| Agree     | 50.0%      | 4     |
| Disagree  | 37.5%      | 3     |
| Neither   | 12.5%      | 1     |

#### Provincial/Territorial Government

| Agreement | Proportion | Count |
|-----------|------------|-------|
| Agree     | 0.0%       | 0     |
| Disagree  | 0.0%       | 0     |
| Neither   | 100.0%     | 2     |

#### Equipment

**Most records are computerized. (N=28)**

| Agreement | Proportion | Count |
|-----------|------------|-------|
| Agree     | 21.4%      | 6     |
| Disagree  | 35.7%      | 10    |
| Neither   | 42.9%      | 12    |

#### Regional Coordinating Organization

| Agreement | Proportion | Count |
|-----------|------------|-------|
| Agree     | 16.7%      | 2     |
| Disagree  | 41.7%      | 5     |
| Neither   | 41.7%      | 5     |

#### Health Service Delivery Organization

| Agreement | Proportion | Count |
|-----------|------------|-------|
| Agree     | 37.5%      | 3     |
| Disagree  | 37.5%      | 3     |
| Neither   | 25.0%      | 2     |

#### Both

| Agreement | Proportion | Count |
|-----------|------------|-------|
| Agree     | 0.0%       | 0     |
| Disagree  | 0.0%       | 0     |
| Neither   | 100.0%     | 2     |
Supplementary File 4: Detailed Survey Results

| Provincial/Territorial Government | Agree: 25.0% (1)  
|                                 | Disagree: 25.0% (1)  
|                                 | Neither agree nor disagree: 50.0% (2) |
Supplementary File 4: Detailed Survey Results

General feedback about readiness to adopt indicators:

**Political/provincial priorities; alignment**
- Provincial/political impact drive priorities & actions
- There is rhetoric around patient-centeredness, but less effort around measurement in Ontario
- While there is openness reported by organizations, there are also realities with regards to competing priorities and fiscal restraints that pose challenges
- There is always room for improvement and our organization is open to consideration. Realities related to competing priorities and fiscal restraint pose challenges at times for needed change
- Organizations report being ready to adopt PCC measures and there is support for this
- Considerations need to be made for alignment of the indicators across the system as well as how to test the indicators and adapt them to specific needs of organizations
- Participation in accreditation for PCC may not require the use of separate indicators for PCC. It was questioned whether these indicators could be aligned with accreditation efforts to avoid separate reporting
- Corporate initiatives in all facilities must be supported to see overall improvement for an indicator.

**Transition – Lack of stability in Ontario**
- Ontario is currently transitioning to a new model for healthcare delivery. It is difficult to implement anything at this time or to assess whether organizations would be able to implement these indicators.
- Given the current state of LHINs it is difficult to commit to new indicators in the current state of system change

**Need for capacity development and resources**
- There is high interest in developing infrastructure and processes for collecting data to inform quality indicators. However, currently there is little capacity to undertake this work
- Support will be required to implement indicator data collection, analysis, and reporting across the entire departments. It is currently occurring in a piecemeal fashion in many sectors
- Staff are not equipped to plan and execute a quality improvement cycle.
- There are current limitations around having surveys for patients in different languages.

**Physician and leadership engagement**
Supplementary File 4: Detailed Survey Results

- A coordinated and standardized approach is required for performance improvement where patients and families are able to influence decision makers
- Physicians need to be engaged in the adoption of these indicators and for readiness
- Executive Leadership support is essential to implement and sustain PCC practices.

General comments about indicators

- The indicators require more discussion when looking at the entire health care system and different sectors
- There is a lack of clarity about what level these indicators could be implemented – some are seen are more macro, while others are more meso/micro
- A simplistic approach to structure indicators could compromise understanding the complexity of the delivery of PCC
- With regards to using the indicators as national indicators, it may be helpful to establish a few process indicators as standard and others that touch on specific issues, such as medication, as optional for the organization. Considerations should be made for risk of measurement burden and survey fatigue compared to amount of benefit
- This is a long list of indicators, most of which will require new data collection for organizations. Given the measurement burden and current workloads we suggest streamlining or prioritizing the indicators to create a smaller core set of indicators and other optional indicators to assist initial adoption.
- Not all indicators in this list are relevant to planning or delivery type organizations. Some of them might be more relevant to research but may not be relevant to those who plan and do QI. Separately, there has also been work in Ontario to reduce indicator fatigue and reduce over measurement so if there any new measures proposed for Ontario, stakeholders here may want to hear more about value and actionability before they implement.
## Supplementary File 5: Summary of Factors to Consider for Implementing PC-QIs

### Facilitators

| Theme 1: Interest in implementation of the PC-QIs |
|-------------------------------------------------|
| **Stakeholders perceive value in using PC-QIs** |
| • Most system-level and primary care organizations saw value in using the PC-QIs and in measuring PCC to improve the patient experience and quality of care |
| • Some participants expressed an appreciation for the development of the PC-QIs as gaps were acknowledged in PCC measurement |
| • Participants also expressed a need for these measures to improve PCC |

> "I mean, the indicators you guys have identified, a ton of work that is very obvious. And I would say for the most part, they’re very, very good, like the justification for them and everything else. I think makes sense" – System Level Organization 3

> "The one thing that they do that we haven’t been able to do, and that’s why I’m really interested in what you have, is looking at patient satisfaction and looking at sort of quality indicator that shows a patient is better today than they were 12 months ago, whether it’s mentally, whether it’s physically. That’s the kind of piece that we have been missing and that I’ve been hunting for the best sort of way to do it, because we haven’t done that very well yet." – Primary Care Organization 2

| **There is provincial/territorial alignment for PCC measurement** |
| • 85% of system-level organizations were interested in most PC-QIs |
| • Interest for system-level organizations depended on alignment with provincial/territorial directions and measurement priorities |
| • This was a particular concern by survey and interview participants from the province of Ontario, where there have been major transitions with regards to organizational structures and development of new policies |

> "And I think that would be a good indication for you on which ones have been identified as a priority within [organization name]. And that’s not to say that others wouldn’t be, like some of them may not be on our list yet, just because we haven’t been able to collect the information required for it yet. But if we..." – Primary Care Organization 2

### Barriers

| **PC-QIs have limitations for understanding context** |
| • Understanding context is limited and some system-level and primary care clinics question how meaningful the measurement will be |
| • Some system-level and primary care clinics question how meaningful the measurement will be without understanding the context, which they see as important for PCC |
| • Patient stories were also suggested as a more compelling way promote improvements care and should complement quantitative measures |

> "I think we have to be careful with all of these that we don’t try to quantify the human context. So somehow that needs to be considered." – System-Level Organization 6

> "I think a lot of people, like, with the humanity in us, we connect to patient stories. So, I think if you find a way to make this about, like, a patient story and them telling their story and how this data helps reflect that, then I think it gets people thinking more about the person and how this data is going to benefit the person and their story." – Primary Care Organization 1

| **There is a need for tailoring and prioritization of the PC-QIs** |
| • System-level organizations and primary care clinics/organizations (especially) would be more interested in the PC-QIs if there was an opportunity to tailor/adapt them to their specific setting/context (e.g. urban vs. rural, specific populations) |
| • The number of PC-QIs was considered many, where organizations would like to pick and choose which ones to implement |
| • Not all PC-QIs were of interest to organizations, especially if there were not seen as actionable (e.g. Timely access to a primary care provider or the "Friends and Family Test" indicator, where patients indicate whether they would recommend a facility to others) |
| • Survey comments indicate that there was partial measurement of indicators - either different terminology was used, or all components of the PC-QI were not measured |

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Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs

**Actionability and effectiveness of the PC-QIs to stimulate change**

- Survey respondents agreed that most PC-QIs “measure what they are supposed to measure”
- Both system-level and primary care organizations/clinics would like to see that the PC-QIs are “actionable”
- Participants suggested existing resources, such as those developed by the Alberta Medical Association (Accelerating for Change Transformation Team) or Accreditation Canada that could help identify effective initiatives to improve PCC if the PC-QIs identify gaps
- The PC-QIs were also seen as a useful tool for communicating with providers about needed improvements

“So if there’s an area that was really a lot lower than the others then that kind of just would help to guide the work that we’re doing as far as that panel management goes. And it also then opens up that communication with the providers as far as what they’re offering in the clinics and maybe what areas again could be improved for in-clinic offers, and then implementing that as well to outreach screening.” – Primary Care Organization 10

**Strength of the evidence for PC-QIs is unclear**

- While survey respondents agreed that most PC-QIs “measure what they are supposed to measure,” PC-QIs where there were a higher proportion of “no” responses (9-12%) and could be further refined included: Policy on PCC; Culturally competent care; Use of Patient-Reported Outcome Measures (PROMs); Equitable care
- Some participants questioned the demonstrated effectiveness/evidence around measuring PCC and that they would lead to improved outcomes, particularly among primary care clinics and organizations
- Previous implementation of Patient Reported Experience Measures (PREMs) has not been helpful to facilitate improvements in primary care. Data collected seen more as “nice to know,” and delays in reporting make data less useful to act on

“So, patient experience, yes, it’s important. But should it rule? I’m not convinced about the clinical outcomes and the downstream savings for costs...” – Primary Care Organization 11

**Organizations respond to patients and policies**

| Theme 2: Motivation to implement PC-QIs |
|----------------------------------------|
| **Organizations respond to patients and policies** |
| - Current pressures for system-level organizations come from patients (69% agree) and accreditation bodies (83.2%), indicating a responsiveness to patient needs as well as standards that their organizations are required to follow |
| - Improving PCC is part of strategic plans for most provinces or organizations and alignment with existing policy and measurement priorities is important |
| - In Alberta, the government and PCNs were considered key organizations for facilitating PC-QI implementation by asking clinics measure PCC |

“If Primary Care Networks get a hold of this in itself, and they consider very valuable measures, they can then start to demand of their member this is a requirement – first a recommendation and then ultimately a requirement and help rollout those processes. There aren’t those kind of clinics that are like ours, where we are really driven to do it on our own, and many need to be led...” – System Level Organization 4

“Where I get nervous and where we’ve experienced some challenges in the past with those bodies [national organizations) being involved is there needs to be a certain level of flexibility in what is being dictated around the measurement pieces. The information that is most interesting at that national level, or that is feasible at that national level is sometimes not meaningful at all at the unit level.” – System-Level Organization 4

“Most recently, things like that panel measurement piece, it’s kind of a [city name] zone initiative. And so those initiatives that come from that group then, we try to roll out in our PCN as best as they can kind of fit into rural. We’re a little bit different because urban and rural are two totally different, I don’t know what the word is for, totally different animals. What works in urban often does not work in rural.” – Primary Care Organization 11

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Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs

**Standardization and alignment of measurement efforts**
- Among system-level organizations, some expressed a need for a Pan-Canadian effort for PC measurement for standardization, where organizations like the Canadian Institute for Health Information, Accreditation Canada, and the Canadian Patient Safety Institute could identify core PC-QIs that all jurisdictions should measure.
- Primary care organizations/clinics would like to see some alignment of measurement efforts provincially to avoid duplication or siloed efforts across stakeholders (government, Health Quality Councils, researchers, PCNs, and clinics).

“I think if you’re able to build a power in a Pan Canadian process, it will make it easier for each jurisdiction independently to get buy-in.” – System-Level Organization 7

“Helping – making it – embed it in things that they might already have to do, so, for instance, if the PCNs need to ask this Schedule B (measurement required by provincial government) question about “Are you satisfied with the experience at your visit today?” You know, that all should be embedded so that we can all get this information that we need, right?” – Primary Care Organization 9

**Engagement of provincial/territorial leadership and champions is critical**
- Engagement of leadership at all levels was seen as an important facilitator for buy-in and for motivating staff to measure PCC.
- Relationships were seen as essential for QI initiatives. From the perspective of PCNs, having strong relationships with the clinics, providers, and managers was essential to support QI efforts.
- Having champions at the local level (unit or clinic) was seen as a key facilitator for uptake and use; physicians value the experience and recommendations of their peers.
- Engaging physicians requires discussing how the PC-QIs would benefit them and their patients.

in healthcare, [or] reduced morbidity for that patient – as long as they get the right clinical care, even if they’re bitching and complaining the whole way.” – Primary Care Organization 4

“In one particular clinic, a few of the patients that I work with expressed concern about kind of their front-end experience, not with the physician... just felt they weren’t treated well, felt they weren’t heard and expressed that they’d expressed those concerns to their physician, and nothing ever changed.” – Primary Care Organization 10

The need for training keeps motivation low
- 65.5% of system-level organizations agreed that more training is needed for new methods/developments in measurement/QI.
- Some system-level organization, particularly those that are lower-resourced, and primary care organizations confirmed the need for training in QI among staff.

“It’s not something that a lot of clinics are comfortable with or know what to do about, and so I think we personally still have a lot of growth to do in terms of how we capture this information, and act on it, and engage with patients and design person-centred processes.” – Primary Care Organization 6

Surveys can be a potential patient burden
- Surveys were seen to be too long for patients to complete.

“I guess one of the challenges is just overburdening patients with surveys. And when we are serving patients wanting to keep those surveys quite brief.” – Primary Care Organization 9
Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs

- Champions to target in primary care were those considered to be “early adopters” or “innovators”
- The College of Physicians and Surgeons and the Medical Association were two organizations that primary care organizations/clinics saw as important to engage for PC-QI implementation

“It comes down to the leadership and their vision for the organisation and how PFCC indicators fit into that vision. And there are a lot of competing priorities in healthcare...And leadership has to make that a priority.” – System-Level Organization 9

“For physicians, a little bit of healthy sort of comparison or competition has, I think, usually been found to stimulate interest and change when you actually see how you compare to others in your cohort. So, I think that some degree of reasonable comparison is sometimes a good thing.” – Primary Care Organization 4

Theme 3: Resources and capacity needed to collect and use data for improvements

| Staff are time and resource-constrained |
|----------------------------------------|
| • 0% of system-level organizations agreed that staff usually have enough time to complete assigned duties |
| • 70.4% of system-level organizations disagreed that staff were satisfied with the health data/information systems, which has implications for collecting, managing, and reporting on PC-QI data |
| • Lower resourced organizations/clinics and Northern territory government representatives described less capacity to collect, report, and act on data for PC-QIs |
| • Some participants discussed the lack of funding for QI and attributed it to challenging fiscal and political environment in their provinces |
| • Primary care participants in Alberta noted the lack of dedicated QI staff in most clinics, particularly family practices and rural clinics |

“I think in addition to that just the current environment that we’re in in Ontario we are resource constrained...And so even just from the perspective of actually having people to be able to do the work is certainly a challenge, even outside of the Ontario Health service system and structure.” – System-level Organization 7

| There is strong capacity for QI for most system-level or higher-resourced primary care organizations |
|-----------------------------------------------|
| • Among system-level organizations, provincial/regional governments and coordinating organizations had the strongest capacity to collect and use data for PC-QIs (especially Prairie and Atlantic provinces) compared to health service delivery organizations |
| • Most system-level and some primary care organizations (generally urban, academic/teaching clinics) have dedicated people or partners to support QI by providing training, help to manage, analyze, report, and interpret data |
| • Most organizations had strong networks with partners, including with the provincial government in some provinces, namely Ontario, New Brunswick, and British Columbia. In primary care in Alberta, some clinics were supported by the PCNs and the Health Quality Council |
| • Five PC-QIs considered highly feasible to implement by system-level organizations (75% of organizations could get information for the PC-QI and have processes to make changes) included: Structures to report PCC performance; Communication between patient and nurse; Coordination of care; Patient and caregiver involvement in decisions about care; Overall experience |

For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml
Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs

“...We have a fairly robust framework of measurement that we've had implemented for quite some time...but our next next step forward is expanding to measures of greatest significance directly to patients. And that includes, again, probably direct patient engagement in evaluating and helping to determine those measures as well.” – Primary Care Organization 2

Technology supports implementation and use of PC-QIs

- Technology was considered an important facilitator for helping with data collection (tablets, QR codes, e-mail) and more real-time reporting (dashboards)
- Regions or clinics with Electronic Medical/Health Records are better able to integrate data for PC-QIs

“It's not quite as slick as I would like it to be but what it does allow is for you to use your cell phone, scan the QR code, do the survey, send it in and you're done and it's real-time. So for example, if you're laying in your hospital bed, you scan the poster on the wall in the hallway and send in your feedback.” – System-Level Organization 2

“...Given the stuff resources we have, it's hard to start collecting something new that isn't already collected without dropping something else off. And then the question becomes, what can we actually drop?” – System-Level Organization 4

PC-QIs can conflict with priorities for patient care and other measurement

- While PCC measurement was seen as important by most participants, participants were challenged by competing priorities, including patient care and other required measurement and projects

“...Given the stuff resources we have, it's hard to start collecting something new that isn't already collected without dropping something else off. And then the question becomes, what can we actually drop?” – System-Level Organization 4

COVID-19 has impacted PCC measurement

- COVID-19 has diverted resources away from patient experience measurement and have caused staff (especially in primary care) to feel like they had no additional capacity to undertake more measurement efforts. Some have continued to collect patient experiences or began to capture patient experiences with virtual care
- Less in person patient flow and inability to use paper surveys in the clinics have challenged efforts to measure PCC

“But you have frontline staff who are exhausted, overwhelmed, have COVID fatigue, and it's like, “Don't ask me to, like, now collect this data on top of everything else I'm doing.” – System-Level Organization 1

“I felt it was difficult to engage staff at this time...[before] with our patient experience surveys, we had the support nurses highly involved, and the clinic staff, and everybody kind of knew, but right now it's hard to go in and say can you add this onto your plate right now.” – Primary Care Organization 10

| Theme 4: Organizational climate for implementation of PC-QIs |
|-------------------------------------------------------------|
| **PCC is part of the culture in most organizations/clinics** |
| • In primary care, PCC aligns with the Patient Medical Home model, as promoted by the Canadian College of Family Physicians |
| **Primary care funding models do not support PC-QI implementation** |
Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs

- Most system-level organizations and some primary care organizations (mainly PCNs) and clinics had well established programs around patient engagement and obtaining patient feedback (e.g. patient advisory groups, conducting focus groups in the community)

"There's going to be an engagement with the community to understand what matters to them, and what they think we should focus measuring, and also an engagement strategy with patient family advisors." – System-Level Organization 5

"...For our patient engagement group, I'm the liaison with them...So we ask them for feedback. So if they happen to come up with something that, "Oh, I think it would be a good idea to also do this", we definitely consider that to incorporate it into what we're working on." – Primary Care Organization 2

PC-QI implementation should fit with the workflow

- Primary care organizations/clinics emphasized the need engage stakeholders to ensure implementation of the PC-QIs fits with the existing clinic workflow and processes as much as possible to minimize disruption to patient care

"I think just getting everybody's buy in, like all the stakeholders, especially the ones that will be doing the work. Just make sure that it's, I mean, most of the stuff are impactful, but just that doesn't take over their daily operations, I suppose." – Primary Care Organization 3

Most organizations have a culture of learning

- Some system-level organizations and primary care clinics spoke about having positive environments for learning, where staff are encouraged to bring in new ideas

"It's a no-blame culture. So, if somebody does something that may be not the right thing, we certainly have a no blame culture. And I think people feel comfortable bringing forward concerns...There's no repercussions to them." – System-Level Organization 10

"...Anybody in our clinic is able to sort of bring ideas forward and initiate things." – Primary Care Organization 5

- Additional data collection is especially challenging for physicians due to time and funding models (fee for service) that do not allow for dedicated time for QI
- There is a need to design implementation in a way that requires as little physician time as possible to support PC-QI adoption and use. Two physicians suggested financial incentive models to support use of the PC-QIs

"It's difficult to schedule time with them because they have to meet their quotas, right. And they have to be available to their patients too...I think the biggest hurdle is just finding time that the physicians are able to give towards that" – Primary Care Organization 8

"And so if I have help with it, it makes it a heck of a lot easier. But I do admit, I have to be strong armed a little bit and I have to think about it and I have to be pushed and prodded even though I know it's good right?" – Primary Care Organization 7

Variability among health provider and leadership readiness in terms of PCC

- System-level and primary care interview participants noted that not all health providers and leadership see PCC as a priority
- There is some variability across sectors. For example, primary care, pediatrics, cancer care, and palliative care as seen to be the most person-centred sectors
- There is a lack of understanding around PCC, with different ideas about what it means

"I guess it's the dismissing this data as not being legitimate because it's only people who want to complain that fill these surveys out. So, I know the quality department has done a lot of work to really focus on the science and the evidence that this is a validated survey and they have all of that information to indicate that no, that's not the case." - System-Level Organization 9

"I guess that's the thing of person-centered. Like, for every person, is they come with a slightly different lens." – System-Level Organization 8
Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs
Informing Person-Centred Quality Indicator Implementation

Mixed Methods Study Reporting Checklist

From: Leech NL, Onwuegbuzie AJ. Guidelines for conducting and reporting mixed research in the field of counseling and beyond. Journal of Counseling & Development. 2010 Jan;88(1):61-9.

1. Research Formulation

1.1.1. Treat each relevant article as data that generate both qualitative (e.g., qualitative findings, literature review of source article, source article author’s conclusion) and quantitative (e.g., p values, effect sizes, sample size score reliability, quantitative results) information that yield a mixed research synthesis. Pg. 6

1.1.2. Subject each document selected as part of the literature review to summarization, analysis, evaluation, and synthesis. Pg. 5

1.1.3. Provide literature reviews that are comprehensive, current, and rigorous; that have been compared and contrasted adequately; and that contain primary sources that are relevant to the research problem under investigation, with clear connections being made between the sources presented and the present study. Pg. 4-5

1.1.4. Present clearly the theoretical/conceptual framework. Pg. 7-8; Pg. 10

1.1.5. Assess the findings stemming from each individual study and the emergent synthesis for trustworthiness, credibility, dependability, legitimation, validity, plausibility, applicability, consistency, neutrality, reliability, objectivity, confirmability, and/or transferability. Pg. 5

1.1.6. Present the goal of the study (i.e., predict; add to the knowledge base; have a personal, social, institutional, and/or organizational impact; measure change; understand complex phenomena; test new ideas; generate new ideas; inform constituencies; and examine the past). Pg. 5-6

1.2.1. Specify the objective(s) of the study (i.e., exploration, description, explanation, prediction, and influence). Pg. 5-6

1.3.1. Specify the rationale of the study. Pg. 6; Supplementary File 3

1.3.2. Specify the rationale for combining qualitative and quantitative approaches (i.e., participant enrichment, instrument fidelity, treatment integrity, and significance enhancement). Pg. 6-7

1.4.1. Specify the purpose of the study. Pg. 5-6

1.4.2. Specify the purpose for combining qualitative and quantitative approaches (e.g., identify representative sample members, conduct member check, validate individual scores on outcome measures, develop items for an instrument, identify barriers and/or facilitators within intervention condition, evaluate the fidelity of implementing the intervention and how it worked, enhance findings that are not significant, compare results from the quantitative data with the qualitative findings). Pg. 6; Pg. 13
Informing Person-Centred Quality Indicator Implementation

1.5.1. Avoid asking research questions that lend themselves to yes/no responses. Research objectives are presented rather than research questions in consideration of manuscript length, however objectives were designed to not illicit only yes/no responses.

1.5.2. Present mixed research questions (i.e., questions that embed both a quantitative research question and a qualitative research question within the same question) when possible. See note above.

2. Research Planning

2.1.1. Specify the initial and final sample sizes for all quantitative and qualitative phases of the study. Pg. 8; Pg. 11; Pg. 16-18

2.1.2. Present all sample size considerations made for the quantitative phase(s) (i.e., a priori power) and qualitative phases (e.g., information-rich cases). Pg. 8; Pg. 11

2.1.3. Present the sampling scheme for both the quantitative and qualitative phases of the study. Pg. 8, 10-11

2.1.4. Describe the mixed sampling scheme (i.e., concurrent–identical, concurrent–parallel, concurrent–nested, concurrent–multilevel, sequential–identical, sequential–parallel, sequential–nested, and sequential–multilevel). Pg. 6

2.1.5. Clarify the type of generalization to be made (i.e., statistical generalization, analytic generalization, and case-to-case transfer) and link it to the selected sampling design, sampling scheme, and sample size(s). Pg. 7-9

2.2.1. Outline the mixed research design. Pg. 6

2.2.2. Specify the quantitative research design (i.e., historical, descriptive, correlational, causal–comparative/quasi-experimental, and experimental). The design is descriptive – Pg. 7

2.2.3. Specify the qualitative research design (e.g., biography, ethnographic, auto-ethnography, oral history, phenomenological, case study, grounded theory). Pg. 10

3. Research Implementation

3.1.1. Outline the mixed data collection strategy. Pg. 8-9; Pg. 12

3.1.2. Present information about all quantitative and qualitative instruments and the process of administration. Pg. 7, 11-12

3.2.1. Outline the mixed data collection strategy (i.e., data reduction, data display, data transformation, data correlation, data consolidation, data comparison, and data integration). Pg. 13

3.2.2. Provide relevant descriptive and inferential statistics for each statistical analysis. Pg. 14, Table 1; Pg. 15; Table 2; Pg. 17-18; Table 3

3.2.3. Discuss the extent to which the assumptions (e.g., normality, independence, equality of variances) that underlie the analyses were met, as well as any observations that might have distorted the findings (e.g., missing data, outliers). Pg. 29 (limitations)

3.2.4. Specify the statistical software used. Pg. 9
Informing Person-Centred Quality Indicator Implementation

3.2.5. Specify where the responsibility or authority for the creation of categories resided (i.e., participants, programs, investigative, literature, or interpretive), what the grounds were on which one could justify the existence of a given set of categories (i.e., external, rational, referential, empirical, technical, or participative), what was the source of the name used to identify a given category (i.e., participants, programs, investigative, literature, or interpretive), and at what point during the research process the categories were specified (i.e., a priori, a posteriori, or iterative). Pg. 9; Supplementary File 3, Pg. 2

3.2.6. Specify the name of the technique used to analyze the qualitative data (e.g., content analysis method of constant comparison, discourse analysis, componential analysis, keywords in context, analytic induction, word count, domain analysis, taxonomic analysis). Pg. 12-13

3.2.7. Specify the qualitative software used. Pg. 12

3.3.1. Discuss the threats to internal validity, external validity, and measurement validity and outline the steps taken to address each of these threats to internal validity, external validity, and measurement validity. Pg. 28-29 (strengths and limitations)

3.3.2. Discuss the threats to trustworthiness, credibility, dependability, authenticity, verification, plausibility, applicability, confirmability, and/or transferability of data and outline all verification procedures used. Pg. 28-29 (strengths and limitations)

3.3.3. Discuss mixed research legitimation types (i.e., sample integration legitimation, insider-outsider legitimation, weakness minimization legitimation, sequential legitimation, conversion legitimation, paradigmatic mixing legitimation, commensurability legitimation, multiple validities legitimation, and political legitimation). Not specifically mentioned, but the study uses sample integration legitimation and weakness minimization legitimation

3.4.1. Interpret relevant types of significance of the quantitative findings (i.e., statistical significance, practical significance, clinical significance, and economic significance). Pg. 25-26

3.4.2. Conduct post hoc power analysis for all statistically nonsignificant findings. N/A

3.4.3. Interpret the significance (i.e., meaning) of qualitative findings. Pg. 25-26

3.4.4. Discuss criteria for evaluating findings in mixed research studies (e.g., within-design consistency, conceptual consistency, interpretive agreement, interpretive distinctiveness, design suitability, design fidelity, analytic adequacy, interpretive consistency, theoretical consistency, integrative efficacy). Not specifically discussed criteria, but assessed on Pg. 28-29

3.5.1. Describe all steps of the mixed research process. Pg. 7-13

3.5.2. Describe the context in which the mixed research study took place. Pg. 7-8, 10-12

3.5.3. Ensure that the mixed research report is accurate and complete; does not distort differences within and among individuals and groups; is free from plagiarism or misrepresentation of the ideas and conceptualizations of other scholars; and contains findings that are adequately accessible for reanalysis, further analysis, verification, or replication. Confirmed

3.5.4. Present all ethical considerations that were addressed in the study (e.g., informed consent, confidentiality, incentives, funding sources, potential conflicts of interest, biases). Pg. 31-32
Informing Person-Centred Quality Indicator Implementation

3.5.5. Specify study approval in accordance with an institutional review board either in the report or in the cover letter submitted to the editor. **Pg. 6**

3.5.6. Present recommendations for future research that culminate in a validation, replication, or extension of the underlying study. **Pg. 29**
Informing the Implementation and Use of Person-Centred Quality Indicators: A Mixed Methods study on the Readiness, Barriers, and Facilitators to Implementation in Canada

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Title: Informing the Implementation and Use of Person-Centred Quality Indicators: A Mixed Methods study on the Readiness, Barriers, and Facilitators to Implementation in Canada

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Informing Person-Centred Quality Indicator Implementation

Abstract

Objectives: To ensure optimal implementation of Person-Centred Quality Indicators (PC-QIs), we assessed the readiness of Canadian healthcare organizations and explored their perceived barriers and facilitators to implementing and using PC-QIs.

Design: Mixed methods.

Setting and Participants: Representatives of Canadian healthcare delivery and coordinating organizations that guide the development and/or implementation of Person-centred care (PCC) measurement. Representatives from primary care clinics and organizations from the province of Alberta, Canada also participated.

Methods: We conducted a survey with representatives of Canadian healthcare organizations. The survey comprised two sections that: 1. assessed readiness for using PC-QIs, and 2. was based on the Organizational Readiness for Change Assessment tool. We summarized the survey results using descriptive statistics. We then conducted follow-up interviews with organizations representing system and clinical-level perspectives to further explore barriers and facilitators to implementing PC-QIs. The interviews were informed by and analyzed using the Consolidated Framework for Implementation Research.

Results: Thirty-three Canadian regional healthcare organizations, across all 13 provinces/territories, participated in the survey. Only five of 26 PC-QIs were considered highly
Informing Person-Centred Quality Indicator Implementation

feasible to implement for 75% of organizations and included: coordination of care, communication, structures to report performance, engaging patients and caregivers, and overall experience. A representative sample of 10 system-level organizations and 11 primary care organizations/clinics participated in the interviews. Key barriers identified were: resources and staff capacity for quality improvement, a shift in focus to COVID-19, and health provider motivation. Facilitators included: prioritization of PCC measurement, leadership and champion engagement, alignment with ongoing provincial strategic direction and measurement efforts, and the use of technology for data collection, management, and reporting.

Conclusions: Despite high interest and policy alignment to use PC-QIs “readiness” to implement them effectively remains a challenge. Organizations need to be supported to collect, use, and report PCC data to make the needed improvements that matter to patients.

Article Summary

Strengths and Limitations of this Study:

- This study uses a rigorous, theory, and evidence-informed implementation science approach to assess readiness, barriers, and facilitators to PC-QI implementation from both a system-level perspective and clinical perspective.
- Our mixed methods study design enabled us to enhance the generalizability of our findings by surveying healthcare organizations across Canada, while obtaining a more in-depth understanding of the barriers and facilitators of PC-QI implementation.
Informing Person-Centred Quality Indicator Implementation

- Study participants may be those interested in using the PC-QIs or have greater capacity to implement them, which may impact our overall assessment of readiness for implementation.
Informing Person-Centred Quality Indicator Implementation

**Background**

Person-centred care (PCC) is a key component of high quality healthcare, which actively engages patients and their caregivers in care decisions and considers patient needs, preferences, and values.[1, 2] A focus on “person-centredness” as opposed to “patient-centredness” promotes a more holistic perspective on care, which is not limited to a person’s disease or illness, but also acknowledges the factors that influence a person’s well-being.[1]

PCC is a model of care that remains aspirational for many healthcare jurisdictions and sectors of care. However, in practice it has been challenging to implement as it requires changes in healthcare structures and processes.[3, 4]

Person-Centred Quality Indicators (PC-QIs) offer an opportunity to drive changes needed to improve the delivery of PCC.[5] Developed by Santana et al. and based on the Donabedian model for quality of care, these generic indicators (non-sector specific) are classified based on their evaluation of healthcare “structures” (e.g. policies or programs, physical structures for providing care), “processes” (interactions between patients, caregivers, healthcare providers, and the healthcare system) and “outcomes” (e.g. patient and health system outcomes).[6] Examples of PC-QIs that assess healthcare structures include whether organizations have a policy for PCC or health information technology to support PCC. Processes PC-QIs include indicators that measure patient experiences related to compassionate care, communication with their healthcare providers, and patient involvement in decisions about their care. PC-QIs that evaluate outcomes of PCC include patient perceptions around the affordability of care and their overall experience with their care.
Informing Person-Centred Quality Indicator Implementation

Quality indicators are used to help national and provincial/regional organizations and health facilities monitor and evaluate the quality of care provided. They provide a quantitative measure that identifies gaps in care to guide healthcare providers and quality improvement (QI) staff in making targeted improvements.[7, 8] While indicators are routinely implemented to enhance healthcare system performance, little research has been done to understand the readiness of organizations to use them and other factors that influence implementation.[9] This has important implications for adoption of the indicators, effective use for QI, as well as patient care and outcomes.

Although factors that influence quality indicator implementation have been studied in intensive care,[10] dementia, [11] and palliative care settings, [12] the use of generic quality indicators intended for use by diverse organizations (e.g. national/regional governments, QI organizations), and across various care settings, have not been explored. The use of PC-QIs also introduces another layer of complexity as it requires the engagement of patients to collect their experiences with care (mainly through Patient-Reported Experience Measures (PREMS)). As such, with increasing interest to measure and improve PCC, there is a need to identify and evaluate effective strategies that will promote uptake and use of PC-QIs for wide application.

The assessment of barriers and facilitators to implementation is critical to identifying implementation strategies.[13, 14] While barriers and facilitators have typically been assessed at the individual level, there is growing recognition that for large-scale organizational change efforts, it is critical to understand factors that influence the collective behaviour change that results in systems re-design.[15] This is particularly relevant to QI initiatives, which involve multiple interdisciplinary team members, such as physicians, nurses, administrative staff, and
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data managers. Understanding aspects of readiness allows one to determine an organization’s
capacity and willingness to implement evidence-based interventions, such as PC-QIs, into
practice.[16] Moreover, an exploration of the implementation context is also important for
identifying barriers and facilitators to change.[17]

As part of a program of research developing and implementing PC-QIs for system-level use
in Canada, our study aimed to assess readiness of organizations to implement PC-QIs and
explore barriers and facilitators to implementation, from the perspective of Canadian
provincial/regional/territorial quality improvement leads (representing a “system-level”
perspective) and health care providers (clinical perspective). The specific objectives included: 1.
assessing readiness of system-level organizations to implement PC-QIs, and 2. exploring
potential barriers and facilitators to implementing PC-QIs for use at both system and clinical
levels. This study was approved by the University Health Research Ethics Boards (REB15-2846)
at the University of Calgary.

Methods

Study Design

To optimize the implementation of PC-QIs using a theory and evidence-based approach,
we chose a mixed methods design to attain more generalizable findings regarding system-level
readiness for implementation as well as obtain an in-depth understanding of the readiness,
barsiers, and facilitators to implementing PC-QIs. We conducted an explanatory sequential
priorities mixed methods design, where the findings from our first quantitative objective
assessing readiness of organizations informed our second qualitative objective to explore the
potential barriers and facilitators to implementing these indicators.[18] The “Guidelines for
Informing Person-Centred Quality Indicator Implementation

conducting and reporting mixed research in the field of counseling and beyond” were used to
guide the design and reporting of this study.[19]

Patient and Public Involvement

Patient and community partners are involved as part of the study team for this program of
research on developing and implementing PC-QIs.[5] For this particular study, a patient partner
was involved in the development of the interview guide, to ensure that the patient perspective
is reflected in the questions asked. Patient and community partners will also be involved in the
co-creation of knowledge dissemination materials and in stakeholder meetings regarding the
application of this study’s findings into practice.

Organizational Readiness Survey for Implementing and Using PC-QIs

Study design and setting: We conducted a web-based survey to assess system level
readiness for implementing and using PC-QIs. Representatives of healthcare delivery and
coordinating organizations that guide the development and/or implementation of PCC
measurement in Canada completed the survey.

Survey development: Guided by organizational readiness theory,[16] we co-developed
and piloted a web-based survey with study collaborators to ensure face validity. The survey
included two components. The first assessed: 1) Motivation - organizational interest in
implementing PC-QIs; 2) Content and construct validity - perceived “measurability”; 3)
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Intervention specific capacity - whether the data could be interpreted and used as part of their organization’s QI processes to improve PCC.

The second component of the survey included an assessment of general capacity for implementation, measuring domains such as: general availability of resources and needed infrastructure, organizational climate, and staff capacity. We used an adapted version of the validated Organizational Readiness for Change (ORC) tool [20], whereby the tool was shortened to minimized respondent fatigue. Questions under each domain were prioritized based on relevancy to the context of QI. Participants were asked to provide qualitative feedback regarding their readiness to implement the PC-QIs and to confirm their willingness to be contacted for a future interview. Survey development and data collection was supported via a web-based platform called ‘Qualtrics.’[21] A copy of the survey is available [see Supplementary File 1].

Participant recruitment: We identified representatives from Canadian healthcare organizations that lead QI and/or PCC measurement initiatives from a previous environmental scan we conducted.[22] We also identified potential contacts through our collaborator, the Canadian Institute for Health Information. A sample frame of 55 eligible organizations across Canada was compiled. Participant details are included in the Results section below.

Data collection: Potential participants were invited to participate via email invitation. Once participants confirmed their ability to respond to questions regarding their organization’s readiness to use PC-QIs and consented, they received a monograph with the technical specifications and evidence supporting the PC-QIs, and a link to the survey. Participants who consented received reminders in two-week intervals until survey completion or until at least a
60% response rate was achieved (determined by the study team to be acceptable) and representation was obtained from all 13 Canadian provinces and territories.

Data analysis: We analyzed the survey data using STATA15 to obtain a descriptive summary of all organizations that participated, including:

- Organization type (health service delivery organization, regional coordinating organization, both and health service delivery organization and regional coordinating organization, and other – provincial or territorial government/Ministry of Health)
- Whether the organization has or could obtain data for the needed PC-QI (already have/could obtain)
- Whether the organization was interested in implementing the PC-QI (somewhat/interested/very interested)
- Whether the organization have processes in place to make changes to improve the indicator (yes); and
- Whether the indicator measured what it is supposed to measure (yes).

We calculated the respondents’ assessment of organizational readiness for each section and compared differences in responses between groups for organization type and region of Canada.

The regions of Canada were defined as: Atlantic, comprised of the provinces of Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland and Labrador; Central, including the provinces of Ontario and Quebec; Northern territories, including Yukon, Northwest Territories, and Nunavut; Pacific, comprising the province of British Columbia; and Prairies, including the provinces of Alberta, Saskatchewan, and Manitoba). We conducted content analysis for the
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qualitative feedback to identify emerging themes as well as patterns across organization types or regions.[23] The survey findings were summarized and sent to participants for their review and feedback.

Interviews to Explore Barriers and Facilitators to Implementing and Using PC-QIs

Study design and setting: For our second objective, we used a qualitative descriptive approach to describe the experiences and perceptions regarding PC-QI implementation and to contrast and compare differences between participant groups. Groups compared included those that provided a system-level perspective, a clinical primary care perspective, different types of organizations, including health service delivery organizations, regional coordinating organizations, provincial or territorial governments, as well as different types of primary care clinics and organizations, such as academic centres and those serving primarily rural populations.[24] We conducted both individual and group interviews with survey respondents to obtain a system-level perspective, as well as primary care providers and Primary Care Network staff who provided a clinic-level perspective. Primary care providers who were interviewed included physicians, clinic administrators, QI managers, and nursing staff. Primary Care Networks were interviewed as they offer QI support to primary care clinics, such as helping to facilitate discussions with physicians and clinic staff to make improvements in processes of care. Primary Care Networks also support data management, analysis and reporting back to the clinics. The clinical perspective was limited to primary care in the province of Alberta for feasibility, as the University of Calgary is situated within Alberta. Furthermore, future research is focused on piloting and studying the implementation of the PC-QIs in primary care in Alberta.
While individual interviews would allow for more in-depth exploration of perceived barriers and facilitators, group interviews with multiple participants from one organization or clinic provide “a greater sense of shared social meanings, or norms, and how these are enacted” [25] and contribute to enhanced understanding of context.[26]

**Interview guide development:** Interview guide development was informed by the survey findings and the Consolidated Framework for Implementation Research (CFIR).[27] The CFIR provides a comprehensive perspective on the factors that influence implementation, particularly regarding implementation context and from an organizational perspective, consistent with the organizational readiness lens that guides our study.[27] The survey findings allowed us to identify specific constructs from the CFIR that would be important to further explore through our interviews. The interview guide was developed by the study authors in consultation with a patient partner and pre-tested with study collaborators [see Supplementary File 2].

**Participant recruitment and inclusion criteria:** We strived to conduct ten system-level interviews and ten clinical primary care interviews. Purposive sampling was used to obtain a variety of perspectives, striving for maximum variation with regards to participant’s role/position in the organization or clinic, type of organization or clinic, geographic region represented, and self-identified gender.[18] For primary care participants, we aimed for representation from all five health service zones in the province of Alberta defined as North, Edmonton, Central, Calgary, and South zones. We identified system-level participants from the organizational readiness survey and recruited primary care participants through referral by our study primary care collaborators and previous interview participants, and a review of Primary
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Care Network websites with public contact information listed for QI staff. Participants were
invited via email. Participant details are included in the Results section below.

Data collection: All interviews took place through videoconference (Zoom) or by
telephone, based on the preference of the participant(s) and in consideration of safety during
the COVID-19 pandemic. Interviews were audio-recorded and field notes collected. Interviews
lasted between 30 and 60 minutes, whereby individual interviews were 38 minutes on average
and group interviews 45 minutes on average. Members of the study team met monthly to
review data collected to date, discuss prominent themes, and data saturation.

Data transcription and analysis: An external transcription service transcribed all audio
recordings verbatim. The transcripts were reviewed, corrected as needed, and anonymized by
the study team. Transcripts were also sent to all interview participants for their review and
feedback.

KM conducted the qualitative data analysis, which included a reading of each transcript
and the field notes to become familiarized with the data.[25] We used a deductive qualitative
content analysis approach to code the data in Nvivo12, with the CFIR as the guiding framework
to categorize data according to factors (constructs) influencing implementation.[23, 27] The
CIFR was used with the intention of mapping the identified barriers and facilitators to evidence-
based implementation strategies, using the Expert Recommendations for Implementing Change
(ERIC) tool following this study.[28] To enhance trustworthiness,[29] three other members of
the study team (MJS, CS, MOB) collectively analyzed 25% of the transcripts, along with the KM,
to compare coding and discuss potential discrepancies in the interpretation of the CFIR
constructs and codebook. The codes/CFIR constructs were summarized and organized as
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“facilitators” or “barriers” to PC-QI implementation. The study team discussed the codes and grouped them into larger categories, where they could be distilled into broader themes and sub-themes of facilitators and barriers until data saturation was reached and no new themes were observed in the data.[25]

**Data interpretation and integration:** To enhance the value of the integration between our qualitative and quantitative methods, we developed a joint display to support the interpretation and reporting of this mixed methods study.[30] Key survey findings were integrated with the themes and sub-themes identified from the interviews to facilitate the interpretation of the data and refine our themes. The integrated findings from the survey and the interviews were summarized and sent to all survey and interview participants for their review and feedback. Additional details regarding the methods can be found in Supplementary File 3.

**Results**

**Organizational Readiness Survey:**

The organizational readiness survey was conducted between November 2019 to March 2020. A total of 33 of 55 Canadian “system-level” organizations that were contacted participated. We attained representation from all 13 provinces and territories across Canada, with a total response rate for 60% (33/55 organizations). Over one-quarter (27.3% [15/55]) of organizations were lost to follow-up after initial contact and/or consent to participate and 12.7% (7/55) of organizations declined to participate due to transitions within the provincial healthcare system that resulted in challenges in available staff time and staff attrition, shifting responsibilities due to COVID-19, or use of PC-QIs not being a focus of their organization.
For peer review only

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Most representation came from the provinces of Ontario and British Columbia who have the greatest number of eligible organizations, each representing 21% of responses. About half of organizations were regional coordinating organizations (51.6%), followed by health service delivery organizations (29.0%). See Table 1 for a summary of the survey participant organizations.

Table 1: Survey Participant Organizations, by % (n)

| Organization Demographics                          | % (n)  | Response Rate % (N=55) |
|---------------------------------------------------|--------|------------------------|
| Provinces/Territories Represented (N=13)          | 100 % (13/13) |                          |
| Organizations Surveyed by Province/Territory (N=33)|        |                        |
| Alberta                                           | 6.1% (2) | 60% (33/55)             |
| British Columbia                                  | 21.2% (7) | 100% (2/2)              |
| Manitoba                                          | 15.2% (5) | 63.6% (7/11)            |
| New Brunswick                                     | 6.1% (2) | 62.5% (5/8)             |
| Newfoundland & Labrador                          | 6.1% (2) | 66.7% (2/3)             |
| Northwest Territories                             | 3.0% (1) | 50.0% (2/4)             |
| Nova Scotia                                       | 6.1% (2) | 100% (1/1)              |
| Nunavut                                           | 3.0% (1) | 100% (1/1)              |
| Ontario                                           | 21.2% (7) | 36.8% (7/19)            |
| Prince Edward Island                              | 3.0% (1) | 100% (1/1)              |
| Québec                                            | 3.0% (1) | 100% (1/1)              |
| Saskatchewan                                      | 3.0% (1) | 50.0% (1/2)             |
| Yukon                                             | 3.0% (1) | 100% (1/1)              |

Type of Organization (N=33)

| Health Service Delivery Organization | 29.0% (9) |
|---------------------------------------|-----------|
| Regional Coordinating Organization    | 51.6% (16) |
| Both                                  | 6.1% (2)  |
| Other (Provincial government/Ministry of Health) | 12.1% (4) |

Table 2 provides a summary of the key survey findings for each PC-QI assessed by the organizations and their reported readiness to implement the PC-QIs. These results are also integrated with the interview findings below. The survey identified a further need to explore specific facilitators and barriers to implementation through interviews, particularly with regards
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to organizational readiness and the perspective of clinical staff, who would be collecting and using the data for QI. These factors for implementation further explored through the interviews included: the importance of aligning with provincial directions for PCC measurement as well as other motivations for implementation, whether organizations and clinics had the capacity to collect and use the data, what resources are needed to support PC-QI implementation, and what organizational cultures or environments support PC-QI implementation. The detailed descriptive survey results are also available in Supplementary file 4.

Table 2: Key Survey Findings

| Motivation – “Interest in implementing the PC-QIs” |
|--------------------------------------------------|
| • 85%+ organizations were interested in implementing most indicators |
| • Interest was lower for PC-QIs related to “Timely access to a primary care provider” as it was not seen as valuable for some organizations to aim for same day access, and the “Friends and Family test” (whether health facility would be recommended to friends and family), where participants did not see that the data would result in meaningful changes |
| • Interest depended on alignment with province directions, particularly in the province of Ontario where there have been major transitions |

| Feasibility – “Have or could obtain info” |
|-----------------------------------------|
| • Provincial/territorial organizations had highest capacity to obtain data for structure indicators relative to other types of organizations |
| • 100% of organizations could get data for the following PC-QIs: ‘Policy on PCC’; ‘Educational programs for PCC’; ‘Healthcare information system to support PCC’; and ‘Structures to report PCC performance’ |
| • 100% of regional coordinating organizations, provincial/territorial organizations, and organizations that were both health service delivery/coordinating could get data for PC-QI on ‘Overall experience’ |
| • Organizations reported partial measurement of PC-QIs – either different terminology was used, or all components of the PC-QI were not measured |

| Actionability – “Have the processes to make changes” |
|-----------------------------------------------------|
| • More than 75% of organizations agreed for these PC-QIs: |
|   o ‘Structures to report PCC performance’; ‘Communication between patient and nurse’; ‘Coordination of care’; ‘Patient and caregiver involvement in decisions about care’; and ‘Overall experience’ |
|   ▪ Most organizations also report having the data or could obtain the data for these indicators, indicating they may be the most feasible to implement |
| • Provincial/territorial organizations were most likely to have processes to make changes relative to other types of organizations for “structure” PC-QIs |

| Validity - “Measures what it is supposed to measure” |
|-----------------------------------------------------|
| • Four PC-QIs received a relatively high proportion of “no” responses (9-12%) and could be further refined: |
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- ‘Policy on PCC’; ‘Culturally competent care’; ‘Use of Patient Reported Outcome Measures’; ‘Equitable care’
- Comments indicate that a more clear definition or other refinements to how the data would be collected would improve the PC-QIs

### Readiness of organizations to implement PC-QIs

- **Motivation for Change:**
  - 65.5% of organizations agree that more training is needed for new methods/developments in measurement/QI
  - Current pressures to change come from patients (69% agree) and accreditation bodies (83.2%)
- **Resources:**
  - 0% of provinces/territories agreed that staff usually have enough time to complete assigned duties
  - 74.1% of organizations reported that workload and pressures keep motivation for new training low
  - 70.4% of organizations disagreed that staff were satisfied with the health data/information systems
- **Organizational climate:**
  - 75% of organizations indicated that their staff are qualified
  - 63.0% of organizations reported heavy workload reduces staff effectiveness

### Interviews to Explore Barriers and Facilitators to Implementing and Using PC-QIs

**Interview Participants:** We conducted interviews between September 2020 to April 2021. Twenty-one individual and group interviews were conducted (N=42 participants). Ten interviews were conducted with system-level health care organizations across Canada (n=13 participants) and 11 with primary care clinics/health centres and Primary Care Networks in Alberta (n=29 participants). While 85.7% (36/42) of interview participants identified as women, 100% of participants providing a system-level perspective identified as women. No men had consented to a follow up interview. Positions held by system-level interview participants included: Leads, Coordinators, or (Executive) Directors of Patient/Client Experience or Engagement (n=9), Directors of departments related to quality, safety, and clinical metrics (n=4), and Epidemiologist (n=1), and a Practice Consultant (n=1).

Among primary care interview participants, all five zones were represented across Alberta, close to half representing urban areas (45%) and most affiliated with academic centres...
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The majority of participants represented primary care clinics or organizations that served diverse populations (e.g. Indigenous populations, newcomers, homeless populations, and both adults and children). Participants held a variety of roles (some more than one), including physicians (n=8), Primary Care Network staff (n=12, comprised of QI/evaluation leads or managers, practice facilitators, data quality leads), clinic nurses (n=3), clinic QI staff (n=6), a medical director (n=1), and clinic support assistant (n=1). See Table 3 for a summary of the participant and organization/clinic demographics.

### Table 3: Summary of Interview Participant & Organization Demographics, by % (n)

| Participants (N= 42) |  |
|----------------------|--|-----------------------------|
| System-level perspective: 31% (13) |  |
| Primary care perspective (Alberta): 69% (29) |  |
| Identify as a woman: 85.7% (36) |  |
| Length of time with organization/clinic |  |
| <1-5 years: 35.7% (15) |  |
| 5+ years: 57.1% (24) |  |
| No answer: 7.1% (3) |  |

| Canadian Regional/Provincial/Territorial Organizations (10 interviews; 13 participants) |  |
|-----------------------------------------------|--|-----------------------------|
| Alberta: 10% (1) |  |
| British Columbia: 20% (2) |  |
| Manitoba: 10% (1) |  |
| New Brunswick: 10% (1) |  |
| Nova Scotia: 10% (1) |  |
| Ontario: 20% (2) |  |
| Saskatchewan: 10% (1) |  |
| Yukon: 10% (1) |  |

| Primary Care Networks and Clinics in Alberta (11 interviews; 29 participants) |  |
|------------------------------------------------------------------------|--|-----------------------------|
| Primary Care Network: 36.4% (4) |  |
| Primary Care Clinic/Health Centre: 63.6% (7) |  |
| Teaching site/affiliated with academic institutions: 63.6% (7) |  |
| Main populations served: |  |
| Urban: 45.5% (5) |  |
| Rural: 36.45 (4) |  |
| Mixed: 27.3% (3) |  |
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Integrated Survey and Interview Findings: The findings are presented as four main themes and sub-themes. These include: the organizations’ interest in implementation of the PC-QIs, motivation to implement PC-QIs, resources and capacity needed to collect and use data for improvements, and the organizational climate for implementation of the PC-QIs. See Table 4 displaying integrated key survey and interview themes, sub-themes, and illustrative quotes, as well as Supplementary File 5 for detailed findings.
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## Table 4: Summary of Factors to Consider for Implementing PC-QIs

| Facilitators                                                                 | Barriers                                                                                           |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| **Theme 1: Interest in implementation of the PC-QIs**                        | **PC-QIs have limitations for understanding context**                                               |
| Stakeholders perceive value in using PC-QIs                                 | “I think we have to be careful with all of these that we don’t try to quantify the human context. So somehow that needs to be considered.” – System-Level Organization 6 |
| “The one thing that they do that we haven’t been able to do, and that’s why I’m really interested in what you have, is looking at patient satisfaction and looking at sort of quality indicator that shows a patient is better today than they were 12 months ago...That’s the kind of piece that we have been missing and that I’ve been hunting for the best sort of way to do it, because we haven’t done that very well yet.” - Primary Care Organization 2 |
| PCs-QIs have limitations for understanding context                            | **There is a need for tailoring and prioritization of the PC-QIs**                                  |
| **There is provincial/territorial alignment for PCC measurement**            | “Where I get nervous and where we’ve experienced some challenges in the past with those bodies [national organizations] being involved is there needs to be a certain level of flexibility in what is being dictated around the measurement pieces. The information that is most interesting at that national level, or that is feasible at that national level is sometimes not meaningful at all at the unit level.” – System-Level Organization 4 |
| “And I think that would be a good indication for you on which ones have been identified as a priority within [organization name]... if we are collecting it, I would say that that has been prioritized within the organization.” – System Level Organization 4 |
| **Actionability and effectiveness of the PC-QIs to stimulate change**         | **Strength of the evidence for PC-QIs is unclear**                                                 |
| “So if there’s an area that was really a lot lower than the others then that kind of just would help to guide the work that we’re doing...And it also then opens up that communication with the providers as far as what they’re offering in the clinics and maybe what areas again could be improved...” – Primary Care Organization 10 |
| **Organizations respond to patients and policies**                           | “So, patient experience, yes, it’s important. But should it rule? I’m not convinced about the clinical outcomes and the downstream savings for costs in healthcare, [or] reduced morbidity for that patient – as long as they get the right clinical care, even if they’re bitching and complaining the whole way.” – Primary Care Organization 4 |
| “If Primary Care Networks get a hold of this in itself, and they consider very valuable measures, they can then start to demand...this is a requirement...that’s one of the very beneficial roles of the Primary Care Networks is to lead clinics down that path to say look these are some measures that you should be doing to provide optimal care.” – Primary Care Organization 5 |
| **Standardization and alignment of measurement efforts are important**       | **The need for training keeps motivation low**                                                     |
| “I think if you’re able to build a power in a Pan Canadian process, it will make it easier for each jurisdiction independently to get buy-in.” – System-Level Organization 7 |
| **It’s not something that a lot of clinics are comfortable with or know what to do about, and so I think we personally still have a lot of growth to do in terms of how we capture this information, and act on it, and engage with patients and design person-centred processes.” – Primary Care Organization 6 |
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| Theme 3: Resources and capacity needed to collect and use data for improvements |
|---|
| **Engagement of provincial/territorial leadership and champions is critical** |
| “It comes down to the leadership and their vision for the organisation and how PFCC indicators fit into that vision. And there are a lot of competing priorities in healthcare...And leadership has to make that a priority.” – System-Level Organization 9 |
| **Surveys can be a potential patient burden** |
| “I guess one of the challenges is just overburdening patients with surveys. And when we are serving patients wanting to keep those surveys quite brief.” – Primary Care Organization 9 |

| **Technology supports implementation and use of PC-QIs** |
| “It’s not quite as slick as I would like it to be but what it does allow is for you to use your cell phone, scan the QR code, do the survey, send it in and you’re done and it’s real-time. So for example, if you’re laying in your hospital bed, you scan the poster on the wall in the hallway and send in your feedback.” – System-Level Organization 2 |

| **Theme 4: Organizational climate for implementation of PC-QIs** |
|---|
| **PC-QI implementation should fit with the workflow** |
| “I think just getting everybody’s buy in, like all the stakeholders, especially the ones that will be doing the work. Just make sure that it’s...impactful, but just that doesn’t take over their daily operations...” – Primary Care Organization 3 |
| **Most organizations have a culture of learning** |
| “It’s a no-blame culture. So, if somebody does something that may be not the right thing, we certainly have a no blame culture. And I think people feel comfortable bringing forward concerns...There’s no repercussions to them.” – System-Level Organization 10 |

| **PC-QIs can conflict with priorities for patient care and other measurement** |
| “Given the stuff resources we have, it’s hard to start collecting something new that isn’t already collected without dropping something else off...what can we actually drop?” – System-Level Organization 4 |

| **COVID-19 has impacted PCC measurement** |
| “But you have frontline staff who are exhausted, overwhelmed, have COVID fatigue, and it’s like, “Don’t ask me to, like, now collect this data on top of everything else I’m doing.” – System-Level Organization 1 |

| **Resources and capacity needed to collect and use data for improvements** |
|---|
| **Theme 3: Resources and capacity needed to collect and use data for improvements** |
| There is strong capacity for QI for most system-level or higher-resourced primary care organizations |
| “...We have a fairly robust framework of measurement that we’ve had implemented for quite some time...but our next our next step forward is expanding to measures of greatest significance directly to patients.” – Primary Care Organization 2 |

| **Staff are time and resource-constrained** |
| “I think in addition to that just the current environment that we’re in in Ontario we are resource constrained... actually having people to be able to do the work is certainly a challenge...” – System-level Organization 7 |

| **Technology supports implementation and use of PC-QIs** |
| “It’s not quite as slick as I would like it to be but what it does allow is for you to use your cell phone, scan the QR code, do the survey, send it in and you’re done and it’s real-time. So for example, if you’re laying in your hospital bed, you scan the poster on the wall in the hallway and send in your feedback.” – System-Level Organization 2 |

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|---|
| **PC-QI implementation should fit with the workflow** |
| “I think just getting everybody’s buy in, like all the stakeholders, especially the ones that will be doing the work. Just make sure that it’s...impactful, but just that doesn’t take over their daily operations...” – Primary Care Organization 3 |

| **Primary care funding models do not support PC-QI implementation** |
| “It’s difficult to schedule time with them because they have to meet their quotas, right. And they have to be available to their patients too...I think the biggest hurdle is just finding time that the physicians are able to give towards that” – Primary Care Organization 8 |

| **Variability among health provider and leadership readiness in terms of PCC** |
| “I guess it’s the dismissing this data as not being legitimate because it’s only people who want to complain that fill these surveys out...the quality department has done a lot of work to really focus on the science and the evidence that this is a validated survey...” – System-Level Organization 9 |
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Theme One: Interest in implementation of the PC-QIs

Facilitators:

Survey respondents agreed that most PC-QIs “measure what they are supposed to measure.”

Most system-level organizations and primary care organizations saw value in using the PC-QIs to improve PCC, the patient experience, and quality of care. 85% of organizations surveyed were interested in implementing most PC-QIs. Provincial and territorial alignment was an important factor for interest in using the PC-QIs among survey respondents. Both system-level and primary care organizations/clinics would like to see that it is feasible to address the indicator and make meaningful changes.

Barriers:

Some participants were less interested in implementing in the PC-QIs as they perceived the PC-QIs to have limitations for understanding context, particularly considering the measurement of cultural competency. Patient stories were seen as a potentially more compelling way to promote improvements and should complement quantitative measures. Organizations/clinics also saw a need to prioritize and tailor the PC-QIs as the generic (non-sector specific) nature of the PC-QIs may not be appropriate for their context. Not all PC-QIs were of interest to organizations, especially if there were not seen as actionable. For example, interest was lower for PC-QIs the PC-QI related to ‘Timely access to a primary care provider’ as it was not seen as valuable for some organizations to aim for same day access.
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Theme Two: Motivation to implement PC-QIs

Facilitators:

Stakeholders were motivated to implement PC-QIs if they perceived a need from patients (69% of survey respondents) and pressures from accreditation bodies (83.2% of survey respondents).

For most provinces or organizations, they saw PC-QIs as aligning with existing policy and measurement priorities, including their provincial/territorial health strategic plans. Standardization of measurement efforts was also a facilitator in motivating organizations/clinics to use PC-QIs. Among system-level organizations, some expressed a need for a Pan-Canadian effort, while primary care stakeholders would like to see alignment of measurement efforts provincially to avoid duplication or siloed efforts across stakeholders. Engagement of leadership at all levels was seen as an important facilitator for buy-in and for motivating staff to measure PCC. Furthermore, having champions at the local level (unit or clinic) was seen as a key facilitator for uptake and use; physicians value the experience and recommendations of their peers.

Barriers:

Other factors that influenced motivation to use PC-QIs was the lack of clarity around the strength of the evidence. Among survey respondents, while most PC-QIs were considered valid, four PC-QIs in particular could be further refined. These included: ‘Policy on PCC’; ‘Culturally competent care’; ‘Use of Patient Reported Outcome Measures (PROMs)’; and ‘Equitable care.’ These PC-QIs received a high proportion of “no” responses (9-12%) to the question about PC-QI
validity. Additionally, some interview participants questioned whether the PC-QIs would lead to improved outcomes; previous experience among primary care stakeholders indicate that they did not find using Patient Reported Experience Measures (PREMs) to be helpful in facilitating improvements. System-level organizations (65.5% of survey respondents) and interview participants indicated more training is needed for new methods/developments in measurement/QI. Finally, some participants noted that surveys may be too long for patients to complete.

Theme Three: Resources and capacity needed to collect and use data for improvements

Facilitators:

Most system-level and some primary care organizations described having strong capacity for QI. They have dedicated staff or partners to support QI by providing training, help to manage, analyze, report, and interpret data. For primary care organizations, those with the strongest capacity tended to be urban and academic/teaching clinics. Among survey respondents, five PC-QIs were considered highly feasible to implement by system-level organizations, where 75% of organizations could get information for the PC-QI and have processes to make changes. These included: ‘Structures to report PCC performance’; ‘Communication between patient and nurse’; ‘Coordination of care’; ‘Patient and caregiver involvement in decisions about care’; and ‘Overall experience.’ Technology was also considered an important facilitator for helping with data collection and real-time reporting to use for QI. This includes the use of tablets, QR codes, e-mailing patients surveys, Electronic Medical/Health Records.
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Barriers:

Many participants described time and resource constraints, which may impact PC-QI implementation. Among survey respondents, 0% of provinces/territories agreed that staff usually have enough time to complete assigned duties. Additionally, 74.1% of organizations reported that workload pressures keep motivation for training low, indicating potential challenges with training for the collection and use of PC-QIs. Some lower resourced organizations/clinics do not have strong capacity for QI due to a lack of funding and dedicated staff to support QI. In particular, the organizations in the Northern Territories of Canada and smaller and rural clinics reported having less capacity for QI. Additionally, participants were challenged by competing priorities. COVID-19 has also had an impact on PCC measurement, as it has diverted resources away from patient experience measurement. Staff described feeling like they had no additional capacity to undertake more measurement efforts. Some system-level organization staff were seconded to COVID-19 surveillance and measurement, while clinic staff incorporated additional processes and policies related to infection control as well as staffing shortages due to school closures and isolation requirements.

Theme Four: Organizational climate for implementation of PC-QIs

Facilitators:

PCC is part of the culture in most organizations/clinics, where the patient perspective in healthcare quality is valued. Most system-level organizations, some primary care organizations (mainly Primary Care Networks), and larger clinics had well established programs around
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patient engagement and obtaining patient feedback. Some system-level organizations and primary care clinics also spoke about having a positive culture of learning. Among primary care stakeholders, another important factor to consider was designing PC-QI implementation to fit with the existing clinic workflow and processes as much as possible to minimize disruption to patient care.

Barriers:

One of the key barriers in primary care is that primary care funding models do not support PC-QI implementation. Additional data collection is especially challenging for physicians due to time constraints. In the province of Alberta, the fee-for-service model of funding, where physicians bill for each service provided, was seen as a barrier to providing dedicated time for QI as physicians may want to prioritize patient visits over QI initiatives. Participants also described variability among health provider and leadership readiness in terms of PCC, where not all health providers and leadership see PCC as a priority and there is variability in understanding what PCC means. For example, some may see PCC as giving patients what they want and ensuring they are satisfied versus engaging patients as partners in their care.

Discussion

We conducted a mixed methods study to assess the readiness of organizations in Canada to implement and use PC-QIs, and to identify specific barriers and facilitators to implementation. Our survey findings highlighted variability in system-level readiness for implementation. While most organizations were interested in using the PC-QIs, some were more ready to implement,
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given the organization’s capacity to collect the data and to use the data to stimulate
improvements in PCC. Notably, only five of 26 PC-QIs were considered highly feasible to
implement. These PC-QIs included: ‘Structures to report PCC performance’; ‘Communication
between patient and nurse’; ‘Coordination of care’; ‘Patient and caregiver involvement in
decisions about care’ and ‘Overall experience.’ Regarding general capacity for implementation,
survey respondents indicated staff time to be a major constraint, a need for training in new
methods/QI, and dissatisfaction with electronic data systems.

Our interviews allowed us to further explore these aspects of readiness, corroborate our
survey findings around readiness, and provide a more enhanced understanding of the barriers
and facilitators. Facilitators identified included: a culture of PCC and patient engagement exists
in most organizations, PC-QIs are aligned with national and provincial measurement efforts,
and that leadership engagement, and the use of technology, such as Electronic Medical
Records, QR codes, dashboards, and email are important for implementation. Barriers
identified were: challenges with resources and workload, limited QI capacity in lower-resourced
settings, especially family practices and rural clinics, and the COVID-19 pandemic, which has
diverted resources, disrupted processes for collecting patient experiences, and impacted
patient flow.

Our previous research found that while many organizations across Canada and in many
other countries, including England, Sweden, Australia, and New Zealand, measure PCC using
patient experience measures, few organizations use quality indicators to monitor and evaluate
PCC.[22] Furthermore, in a 2019 scoping review of the literature, we also found scarce evidence
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on the implementation of PC-QIs and evaluation of their use, highlighting a significant gap in
the literature.[31] However, some studies have explored the factors that influence the
implementation and use of quality indicators, albeit not specifically focused on measuring PCC.

Our findings are consistent with previous research on quality indicator implementation in
various care settings and studies on the implementation of patient-reported experience and
outcome measures (PREMs and PROMs).[10-12, 32-34] Challenges associated with knowledge,
skills (need for training), time constraints, and motivation around measurement have been
widely reported. Important facilitators to support quality indicator implementation that have
also been reported include the need for administrative support for clinicians,[10] the
importance of electronic data systems,[12, 32] and alignment with national and regional
priorities,[11] the need to integrate measurement within established workflows to minimize
patient care disruptions as well as the uncertainty around the benefits of using patient-
reported data.[32]

Our findings also suggest inequitable uptake of person-centred QI, where organizations that
are least resourced may also be in most need of improved quality of care that is person-
centred. This includes organizations in Canada’s Northern Territories, which are home to a
larger proportion of Indigenous communities, relative to other areas of Canada, as well as rural
primary care clinics, where people experience challenges with remote access to services.

Rolnitsky et al. conducted a 2018 mapping review of the literature to measure the
representation of vulnerable populations in quality improvement studies.[35] They found that
while one-third of quality improvement research is focused on vulnerable populations, some
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populations are under-represented (less than 2%), including rural residents, the poor, visible
minorities, the terminally ill, adolescents, and prisoners.[35] Moreover, in Canada, as well as
Australia, New Zealand, and the United States, inequities related to the quality of care for
Indigenous people are well-documented.[36] These gaps that have been identified in research,
including this study, suggest a need for increased attention to more equitable implementation
of QI, especially focused on promoting PCC.

Our study identified some unique factors perceived to influence implementation by
including both system and clinical level perspectives, such as the role of external organizations
and partners in supporting implementation to enhance capacity for QI, the variability in
provider and leadership readiness around PCC and measurement, organizational culture in
terms of patient engagement and QI, and specific implementation challenges in Canadian
primary care contexts (fee-for-service models). Furthermore, our study identified barriers
associated with planning for PC-QI implementation during COVID-19, where the pandemic
negatively affected the ability for organizations and clinics to continue collecting patient-
reported data.

This study is the first to assess the readiness of Canadian organizations and explore barriers
and facilitators to implementing PC-QIs. Our mixed methods study design enabled us to
enhance the generalizability of our findings by surveying healthcare organizations across
Canada, while obtaining a more in-depth understanding of the barriers and facilitators of PC-QI
implementation. Moreover, this research contributes to the limited body of evidence regarding
quality indicator implementation by using and evidence and theory informed approach
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(organizational readiness lens, CIFR) and obtaining diverse perspectives at the local clinical level as well as a regional/provincial/territorial system level. With increased interest in measuring PCC globally and leveraging ongoing measurement efforts in Canada, this research can provide guidance for PCC measurement moving forward.

Several limitations of this research should be acknowledged. First, there is a risk of selection bias, where those potentially most interested in the PC-QI implementation and have resources available to support implementation were most likely to participate in the survey and interviews. This was the case for our most of our interview participants in primary care, who tended to be “early adopters” with respect to PCC measurement and QI. In addition, we attained a relatively low response rate for the provinces of Ontario and British Columbia in our survey. We were also limited in sampling participants from the province of Quebec as we did not sample regionally due to French language limitations. These limitations may influence the generalizability of our findings. Despite this, efforts were made to ensure a diversity of perspectives through purposive sampling to attain greater representativeness.

Future research includes mapping these barriers and facilitators to evidence-based implementation strategies and engaging key stakeholders in PCC measurement in Canada and in primary care in Alberta to inform future implementation efforts.

Conclusions

The findings of this study suggest that PC-QI implementation can leverage the high level of interest in their use, alignment with existing policy and initiatives in PCC measurement, and
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opportunities to integrate technology to support implementation. Despite this, organizational
readiness to implement is variable across contexts; it will require resource investment, capacity
development, and sustained leadership engagement at all levels to support organizations to
collect, use, and report data on PCC. This study provides a foundational basis for identifying
implementation strategies that will optimize PC-QI implementation and facilitate the
incorporation of the patient perspective in improving their quality of care.

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Author Contributions
Informing Person-Centred Quality Indicator Implementation

KM, M-JS, BH, CMS, and MOB contributed to the study concept, study design, interpretation of the data, and provided critical review and revision of the manuscript for intellectual content.

MOB provided support in identifying and contacting potential interview participants in primary care. KM collected the survey and interview data. KM, CMS, MOB, and M-JS conducted data analysis. KM, M-JS, BH, CMS, and MOB also provided their final approval of this publication and agree to be accountable for all aspects of the work to ensure both accuracy and integrity of this research.

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Competing interests

None declared.

Patient consent for publication

Not required.

Ethics approval

Ethics approval was granted from the University Health Research Ethics Boards [(REB15-2846)] at the University of Calgary.
Informing Person-Centred Quality Indicator Implementation

628 **Provenance and peer review**

629 Not commissioned; externally peer reviewed.

630

631 **Transparency statement**

632 The lead author affirms that this manuscript is an honest, accurate, and transparent account of

633 the study being reported; that no important aspects of the study have been omitted; and that

634 any discrepancies from the study as planned (and, if relevant, registered) have been explained.

635

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Start of Block: Introduction + Screening

Welcome

Before we begin, do you feel able to provide answers for this survey?

☐ Yes

☐ No

Display This Question:
If Before we begin, do you feel able to provide answers for this survey? = No

Do you know of anyone who would be more appropriate?

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

End of Block: Introduction + Screening

Start of Block: Respondent Profile

Who is filling out this survey?

________________________________________________________________
________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

What are your title(s) in the organization?

________________________________________________________________

I am answering this question as a representative of a:

○ Regional/coordinating organization that supports health service delivery (ex: AHS, PCN/LHIN, health quality improvement council, etc)

○ Health service delivery organization (clinical points of care such as hospitals, clinics)

○ Other (please describe) __________________________________________________________

End of Block: Respondent Profile

Start of Block: Organizational Profile
Supplementary File 1: PC-QI Organizational Readiness Survey

What province or territory is your organization based in?

- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland and Labrador
- Northwest Territories
- Nova Scotia
- Nunavut
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Yukon
- National

What is the name of the organization you represent?

__________________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

What type of services does your organization support? Check one or more that apply.

- [ ] Acute care services (e.g. hospitals)
- [ ] Community health services (e.g. out-patient clinics, primary care, long-term, etc.)
- [ ] Other - Please describe:
  __________________________________________________
- [ ] Not applicable

Your organization serves the following population?

- [ ] Adults only
- [ ] Children only
- [ ] Both adults and children

End of Block: Organizational Profile

Start of Block: Org readiness screen

The PC-QIs have been developed with the intention of system-level application, to guide healthcare organizations across various sectors of care in measuring and improving Person-Centred Care.

A secondary section of the survey asks for your assessment of the readiness of your organization in adopting and using these indicators to measure Person-Centred Care, regional / coordinating health organization or health service delivery organization.

Before we begin, do you feel able to provide answers for this aspect of the survey?

- [ ] Yes
- [ ] No
Supplementary File 1: PC-QI Organizational Readiness Survey

**Display This Question:**

If The PC-QIs have been developed with the intention of system-level application, to guide healthcare...

No

Do you know of anyone who would be more appropriate?

________________________________________________________________

________________________________________________________________

________________________________________________________________

________________________________________________________________

________________________________________________________________

End of Block: Org readiness screen

Start of Block: QIs

**Structure Indicator 1: Policy on Person-centred Care**

**Definition:** Regional/provincial/national policy (or policies) that guides and supports the provision of PCC

**Numerator:** Number of hospitals and healthcare centres/organizations that have a policy (or policies) for PCC which includes the following five components:

1) Establishment of an operational definition for PCC;
2) Inclusion of PCC in the organization’s Mission and Vision;
3) Inclusion of PCC as part of the organization’s Core Values;
4) Allocation of resources to support and implement PCC;
5) Evaluation of PCC protocol and program implementation with the perspective of patients

**Denominator:** Number of all audited hospital and healthcare centres/organizations

Which of the following statements is most true for the organization you support?
Supplementary File 1: PC-QI Organizational Readiness Survey

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?
- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?
- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

Do you have any other feedback about this indicator?

Structure Indicator 2: Educational Programs on Person-centred Care

**Definition:** Educational program(s) in place describing PCC and how to practice PCC for all healthcare personnel (e.g. staff, physicians, nurses, allied health care professionals, caregivers).

Training includes providing care that promotes co-design and partnership with patients, collaboration among the healthcare team, in addition to anti-discriminatory care, cultural competence and humility.

Quality of training should be assessed by healthcare personnel and by patients to inform necessary gaps and improvements needed in educational programs.

Process and outcome indicators can provide a patient perspective on the delivery of PCC.

**Numerator:** Number of hospitals and healthcare centres, community-based organizations that have an educational program(s) for PCC

**Denominator:** Number of all audited hospital and healthcare centres, and community-based
Supplementary File 1: PC-QI Organizational Readiness Survey

organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this indicator?

________________________________________________________________

Structure Indicator 3: Culturally Competent Care

Definition: Percentage of healthcare facilities using a survey to assess organizational cultural competence

Numerator: Number of healthcare systems (hospitals and healthcare centres) assessing organizational cultural competence

Denominator: Number of all audited hospital and healthcare centres/organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information
Supplementary File 1: PC-QI Organizational Readiness Survey

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Do you have any other feedback about this indicator?

________________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

Structure Indicator 4: Providing a Supportive and Accommodating Person-centred Care Environment

Definition: Healthcare systems with a protocol(s) for co-developing a supportive and accommodating physical PCC environment in healthcare facilities with patients

Numerator: Number of hospitals and healthcare centres/organizations with a protocol(s) for co-developing a PCC environment with patients

Denominator: Number of all audited hospitals and healthcare centres/organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________

- ----------------------------------------------------------------------------------------------------------------------------------
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________________

Do you have any other feedback about this indicator?

________________________________________________________________________

Structure Indicator 5: Co-designing Care in Partnership with Communities

**Definition**: Healthcare systems should have a protocol(s) guiding development of partnerships with communities for co-designing care, and should provide an opportunity for partners to evaluate the partnership regularly

**Numerator**: Number of hospital and healthcare centres/organizations with a protocol guiding the development of partnerships with communities for co-designing care

**Denominator**: Number of all audited hospital and healthcare centres/organizations
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

○ Yes

○ Somewhat

○ No

If you selected "somewhat" or "no", please provide additional feedback.

---------------------------------------------------------------------

---------------------------------------------------------------------

Do you have any other feedback about this indicator?

---------------------------------------------------------------------

---------------------------------------------------------------------

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

Structure Indicator 6: Healthcare Information System to Support Person-Centred Care

Definition: Healthcare systems using health information technology to support and monitor PCC by:
- Supporting patient-healthcare professional communication
- Providing patients with information about their health and care
- Supporting the coordination, continuity and transitions of care

Numerator: Number of hospital and healthcare centres/organizations using healthcare information technology to support and monitor PCC

Denominator: Number of all audited hospitals and healthcare centres/organizations

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

______________________________________________________________

Do you have any other feedback about this indicator?

______________________________________________________________

Structure Indicator 7: Structures to Report Person-centred Care Performance

**Definition:** Healthcare systems should report PCC performance based on feedback from patients and healthcare staff

**Numerator:** Number of hospital and healthcare centres / organizations reporting on PCC performance based on feedback from patients and healthcare staff

**Denominator:** Number of all audited hospitals and healthcare centres / organizations
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: _______________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this indicator?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

**Process Indicator 1: Compassionate Care**

**Definition:** Percentage of patients that reported receiving compassionate care during their visit with a healthcare professional (e.g. doctors, nurses, allied health professionals) across healthcare settings and home care

**Numerator:** Total number of patients reporting receiving compassionate care during their visit with a healthcare professional (e.g. doctors, nurses, allied health professionals) across healthcare settings and home care

**Denominator:** Total number of patients responding to the question(s) who reported receiving compassionate care

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 2: Equitable Care

**Definition**: Percentage of patients that reported that they received inequitable access to care and treatment because of their race/ethnicity, education level, gender, language, religion, and/or sexual orientation

**Numerator**: Total number of patients reporting that they received equitable access to care and treatment

**Denominator**: Total number of patients responding to the questions assessing equitable
Supplementary File 1: PC-QI Organizational Readiness Survey

access to care and treatment

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________
________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 3: Trusting Relationship with Healthcare Provider

**Definition**: Percentage of patients that reported a high level of trust with their healthcare provider

**Numerator**: Total number of patients responding highly to the questions assessing trust

**Denominator**: Total number of patients responding to the questions assessing trust

Which of the following statements is most true for the organization you support?
Supplementary File 1: PC-QI Organizational Readiness Survey

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

☐ Yes

☐ Somewhat

☐ No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

Process Indicator 4: Accessing Interpreter Services

**Definition:** Percentage of patients that reported access to interpreter services in multiple languages across health care settings

**Numerator:** Total number of patients reporting receiving access to interpreter services

**Denominator:** Total number of patients responding to the questions assessing access to interpreter services

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ____________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 5: Communication with Healthcare System

**Definition:** Percentage of patients that reported a high level of communication between patients and healthcare staff (e.g. health-line operators (#811), office assistants, associated healthcare staff) at the time of accessing healthcare and throughout patient and family interactions with the healthcare system

**Numerator:** Total number of patients responding positively to the question(s) assessing communication with healthcare staff

**Denominator:** Total number of patients responding to the overall questions assessing communication
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: __________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

- Please provide more information.
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 6: Communication between Patient and Healthcare Provider – Nurse
Definition: Percentage of patients that reported a high level of communication between patient and nurses

Numerator: Total number of patients responding positively to questions assessing overall communication with nurses

Denominator: Total number of patients responding to questions assessing communication with nurses

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information
Supplementary File 1: PC-QI Organizational Readiness Survey

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

____________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Do you have any other feedback about this measure?



Process Indicator 7: Communication between Patient and Healthcare Provider - Physician

Definition: Percentage of patients that reported a high level of communication between patient and physicians

Numerator: Total number of patients responding positively to the questions assessing communication with physicians

Denominator: Total number of patients responding to the questions assessing communication with physicians

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ____________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

**Process Indicator 8: Information about Taking Medication**

**Definition:** Percentage of patients responding that the healthcare provider explained to them their medication, including the purpose, side effects, and potential changes to the treatment.

**Numerator:** Total number of patients responding that the healthcare provider explained to them about their medication, including the purpose, side effects, and potential changes to the treatment.

**Denominator:** Total number of patients responding to the question(s)

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ____________________________

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Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 9: Communicating Test Results

**Definition:** Percentage of patients that responded that they received and understood information about their test results

**Numerator:** Total number of patients responding that they received and understood information about their test results
Supplementary File 1: PC-QI Organizational Readiness Survey

**Denominator**: Total number of patients responding to the question(s) about receiving and understanding information about their test results

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- [ ] Yes
- [ ] No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 10: Coordination of Care

**Definition:** Percentage of patients that reported that their care was coordinated well. Care coordination means that patient care activities and information is shared among all of the participants concerned with a patient's care, and collaborating in a shared plan of care which includes the patient and family as part of the team.

**Numerator:** Total number of patients responding to having received coordinated care

**Denominator:** Total number of patients responding to the questions assessing coordination of care
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

Do you have any other feedback about this measure?

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

Process Indicator 11: Patient and Caregiver Involvement in Decisions about Their Care and Treatment

**Definition**: The percentage of patients/caregivers that reported their healthcare provider involved them as much as they wanted in decisions about their care and treatment

**Numerator**: Number of survey respondents who reported that their healthcare provider involved them as much as they wanted in decisions about their care and treatment

**Denominator**: Number of respondents who answered the survey question(s) on involvement in decisions about their care and treatment

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

__________________________________________________________________________

Do you have any other feedback about this measure?

__________________________________________________________________________

Process Indicator 12: Engaging Patients in Managing their Own Health

**Definition**: Percentage of patients and caregivers that report being engaged in self-managing their condition, which includes:

1. Shared decision-making;
2. Goal-setting;
3. Supporting self-care management; and
4. Care plans being accessible to patients/caregivers/healthcare providers
Supplementary File 1: PC-QI Organizational Readiness Survey

**Numerator:** Total number of patients and caregivers that responded positively to being engaged in self-management

**Denominator:** Total number of patients and caregivers that responded to the question(s) assessing engagement of self-management

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 13: Timely Access to a Primary Care Provider

**Definition**: Percentage of patients and clients able to see a doctor or nurse practitioner on the same day or next day, when needed

**Numerator**: The number of respondents who answered "same day" and "next day" in response to the following patient and client survey question: “The last time you were sick or were concerned you had a health problem, how many days did it take from when you first tried to see your doctor or nurse practitioner to when you actually saw him/her or someone else in their office?”

**Denominator**: The number of respondents who registered an answer of the following patient and client survey question: “The last time you were sick or were concerned you had a health problem, how many days did it take from when you first tried to see your doctor or nurse practitioner to when you actually saw him/her or someone else in their office?”
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: __________________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

○ Yes

○ Somewhat

○ No

If you selected "somewhat" or "no", please provide additional feedback.

__________________________

Do you have any other feedback about this measure?

__________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

**Process Indicator 14: Patient Preparation for a Care Plan at a Healthcare Facility**

**Definition:** This indicator measures the percentage of patients reporting that they had enough information about their care and treatment when admitted into a healthcare facility (e.g. homecare, hospital, mental health institution)

**Numerator:** Number of patients reporting that they had enough information about their care and treatment when admitted into a healthcare facility

**Denominator:** Number of patients admitted into the healthcare facility

Which of the following statements is most true for the organization you support?

- [ ] We already have the information for this indicator
- [ ] We can obtain this information
- [ ] We cannot obtain this information

How interested would your organization be in implementing this indicator?

- [ ] Not interested
- [ ] Somewhat interested
- [ ] Interested
- [ ] Very interested
- [ ] Other: ____________________________________________________________

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Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Process Indicator 15: Transition Planning

Definition: Percentage of patients that reported receiving information and discussing their needs to manage their condition in preparation for care transition across care sectors

Numerator: Number of patients that reported receiving information and discussing their needs to manage their condition in preparation for care transition across care sectors

Denominator: Number of patients admitted into the healthcare facility
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________
________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________
________________________________________________________________

Process Indicator 16: Using Patient-reported Outcome Measures (PROMs) to Deliver Person Centered Care

Definition: Percentage of clinics/hospitals/health centres using PROMs in healthcare decision making including point of care management and policy

Numerator: Number of clinics/hospitals/health centres in a jurisdiction using PROMs in clinical care

Denominator: Total number of clinics/hospitals/health centres in a jurisdiction
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

○ Yes

○ Somewhat

○ No

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If you selected "somewhat" or "no", please provide additional feedback.

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Do you have any other feedback about this measure?

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Page Break
Outcome Indicator 1: Overall Experience

**Definition:** Percentage of patients reporting their overall experience within the facility

**Numerator:** Number of patients rating their overall experience within the facility as “Very good” (top box)

**Denominator:** Total number of patients rating the hospital their overall experience within the facility

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________
Supplementary File 1: PC-QI Organizational Readiness Survey

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Outcome Indicator 2: Cost of Care – Affordability

Definition: Percentage of patients reporting that they can afford the cost of their healthcare treatment (e.g. medications, treatment program, equipment)

Numerator: Number of patients reporting that they can afford the cost of their healthcare treatment

Denominator: Total number of patients reporting the cost of their healthcare treatment
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

☐ Yes

☐ Somewhat

☐ No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Global Indicator – Friends and Family Test

**Definition:** Percentage of patients reporting recommending the hospital/health facility to friends and family

**Numerator:** Number of patients answering ‘Definitely yes’ when asked if they would recommend the hospital/health facility to friends and family

**Denominator:** Number of patients answering the question asking if they would recommend the hospital/health facility to friends and family
Supplementary File 1: PC-QI Organizational Readiness Survey

Which of the following statements is most true for the organization you support?

- We already have the information for this indicator
- We can obtain this information
- We cannot obtain this information

How interested would your organization be in implementing this indicator?

- Not interested
- Somewhat interested
- Interested
- Very interested
- Other: ________________________________

Does your organization have processes in place to make changes needed to improve this indicator?

- Yes
- No
Supplementary File 1: PC-QI Organizational Readiness Survey

Does this indicator measure what it is supposed to measure?

- Yes
- Somewhat
- No

If you selected "somewhat" or "no", please provide additional feedback.

________________________________________________________________

Do you have any other feedback about this measure?

________________________________________________________________

Page Break
Supplementary File 1: PC-QI Organizational Readiness Survey

End of Block: QIs

Start of Block: Organizational Readiness (DISPLAY IF)

The following questions aim to assess the readiness of Canadian healthcare organizations/agencies to adopt and use PC-QIs to measure and improve Person-Centred Care across various sectors of care.

Please answer the following questions based on your perspective as a regional or coordinating healthcare organization/agency that provides support to healthcare service delivery organizations/facilities. While we recognize that healthcare organizations/facilities within your region can vary considerably, we encourage you to provide your general assessment of these organizations.

Your healthcare organizations need additional guidance in setting specific goals

- [ ] Strongly disagree
- [ ] Somewhat disagree
- [ ] Neither agree nor disagree
- [ ] Somewhat agree
- [ ] Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Your healthcare organization needs additional guidance in evaluating staff performance.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Your healthcare organizations need more training for new methods/developments in your area of responsibility.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Current pressures to make changes in your healthcare organizations come from patients and family/caregivers.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Current pressures to make changes in your healthcare organizations come from accreditation or licensing authorities.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff in your healthcare organizations have the skills they need to do their jobs.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

More support staff are needed for getting tasks completed.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Frequent staff turnover in your healthcare organizations is a problem.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff in your healthcare organizations usually have enough time to complete assigned duties.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

There are enough staff in your healthcare organizations to meet organizational needs.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Staff in your healthcare organizations are qualified for their duties.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff training and continuing education are priorities in your healthcare organizations.

○ Strongly disagree
○ Somewhat disagree
○ Neither agree nor disagree
○ Somewhat agree
○ Strongly agree

Staff receive regular in-service training in your healthcare organizations.

○ Strongly disagree
○ Somewhat disagree
○ Neither agree nor disagree
○ Somewhat agree
○ Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

The workload and pressures in your healthcare organizations keep motivation for new training low.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Most records in your healthcare organizations are computerized.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Staff are satisfied with the health data/information systems in your healthcare organizations.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Management in your healthcare organizations have a clear plan for accomplishing the goals.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

The staff in your healthcare organizations work together effectively as a team.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

Staff in your healthcare organizations are free to try out different ideas or techniques.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

The staff in your healthcare organizations are kept well informed by management.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

The heavy workload reduces staff effectiveness.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
Supplementary File 1: PC-QI Organizational Readiness Survey

It is easy to change routine procedures to meet new conditions.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Management decisions in your healthcare organizations are well planned.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Do you have any other thoughts about your healthcare organizations’ readiness to adopt these indicators?

- No
- Yes

End of Block: Organizational Readiness (DISPLAY IF)

Start of Block: Contact survey (Kim)
Supplementary File 1: PC-QI Organizational Readiness Survey

Thank you for taking the time to complete this survey. Please do not hesitate to contact the Primary Investigator, Dr. Maria Santana (mjsantan@ucalgary.ca), or the Study Coordinator, Kimberly Manalili (kmanalil@ucalgary.ca), should you have any questions about the study.

Our research team is also conducting a series of phone or face-to-face individual interviews with a diverse sample of organizational representatives across Canada, who will be identified through their participation in this survey. The aim of the interviews is to obtain an in-depth understanding of the potential barriers and facilitators to implementing the PC-QIs to measure and evaluate PCC across different sectors of care.

The interviews will be approximately 30-45 minutes in length.

Would you be willing to be contacted for a follow-up interview?

- Yes
- No

End of Block: Contact survey
Supplementary File 2: PC-QI Implementation Interview Guides

PC-QI Implementation Interview Guide
Regional/Provincial/Territorial Organizations: System-level Perspective

Interview Questions

1. Tell me about your work/role(s) at ________. (warm-up question)

2. From your experience, how do organizations decide what to measure and whether to measure something? (your organization, at the regional/provincial level; hospitals/health centres)?
   a. How has COVID-19 influenced decisions around measurement?
   b. How are patients and the public (families, communities) involved in healthcare measurement?
      Probes: What has your experience been with involving patients? Has COVID-19 impacted the extent to which they can be involved?

3. From your perspective, what would it take for your organization to implement or use these PC-QIs?
   a. What are some barriers or challenges to adopt/implement/use them to make changes in how care is delivered?
   b. How has/will COVID-19 affect your capacity to measure person-centred care?
      Probes:
      o Are there any organizational factors that will support implementation and use?
         • Specific probes: Resources, motivations - interest in QI and/or PCC, leadership engagement, capacity/knowledge/skills to do QI, existing QI processes and data collection (including existing PREMs used), comfort with data, reporting, PCC as a priority, policies (e.g. Patient Medical Home model) and measurement frameworks, teamwork, work flow implications, patient engagement, culture of learning and innovation, etc.
      o Individual level factors?
         • Specific probes: Motivations - interest in QI and/or PCC, ownership, etc.
      o Specific factors related to the indicators?
         • Specific probes: validity, measurability, number of PC-QIs
      o Others?
         • Specific probes: potential for integration, storage, data systems, linkage capacity to administrative databases, etc.
Supplementary File 2: PC-QI Implementation Interview Guides

PC-QI Implementation Interview Guide
Primary Care Providers: Clinical-level Perspective

Interview Questions

1. Tell me about your work/role(s) at ________. (warm-up question)

2. From your experience, how does your clinic decide what to measure and whether to measure something?
   a. How has COVID-19 influenced decisions around measurement?
   b. How are patients and the public (families, communities) involved in healthcare measurement?
      i. Probes: What has your experience been with involving patients? Has COVID-19 impacted the extent to which they can be involved?

3. From your perspective, what would it take for your clinic to implement or use these PC-QIs?
   a. What are some barriers or challenges to adopt/implement/use them to make changes in how care is delivered?
   b. How has/will COVID-19 affect your capacity to measure person-centred care?
   c. Probes:
      d. Are there any organizational factors that will support implementation and use?
         i. Specific probes: Resources, motivations - interest in QI and/or PCC, leadership engagement, capacity/knowledge/skills to do QI, existing QI processes and data collection (including existing PREMs used), comfort with data, reporting, PCC as a priority, policies (e.g. Patient Medical Home model) and measurement frameworks, teamwork, work flow implications, patient engagement, culture of learning and innovation, etc.
   e. Individual level factors?
      i. Specific probes: Motivations - interest in QI and/or PCC, ownership, etc.
   f. Specific factors related to the indicators?
      i. Specific probes: validity, measurability, number of PC-QIs
   g. Others?
      i. Specific probes: potential for integration, storage, data systems, linkage capacity to administrative databases, etc.
Supplementary File 3: Detailed Methods

Study Methods

Study Design

To optimize the implementation of PC-QIs using a theory and evidence-based approach, we chose a mixed methods design to allow us to attain more generalizable findings regarding system-level readiness for implementation as well as to obtain an in-depth understanding of the readiness, barriers, and facilitators to implementing PC-QIs. We conducted an explanatory sequential priorities mixed methods design. We used our findings from our first quantitative objective assessing readiness of system-level organizations (using a survey) to inform a second qualitative objective to explore the potential barriers and facilitators to implementing these indicators for use at both the system-level and the clinical level via individual and group interviews.[1] We identified system-level organizational representatives to interview from those who completed the readiness survey.[2] Results from the survey allowed us to identify specific implementation factors to further explore through the interviews.[2] Taken together, the interpretation of the results provided us with the opportunity to enhance our understanding of the factors that influence PC-QI implementation from both system and clinical perspectives. The “Guidelines for conducting and reporting mixed research in the field of counseling and beyond” were used to guide the design and reporting of this study.[3]

Organizational Readiness Survey for Implementing and Using PC-QIs

Study design and setting: We conducted a web-based survey to assess system level readiness for implementing and using PC-QIs. Representatives of healthcare delivery and
coordinating organizations that guide the development and/or implementation of person-centred care measurement in Canada completed the survey.

**Survey development:** Guided by organizational readiness theory,[4] we co-developed and piloted a web-based survey with study collaborators to ensure face validity. The two-part survey included two components. The first component assessed: 1) Motivation - organizational interest in implementing the PC-QIs; 2) Content and construct validity - perceived “measurability”; 3) Intervention specific capacity - whether the data could be interpreted and used as part of their organization’s quality improvement processes to improve PCC. This survey component was developed *de novo* with the study team.

The second component of the survey included an assessment of general capacity for implementation of the PC-QIs, measuring domains such as: general availability of resources and needed infrastructure, organizational climate, staff capacity, etc. We identified an existing measure through a systematic review of instruments to assess organizational readiness for knowledge translation in healthcare.[5] We adapted a version of the Organizational Readiness for Change (ORC) tool.[6] The ORC is a valid and reliable survey that measures key variables of interest related to organizational readiness and cognitive psychology.[5, 6] Adaptations to this version included shortening the measure to mitigate respondent fatigue.[7] The research team identified 1-2 priority items for each relevant domain on the ORC and minor modifications to language to reflect the context of implementation. Participants were asked to provide overall feedback regarding their readiness to implement the PC-QIs.

We collected participant demographics including organization type and position/role. The survey also included a question about willingness to be contacted for a future interview. Survey
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Development and data collection was supported via a web-based platform called ‘Qualtrics.’ [8]

We tested the survey for face and content validity and revised it over four rounds with the research team and then two rounds with study collaborators. The revisions included improvements to the wording of the questions for component one and general flow. A copy of the survey is available [see Supplementary File 1].

**Participant recruitment:** We identified representatives from Canadian healthcare organizations that lead QI and/or PCC measurement initiatives from a previous environmental scan that our study team conducted. [9] We conducted a google search to confirm contacts previously identified as well as any new potential contacts from published website content. Google search words included the names of provincial or regional healthcare organizations (e.g. Edmonton Oliver Primary Care Network, Vancouver Coastal Health), as well words such as “quality improvement,” “patient or person-centred care measurement,” “staff,” or “team.” We also identified potential contacts through collaborators, such as the Canadian Institute for Health Information, as well as through various national or provincial organizations (e.g. Strategy for Patient-Oriented Research). If contact information for potential participants was not available, we sent an email invitation to the organization to seek a referral to the most appropriate contact in the organization. A sample frame of 55 eligible organizations across Canada was compiled based on our search.

**Data collection:** Potential participants received an email cover letter and formal invitation letter explaining the purpose of the study, ethical approvals, and contact information for investigators. There were asked to provide their consent to participate in the study and confirm that they could comment adequately on organization’s readiness for PC-QI
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implementation. Participation was voluntary. Once participants confirmed and provided consent, they received a copy of the monograph that included the technical specifications and evidence supporting the PC-QIs, as well as a link providing access to the survey. If the participant confirmed they were not the appropriate contact, they were asked to provide an alternative contact for their organization. For those who provided their consent to participate, email reminders to complete the survey were sent in two-week intervals until survey completion or until at least a 60% response rate (determined by the study team to be acceptable) was achieved and representation was obtained from all 13 Canadian provinces/territories.

Responses were exported into an excel file and de-identified. To avoid duplicate responses, a “web-link collector” option used cookies to restrict one unique response per device, and responses were reviewed by the research team.

Data analysis: We analyzed the survey data using STATA15 to obtain a descriptive summary of all organizations that participated, including type of organization; whether the organization has or could obtain data for the needed PC-QI (already have/could obtain); were interested in implementing the PC-QI (somewhat/interested/very interested); have processes in place to make changes to improve the indicator (yes), and whether the indicator measured what it is supposed to measure (yes); calculate the respondents’ assessment of organizational readiness for each section, according to three grouped categories of agree/strongly agree, neither agree nor disagree, disagree/strongly disagree; and compare differences in responses for both the PC-QI assessment and organizational readiness between groups for organization type and region of Canada (Atlantic – Nova Scotia, Prince Edward Island, New Brunswick,
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Newfoundland and Labrador, Central – Ontario, Quebec, Northern territories – Yukon, Nunavut, Northwest Territories, Pacific – British Columbia, and Prairies – Alberta, Saskatchewan, Manitoba).

We conducted content analysis for the qualitative feedback to identify emerging themes as well as patterns across organization types or regions.[10] The survey findings were summarized into a two-page document and sent to participants for their review and feedback. No changes were suggested by participants.

Interviews to Explore Barriers and Facilitators to Implementing and Using PC-QIs

Study design and setting: For our second objective, we used a qualitative descriptive approach to describe the experiences and perceptions regarding PC-QI implementation, as well as to contrast and compare differences between participant groups.[11] A qualitative descriptive approach has utility in identifying practical improvements to healthcare settings.[12] We conducted both individual and group interviews with survey respondents including system-level stakeholders, primary care providers (including physicians, clinic administrators, nursing staff), and Primary Care Network (PCN) staff. While individual interviews would allow for more in-depth exploration of perceived barriers and facilitators, group interviews with multiple participants from one organization or clinic provided “a greater sense of shared social meanings, or norms, and how these are enacted”[13] and contributed to enhanced understanding of contextual factors that may influence implementation.[14]

With regards to the clinical perspective, for feasibility purposes, we focussed on the specific barriers and facilitators in primary care in Alberta. PCN staff provide quality improvement support to clinics within their regional network. The clinical perspective was not
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included as part of the organizational readiness survey that was conducted due to foreseen challenges with recruitment of a representative sample of primary care organizations.

**Interview guide development:** Interview guide development was informed by the survey findings as well as the Consolidated Framework for Implementation Research (CFIR).\[15\] As a meta-framework, the CFIR provides a comprehensive perspective on the factors that influence implementation, particularly with regards to the context of implementation and from an organizational perspective.\[15\] This is consistent with the organizational readiness lens that guides our study. The survey findings allowed us to identify specific constructs from the CIFR that would be important to further explore through our interviews (as interview probes). We developed an interview guide for participants providing a system-level perspective and adapted for those with a clinical (primary care perspective) from Alberta to ensure appropriate terminology was used (e.g. clinic vs. organization, etc.). The interview guide was developed by the study authors in consultation with patient partners [see Supplementary File 2]. We pre-tested the interview guide with three study collaborators, two of whom provided a system-level perspective and one a clinical primary care perspective. The interview guides were improved for question clarity and addition of specific prompts (supporting clarifications) and responses options.

**Participant recruitment and inclusion criteria:** We strived to conduct ten system-level interviews and another ten providing a clinical primary care perspective. Purposive sampling was used to obtain a variety of perspectives on barriers and facilitators to PC-QI implementation, striving for maximum variation with regards to participant’s role/position in the organization or clinic, type of organization (government, regional coordinating organization,
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or health service delivery organization) or clinic (academic, non-academic), geographic region represented, and self-identified gender.[1] For primary care participants, we aimed to obtain representation from all five health zones in Alberta (North, Edmonton, Central, Calgary, and South).

We identified system-level participants from the organizational readiness survey, among those who consented to being contacted for a follow-up interview. We recruited primary care participants through multiple strategies, including referral by our study primary care collaborators, by previous interview participants, and through a review of PCN websites with public contact information listed for quality improvement staff or generic inquiries. Initial contact was made via email and phone to inquire about potential participation from the quality improvement PCN staff and/or referrals to clinical staff working with the PCN. We formally invited potential participants via email and provided with information about the study, the study consent form, and monograph of the PC-QIs. Participants were contacted two times via email, two weeks apart, before discontinuing contact.

Data collection: All interviews took place through videoconference (Zoom) or by telephone, based on the preference of the participant(s) and in consideration of participant and researcher safety during the COVID-19 pandemic. One member of the study team conducted interviews throughout the data collection period. Prior to starting each interview, the consent form was reviewed, and participants were provided with the opportunity to ask questions about the consent form and/or the study. Interviews were audio-recorded using a separate digital recorder (not on Zoom), in compliance with University of Calgary research ethics requirements at the time, and field notes were collected. Interviews lasted between 30 and 60
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minutes to minimize the burden on participant’s time. Members of the study team met monthly to review data collected to date, discuss emerging themes, and data saturation.

**Data transcription and analysis:** We used Microsoft excel to summarize interview participant demographics, by proportion, based on self-identified gender, years worked with the organization/clinic, region represented, and type of organization/clinic.

An external transcription service transcribed all audio recordings. The transcripts were reviewed, corrected as needed, and anonymized by the study team. Transcripts were also sent to all interview participants for their review and feedback. Two participants confirmed their review and provided feedback; minor changes were made to one transcript to clarify the description of a QI initiative.

One member of the research team conducted the qualitative data analysis, which included a reading of each transcript and the field notes to become familiarized with the data [13]. We used a deductive qualitative content analysis approach to code the data in Nvivo12, with the CFIR as the guiding framework to categorize data according to factors (constructs) influencing implementation.[10, 15] The CIFR was used with the intention of mapping the identified barriers and facilitators to evidence-based implementation strategies, using the Expert Recommendations for Implementing Change (ERIC) tool following this study (identification of strategies to be published elsewhere).[16] The online CFIR codebook ([https://cfirguide.org/tools/](https://cfirguide.org/tools/)) was used to ensure consistency in coding. To enhance trustworthiness,[17] three other members of the study team collectively analyzed 25% of the transcripts, along with the main analyst, to compare coding and discuss potential discrepancies in the interpretation of the CFIR constructs (and/or codebook). An audit trail was created to
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track decisions around coding and any additions made to the inclusion/exclusion criteria outlined in the CFIR codebook.[17] The codes/CFIR constructs were summarized and organized as “facilitators” or “barriers” to PC-QI implementation. Principles of constant comparison were employed to identify similarities and differences across groups of participants (e.g. system-level vs. clinical level, regions represented, etc.).[18] The study team discussed the codes and grouped them into larger categories, where they could be distilled into broader themes and sub-themes of facilitators and barriers until data saturation was reached and no new themes were observed in the data.[13]

Data interpretation and integration: To enhance the value of the integration between our qualitative and quantitative methods, we developed a joint display (summary table) to support the interpretation and reporting of this mixed methods study.[19] Key survey findings were integrated with the themes and sub-themes identified from the interviews to facilitate the interpretation of the data and refine our themes. The integrated findings from the survey and the interviews were summarized into a two-page document to all survey and interview participants for their review and feedback. No changes were suggested by participants.

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Table 1: Summary of PC-QI Assessment, by % (N=33)

| PC-QI | Interested in implementing (Yes = somewhat/interested/very interested): | Have or could obtain the info needed (Yes = already have/could obtain data): | Have processes in place to make changes: | PC-QI measures what it is supposed to measure: | Feedback |
|-------|-------------------------------------------------|-------------------------------------------------|---------------------------------|---------------------------------|----------|
| Structure | | | | | |
| S1 – Policy on Person-Centred Care | Yes: 84.9% (28) No: 6.1% (2) Other: 9.1% (3) | Yes: 88.9% (29) No: 12.1% (4) | Yes: 72.3% (24) No: 27.3% (9) | Yes: 75.8% (25) Somewhat: 15.2% (5) No: 9.1% (3) | • Uncertainty around use or purpose of this indicator and meaningful improvements for PCC  
• One organization noted that it is already used as part of the accreditation process  
• There were suggestions that this may not be used as an indicator but the other mechanisms to assess the five elements (e.g. self-report, audit; not necessarily as one overarching policy)  
• Indicator seen as too simplistic, other feedback indicates that it may be too prescriptive, with implications for resources that are lacking  
• One provincial network found that it would be a challenge to influence |
## Supplementary File 4: Detailed Survey Results

|                        | Yes: 84.9 (28) | No: 3.0 (27) | Other: 12.1% (4) | Yes: 69.7 (23) | No: 30.3 (10) | Yes: 66.7% (22) | Somewhat: 27.3% (9) | No: 6.0% (2) |
|------------------------|----------------|--------------|------------------|----------------|--------------|------------------|---------------------|-------------|
| **S2 – Educational Programs on Person-Centred Care** | Yes: 81.8 (27) | No: 18.2 (6) |                  |                |              |                  |                     |             |
|                        | Yes: 66.7% (22) | Somewhat: 27.3% (9) | No: 6.0% (2) |                  |              |                  |                     |             |

- It is more important to look at training effectiveness and/or quality rather than whether training was provided in order to solicit change
- There is a need to clarify what is meant by educational program and/or to broaden what is meant by educational programs; some organizations may not have programs but access external training or participate in educational activities
- Resources are limited for educational programs

|                        | Yes: 90.9% (30) | No: 3.0 (24) | Other: 6.0 (2) | Yes: 66.7% (22) | Somewhat: 30.3% (10) | No: 9.1% (3) |
|------------------------|-----------------|--------------|----------------|------------------|----------------------|-------------|
| **S3 – Culturally Competent Care** | Yes: 72.3% (24) | No: 27.3% (9) |                |                  |                     |             |

- Consider terminology and goals and expectations of different organizations e.g. cultural safety may be the goal, where cultural competency is a lower goal. This measure may not be comparable across organizations.
- Cultural competency is unattainable; organizations should strive for cultural awareness and sensitivity
- Seen as potentially more meaningful at a broader healthcare system level
- Indicator should measure whether care is culturally competent (change
### Supplementary File 4: Detailed Survey Results

| Question                                                                 | Yes (%) | No (%) | Other (%) | Notes                                                                                                                                 |
|--------------------------------------------------------------------------|---------|--------|-----------|----------------------------------------------------------------------------------------------------------------------------------------|
| S4– Providing a Supportive and Accommodating Person-Centred Environment | 87.9% (29) | 9.1% (3) | 3.0 (1)  | Limiting to whether cultural competency is being assessed; limiting to a survey may not be an appropriate proxy for measuring culturally competent care |
|                                                                           | 75.8% (25) | 24.2% (8) |           | • More clarity is needed around the definition of the physical PCC environment as well as what is meant by protocol (i.e. if the protocol would include the use of tools or toolkits) |
|                                                                           | 57.6% (19) | 42.4% (14) |           | • Some aspects of the PCC environment are not within the jurisdiction of organizations |
|                                                                           | 75.8% (25) |           |           | • The use of a survey to assess the co-development of a supportive and accommodation person-centred environment may not be appropriate |
|                                                                           | 72.7% (24) | 27.3% (9)  |           | • More clarity is needed with regards to the purpose of the indicator and defining what the goals of the partnerships |
|                                                                           | 51% (17) | 48.5% (16) |           | o Would this indicator measure co-design of patient care or health care services? (broader health system improvements) |
|                                                                           | 84.6% (28) | 12.1% (4) | 3.0% (1)  | • Some clarity is needed by what is meant by “communities” – there may be differences in terminology/opportunities to align |
### Supplementary File 4: Detailed Survey Results

| Question                                                                 | Yes (%) | No (%) | Other (%) | Additional Notes                                                                                                                                 |
|--------------------------------------------------------------------------|---------|--------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| S6– Healthcare Information System to Support Person-Centred Care         | 87.9% (29) | 6.1% (2) | 6.1% (2) | Aligns with digital health strategy for Ontario Health; Part of ongoing development in various provinces or organizations; There are some concerns about resources required for health information systems; Some clarity and further refinement is needed around the measure: What is considered “IT” for coordinating care? Rather than a “yes” or “no” response, needs to be more specific (e.g. scale, identify specific elements to assess); broad indicator may not be helpful for hospitals; There is a lack of clarity around how monitoring of PCC will be achieved by the presence of health information systems |
| S7– Structures to Report Person-centred Care Performance                 | 84.9% (28) | 6.1% (2) | 9.1% (3) | More clarity needed on whether this includes patient/provider experiences or just outcomes; Organizations/provinces report this as ongoing development, but there |
Supplementary File 4: Detailed Survey Results

| Process                  | Yes: 90.9% (30) | Yes: 72.7% (24) | Yes: 66.7% (22) | Yes: 87.9% (29)   | Comments                                                                 |
|--------------------------|-----------------|-----------------|-----------------|------------------|--------------------------------------------------------------------------|
| P1 – Compassionate Care  | No: 6.1% (2)    | No: 27.3% (9)   | No: 33.3% (11)  | Somewhat: 9.1% (3)| Some work being done with CIHI, but currently limited to acute care    |
|                          | Other: 3.0% (1) |                  |                 | No: 3.0% (1)     | Suggestions for including both qualitative and quantitative data to know where to improve for PCC |
|                          |                 |                  |                 |                  | Currently being included in some patient experience surveys that are used |
|                          |                 |                  |                 |                  | Some variation in terminology used (e.g. courtesy, respect, what matters to use); clarity on what is meant by “compassionate care” is needed |
|                          |                 |                  |                 |                  | This may be challenging for assessment at system level as surveys are often designed and administered by health service providers |
|                          |                 |                  |                 |                  | Improvement in this indicator requires a culture change                  |
| P2 – Equitable Care      | Yes: 87.9% (29) | Yes: 66.7% (22) | Yes: 66.7% (22) |                  | More appropriate as a system-level indicator as it would be challenging for either healthcare providers or patients to assess; may be interpreted as discrimination vs. inequitable treatment |
|                          | No: 3.0% (1)    | Somewhat: 24.2% (8) |                   |                  |                                                                          |
|                          | Other: 9.1% (3) | No: 9.1% (3)    |                 |                  |                                                                          |
|                          |                 |                  |                 |                  |                                                                          |
### Supplementary File 4: Detailed Survey Results

| P3— Trusting Relationship with Healthcare Provider |  |  |  | • Different terminology seen in various surveys that may be easier to interpret (e.g. took values/preferences into account; treated unfairly, questions related to access)  
• Indicator could be interpreted with other population health data, stratified with appropriate variables  
• Could be met with resistance from patients in answering honestly as it may be seen to impact future care  
• Could be incorporated into the measure around cultural competency |
|-----------------------------------------------|---|---|---|---|
| Yes: 90.9% (30)  
No: 3.0% (1)  
Other: 6.1% (2) | Yes: 54.55% (18)  
No: 45.45% (15) | Yes: 54.55% (18)  
No: 45.45% (15) | Yes: 81.8%  
Somewhat: 15.2% (5)  
No: 3.0% (1) | • The current measure looks at whether a relationship of trust is established but not the level of trust  
• Some measures already exist, but do not explicitly assess trust; questions may assess reliability, whether the patient feels heard/understood  
• Examples given for the indicator are focused on the doctor; it is unclear with the healthcare team fits in this indicator |
| P4— Accessing Interpreter Services | Yes: 84.9% (28)  
No: 9.1% (3)  
Other: 6.1% (2) | Yes: 54.55% (18)  
No: 45.45% (15) | Yes: 63.6%  
Somewhat: 12.1% (4)  
No: 6.1% (2) | • The practice varies widely across organizations and provinces, so it may be uncertain how possible it is to offer interpreter services – some |
### P5– Communication with Healthcare System

| Response | Yes: 84.9% (28)  |
|----------|------------------|
|          | No: 9.1% (3)     |
|          | Other: 6.1% (2)  |

| Response | Yes: 72.7% (24)  |
|----------|------------------|
|          | No: 27.3% (9)    |

| Response | Yes: 69&% (23)  |
|----------|------------------|
|          | Somewhat: 24.2% (8) |
|          | No: 6.1% (2)     |

- **No:** 45.55% (15)

  - have in-person interpreters, where others primarily use a call service
  - This indicator may be more meaningfully measured at the local hospital level
  - One organization assesses language as an area around whether they were “treated unfairly,”
  - Some organizations track utilization and awareness of services
  - Two organizations reported being able to get the data but it is either not regularly reported or will require new data collection
  - Survey data collected is limited to either English or French

  - Seen as more suited to a service provider organization by one organization, while another uses a similar measure at system level
  - Two organizations report capturing this data as part of assessing general experience
  - “High level of communication” should be further defined to clarify what aspects of communication are being measured
  - Clarity needed on the goals of the indicator – that patients communicate with support staff or
Supplementary File 4: Detailed Survey Results

| Question                                                                 | Yes: 90.9% (30) | Yes: 84.85% (18) | Yes: 81.2% (27) | Yes: 72.7% (24) | Somewhat: 24.2% (8) | No: 3.0% (1) |
|--------------------------------------------------------------------------|------------------|-------------------|-----------------|-----------------|----------------------|--------------|
| P6— Communication between Patient and Healthcare Provider—Nurse          |                  |                   |                 |                 |                      |              |
| • Experience from Ontario home care shows that patients are not always   |                  |                   |                 |                 |                      |              |
| able to distinguish between a nurse and other providers                  |                  |                   |                 |                 |                      |              |
| • Already being collected in acute care in Ontario through CPES          |                  |                   |                 |                 |                      |              |
| • Indicator was seen as general and not specific                         |                  |                   |                 |                 |                      |              |
| • Some clarifications are needed on what is meant by:                   |                  |                   |                 |                 |                      |              |
|   o “high levels of communication”                                       |                  |                   |                 |                 |                      |              |
|   o Nurse (RN? RPN? LPN? NP?)                                           |                  |                   |                 |                 |                      |              |
| • Organizations questioned whether this should be limited to one type of |                  |                   |                 |                 |                      |              |
| healthcare provider; the indicator emphasize more team-based models of  |                  |                   |                 |                 |                      |              |
| care. One organization reported using the more generic “healthcare       |                  |                   |                 |                 |                      |              |
| provider” term                                                           |                  |                   |                 |                 |                      |              |
| P7— Communication between Patient and                                     |                  |                   |                 |                 |                      |              |
| • Similar feedback to P6:                                               |                  |                   |                 |                 |                      |              |
Supplementary File 4: Detailed Survey Results

| Healthcare Provider – Physician | Other: 3.0% (1) | No: 30.3% (10) | Somewhat: 24.2% (8) No: 3.0% (1) |
|---------------------------------|----------------|----------------|----------------------------------|
|                                 |                |                | o Already collected in acute care in Ontario through CPES |
|                                 |                |                | o One organization looks generally at “healthcare providers,” not limiting to the physician |
|                                 |                |                | o Clarity needed for “high levels of communication” |
|                                 |                |                | • Most responsible health care provider is not always the physician (may be NP, Midwife, Dentist) |
|                                 |                |                | • One organization saw this more suited to health providers; not applicable to LHIN delivered services (home care) |
|                                 |                |                | • One organization reported that this is only collected through provincial surveys, not across all patient/client care services |
| P8– Information about Taking Medication | Yes: 84.9% (28) No: 9.1% (3) Other: 6.1% (2) | Yes: 72.7% (24) No: 27.3% (9) | Yes: 81.8% (27) No: 18.2% (6) |
|                                 |                |                | Yes: 90.9% (30) Somewhat: 9.1% (3) No: 0.0% (0) |
|                                 |                |                | • Limited applicability to LHIN delivered services, but more appropriate to a health service provider |
|                                 |                |                | • Already being measured by some organizations, mainly in acute in-patient care or limited to provincial reporting (reported as infrequent by one organization – every 3-5 years); some work currently being done with CIHI and primary care |
Supplementary File 4: Detailed Survey Results

| P9 – Communicating Test Results | Yes: 84.9% (28) No: 9.1% (3) Other: 6.1% (2) | Yes: 57.6% (19) No: 42.4% (14) | Yes: 63.6% (21) No: 36.4% (12) | Yes: 87.9% (29) Somewhat: 9.1% (3) No: 3.0% (1) |
|---------------------------------|---------------------------------------------|---------------------------------|---------------------------------|---------------------------------------------|

- There are some measures about explaining mediation, but not specific changes to treatment
- Not applicable to LHIN delivered services
- One organization reported that this data is currently collected through the introduction of the electronic health record
- Other organizations reported that this data is not collected in all sectors (one noted it is only collected in the Emergency Department)
- Another organization indicated that this data is collected through a general patient experience survey (not asking specifically about test results)
- It was suggested that an additional question could be added about understanding results

| P10 – Coordination of Care       | Yes: 90.9% (30) No: 3.0% (1) Other: 6.1% (2) | Yes: 75.8% (25) No: 24.2% (8) | Yes: 75.8% (25) No: 24.2% (8) | Yes: 75.8% (25) Somewhat: 21.2% (7) No: 3.0% (1) |
|---------------------------------|---------------------------------------------|---------------------------------|---------------------------------|---------------------------------------------|

- There is interest in this indicator as part of future directions for Ontario Health; some data is already available regarding coordination of care
- One organization reported surveying about some aspects of coordination of care, but not globally
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| Indicator |
|-----------|
| **P11— Patient and Caregiver Involvement in Decisions about Their Care and Treatment** |

| Response | Yes: 90.9% (30) | Yes: 90.9% (30) | Yes: 81.8% (27) | Yes: 90.9% (30) |
|----------|----------------|----------------|----------------|----------------|
|           | No: 3.0% (1)   | No: 9.1% (3)   | No: 18.2% (6)  | Somewhat: 9.1% (3) |
|           | Other: 6.1% (2)|                | No: 0.0% (0)   |                  |

- This indicator would require processes/collaboration with other jurisdictions as care is often provided outside of the territories.
- Indicator is seen as too broad to capture complexity; suggestion to break up the concept into continuity (informational, relational, managerial) and coordination.
- Question about whether this is patient-centred – it positions the patient as the receiver versus the partner in care; it may not be easy for the patient to assess. Suggestion by another organization to include a separate question about whether the patient was involved as a partner in the team.
- Numerator needs to include the word 'well' to give context on patient satisfaction.

- While this is available for LHIN delivered services, may not be available for all services in the region.
- The indicator may be more clear for some sectors than others (e.g. for hospitals, specialists, and primary care), but challenging for home care.
- This is measured by some organizations, but it is not.
### P12—Engaging Patients in Managing their Own Health

| Response | Count |
|----------|-------|
| Yes      | 90.9% (30) |
| No       | 3.0% (1) |
| Other    | 6.1% (2) |

- *Standardized across the health system, or that questions are related to this domain, but not all facets are covered*

  - Seen as similar to P11, with comments about potential overlap. One organization suggested prioritizing 11 over 12.
  - Suggestion to add series of specific questions to yield meaningful responses in guiding improvement
  - This indicator is “touched on” by a number of organizations, but not asked about specifically. One organization reports having standards for self-management, shared decision-making, but this indicator is not used

### P13—Timely Access to a Primary Care Provider

| Response | Count |
|----------|-------|
| Yes      | 75.8% (25) |
| No       | 15.2% (5) |
| Other    | 9.1% (3) |

- Primary care is out of scope for some organizations and/or primary care tends to be independent in some jurisdictions
- Already collected by some organizations, but not across all sectors. One organization reported measuring this as part of the experience care survey for the emergency department
### Supplementary File 4: Detailed Survey Results

| Question                                                                 | Yes %     | No %     | Other %  |
|-------------------------------------------------------------------------|-----------|----------|----------|
| P14– Patient Preparation for a Care Plan at a Healthcare Facility       | 87.9% (29)| 6.0% (2) | 6.0% (2) |
| P14– Patient Preparation for a Care Plan at a Healthcare Facility       | 60.6% (20)|          | 6.0% (2) |
| P14– Patient Preparation for a Care Plan at a Healthcare Facility       | 66.7% (22)|          | 33.3% (13)|
| P14– Patient Preparation for a Care Plan at a Healthcare Facility       | 84.85% (28)|         | 0.0% (0)  |

- Concern for patient’s ability to answer as expected; they may refer to their own family practitioner, but not to the ability to access walk-in clinics
- Some suggested refinements to indicator:
  - Specify “urgent” health problem as it is appropriate to receive an appointment at a later date for some cases. Same day access isn’t always the goals
  - Potentially change to measuring percentage of patients who are able to see their healthcare provider when they prefer
  - Include “community health nurse” as another option for primary care provider

- One organization reports no plans to obtain this information from all patients, but those with specific trajectories (e.g. hospital stay for surgery)
- Suggested changes to the indicator:
  - Question about whether indicator should be “at discharge” rather than “at
### Supplementary File 4: Detailed Survey Results

| P15– Transition Planning | Yes: 87.9% (29) No: 3.0% (1) Other: 9.1% (3) | Yes: 66.7% (22) No: 33.3% (11) | Yes: 75.8% (25) Somewhat: 21.2% (7) No: 3.0% (1) |  |
|--------------------------|---------------------------------------------|---------------------------------|-----------------------------------------------|---|

- Diagnosis may not be known until after they have been admitted
  - Wording to be adjusted for outpatient setting
  - Challenging to understand what is meant by “enough”
  - Need to clarify goal of the indicator – whether for improving health literacy/health system literacy or both
  - Indicator does not break down type of information (service, who to contact, etc.)
  - Seen as having overlap with other process indicator

- There is alignment in the direction for Ontario Health Teams
- One organization is unclear about their own organization’s interest
- Some organizations would be limited in obtaining data – only available for cancer treatment centers/hospitals or for discharged patients
- Topic is seen as being broad – themes in the area may be more useful to operationalize; challenges may be information based, logistical/practical, emotional. There
may also be multiple stakeholders involved in transition planning, especially with pediatric patients (parents, caregivers)
- One organization noted that there may be two questions that are part of this indicator: receiving information and having the opportunity to discuss. For the denominator, it would before the total number who have undergone recent transition
- Seen has having some overlap with P10 and P11; suggested to combine to reduce measurement burden

| P16—Using Patient-reported Outcome Measures (PROMs) to Deliver Person Centered Care | Yes: 87.9% (29) No: 6.1% (2) Other: 6.1% (2) | Yes: 51.5% (17) No: 48.5% (16) | Yes: 51.5% (17) No: 48.5% (16) | Yes: 66.7% (22) Somewhat: 21.2% (7) No: 12.1% (4) |
| --- | --- | --- | --- | --- |
| The use of PROMs is in development for a number of organizations/jurisdictions; it is not yet reported on, or the data would be limited to certain sectors |
| Using PROMs is different than using them for decision-making |
| It may be helpful to distinguish between generic PROMs and those for specific conditions to target certain sectors/health care teams |
| May be more of a structural indicator than process |
### O1– Overall Experience

| Response | Yes | No  |
|----------|-----|-----|
| Overall  | 87.9% (29) | 3.0% (1) |
|            | 93.9% (31) | 6.1% (2) |
|            | 93.9% (31) | 6.1% (2) |
| Other     | 9.1% (3)  |     |

- This is collected by a number of organizations, but it may not be easy to aggregate since different service providers collect this data in different ways.
- Currently, mainly limited to acute care/hospitals, but there is interest in expanding to all facilities.
- It is challenging to action; it would be important to understand what drives overall experience across sectors. One organization noted that it would need to be combined with other measures to be meaningful.
- Agreement on the use of top box scoring that is proposed.

### O2– Cost of Care – Affordability

| Response | Yes | No  |
|----------|-----|-----|
| Affordability | 81.8% (27) | 12.1% (4) |
|            | 21.2% (7) | 78.8% (26) |
|            | 27.3% (9) | 72.7% (24) |
|            | 84.9% (28) | 15.1% (3) |

- Organizations report not currently collecting this data or having the processes to make changes. Two organizations reported having some data available – one through the client relations office (questions about finances) and the other through an evaluation of an inner-city primary care group.
- The indicator may be too simplistic to measure complex social constructs through quantitative measures.
### Supplementary File 4: Detailed Survey Results

| Global                                                                 |
|-----------------------------------------------------------------------|
| • This information may be available through a different government    |
|   department                                                          |
| • There is a question about the purpose of the measurement if there   |
|   is no influence on what constitutes universal health care          |
| • Uncertainty about whether this indicator fits with the others; it   |
|   is less about individual care experience but more about coverage   |
|   within the province                                                 |
| • There is uncertainty about how the numerator and denominator could |
|   be populated                                                       |
| • The data could be collected from a sample, but it may not be       |
|   generalizable                                                      |
| • Almost all services in the territory are covered by NIHB. Costs for |
|   cross-jurisdictional medical travel would be valuable to measure   |
|   as there are costs associated with travel for patients (lost wages |
|   and time away from home)                                           |
| • The question could be asked in conjunction with a demographic      |
|   question on income level to guide improvement                      |
Supplementary File 4: Detailed Survey Results

| G1 – Friends and Family Test | Yes: 78.8% (26) | Yes: 75.8% (25) | Yes: 57.6% (19) | Yes: 72.7% (24) |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|
|                             | No: 12.1% (4)   | No: 24.2% (8)   | No: 42.4% (14)  | Somewhat: 21.2% (7) |
|                             | Other: 9.1% (3) |                  | No: 6.1% (2)    |                  |

- Some organizations report not liking this measure
- One organization reported dropping it from their metrics. It was noted that in the UK they encountered problems with this indicator. This may be more relevant to certain sectors where patients have a choice (e.g. home care or long-term care)
- The measure is limited – it may not apply across all settings and patients do not always have a choice in the facility they attend; not seen as relevant for the Canadian context and for specific jurisdictions (i.e. Nunavut, PEI)
- Recommending a hospital may not be associated with the care experience; the purpose of measurement is questioned
- Difficult to act on this indicator

Table 1b: Summary of PC-QIs Assessment of Feasibility by Region, % (N=33)

Atlantic: New Brunswick, Newfoundland & Labrador, Nova Scotia, Prince Edward Island (n = 7)
Central: Ontario, Quebec (n = 8)
Northern: Nunavut, Northwest Territories, Yukon (n= 3)
Pacific: British Columbia (n = 7)
Prairie: Alberta, Manitoba, Saskatchewan (n = 8)
## Supplementary File 4: Detailed Survey Results

| PC-QI | Have or could obtain the info needed (Yes = already have/ could obtain data) | Have processes in place to make changes |
|-------|--------------------------------------------------------------------------------|----------------------------------------|
|       | All: 88.9% (29) No: 12.1% (4)                                                  | All: 72.3% (24) No: 27.3% (9)          |
|       | **Atlantic** Yes: 100% (7) No: 0% (0)                                            | **Atlantic** Yes: 85.7% (6) No: 14.3% (1) |
|       | **Central** Yes: 87.5% (7) No: 12.5% (1)                                         | **Central** Yes: 62.5% (5) No: 37.5% (3) |
|       | **Northern** Yes: 66.7% (2) No: 33.3% (1)                                         | **Northern** Yes: 33.3% (1) No: 66.7% (2) |
|       | **Pacific** Yes: 100% (7) No: 0% (0)                                             | **Pacific** Yes: 85.7% (6) No: 14.3% (1) |
|       | **Prairie** Yes: 75.0% (6) No: 25.0% (2)                                          | **Prairie** Yes: 75.0% (6) No: 25.0% (2) |

| PC-QI | Have or could obtain the info needed (Yes = already have/ could obtain data) | Have processes in place to make changes |
|-------|--------------------------------------------------------------------------------|----------------------------------------|
|       | All: 81.8 (27) No: 18.2 (6)                                                    | All: 69.7 (23) No: 30.3 (10)           |
# Supplementary File 4: Detailed Survey Results

| Region       | Yes (%) | No (%)  |
|--------------|---------|---------|
| Atlantic     | 100% (7)| 0% (0)  |
| Central      | 75.0% (6)| 25.0% (2)|
| Northern     | 66.7% (2)| 33.3% (1)|
| Pacific      | 85.7% (6)| 14.3% (1)|
| Prairie      | 75.0% (6)| 25.0% (2)|

| Region       | Yes (%) | No (%)  |
|--------------|---------|---------|
| Atlantic     | 71.4% (5)| 28.6% (2)|
| Central      | 62.5% (5)| 37.5% (3)|
| Northern     | 33.3% (1)| 66.7% (2)|
| Pacific      | 71.4% (5)| 28.6% (2)|
| Prairie      | 87.5% (7)| 12.5% (1)|

## S3 – Culturally Competent Care

| Region       | Yes (%) | No (%)  |
|--------------|---------|---------|
| All          | 72.3% (24)| 27.3% (9)|
| Atlantic     | 85.7% (6)| 14.3% (1)|
| Central      | 87.5% (7)| 12.5% (1)|

| Region       | Yes (%) | No (%)  |
|--------------|---------|---------|
| All          | 66.7% (22)| 33.3% (11)|
| Atlantic     | 85.7% (6)| 14.3% (1)|
| Central      | 62.5% (5)| 37.5% (3)|
Supplementary File 4: Detailed Survey Results

| Region   | Yes          | No          | Yes          | No          |
|----------|--------------|-------------|--------------|-------------|
| Northern | Yes: 33.3%   | No: 66.7%   | Yes: 66.7%   | No: 33.3%   |
|          | (1)          | (2)         | (2)          | (1)         |
| Pacific  | Yes: 57.1%   | No: 42.9%   | Yes: 57.1%   | No: 42.9%   |
|          | (4)          | (3)         | (4)          | (3)         |
| Prairie  | Yes: 75.0%   | No: 25.0%   | Yes: 62.5%   | No: 37.5%   |
|          | (6)          | (2)         | (5)          | (3)         |

S4– Providing a Supportive and Accommodating Person-Centred Environment

| Region   | Yes          | No          | Yes          | No          |
|----------|--------------|-------------|--------------|-------------|
| All      | Yes: 75.8%   | No: 24.2%   | Yes: 57.6%   | No: 42.4%   |
|          | (25)         | (8)         | (19)         | (14)        |
| Atlantic | Yes: 100%    | No: 0%      | Yes: 71.4%   | No: 28.6%   |
|          | (7)          | (0)         | (5)          | (2)         |
| Central  | Yes: 75.0%   | No: 25.0%   | Yes: 37.5%   | No: 62.5%   |
|          | (6)          | (2)         | (3)          | (5)         |
| Northern | Yes: 33.3%   | No: 66.7%   | Yes: 33.3%   | No: 66.7%   |
|          | (1)          | (2)         | (1)          | (2)         |
| Pacific  | Yes: 57.1%   |             | Yes: 42.9%   |             |
|          | (4)          |             | (3)          |             |
### Supplementary File 4: Detailed Survey Results

| Region | Yes (%) | No (%) | Total |
|--------|---------|--------|-------|
| **Prairie** | | | |
| No: 42.9% (3) | | | |
| Yes: 87.5% (7) | | | |
| No: 12.5% (1) | | | |
| No: 57.1% (4) | | | |
| Yes: 87.5% (7) | | | |
| No: 12.5% (1) | | | |
| **S5—Co-designing Care in Partnership with Communities** | | | |
| All | Yes: 72.7% (24) | No: 27.3% (9) | 33 |
| Atlantic | Yes: 85.7% (6) | No: 14.3% (1) | 7 |
| Central | Yes: 87.5% (7) | No: 12.5% (1) | 8 |
| Northern | Yes: 33.3% (1) | No: 66.7% (2) | 3 |
| Pacific | Yes: 57.1% (4) | No: 42.9% (3) | 7 |
| Prairie | Yes: 75.0% (6) | No: 25.0% (2) | 8 |
| All | Yes: 51% (17) | No: 48.5% (16) | 33 |
### Supplementary File 4: Detailed Survey Results

| S6– Healthcare Information System to Support Person-Centred Care | All | Atlantic | Central | Northern | Pacific | Prairie |
|---|---|---|---|---|---|---|
| Yes: 66.7% (22) No: 33.3% (11) | Yes: 51% (17) No: 48.5% (16) | Yes: 57.1% (4) No: 42.9% (3) | Yes: 87.5% (7) No: 12.5% (1) | Yes: 66.7% (2) No: 33.3% (1) | Yes: 57.1% (4) No: 42.9% (3) | Yes: 62.5% (5) No: 36.5% (3) |

| S7– Structures to Report Person-centred Care Performance | All | Atlantic |
|---|---|---|
| Yes: 87.9% (29) No: 12.1% (4) | Yes: 100% (7) No: 0% (0) | Yes: 100% (7) No: 0% (0) |
Supplementary File 4: Detailed Survey Results

| Region       | Yes       | No       |
|--------------|-----------|----------|
| Central      | 87.5% (7) | 12.5% (1) |
| Northern     | 66.7% (2) | 33.3% (1) |
| Pacific      | 71.4% (5) | 28.6% (2) |
| Prairie      | 100% (8)  | 0% (0)    |

| Region       | Yes       | No       |
|--------------|-----------|----------|
| Atlantic     | 85.7% (6) | 14.3% (1) |
| Central      | 87.5% (7) | 12.5% (1) |
| Northern     | 66.7% (2) |           |
### Supplementary File 4: Detailed Survey Results

| Region  | Yes (%) | No (%) |
|---------|---------|--------|
| Pacific | 33.3%   | 66.7%  |
| Prairie | 33.3%   | 66.7%  |
| Atlantic| 45.45%  | 54.55% |
| Central | 50.0%   | 50.0%  |
| Northern| 66.7%   | 33.3%  |
| Pacific | 42.9%   | 57.1%  |
| Prairie | 75.0%   | 25.0%  |
| Atlantic| 71.43%  | 28.6%  |
| Central | 37.5%   | 62.5%  |
| Northern| 66.7%   | 33.3%  |
| Pacific | 71.4%   | 28.6%  |
| Prairie | 66.7%   | 33.3%  |
### Supplementary File 4: Detailed Survey Results

| P3 – Trusting Relationship with Healthcare Provider | All | Atlantic | Central | Northern | Pacific | Prairie |
|--------------------------------------------------|-----|----------|---------|----------|---------|---------|
| Yes: 37.5% (3) No: 62.5% (5)                     | Yes: 54.55% (18) No: 45.45% (15) | Yes: 57.1% (4) No: 42.9% (3) | Yes: 75.0% (6) No: 25.0% (2) | Yes: 33.3% (1) No: 66.7% (2) | Yes: 42.9% (3) No: 57.1% (4) | Yes: 50.0% (4) No: 50.0% (4) |
| Yes: 87.5% (7) No: 12.5% (1)                     | Yes: 54.55% (18) No: 45.45% (15) | Yes: 57.1% (4) No: 42.9% (3) | Yes: 50.0% (4) No: 50.0% (4) | Yes: 33.3% (1) No: 66.7% (2) | Yes: 42.9% (3) No: 57.1% (4) | Yes: 75.0% (6) No: 25.0% (2) |

| P4 – Accessing Interpreter Services              | All | All |
|--------------------------------------------------|-----|-----|
| Yes: 54.55% (18) No: 45.55% (15)                 | Yes: 54.55% (18) No: 45.55% (15) | Yes: 63.6% (21) No: 36.4% (12) |
### Supplementary File 4: Detailed Survey Results

| Region       | Yes (%) | No (%) | Count |
|--------------|---------|--------|-------|
| Atlantic     | 42.9%   | 57.1%  | 3     |
| Central      | 87.5%   | 12.5%  | 1     |
| Northern     | 33.3%   | 66.7%  | 1     |
| Pacific      | 28.6%   | 71.4%  | 2     |
| Prairie      | 62.5%   | 37.5%  | 2     |
| All          | 72.7%   | 27.3%  | 9     |
| Atlantic     | 85.7%   | 14.3%  | 1     |
| Central      | 75.0%   | 25.0%  | 2     |

**P5—Communication with Healthcare System**

| Region       | Yes (%) | No (%) | Count |
|--------------|---------|--------|-------|
| Atlantic     | 71.4%   | 28.6%  | 5     |
| Central      | 62.5%   | 37.5%  | 3     |
| Northern     | 66.7%   | 33.3%  | 2     |
| Pacific      | 42.9%   | 57.1%  | 3     |
| Prairie      | 75.0%   | 25.0%  | 6     |
| All          | 69.8%   | 30.2%  | 10    |
| Atlantic     | 85.7%   | 14.3%  | 1     |
| Central      | 50.0%   | 50.0%  | 4     |
## Supplementary File 4: Detailed Survey Results

| Region   | Yes (%) | No (%) |
|----------|---------|--------|
| Northern | 33.3%   | 66.7%  |
| Pacific  | 71.4%   | 28.6%  |
| Prairie  | 75.0%   | 25.0%  |

| Region   | Yes (%) | No (%) |
|----------|---------|--------|
| Northern | 66.7%   | 33.3%  |
| Pacific  | 57.1%   | 42.9%  |
| Prairie  | 87.5%   | 12.5%  |

### P6– Communication between Patient and Healthcare Provider – Nurse

| Region   | Yes (%) | No (%) |
|----------|---------|--------|
| All      | 84.85%  | 15.15% |
| Atlantic | 85.7%   | 14.3%  |
| Central  | 100%    | 0%     |
| Northern | 33.3%   | 66.7%  |
| Pacific  | 85.7%   |        |

| Region   | Yes (%) | No (%) |
|----------|---------|--------|
| All      | 81.2%   | 18.2%  |
| Atlantic | 100%    | 0%     |
| Central  | 75.0%   | 25.0%  |
| Northern | 66.7%   | 33.3%  |
| Pacific  | 71.4%   |        |
### Supplementary File 4: Detailed Survey Results

| Table | No: 14.3% (1) | No: 28.6% (2) |
|-------|---------------|---------------|
| Prairie | Yes: 87.5% (7) | Yes: 87.5% (7) |
|        | No: 12.5% (1)  | No: 12.5% (1)  |
| P7– Communication between Patient and Healthcare Provider – Physician | | |
| All | No: 30.3% (10) | No: 30.3% (10) |
| Atlantic | Yes: 71.4% (5) | Yes: 100% (7) |
|        | No: 28.6% (2)  | No: 0% (0)    |
| Central | Yes: 50.0% (4) | Yes: 50.0% (4) |
|        | No: 50.0% (4)  | No: 50.0% (4) |
| Northern | Yes: 33.3% (1) | Yes: 33.3% (1) |
|        | No: 66.7% (2)  | No: 66.7% (2) |
| Pacific | Yes: 85.7% (6) | Yes: 71.4% (5) |
|        | No: 14.3% (1)  | No: 28.6% (2) |
| Prairie | Yes: 87.5% (7) | Yes: 75.0% (6) |
|        | No: 12.5% (1)  | No: 25.0% (2) |
### P8—Information about Taking Medication

| Region   | All       | Atlantic | Central | Northern | Pacific | Prairie |
|----------|-----------|----------|---------|----------|---------|---------|
|          | Yes: 72.7% (24) | Yes: 100% (7) | Yes: 62.5% (5) | Yes: 33.3% (1) | Yes: 71.4% (5) | Yes: 75.0% (6) |
|          | No: 27.3% (9)    | No: 0% (0)    | No: 37.5% (3)    | No: 66.7% (2)    | No: 28.6% (2)    | No: 25.0% (2)    |

### P9—Communicating Test Results

| Region   | All       | Atlantic | Central | Northern | Pacific | Prairie |
|----------|-----------|----------|---------|----------|---------|---------|
|          | Yes: 57.6% (19) | Yes: 71.4% (5) | Yes: 75.0% (6) | Yes: 85.7% (7) | Yes: 85.7% (6) |
|          | No: 42.4% (14)    | No: 28.6% (2)    | No: 12.5% (1)    | No: 14.3% (1)    | No: 14.3% (1)    |
Supplementary File 4: Detailed Survey Results

| Region   | Yes (%) | No (%) | (Sample Size) |
|----------|---------|--------|---------------|
| Central  | Yes: 50.0% (4) | No: 50.0% (4) | |
| Northern | Yes: 33.3% (1)  | No: 66.7% (2)  | |
| Pacific  | Yes: 57.1% (4)  | No: 42.9% (3)  | |
| Prairie  | Yes: 62.5% (5)  | No: 37.5% (3)  | |
|          | Central        | Northern       | Pacific       | Prairie       |
| All      | Yes: 75.8% (25) | No: 24.2% (8)  | Yes: 85.7% (6) | No: 14.3% (1) |
|          | All            | Atlantic       | Central       | Northern      |
|          | Yes: 87.5% (7)  | No: 12.5% (1)  | Yes: 87.5% (7) | No: 12.5% (1) |
|          |                |                | Yes: 66.7% (2) | No: 33.3% (1)  |
### Supplementary File 4: Detailed Survey Results

| Region   | Yes (%) | No (%) | Yes (%) | No (%) |
|----------|---------|--------|---------|--------|
| Pacific  | 85.7% (6) | 14.3% (1) | 71.4% (5) | 28.6% (2) |
| Prairie  | 62.5% (5) | 37.5% (3) | 62.5% (5) | 37.5% (3) |

| P11– Patient and Caregiver Involvement in Decisions about Their Care and Treatment | All | Atlantic | Central | Northern | Pacific | Prairie |
|---------------------------------------------------------------------------------|-----|----------|---------|----------|---------|---------|
| Yes (%)                           | 90.9% (30) | 100% (7) | 100% (8) | 66.7% (2) | 85.7% (6) | 87.5% (7) |
| No (%)                            | 9.1% (3)    | 0% (0)    | 0% (0)   | 33.3% (1) | 12.5% (1) | 12.5% (1) |

| Region   | Yes (%) | No (%) | Yes (%) | No (%) |
|----------|---------|--------|---------|--------|
| Atlantic | 100% (7) | 0% (0) | 100% (7) | 0% (0) |
| Central  | 87.5%    | 12.5% (1) | 87.5% | 12.5% (1) |
| Northern | 33.3% (1) | 66.7% (2) | 33.3% (1) | 66.7% (2) |
| Pacific  | 71.43% (5) | 28.6% (2) | 71.43% (5) | 28.6% (2) |
| Prairie  | 87.5% (7) |        | 87.5% (7) |        |
## Supplementary File 4: Detailed Survey Results

| Survey Question | Yes (%) | No (%) | Region | Yes (%) | No (%) |
|----------------|---------|--------|--------|---------|--------|
| **P12—Engaging Patients in Managing their Own Health** | | | | | |
| All | 63.6% (21) | 36.4% (12) | All | 72.7% (24) | 27.3% (9) |
| Atlantic | 71.4% (5) | 28.6% (2) | Atlantic | 57.1% (4) | 42.9% (3) |
| Central | 50.0% (4) | 50.0% (4) | Central | 75.0% (6) | 25.05% (2) |
| Northern | 66.7% (2) | 33.3% (1) | Northern | 66.7% (2) | 33.3% (1) |
| Pacific | 85.7% (6) | 14.3% (1) | Pacific | 85.7% (6) | 14.3% (1) |
| Prairie | 50.0% (4) | 50.0% (4) | Prairie | 75.0% (6) | 25.0% (2) |

| **P13—Timely Access to a Primary Care Provider** | | | | | |
| All | 54.55% (18) | 45.45% (15) | All | 39.4% (13) | 60.6% (20) |
| Atlantic | | | Atlantic | | |
### Supplementary File 4: Detailed Survey Results

| Region      | Yes                  | No                  |
|-------------|----------------------|---------------------|
| Central     | Yes: 75.0% (6)       | No: 25.0% (2)       |
| Northern    | Yes: 66.7% (2)       | No: 33.3% (1)       |
| Pacific     | Yes: 28.6% (2)       | No: 71.4% (5)       |
| Prairie     | Yes: 50.0% (4)       | No: 50.0% (4)       |

| Region      | Yes                  | No                  |
|-------------|----------------------|---------------------|
| Central     | Yes: 50.0% (4)       | No: 50.0% (4)       |
| Northern    | Yes: 66.7% (2)       | No: 33.3% (1)       |
| Pacific     | Yes: 14.29% (1)      | No: 85.7% (6)       |
| Prairie     | Yes: 50.0% (4)       | No: 50.0% (4)       |

| P14 – Patient Preparation for a Care Plan at a Healthcare Facility | All | All |
|-------------------------------------------------------------------|-----|-----|
|                                                                   | Yes: 60.6% (20) | Yes: 66.7% (22) |
|                                                                   | No: 39.4% (13)  | No: 33.3% (11)  |
| Atlantic                                                         | Yes: 57.1% (4) | Yes: 57.1% (4)  |
|                                                                   | No: 42.9% (3)   | No: 42.9% (3)   |
| Central                                                          | Yes: 62.5% (5) | Yes: 50.0% (4)  |
|                                                                   | No: 38.5% (3)   | No: 50.0% (4)   |
Supplementary File 4: Detailed Survey Results

| Region   | Yes:        | No:        |
|----------|-------------|------------|
| Northern | 33.3% (1)   | 66.7% (2)  |
| Pacific  | 57.1% (4)   | 42.9% (3)  |
| Prairie  | 75.0% (6)   | 25.0% (2)  |

| Region   | Yes:        | No:        |
|----------|-------------|------------|
| Northern | 66.7% (2)   | 33.3% (1)  |
| Pacific  | 71.4% (5)   | 28.6% (2)  |
| Prairie  | 87.5% (7)   | 12.5% (1)  |

| Region       | Yes:        | No:        |
|--------------|-------------|------------|
| P15–Transition Planning | All        |            |
|               | Yes: 66.7% (22) | No: 33.3% (11) |
|               | Atlantic    |            |
|               | Yes: 85.7% (6) | No: 14.3% (1) |
|               | Central     |            |
|               | Yes: 75.0% (6) | No: 25.0% (2) |
|               | Northern    |            |
|               | Yes: 33.3% (1) | No: 66.7% (2) |
|               | Pacific     |            |
|               | Yes: 71.4% (5) | No: 28.6% (2) |

| Region       | Yes:        | No:        |
|--------------|-------------|------------|
| All          | Yes: 75.8% (25) | No: 24.2% (8) |
| Atlantic     | Yes: 100% (7)  | No: 0% (0)  |
| Central      | Yes: 75.0% (6) | No: 25.0% (2) |
| Northern     | Yes: 66.7% (2) | No: 33.3% (1) |
| Pacific      | Yes: 57.1% (4) | No: 42.9% (3) |
### Supplementary File 4: Detailed Survey Results

|                      | Prairie                                                                 | Prairie                                                                 |
|----------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------|
|                      | Yes: 50.0% (4)                                                          | Yes: 75.0% (6)                                                          |
|                      | No: 50.0% (4)                                                           | No: 25.0% (2)                                                           |
| **P16— Using Patient-reported** | **Outcome Measures (PROMs) to Deliver Person Centered Care** | **Outcome Measures (PROMs) to Deliver Person Centered Care** |
|                      | **All**                                                                 | **All**                                                                 |
|                      | Yes: 51.5% (17)                                                         | Yes: 51.5% (17)                                                         |
|                      | No: 48.5% (16)                                                          | No: 48.5% (16)                                                          |
|                      | **Atlantic**                                                           | **Atlantic**                                                           |
|                      | Yes: 28.6% (2)                                                          | Yes: 28.6% (2)                                                          |
|                      | No: 71.4% (5)                                                           | No: 71.4% (5)                                                           |
|                      | **Central**                                                            | **Central**                                                            |
|                      | Yes: 37.5% (3)                                                          | Yes: 50.0% (4)                                                          |
|                      | No: 62.5% (5)                                                           | No: 50.0% (4)                                                           |
|                      | **Northern**                                                           | **Northern**                                                           |
|                      | Yes: 100% (3)                                                           | Yes: 66.7% (2)                                                          |
|                      | No: 0% (0)                                                              | No: 33.3% (1)                                                           |
|                      | **Pacific**                                                            | **Pacific**                                                            |
|                      | Yes: 57.1% (4)                                                          | Yes: 42.9% (3)                                                          |
|                      | No: 42.9% (3)                                                           | No: 57.1% (4)                                                           |
|                      | **Prairie**                                                            | **Prairie**                                                            |
|                      | Yes: 62.5% (5)                                                          | Yes: 62.5% (5)                                                          |
|                      | No: 37.5% (3)                                                           | No: 37.5% (3)                                                           |
| **O1— Overall Experience** | **All**                                                                 | **All**                                                                 |
|                      | Yes: 93.9% (31)                                                         | Yes: 93.9% (31)                                                         |
## Supplementary File 4: Detailed Survey Results

| Region      | Yes:       | No:       |
|-------------|------------|-----------|
| Atlantic    | 100% (7)   | 0% (0)    |
| Central     | 100% (8)   | 0% (0)    |
| Northern    | 100% (3)   | 0% (0)    |
| Pacific     | 85.7% (6)  | 14.3% (1) |
| Prairie     | 87.5% (7)  | 12.5% (1) |

### O2 – Cost of Care – Affordability

| Region      | Yes:       | No:       |
|-------------|------------|-----------|
| All         | 21.2% (7)  | 78.8% (26)|
| Atlantic    | 14.3% (1)  | 85.7% (6) |
| Central     | 87.5% (7)  | 12.5% (1) |
## Supplementary File 4: Detailed Survey Results

| Region | Yes | No  |
|--------|-----|-----|
| Northern | 37.5% (3) | 62.5% (5) |
| Pacific | 0% (0) | 100% (7) |
| Prairie | 37.5% (3) | 62.5% (5) |

| Region | Yes | No  |
|--------|-----|-----|
| Northern | 12.5% (1) | 87.5% (7) |
| Pacific | 28.6% (2) | 71.4% (5) |
| Prairie | 50.0% (4) | 50.0% (4) |

### G1– Friends and Family Test

| Region | Yes | No  |
|--------|-----|-----|
| All | 75.8% (25) | 24.2% (8) |
| Atlantic | 71.4% (5) | 28.6% (2) |
| Central | 87.5% (7) | 12.5% (1) |
| Northern | 66.7% (2) | 33.3% (1) |
| Pacific | 57.6% (19) | 42.4% (14) |
| Atlantic | 85.7% (6) | 14.3% (1) |
| Central | 50.0% (4) | 50.0% (4) |
| Northern | 66.7% (2) | 33.3% (1) |
| Pacific | 50.0% (4) | 50.0% (4) |
Supplementary File 4: Detailed Survey Results

| PC-QI | Have or could obtain the info needed (Yes = already have/ could obtain data) | Have processes in place to make changes |
|-------|--------------------------------------------------------------------------------|----------------------------------------|
| S1 – Policy on Person-Centred Care | All  
Yes: 88.9% (29)  
No: 12.1% (4)  
Regional Coordinating Organization  
Yes: 81.3% (13)  
No: 18.8% (3)  
Health Service Delivery Organization  
Yes: 100% (9)  
No: 0% (0)  
Both | All  
Yes: 72.3% (24)  
No: 27.3% (9)  
Regional Coordinating Organization  
Yes: 68.8% (11)  
No: 31.3% (5)  
Health Service Delivery Organization  
Yes: 88.9% (8)  
No: 11.1% (1)  
Both |

Table 1c: Summary of PC-QIs Assessment of Feasibility by Type of Organization, % (N=33; by organization N=31)

Regional Coordinating Organization (n = 16)  
Health Service Delivery Organization (n = 9)  
Both – Health Service Delivery Organization & Regional Coordinating Organization (n= 2)  
Provincial/Territorial Government (n = 4)
### Supplementary File 4: Detailed Survey Results

| Survey Topic                                                                 | Yes Yes | Yes No | No Yes | No No |
|------------------------------------------------------------------------------|---------|--------|--------|-------|
| **S2 – Educational Programs on Person-Centred Care**                        |         |        |        |       |
| **All**                                                                      | Yes: 81.8% (27) | No: 18.2% (6) |       |       |
| **Regional Coordinating Organization**                                      | Yes: 75.0% (12) | No: 25.0% (4) |       |       |
| **Health Service Delivery Organization**                                    | Yes: 88.9% (8) | No: 11.1% (1) |       |       |
| **Both**                                                                     | Yes: 50.0% (1) | No: 50.0% (1) |       |       |
| **Provincial/Territorial Government**                                        | Yes: 100% (4) | No: 0% (0) |       |       |
| **S3 – Culturally Competent Care**                                           |         |        |        |       |
| **All**                                                                      | Yes: 72.3% (24) | No: 27.3% (9) |       |       |
| **Provincial/Territorial Government**                                        | Yes: 100% (4) | No: 0% (0) |       |       |
Supplementary File 4: Detailed Survey Results

|                                      | Regional Coordinating Organization | Health Service Delivery Organization | Both | Provincial/Territorial Government |
|--------------------------------------|-------------------------------------|--------------------------------------|------|-----------------------------------|
| **Yes** | 68.8% (11) | 77.8% (7) | 50.0% (1) | 75.0% (3) |
| **No**  | 31.3% (5)  | 22.2% (2) | 50.0% (1) | 25.0% (1) |

**Regional Coordinating Organization**

|                                      | Yes: 43.8% (7) | No: 56.3% (9) |
|--------------------------------------|-----------------|---------------|
| **Yes** | 43.8% (7) | 56.3% (9) |
| **No**  | 22.2% (2)  | 77.8% (7) |

**Health Service Delivery Organization**

| Both | Yes: 100.0% (2) | No: 0% (0) |
|------|-----------------|------------|

**Province/Territorial Government**

| All   | Yes: 75.8% (25) | No: 24.2% (8) |
|-------|-----------------|---------------|

**S4 – Providing a Supportive and Accommodating Person-Centred Environment**

| All | Yes: 57.6% (19) | No: 42.4% (14) |
|-----|-----------------|---------------|

**Regional Coordinating Organization**

| Yes: 50.0% (8) | No: 50.0% (8) |

**Health Service Delivery Organization**

| Yes: 77.8% (7) | No: 22.2% (2) |

| Both | Yes: 50.0% (1) | No: 50.0% (1) |
|------|----------------|---------------|
### Supplementary File 4: Detailed Survey Results

| Question                                                                 | All                          | Regional Coordinating Organization | Health Service Delivery Organization | Both                          | Provincial/Territorial Government |
|--------------------------------------------------------------------------|------------------------------|-------------------------------------|--------------------------------------|-------------------------------|----------------------------------|
| **S5— Co-designing Care in Partnership with Communities**                | Yes: 72.7% (24) No: 27.3% (9) | Yes: 75.0% (12) No: 25.0% (4)       | Yes: 77.8% (7) No: 22.2% (2)         | Yes: 50.0% (1) No: 50.05% (1)  | Yes: 75.0% (3) No: 25.0% (1)     |
| **Regional Coordinating Organization**                                  |                              | Yes: 56.3% (9) No: 43.8% (7)        |                                      | Yes: 0% (0) No: 100% (2)       |                                 |
| **Health Service Delivery Organization**                                |                              |                                      | Yes: 55.6% (5) No: 44.4% (4)        |                               |                                 |
| **Both**                                                                 |                              |                                      |                                      |                               |                                 |
| **Provincial/Territorial Government**                                    |                              |                                      |                                      |                               |                                 |
| **S6— Healthcare Information System to Support Person-Centred Care**    | Yes: 66.7% (22) No: 33.3% (11)| Yes: 50.0% (8)                       |                                      |                               |                                 |
| **Regional Coordinating Organization**                                  |                              |                                      | Yes: 43.8% (7)                       |                               |                                 |
Supplementary File 4: Detailed Survey Results

|                              | No: 50.0% (8)                     | No: 56.3% (9)                     |
|------------------------------|-----------------------------------|-----------------------------------|
| Health Service Delivery Organization | Yes: 88.9% (8)                  | Yes: 55.6% (5)                  |
|                              | No: 11.1% (1)                     | No: 44.4% (4)                     |
| Both                         | Yes: 50.0% (1)                    | Both                              |
|                              | No: 50.0% (1)                     | Yes: 0% (0)                       |
|                              | No: 100% (1)                      | No: 100% (2)                      |
| Provincial/Territorial Government | Yes: 100% (4)                    | Provincial/Territorial Government |
|                              | No: 0% (0)                        | Yes: 100% (4)                     |
|                              | No: 0% (0)                        | No: 0% (0)                        |

| S7— Structures to Report Person-centred Care Performance | All: Yes: 87.9% (29) No: 12.1% (4) | All: Yes: 75.8% (25) No: 24.2% (8) |
|---------------------------------------------------------|-----------------------------------|-----------------------------------|
| Regional Coordinating Organization                      | Yes: 87.5% (14)                  | Regional Coordinating Organization |
|                                                          | No: 12.5% (2)                     | Yes: 75.0% (12)                   |
|                                                          |                                   | No: 25.0% (4)                     |
| Health Service Delivery Organization                     | Yes: 88.9% (8)                   | Health Service Delivery Organization |
|                                                          | No: 11.1% (1)                     | Yes: 77.8% (7)                    |
|                                                          |                                   | No: 22.2% (2)                     |
| Both                                                     | Yes: 50.0% (1)                    | Both                              |
|                                                          | No: 50.0% (1)                     | Yes: 50.0% (1)                    |
|                                                          |                                   | No: 50.0% (1)                     |
| Provincial/Territorial Government                        |                                   | Provincial/Territorial Government |
### Supplementary File 4: Detailed Survey Results

| P1 – Compassionate Care | All | Regional Coordinating Organization | Health Service Delivery Organization | Both | Provincial/Territorial Government |
|-------------------------|-----|-------------------------------------|-------------------------------------|------|----------------------------------|
| Yes: 100% (4)           | Yes: 75.0% (3) | Yes: 72.7% (24) | Yes: 66.7% (6) | Yes: 50.0% (1) | Yes: 75.0% (3) |
| No: 0% (0)              | No: 25.0% (1)  | No: 27.3% (9) | No: 33.3% (3) | No: 50.0% (1)  | No: 25.0% (1)  |

| P2 – Equitable Care | All | Regional Coordinating Organization | Health Service Delivery Organization | Both | Provincial/Territorial Government |
|---------------------|-----|-------------------------------------|-------------------------------------|------|----------------------------------|
| Yes: 45.45% (15)    | Yes: 66.7% (22) | Yes: 50.0% (8) | Yes: 68.8% (11) | Yes: 0% (0) | Yes: 100% (4) |
| No: 54.55% (18)     | No: 33.3% (11)  | No: 50.0% (8) | No: 31.3% (5)  | No: 100% (2) | No: 0% (0)   |
## Supplementary File 4: Detailed Survey Results

|                          | **Health Service Delivery Organization** | **Provincial/Territorial Government** |
|--------------------------|------------------------------------------|--------------------------------------|
| **Yes**                  | 55.6% (5)                                | 25% (1)                              |
| **No**                   | 44.4% (4)                                | 75.0% (3)                            |
| **Both**                 |                                          |                                      |
| **Yes**                  | 0% (0)                                   |                                      |
| **No**                   | 100% (2)                                 |                                      |

|                          | **Regional Coordinating Organization**   | **Provincial/Territorial Government** |
|--------------------------|------------------------------------------|--------------------------------------|
| **Yes**                  | 56.3% (9)                                | 75.0% (3)                            |
| **No**                   | 43.8% (7)                                | 25.0% (1)                            |

|                          | **Health Service Delivery Organization** | **Provincial/Territorial Government** |
|--------------------------|------------------------------------------|--------------------------------------|
| **Yes**                  | 55.6% (5)                                | 50.0% (2)                            |
| **No**                   | 44.4% (4)                                | 50.0% (2)                            |
| **Both**                 |                                          |                                      |
| **Yes**                  | 50.0% (0)                                |                                      |
| **No**                   | 50.0% (0)                                |                                      |

| **P3—Trusting Relationship with Healthcare Provider** | **All** | **Regional Coordinating Organization** | **Health Service Delivery Organization** |
|------------------------------------------------------|---------|----------------------------------------|------------------------------------------|
| **Yes**                                              | 54.55% (18) | **Yes**                                               | 53.3% (3)                                |
| **No**                                               | 45.45% (15) | **No**                                                | 46.7% (6)                                |
| **Regional Coordinating Organization**               |          | **Regional Coordinating Organization**                |                                          |
| **Yes**                                              | 62.5% (10)  | **Yes**                                               | 66.7% (6)                                |
| **No**                                               | 37.5% (6)   | **No**                                                | 33.3% (3)                                |
| **Health Service Delivery Organization**             |          | **Health Service Delivery Organization**              |                                          |
| **Yes**                                              | 55.6% (5)   | **Yes**                                               | 33.3% (3)                                |
| **No**                                               | 44.4% (4)   | **No**                                                | 66.7% (6)                                |
| **Both**                                             |          | **Both**                                              |                                          |
| **Yes**                                              | 50.0% (0)   | **Yes**                                               | 50.0% (1)                                |
| **No**                                               | 50.0% (0)   | **No**                                                | 50.0% (1)                                |
| **Provincial/Territorial Government**                |          | **Provincial/Territorial Government**                 |                                          |
| **Yes**                                              | 50.0% (2)   | **Yes**                                               | 75.0% (3)                                |
| **No**                                               | 50.0% (2)   | **No**                                                | 25.0% (1)                                |
### Supplementary File 4: Detailed Survey Results

|                | All                                      | Regional Coordinating Organization | Health Service Delivery Organization | Both                                      | Provincial/Territorial Government |
|----------------|------------------------------------------|------------------------------------|-------------------------------------|------------------------------------------|----------------------------------|
| P4— Accessing Interpreter Services | **All**<br>Yes: 54.55% (18)<br>No: 45.55% (15) | **Regional Coordinating Organization**<br>Yes: 31.3% (5)<br>No: 68.8% (11) | **Health Service Delivery Organization**<br>Yes: 66.7% (6)<br>No: 33.3% (3) | **Both**<br>Yes: 100% (2)<br>No: 0% (0) | **Provincial/Territorial Government**<br>Yes: 75.0% (3)<br>No: 25.0% (1) |
| P5— Communication with Healthcare System | **All**<br>Yes: 72.7% (24)<br>No: 27.3% (9) | **Regional Coordinating Organization**<br>Yes: 75.0% (12)<br>No: 25.0% (4) | **Health Service Delivery Organization**<br>Yes: 88.9% (8) | **Regional Coordinating Organization**<br>Yes: 62.5% (10)<br>No: 37.5% (6) | **Health Service Delivery Organization**<br>Yes: 66.7% (6) |
### Supplementary File 4: Detailed Survey Results

| Category                                                                 | Yes: 84.85% (18) | No: 15.15% (5) |
|---------------------------------------------------------------------------|------------------|-----------------|
| Regional Coordinating Organization | Yes: 87.5% (14)  | No: 12.5% (2)   |
| Health Service Delivery Organization | Yes: 77.8% (7)   | No: 22.2% (2)   |
| Both                                                                      | Yes: 100% (2)    | No: 0% (0)      |
| Provincial/Territorial Government | Yes: 75.0% (3)   | No: 25.0% (1)   |

| Category                                                                 | Yes: 81.2% (27)  | No: 18.2% (6)   |
|---------------------------------------------------------------------------|------------------|-----------------|
| Regional Coordinating Organization | Yes: 81.3% (13)  | No: 18.8% (3)   |
| Health Service Delivery Organization | Yes: 77.8% (7)   | No: 22.2% (2)   |
| Both                                                                      | Yes: 50.0% (1)   | No: 50.0% (1)   |
| Provincial/Territorial Government | Yes: 100% (4)    | No: 0% (0)      |
### Supplementary File 4: Detailed Survey Results

#### P7– Communication between Patient and Healthcare Provider – Physician

|                         | All               | All               |
|-------------------------|-------------------|-------------------|
|                         | Yes: 69.7% (23)   | Yes: 69.7% (23)   |
|                         | No: 30.3% (10)    | No: 30.3% (10)    |
| **Regional Coordinating Organization** |                    |                    |
| Yes: 68.8% (11)         | Yes: 68.8% (11)   |
| No: 31.3% (5)           | No: 31.3% (5)     |
| **Health Service Delivery Organization** |                    |                    |
| Yes: 66.7% (6)          | Yes: 66.7% (6)    |
| No: 33.3% (3)           | No: 33.3% (3)     |
| **Both**                | Yes: 50.0% (1)    | Yes: 50.0% (1)    |
|                         | No: 50.0% (1)     | No: 50.0% (1)     |
| **Provincial/Territorial Government** |                    |                    |
| Yes: 75.0% (3)          | Yes: 75.0% (3)    |
| No: 25.0% (1)           | No: 25.0% (1)     |

#### P8– Information about Taking Medication

|                         | All               | All               |
|-------------------------|-------------------|-------------------|
|                         | Yes: 72.7% (24)   | Yes: 81.8% (27)   |
|                         | No: 27.3% (9)     | No: 18.2% (6)     |
| **Regional Coordinating Organization** |                    |                    |
| Yes: 81.3% (13)         | Yes: 81.3% (13)   |
| No: 18.8% (3)           | No: 18.8% (3)     |
| **Health Service Delivery Organization** |                    |                    |
| Yes: 66.7% (6)          | Yes: 77.8% (7)    |
| No: 33.3% (3)           | No: 22.2% (2)     |
### Supplementary File 4: Detailed Survey Results

|                            | Both                                      | Provincial/Territorial Government |
|---------------------------|-------------------------------------------|----------------------------------|
| **Yes**                   | 0% (0)                                    | Yes: 75.0% (3)                   |
| **No**                    | 100% (2)                                  | No: 25.0% (1)                    |

|                            | Both                                      | Provincial/Territorial Government |
|---------------------------|-------------------------------------------|----------------------------------|
| **Yes**                   | 100% (2)                                  | Yes: 75.0% (3)                   |
| **No**                    | 0% (0)                                    | No: 25.0% (1)                    |

| P9 – Communicating Test Results | All                                      | Regional Coordinating Organization |
|-------------------------------|------------------------------------------|------------------------------------|
| **Yes**                       | 57.6% (19)                               | Yes: 43.8% (7)                     |
| **No**                        | 42.4% (14)                               | No: 56.3% (9)                      |

| P9 – Communicating Test Results | All                                      | Regional Coordinating Organization |
|-------------------------------|------------------------------------------|------------------------------------|
| **Yes**                       | 63.6% (21)                               | Yes: 56.3% (9)                     |
| **No**                        | 36.4% (12)                               | No: 43.8% (7)                      |

| P9 – Communicating Test Results | All                                      | Health Service Delivery Organization |
|-------------------------------|------------------------------------------|--------------------------------------|
| **Yes**                       | 77.8% (7)                                | Yes: 66.7% (6)                       |
| **No**                        | 22.2% (2)                                | No: 33.3% (3)                        |

| P9 – Communicating Test Results | All                                      | Health Service Delivery Organization |
|-------------------------------|------------------------------------------|--------------------------------------|
| **Yes**                       | 66.7% (6)                                | Yes: 66.7% (6)                       |
| **No**                        | 33.3% (3)                                | No: 33.3% (3)                        |

| P10 – Coordination of Care   | All                                      | Provincial/Territorial Government   |
|------------------------------|------------------------------------------|------------------------------------|
| **Yes**                      | 75.8% (25)                               | Yes: 75.0% (3)                     |
| **No**                       | 24.2% (15)                               | No: 25.0% (1)                      |

| P10 – Coordination of Care   | All                                      | Provincial/Territorial Government   |
|------------------------------|------------------------------------------|------------------------------------|
| **Yes**                      | 75.8% (25)                               | Yes: 75.0% (3)                     |
| **No**                       | 24.2% (15)                               | No: 25.0% (1)                      |
Supplementary File 4: Detailed Survey Results

|                                | Yes          | No          |
|--------------------------------|--------------|-------------|
| **Regional Coordinating Organization** | 81.2% (13)   | 18.8% (3)   |
| **Health Service Delivery Organization** | 77.8% (7)    | 22.2% (2)   |
| **Both**                        | 50.0% (1)    | 50.0% (1)   |
| **Provincial/Territorial Government** | 75.0% (3)    | 25.0% (1)   |

**P11—Patient and Caregiver Involvement in Decisions about Their Care and Treatment**

|                                | Yes          | No          |
|--------------------------------|--------------|-------------|
| **Regional Coordinating Organization** | 100% (16)    | 0% (0)      |
| **Health Service Delivery Organization** | 77.8% (7)    | 22.2% (2)   |
| **Both**                        | 50.0% (1)    | 50.0% (1)   |

|                                | Yes          | No          |
|--------------------------------|--------------|-------------|
| **Provincial/Territorial Government** | 100% (4)     | 0% (0)      |

|                                | Yes          | No          |
|--------------------------------|--------------|-------------|
| **Regional Coordinating Organization** | 87.5% (14)   | 12.5% (2)   |
| **Health Service Delivery Organization** | 55.6% (5)    | 44.4% (4)   |
| **Both**                        | 50.0% (1)    | 50.0% (1)   |

|                                | Yes          | No          |
|--------------------------------|--------------|-------------|
| **Regional Coordinating Organization** | 81.8% (27)   | 18.2% (6)   |
| **Health Service Delivery Organization** | 66.7% (6)    | 33.3% (3)   |
| **Both**                        | 50.0% (1)    | 50.0% (1)   |
## Supplementary File 4: Detailed Survey Results

| P12—Engaging Patients in Managing their Own Health | All | Regional Coordinating Organization | Health Service Delivery Organization | Both | Provincial/Territorial Government |
|---|---|---|---|---|---|
| Yes: 100% (2) No: 0% (0) | Yes: 63.6% (21) No: 36.4% (12) | Yes: 68.8% (11) No: 31.3% (5) | Yes: 66.7% (6) No: 33.3% (3) | Yes: 50.0% (1) No: 50.0% (1) | Yes: 50.0% (2) No: 50.0% (2) |
| Provincial/Territorial Government | Yes: 75.0% (3) No: 25.0% (1) | Yes: 75.0% (3) No: 25.0% (1) |

| P13—Timely Access to a Primary Care Provider | All | All | Provincial/Territorial Government |
|---|---|---|---|
| Yes: 100% (2) No: 0% (0) | Yes: 72.7% (24) No: 27.3% (9) | Yes: 72.7% (24) No: 27.3% (9) | Yes: 50.0% (1) No: 50.0% (1) |
| Yes: 100% (4) No: 0% (0) | Yes: 50.0% (1) No: 50.0% (1) | Yes: 100% (4) No: 0% (0) | Yes: 39.4% (13) No: 60.6% (20) |
### Supplementary File 4: Detailed Survey Results

| Regional Coordinating Organization | Regional Coordinating Organization |
|------------------------------------|------------------------------------|
| Yes: 62.5% (10)                    | Yes: 43.75% (7)                    |
| No: 37.5% (6)                      | No: 56.25% (9)                     |

| Health Service Delivery Organization | Health Service Delivery Organization |
|---------------------------------------|---------------------------------------|
| Yes: 44.4% (4)                       | Yes: 22.2% (2)                        |
| No: 55.6% (5)                        | No: 77.9% (7)                         |

| Both | Both |
|------|------|
| Yes: 100% (2) | Yes: 50.0% (1) |
| No: 0% (0)     | No: 50.05% (1) |

| Provincial/Territorial Government | Provincial/Territorial Government |
|-----------------------------------|-----------------------------------|
| Yes: 50.0% (2)                    | Yes: 75.0% (3)                    |
| No: 50.0% (2)                     | No: 25.0% (1)                     |

| P14 – Patient Preparation for a Care Plan at a Healthcare Facility | P14 – Patient Preparation for a Care Plan at a Healthcare Facility |
|------------------------------------------------------------------|------------------------------------------------------------------|
| All | All |
| Yes: 60.6% (20) | Yes: 66.7% (22) |
| No: 39.4% (13)  | No: 33.3% (11)  |

| Regional Coordinating Organization | Regional Coordinating Organization |
|------------------------------------|------------------------------------|
| Yes: 68.8% (11)                    | Yes: 75.0% (12)                    |
| No: 31.3% (5)                      | No: 25.0% (4)                      |

| Health Service Delivery Organization | Health Service Delivery Organization |
|---------------------------------------|---------------------------------------|
| Yes: 55.6% (5)                       | Yes: 55.6% (5)                       |
| No: 44.4% (4)                        | No: 44.4% (4)                        |

| Both | Both |
|------|------|
| Yes: 0% (0) | Yes: 50.0% (1) |
| No: 100% (2) | No: 50.0% (1) |
### Supplementary File 4: Detailed Survey Results

| Survey Item                                                                 | All | Regional Coordinating Organization | Health Service Delivery Organization | Both | Provincial/Territorial Government |
|----------------------------------------------------------------------------|-----|-------------------------------------|-------------------------------------|------|-----------------------------------|
| **P15—Transition Planning**                                               |     |                                     |                                     |      |                                   |
| Yes                                                                         | 66.7% (22) |                                     |                                     |      |                                   |
| No                                                                          | 33.3% (11) |                                     |                                     |      |                                   |
| **Regional Coordinating Organization**                                    |     |                                     |                                     |      |                                   |
| Yes                                                                         | 56.3% (9)  |                                     |                                     |      |                                   |
| No                                                                          | 43.8% (7)  |                                     |                                     |      |                                   |
| **Health Service Delivery Organization**                                   |     |                                     |                                     |      |                                   |
| Yes                                                                         | 77.8% (7)  |                                     |                                     |      |                                   |
| No                                                                          | 22.2% (2)  |                                     |                                     |      |                                   |
| **Both**                                                                   |     |                                     |                                     |      |                                   |
| Yes                                                                         | 50.0% (1)   |                                     |                                     |      |                                   |
| No                                                                          | 50.0% (1)   |                                     |                                     |      |                                   |
| **Provincial/Territorial Government**                                      |     |                                     |                                     |      |                                   |
| Yes                                                                         | 75.0% (3)   |                                     |                                     |      |                                   |
| No                                                                          | 25.0% (1)   |                                     |                                     |      |                                   |
| **P16—Using Patient-reported Outcome Measures (PROMs) to Deliver Person Centered Care** |     |                                     |                                     |      |                                   |
| Yes                                                                         | 51.5% (17)  |                                     |                                     |      |                                   |
| No                                                                          | 48.5% (16)  |                                     |                                     |      |                                   |
| **Regional Coordinating Organization**                                     |     |                                     |                                     |      |                                   |
| Yes                                                                         | 68.8% (11)  |                                     |                                     |      |                                   |
| No                                                                          | 31.2% (4)   |                                     |                                     |      |                                   |
| **Provincial/Territorial Government**                                      |     |                                     |                                     |      |                                   |
| Yes                                                                         | 100% (4)    |                                     |                                     |      |                                   |
| No                                                                          | 0% (0)      |                                     |                                     |      |                                   |
Supplementary File 4: Detailed Survey Results

|                           | Health Service Delivery Organization | Health Service Delivery Organization |
|---------------------------|--------------------------------------|--------------------------------------|
|                           | No: 31.3% (5)                        | No: 43.8% (7)                        |
| Health Service Delivery   | Yes: 22.2% (2)                       | Yes: 11.1% (1)                       |
| Organization              | No: 77.8% (7)                        | No: 88.9% (8)                        |
| Both                      | Yes: 0% (0)                          | Both                                  |
|                           | No: 100% (2)                         | Yes: 50.0% (1)                       |
|                           |                                      | No: 50.0% (1)                        |
| Provincial/Territorial    | Yes: 75.0% (3)                       | Provincial/Territorial Government    |
| Government                | No: 25.0% (1)                        | Yes: 100% (4)                        |
|                           |                                      | No: 0% (0)                            |

| O1— Overall Experience    | All                                   | All                                   |
|                           | Yes: 93.9% (31)                       | Yes: 93.9% (31)                       |
|                           | No: 6.1% (2)                          | No: 6.1% (2)                          |
| Regional Coordinating     | Yes: 100% (16)                        | Regional Coordinating Organization   |
| Organization              | No: 0% (0)                            | Yes: 93.8% (15)                       |
|                           |                                      | No: 6.3% (1)                          |
| Health Service Delivery   | Yes: 77.8% (7)                        | Health Service Delivery Organization |
| Organization              | No: 22.2% (2)                         | Yes: 88.9% (8)                        |
| Both                      | Yes: 100% (2)                         | No: 11.1% (1)                         |
|                           | No: 0% (0)                            | Both                                  |
|                           |                                      | Yes: 100% (2)                         |
|                           |                                      | No: 0% (0)                            |
| Provincial/Territorial    |                                      | Provincial/Territorial Government    |
## Supplementary File 4: Detailed Survey Results

| O2– Cost of Care – Affordability |  |  |
|----------------------------------|---|---|
| **All**                          | Yes: 100% (4) | Yes: 100% (4) |
|                                   | No: 0% (0)     | No: 0% (0)     |
| **Regional Coordinating Organization** | Yes: 21.2% (7) | Yes: 27.3% (9) |
|                                   | No: 78.8% (26) | No: 72.7% (24) |
| **Health Service Delivery Organization** | Yes: 11.1% (1) | Yes: 0% (0) |
|                                   | No: 88.9% (8)  | No: 100% (9)   |
| **Both**                         | Yes: 0% (0)    | Yes: 50.0% (1) |
|                                   | No: 100% (2)   | No: 50.0% (1)  |
| **Provincial/Territorial Government** | Yes: 25.0% (1) | Yes: 50.0% (2) |
|                                   | No: 75.0% (3)  | No: 50.0% (2)  |

| G1– Friends and Family Test |  |  |
|----------------------------|---|---|
| **All**                    | Yes: 75.8% (25) | Yes: 57.6% (19) |
|                            | No: 24.2% (8)   | No: 42.4% (14)  |
| **Regional Coordinating Organization** | Yes: 75.0% (12) | Yes: 62.5% (10) |
|                            | No: 25.0% (4)   | No: 37.5% (6)   |
### Supplementary File 4: Detailed Survey Results

| Health Service Delivery Organization | Provincial/Territorial Government |
|--------------------------------------|----------------------------------|
| Yes: 66.7% (6)                       | Yes: 75.0% (3)                   |
| No: 33.3% (3)                        | No: 25.0% (1)                    |
| Both                                 | Both                             |
| Yes: 100% (2)                        | Yes: 50.0% (1)                   |
| No: 0% (0)                           | No: 50.0% (1)                    |

| Categories | % (n) |
|------------|-------|
| Motivation for Change |       |
| Program needs |       |
| Healthcare organizations need additional guidance in setting specific goals. (N=29) | Agree: 41.4% (12) Disagree: 41.4% (12) Neither agree nor disagree: 17.2% (5) |
| Healthcare organizations need additional guidance in evaluating staff performance. (N=29) | Agree: 34.5% (10) Disagree: 34.5% (10) Neither agree nor disagree: 31.0% (9) |

*Respondents provided perspective based on the health organization(s) they support/provide guidance to for quality improvement and/or person-centred measurement*
Supplementary File 4: Detailed Survey Results

| Training needs | Agree: 65.5% (19)  
Disagree: 17.2% (5)  
Neither agree nor disagree: 17.2% (5) |
|----------------|--------------------------------------------------|
| *Healthcare organizations need more training for new methods/developments in your area of responsibility. (N=29)* | |

| Pressures for change | Agree: 69.0% (20)  
Disagree: 6.9% (2)  
Neither agree nor disagree: 24.1% (7) |
|---------------------|--------------------------------------------------|
| *Current pressures to make changes come from patients and family/caregivers. (N=29)* | |
| *Current pressures to make changes come from accreditation or licensing authorities. (N=29)* | Agree: 86.2% (25)  
Disagree: 6.9% (2)  
Neither agree nor disagree: 6.9% (2) |

| Resources | Agree: 62.1% (18)  
Disagree: 10.3% (3)  
Neither agree nor disagree: 27.6% (8) |
|-----------|--------------------------------------------------|
| **Staffing** | |
| *Staff have the skills they need to do their jobs. (N=29)* | |
| *More support staff are needed for getting tasks completed. (N=28)* | Agree: 42.9% (12)  
Disagree: 3.6% (1)  
Neither agree nor disagree: 42.9% (12) |
| *Frequent staff turnover is a problem. (N=28)* | Agree: 60.7% (17)  
Disagree: 25.0% (7)  
Neither agree nor disagree: 14.3% (4) |
### Supplementary File 4: Detailed Survey Results

| Question                                                                 | Agree (%) | Disagree (%) | Neither agree nor disagree (%) |
|--------------------------------------------------------------------------|-----------|--------------|-------------------------------|
| Staff usually have enough time to complete assigned duties. \(N=28\)    | 21.4%     | 35.7%        | 42.9%                        |
| There are enough staff to meet organizational needs. \(N=28\)            | 10.7%     | 46.4%        | 42.9%                        |
| Staff are qualified for their duties. \(N=28\)                          | 75.0%     | 7.1%         | 17.9%                        |
| Training                                                                |           |              |                               |
| Staff training and continuing education are priorities. \(N=28\)        | 50.0%     | 25%          | 25%                          |
| Staff receive regular inservice training in your healthcare organizations. \(N=27\) | 40.7%     | 25.9%        | 33.3%                        |
| The workload and pressures in your healthcare organizations keep motivation for new training low. \(N=27\) | 74.1%     | 7.4%         | 18.5%                        |
| Equipment                                                                |           |              |                               |
| Most records are computerized. \(N=28\)                                 | 21.4%     | 35.7%        |                               |
Supplementary File 4: Detailed Survey Results

| Question                                                                 | Agree Percentage | Disagree Percentage | Neither Agree nor Disagree Percentage |
|-------------------------------------------------------------------------|------------------|---------------------|---------------------------------------|
| **Organizational Climate**                                             |                  |                     |                                       |
| **Mission**                                                            |                  |                     |                                       |
| Management in your healthcare organizations have a clear plan for accomplishing the goals. (N=27) | Agree: 55.6% (15) | Disagree: 25.9% (7) | Neither agree nor disagree: 18.5% (5) |
| **Cohesion**                                                           |                  |                     |                                       |
| The staff in your healthcare organizations work together effectively as a team. (N=27) | Agree: 66.7% (18) | Disagree: 11.1% (3) | Neither agree nor disagree: 22.2% (6) |
| **Autonomy**                                                           |                  |                     |                                       |
| Staff in your healthcare organizations are free to try out different ideas or techniques. (N=27) | Agree: 55.6% (15) | Disagree: 11.1% (3) | Neither agree nor disagree: 33.3% (9) |
| **Communication**                                                      |                  |                     |                                       |
| The staff in your healthcare organizations are kept well informed by management. (N=27) | Agree: 59.3% (16) | Disagree: 25.9% (7) |                                       |
Supplementary File 4: Detailed Survey Results

| Stress | Neither agree nor disagree: 14.8% (4) |
|--------|--------------------------------------|
| *The heavy workload reduces staff effectiveness. (N=27)* | Agree: 63.0% (17) Disagree: 0.0% (0) Neither agree nor disagree: 37.0% (10) |

| Change | Agree: 18.5% (5) Disagree: 55.6% (15) Neither agree nor disagree: 25.9% (7) |
|--------|--------------------------------------|
| *It is easy to change routine procedures to meet new conditions. (N=27)* | |

| Leadership | Agree: 55.6% (15) Disagree: 22.2% (6) Neither agree nor disagree: 22.2% (6) |
|------------|--------------------------------------|
| *Management decisions in your healthcare organizations are well planned. (N=27)* | |

Table 2b: Organizational Readiness, by Region (Adapted from Organizational Readiness for Change Scale – TCU ORC), by % (n/d)

*Respondents provided perspective based on the health organization(s) they support/provide guidance to for quality improvement and/or person-centred measurement*

**Select readiness factors were chosen based on most divergence in responses**

| Categories              | % (n) |
|-------------------------|-------|
| Motivation for Change   |       |
Supplementary File 4: Detailed Survey Results

| Program needs | |  
|----------------|-------------------|  
| Healthcare organizations need additional guidance in setting specific goals. (N=29) | Agree: 41.4% (12) |  
| | Disagree: 41.4% (12) |  
| | Neither agree nor disagree: 17.2% (5) |  
| **Atlantic** | Agree: 28.2% (2) |  
| | Disagree: 71.4% (5) |  
| | Neither agree nor disagree: 0% (0) |  
| **Central** | Agree: 14.3% (1) |  
| | Disagree: 42.9% (3) |  
| | Neither agree nor disagree: 42.9% (3) |  
| **Northern** | Agree: 100% (2) |  
| | Disagree: 0% (0) |  
| | Neither agree nor disagree: 0% (0) |  
| **Pacific** | Agree: 80.0% (4) |  
| | Disagree: 0% (0) |  
| | Neither agree nor disagree: 20.0% (1) |  
| **Prairie** | Agree: 37.5% (3) |  
| | Disagree: 50.0% (4) |  
| | Neither agree nor disagree: 12.5% (1) |  
| Healthcare organizations need additional guidance in evaluating staff performance. (N=29) | Agree: 34.5% (10) |  
| | Disagree: 34.5% (10) |  
| | Neither agree nor disagree: 31.0% (9) |  
| | Agree: 42.9% (3) |  

Supplementary File 4: Detailed Survey Results

| Region  | Agree | Disagree | Neither agree nor disagree |
|---------|-------|----------|---------------------------|
| Atlantic| 14.3% (1) | 42.9% (3) | 42.9% (3) |
| Central | 100% (2)  | 0% (0)    | 0% (0)       |
| Northern| 20.0% (1) | 20.0% (1) | 60.0% (3)  |
| Pacific | 37.5% (3) | 37.5% (3) | 25.0% (2)  |
| Prairie | 37.5% (3) | 37.5% (3) | 25.0% (2)  |

**Resources**

**Staffing**

*Staff usually have enough time to complete assigned duties. (N=28)*

| Region  | Agree | Disagree | Neither agree nor disagree |
|---------|-------|----------|---------------------------|
| Atlantic| 21.4% (6) | 35.7% (10) | 42.9% (12) |
| Central | 28.6% (2) | 28.6% (2) | 42.9% (3)  |
Supplementary File 4: Detailed Survey Results

| Region   | Agree: | Disagree: | Neither agree nor disagree: |
|----------|--------|-----------|-----------------------------|
| **Central** | 16.7% (1) | 33.3% (2) | 50.0% (3) |
|          | **Northern** | 0% (0) | 100% (2) | 0% (0) |
|          | **Pacific** | 40.0% (2) | 40.0% (2) | 20% (1) |
|          | **Prairie** | 12.5% (1) | 25.0% (2) | 62.5% (5) |

**Training**

*Staff receive regular inservice training in your healthcare organizations. (N=27)*

| Region   | Agree: | Disagree: | Neither agree nor disagree: |
|----------|--------|-----------|-----------------------------|
| **Atlantic** | 40.7% (11) | 25.9% (7) | 33.3% (9) |
|          | **Central** | 57.1% (4) | 28.6% (2) | 14.3% (1) |
|          | **Northern** | 33.3% (2) | 16.7% (1) | 50.0% (3) |

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Supplementary File 4: Detailed Survey Results

| Region      | Agree               | Disagree       | Neither agree nor disagree |
|-------------|---------------------|----------------|----------------------------|
| Pacific     | 20.0% (1)           | 40.0% (2)      | 40.0% (2)                  |
| Prairie     | 57.1% (4)           | 14.3% (1)      | 28.6% (2)                  |
| Equipment   |                     |                |                            |
| Most records are computerized. (N=28) | Agree: 21.4% (6) | Disagree: 35.7% (10) | Neither agree nor disagree: 42.9% (12) |
| Atlantic    | 28.6% (2)           | 42.9% (3)      | 28.6% (2)                  |
| Central     | 16.7% (1)           | 0% (0)         | 83.3% (5)                  |
| Northern    | 50.0% (1)           | 50.0% (1)      | 0% (0)                     |
| Pacific     | 40.0% (2)           | 40.0% (2)      |                            |
Supplementary File 4: Detailed Survey Results

| Prairie | Neither agree nor disagree: 20.0% (1) |
|---------|--------------------------------------|
|         | Agree: 0% (0)                         |
|         | Disagree: 50.0% (4)                  |
|         | Neither agree nor disagree: 50.0% (4) |

Table 2c: Organizational Readiness, by Organizational Type (Adapted from Organizational Readiness for Change Scale – TCU ORC), by % (n/d)
*Respondents provided perspective based on the health organization(s) they support/provide guidance to for quality improvement and/or person-centred measurement*

| Categories |
|------------|
| % (n)      |

| Motivation for Change | % (n) |
|-----------------------|-------|
| Program needs         |       |

*Healthcare organizations need additional guidance in setting specific goals. (N=29)*

| Regional Coordinating Organization | Agree: 41.4% (12) |
|------------------------------------|-------------------|
|         | Disagree: 41.4% (12) |
|         | Neither agree nor disagree: 17.2% (5) |

| Health Service Delivery Organization | Agree: 23.08% (3) |
|--------------------------------------|-------------------|
|         | Disagree: 53.85% (7) |
|         | Neither agree nor disagree: 23.08% (3) |

| Both | Agree: 50.0% (1) |
|------|------------------|
|      | Disagree: 50.0% (4) |
|      | Neither agree nor disagree: 0% (8) |
Supplementary File 4: Detailed Survey Results

| Healthcare organizations need additional guidance in evaluating staff performance. (N=29) |
|------------------------------------------------------------------------------------------------|
| **Provincial/Territorial Government**                                                                 |
| Agree: 75.0% (3)                                                                                         |
| Disagree: 0% (0)                                                                                        |
| Neither agree nor disagree: 25.0% (1)                                                                   |
| **Regional Coordinating Organization**                                                                   |
| Agree: 34.5% (10)                                                                                         |
| Disagree: 34.5% (10)                                                                                    |
| Neither agree nor disagree: 31.0% (9)                                                                   |
| **Health Service Delivery Organization**                                                                |
| Agree: 23.0% (3)                                                                                         |
| Disagree: 38.5% (5)                                                                                      |
| Neither agree nor disagree: 38.5% (5)                                                                   |
| **Both**                                                                                                 |
| Agree: 50.0% (1)                                                                                         |
| Disagree: 50.0% (1)                                                                                      |
| Neither agree nor disagree: 0% (0)                                                                       |

Resources

Staffing
Supplementary File 4: Detailed Survey Results

| Question                                                                 | Regional Coordinating Organization | Health Service Delivery Organization | Both | Provincial/Territorial Government |
|-------------------------------------------------------------------------|-------------------------------------|--------------------------------------|------|----------------------------------|
| Staff usually have enough time to complete assigned duties. (N=28)      | Agree: 21.4% (6)                    | Disagree: 35.7% (10)                 | Neither agree nor disagree: 42.9% (12) |
| Regional Coordinating Organization                                      | Agree: 33.3% (4)                    | Disagree: 33.3% (4)                  | Neither agree nor disagree: 33.3% (4)  |
| Health Service Delivery Organization                                     | Agree: 12.5% (1)                    | Disagree: 50.0% (4)                  | Neither agree nor disagree: 37.5% (3)  |
| Both                                                                    | Agree: 50.0% (1)                     | Disagree: 0% (0)                     | Neither agree nor disagree: 50.0% (1)  |
| Provincial/Territorial Government                                       | Agree: 0% (0)                        | Disagree: 50.0% (2)                  | Neither agree nor disagree: 50.0% (2)  |
| Training                                                                |                                     |                                      |      |                                  |
| Staff receive regular inservice training in your healthcare organizations. (N=27) | Agree: 40.7% (11)                   | Disagree: 25.9% (7)                  | Neither agree nor disagree: 33.3% (9)  |
| Regional Coordinating Organization                                      | Agree: 54.55% (6)                   | Disagree: 18.2% (2)                  | Neither agree nor disagree: 27.3% (3)  |
## Supplementary File 4: Detailed Survey Results

### Health Service Delivery Organization

| Both | Agree: 50.0% (4)  
|      | Disagree: 37.5% (3)  
|      | Neither agree nor disagree: 12.5% (1) |

| Provincial/Territorial Government | Agree: 0% (0)  
|                                 | Disagree: 0% (0)  
|                                 | Neither agree nor disagree: 100% (2) |

### Equipment

#### Most records are computerized. (N=28)

| Regional Coordinating Organization | Agree: 21.4% (6)  
|                                   | Disagree: 35.7% (10)  
|                                   | Neither agree nor disagree: 42.9% (12) |

| Health Service Delivery Organization | Agree: 16.7% (2)  
|                                     | Disagree: 41.7% (5)  
|                                     | Neither agree nor disagree: 41.7% (5) |

| Both | Agree: 37.5% (3)  
|      | Disagree: 37.5% (3)  
|      | Neither agree nor disagree: 25.0% (2) |

| Both | Agree: 0% (0)  
|      | Disagree: 0% (0)  
|      | Neither agree nor disagree: 100% (2) |
Supplementary File 4: Detailed Survey Results

| Provincial/Territorial Government | Agree: 25.0% (1)  
Disagree: 25.0% (1)  
Neither agree nor disagree: 50.0% (2) |
Supplementary File 4: Detailed Survey Results

General feedback about readiness to adopt indicators:

**Political/provincial priorities; alignment**
- Provincial/political impact drive priorities & actions
- There is rhetoric around patient-centeredness, but less effort around measurement in Ontario
- While there is openness reported by organizations, there are also realities with regards to competing priorities and fiscal restraints that pose challenges
- There is always room for improvement and our organization is open to consideration. Realities related to competing priorities and fiscal restraint pose challenges at times for needed change
- Organizations report being ready to adopt PCC measures and there is support for this
- Considerations need to be made for alignment of the indicators across the system as well as how to test the indicators and adapt them to specific needs of organizations
- Participation in accreditation for PCC may not require the use of separate indicators for PCC. It was questioned whether these indicators could be aligned with accreditation efforts to avoid separate reporting
- Corporate initiatives in all facilities must be supported to see overall improvement for an indicator.

**Transition – Lack of stability in Ontario**
- Ontario is currently transitioning to a new model for healthcare delivery. It is difficult to implement anything at this time or to assess whether organizations would be able to implement these indicators.
- Given the current state of LHINs it is difficult to commit to new indicators in the current state of system change

**Need for capacity development and resources**
- There is high interest in developing infrastructure and processes for collecting data to inform quality indicators. However, currently there is little capacity to undertake this work
- Support will be required to implement indicator data collection, analysis, and reporting across the entire departments. It is currently occurring in a piecemeal fashion in many sectors
- Staff are not equipped to plan and execute a quality improvement cycle.
- There are current limitations around having surveys for patients in different languages.

**Physician and leadership engagement**
Supplementary File 4: Detailed Survey Results

- A coordinated and standardized approach is required for performance improvement where patients and families are able to influence decision makers
- Physicians need to be engaged in the adoption of these indicators and for readiness
- Executive Leadership support is essential to implement and sustain PCC practices.

General comments about indicators

- The indicators require more discussion when looking at the entire health care system and different sectors
- There is a lack of clarity about what level these indicators could be implemented – some are seen as more macro, while others are more meso/micro
- A simplistic approach to structure indicators could compromise understanding the complexity of the delivery of PCC
- With regards to using the indicators as national indicators, it may be helpful to establish a few process indicators as standard and others that touch on specific issues, such as medication, as optional for the organization. Considerations should be made for risk of measurement burden and survey fatigue compared to amount of benefit
- This is a long list of indicators, most of which will require new data collection for organizations. Given the measurement burden and current workloads we suggest streamlining or prioritizing the indicators to create a smaller core set of indicators and other optional indicators to assist initial adoption.
- Not all indicators in this list are relevant to planning or delivery type organizations. Some of them might be more relevant to research but may not be relevant to those who plan and do QI. Separately, there has also been work in Ontario to reduce indicator fatigue and reduce over measurement so if there are new measures proposed for Ontario, stakeholders here may want to hear more about value and actionability before they implement.
## Supplementary File 5: Summary of Factors to Consider for Implementing PC-QIs

### Facilitators

| Theme 1: Interest in implementation of the PC-QIs |
|-------------------------------------------------|
| **Stakeholders perceive value in using PC-QIs** |
| • Most system-level and primary care organizations saw value in using the PC-QIs and in measuring PCC to improve the patient experience and quality of care |
| • Some participants expressed an appreciation for the development of the PC-QIs as gaps were acknowledged in PCC measurement |
| • Participants also expressed a need for these measures to improve PCC |
| **“I mean, the indicators you guys have identified, a ton of work that is very obvious. And I would say for the most part, they’re very, very good, like the justification for them and everything else. I think makes sense”** – System Level Organization 3 |
| **“The one thing that they do that we haven’t been able to do, and that’s why I’m really interested in what you have, is looking at patient satisfaction and looking at sort of quality indicator that shows a patient is better today than they were 12 months ago, whether it’s mentally, whether it’s physically. That’s the kind of piece that we have been missing and that I’ve been hunting for the best sort of way to do it, because we haven’t done that very well yet.”** – Primary Care Organization 2 |
| **There is provincial/territorial alignment for PCC measurement** |
| • 85% of system-level organizations were interested in most PC-QIs |
| • Interest for system-level organizations depended on alignment with provincial/territorial directions and measurement priorities |
| • This was a particular concern by survey and interview participants from the province of Ontario, where there have been major transitions with regards to organizational structures and development of new policies |
| **“And I think that would be a good indication for you which ones have been identified as a priority within [organization name]. And that’s not to say that others wouldn’t be, like some of them may not be on our list yet, just because we haven’t been able to collect the information required for it yet. But if we** |

### Barriers

| PC-QIs have limitations for understanding context |
|------------------------------------------------|
| • Understanding context is limited and some system-level and primary care clinics question how meaningful the measurement will be |
| • Some system-level and primary care clinics question how meaningful the measurement will be without understanding the context, which they see is important for PCC |
| • Patient stories were also suggested as a more compelling way to promote improvements care and should complement quantitative measures |
| **“I think we have to be careful with all of these that we don’t try to quantify the human context. So somehow that needs to be considered.”** – System-Level Organization 6 |
| **There is a need for tailoring and prioritization of the PC-QIs** |
| • System-level organizations and primary care clinics/organizations (especially) would be more interested in the PC-QIs if there was an opportunity to tailor/adapt them to their specific setting/context (e.g. urban vs. rural, specific populations) |
| • The number of PC-QIs was considered many, where organizations would like to pick and choose which ones to implement |
| • Not all PC-QIs were of interest to organizations, especially if there were not seen as actionable (e.g. Timely access to a primary care provider or the “Friends and Family Test” indicator, where patients indicate whether they would recommend a facility to others) |
| • Survey comments indicate that there was partial measurement of indicators - either different terminology was used, or all components of the PC-QI were not measured |
**Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs**

**Actionability and effectiveness of the PC-QIs to stimulate change**
- Survey respondents agreed that most PC-QIs “measure what they are supposed to measure”
- Both system-level and primary care organizations/clinics would like to see that the PC-QIs are “actionable”
- Participants suggested existing resources, such as those developed by the Alberta Medical Association (Accelerating for Change Transformation Team) or Accreditation Canada that could help identify effective initiatives to improve PCC if the PC-QIs identify gaps
- The PC-QIs were also seen as a useful tool for communicating with providers about needed improvements

“Where I get nervous and where we’ve experienced some challenges in the past with those bodies (national organizations) being involved is there needs to be a certain level of flexibility in what is being dictated around the measurement pieces. The information that is most interesting at that national level, or that is feasible at that national level is sometimes not meaningful at all at the unit level.” – System-Level Organization 4

“Most recently, things like that panel measurement piece, it’s kind of a [city name] zone initiative. And so those initiatives that come from that group then, we try to roll out in our PCN as best as they can kind of fit into rural. We’re a little bit different because urban and rural are two totally different. I don’t know what the word is for, totally different animals. What works in urban often does not work in rural.” – Primary Care Organization 11

**Theme 2: Motivation to implement PC-QIs**

**Organizations respond to patients and policies**
- Current pressures for system-level organizations come from patients (69% agree) and accreditation bodies (83.2%), indicating a responsiveness to patient needs as well as standards that their organizations are required to follow
- Improving PCC is part of strategic plans for most provinces or organizations and alignment with existing policy and measurement priorities is important
- In Alberta, the government and PCNs were considered key organizations for facilitating PC-QI implementation by asking clinics measure PCC

“If Primary Care Networks get a hold of this in itself, and they consider very valuable measures, they can then start to demand of their member this is a requirement – first a recommendation and then ultimately a requirement and help rollout those processes. There aren’t those kind of clinics that are like ours, where we are really driven to do it on our own, and many need to be led

“Where I get nervous and where we’ve experienced some challenges in the past with those bodies (national organizations) being involved is there needs to be a certain level of flexibility in what is being dictated around the measurement pieces. The information that is most interesting at that national level, or that is feasible at that national level is sometimes not meaningful at all at the unit level.” – System-Level Organization 4

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**Strength of the evidence for PC-QIs is unclear**
- While survey respondents agreed that most PC-QIs “measure what they are supposed to measure,” PC-QIs where there were a higher proportion of “no” responses (9-12%) and could be further refined included: Policy on PCC; Culturally competent care; Use of Patient-Reported Outcome Measures (PROMs); Equitable care
- Some participants questioned the demonstrated effectiveness/evidence around measuring PCC and that they would lead to improved outcomes, particularly among primary care clinics and organizations
- Previous implementation of Patient Reported Experience Measures (PREMs) has not been helpful to facilitate improvements in primary care. Data collected seen more as “nice to know,” and delays in reporting make data less useful to act on

“So, patient experience, yes, it’s important. But should it rule? I’m not convinced about the clinical outcomes and the downstream savings for costs
Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs

| Factor                                                                 | Quote                                                                                           | Source                                      |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------|
| **Standardization and alignment of measurement efforts**              | • Among system-level organizations, some expressed a need for a Pan-Canadian effort for PC measurement for standardization, where organizations like the Canadian Institute for Health Information, Accreditation Canada, and the Canadian Patient Safety Institute could identify core PC-QIs that all jurisdictions should measure | Primary Care Organization 5                |
|                                                                      | • Primary care organizations/clinics would like to see some alignment of measurement efforts provincially to avoid duplication or siloed efforts across stakeholders (government, Health Quality Councils, researchers, PCNs, and clinics) | System-Level Organization 7                 |
|                                                                  | “I think if you’re able to build a power in a Pan Canadian process, it will make it easier for each jurisdiction independently to get buy-in.” | – System-Level Organization 7               |
| **The need for training keeps motivation low**                        | • 65.5% of system-level organizations agreed that more training is needed for new methods/developments in measurement/QI | Primary Care Organization 4                 |
|                                                                      | • Some system-level organization, particularly those that are lower-resourced, and primary care organizations confirmed the need for training in QI among staff. |                                                                            |
|                                                                  | “It’s not something that a lot of clinics are comfortable with or know what to do about, and so I think we personally still have a lot of growth to do in terms of how we capture this information, and act on it, and engage with patients and design person-centred processes.” | Primary Care Organization 6                 |
| **Surveys can be a potential patient burden**                        | • Surveys were seen to be too long for patients to complete | Primary Care Organization 9                 |
|                                                                  | “I guess one of the challenges is just overburdening patients with surveys. And when we are serving patients wanting to keep those surveys quite brief.” |                                                                            |
| **Engagement of provincial/territorial leadership and champions is critical** | • Engagement of leadership at all levels was seen as an important facilitator for buy-in and for motivating staff to measure PCC. | Primary Care Organization 9                 |
|                                                                      | • Relationships were seen as essential for QI initiatives. From the perspective of PCNs, having strong relationships with the clinics, providers, and managers was essential to support QI efforts. |                                                                            |
|                                                                      | • Having champions at the local level (unit or clinic) was seen as a key facilitator for uptake and use; physicians value the experience and recommendations of their peers |                                                                            |
|                                                                      | • Engaging physicians requires discussing how the PC-QIs would benefit them and their patients |                                                                            |
### Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs

- Champions to target in primary care were those considered to be “early adopters” or “innovators”
- The College of Physicians and Surgeons and the Medical Association were two organizations that primary care organizations/clinics saw as important to engage for PC-QI implementation

“It comes down to the leadership and their vision for the organisation and how PFCC indicators fit into that vision. And there are a lot of competing priorities in healthcare...And leadership has to make that a priority.” – System-Level Organization 9

“For physicians, a little bit of healthy sort of comparison or competition has, I think, usually been found to stimulate interest and change when you actually see how you compare to others in your cohort. So, I think that some degree of reasonable comparison is sometimes a good thing.” – Primary Care Organization 4

### Theme 3: Resources and capacity needed to collect and use data for improvements

#### There is strong capacity for QI for most system-level or higher-resourced primary care organizations
- Among system-level organizations, provincial/regional governments and coordinating organizations had the strongest capacity to collect and use data for PC-QIs (especially Prairie and Atlantic provinces) compared to health service delivery organizations
- Most system-level and some primary care organizations (generally urban, academic/teaching clinics) have dedicated people or partners to support QI by providing training, help to manage, analyze, report, and interpret data
- Most organizations had strong networks with partners, including with the provincial government in some provinces, namely Ontario, New Brunswick, and British Columbia. In primary care in Alberta, some clinics were supported by the PCNs and the Health Quality Council
- Five PC-QIs considered highly feasible to implement by system-level organizations (75% of organizations could get information for the PC-QI and have processes to make changes) included: Structures to report PCC performance; Communication between patient and nurse; Coordination of care; Patient and caregiver involvement in decisions about care; Overall experience

#### Staff are time and resource-constrained
- 0% of system-level organizations agreed that staff usually have enough time to complete assigned duties
- 70.4% of system-level organizations disagreed that staff were satisfied with the health data/information systems, which has implications for collecting, managing, and reporting on PC-QI data
- Lower resourced organizations/clinics and Northern territory government representatives described less capacity to collect, report, and act on data for PC-QIs
- Some participants discussed the lack of funding for QI and attributed it to challenging fiscal and political environment in their provinces
- Primary care participants in Alberta noted the lack of dedicated QI staff in most clinics, particularly family practices and rural clinics

“I think in addition to that just the current environment that we’re in in Ontario we are resource constrained...And so even just from the perspective of actually having people to be able to do the work is certainly a challenge, even outside of the Ontario Health service system and structure.” – System-level Organization 7
Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs

“...We have a fairly robust framework of measurement that we've had implemented for quite some time...but our next step forward is expanding to measures of greatest significance directly to patients. And that includes, again, probably direct patient engagement in evaluating and helping to determine those measures as well.” – Primary Care Organization 2

Technology supports implementation and use of PC-QIs

- Technology was considered an important facilitator for helping with data collection (tablets, QR codes, e-mail) and more real-time reporting (dashboards)
- Regions or clinics with Electronic Medical/Health Records are better able to integrate data for PC-QIs

“It’s not quite as slick as I would like it to be but what it does allow is for you to use your cell phone, scan the QR code, do the survey, send it in and you’re done and it’s real-time. So for example, if you’re laying in your hospital bed, you scan the poster on the wall in the hallway and send in your feedback.” – System-Level Organization 2

“We have all the emails for our patients on file. When we choose to do a survey, we ask people, as they come in, if they would be OK receiving an email survey, and then we send – it sends it out via email to them, and then the Health Quality Council of Alberta kind of collates all the data and gives us the report back in the end.” – Primary Care Organization 6

“...If we want to do more quality improvement, if you want to do more work in reflecting patient input and patient participation in these systems, patient experience opportunity, you need to invest in it. And government has acknowledged it at a certain level, and they’ve been talking [about it] for 15 years in my experience. We're working at primary care reform in Alberta and yet, they have not invested in it.” – Primary Care Organization 4

PC-QIs can conflict with priorities for patient care and other measurement

- While PCC measurement was seen as important by most participants, participants were challenged by competing priorities, including patient care and other required measurement and projects

“...Given the stuff resources we have, it’s hard to start collecting something new that isn’t already collected without dropping something else off. And then the question becomes, what can we actually drop?” – System-Level Organization 4

COVID-19 has impacted PCC measurement

- COVID-19 has diverted resources away from patient experience measurement and have caused staff (especially in primary care) to feel like they had no additional capacity to undertake more measurement efforts. Some have continued to collect patient experiences or began to capture patient experiences with virtual care
- Less in person patient flow and inability to use paper surveys in the clinics have challenged efforts to measure PCC

“But you have frontline staff who are exhausted, overwhelmed, have COVID fatigue, and it’s like, “Don’t ask me to, like, now collect this data on top of everything else I’m doing.” – System-Level Organization 1

“I felt it was difficult to engage staff at this time... [before] with our patient experience surveys, we had the support nurses highly involved, and the clinic staff, and everybody kind of knew, but right now it’s hard to go in and say can you add this onto your plate right now.” – Primary Care Organization 10

| Theme 4: Organizational climate for implementation of PC-QIs |
|---------------------------------------------------------------|
| **PCC is part of the culture in most organizations/clinics**   |
| In primary care, PCC aligns with the Patient Medical Home model, as |
| promoted by the Canadian College of Family Physicians           |
| **Primary care funding models do not support PC-QI implementation** |
Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs

- Most system-level organizations and some primary care organizations (mainly PCNs) and clinics had well established programs around patient engagement and obtaining patient feedback (e.g. patient advisory groups, conducting focus groups in the community)

> “There’s going to be an engagement with the community to understand what matters to them, and what they think we should focus measuring, and also an engagement strategy with patient family advisors.” – System-Level Organization 5

> “…For our patient engagement group, I’m the liaison with them...So we ask them for feedback. So if they happen to come up with something that, “Oh, I think it would be a good idea to also do this”, we definitely consider that to incorporate it into what we’re working on.” – Primary Care Organization 2

PC-QI implementation should fit with the workflow
- Primary care organizations/clinics emphasized the need engage stakeholders to ensure implementation of the PC-QIs fits with the existing clinic workflow and processes as much as possible to minimize disruption to patient care

> “I think just getting everybody's buy in, like all the stakeholders, especially the ones that will be doing the work. Just make sure that it’s, I mean, most of the stuff are impactful, but just that doesn’t take over their daily operations, I suppose.” – Primary Care Organization 3

Most organizations have a culture of learning
- Some system-level organizations and primary care clinics spoke about having positive environments for learning, where staff are encouraged to bring in new ideas

> “It’s a no-blame culture. So, if somebody does something that may be not the right thing, we certainly have a no blame culture. And I think people feel comfortable bringing forward concerns...There’s no repercussions to them.” – System-Level Organization 10

> “…Anybody in our clinic is able to sort of bring ideas forward and initiate things.” – Primary Care Organization 5

- Additional data collection is especially challenging for physicians due to time and funding models (fee for service) that do not allow for dedicated time for QI
- There is a need to design implementation in a way that requires as little physician time as possible to support PC-QI adoption and use. Two physicians suggested financial incentive models to support use of the PC-QIs

> “It’s difficult to schedule time with them because they have to meet their quotas, right. And they have to be available to their patients too...I think the biggest hurdle is just finding time that the physicians are able to give towards that” – Primary Care Organization 8

> “And so if I have help with it, it makes it a heck of a lot easier. But I do admit, I have to be strong armed a little bit and I have to think about it and I have to be pushed and prodded and even though I know it’s good right?” – Primary Care Organization 7

Variability among health provider and leadership readiness in terms of PCC
- System-level and primary care interview participants noted that not all health providers and leadership see PCC as a priority
- There is some variability across sectors. For example, primary care, pediatrics, cancer care, and palliative care as seen to be the most person-centred sectors
- There is a lack of understanding around PCC, with different ideas about what it means

> “I guess it’s the dismissing this data as not being legitimate because it’s only people who want to complain that fill these surveys out. So, I know the quality department has done a lot of work to really focus on the science and the evidence that this is a validated survey and they have all of that information to indicate that no, that’s not the case.” - System-Level Organization 9

> “I guess that’s the thing of person-centered. Like, for every person, is they come with a slightly different lens.” -System-Level Organization 8
Supplementary File 5: Detailed Summary of Factors to Consider for Implementing PC-QIs
Informing Person-Centred Quality Indicator Implementation

Mixed Methods Study Reporting Checklist

From: Leech NL, Onwuegbuzie AJ. Guidelines for conducting and reporting mixed research in the field of counseling and beyond. Journal of Counseling & Development. 2010 Jan;88(1):61-9.

1. Research Formulation

1.1.1. Treat each relevant article as data that generate both qualitative (e.g., qualitative findings, literature review of source article, source article author’s conclusion) and quantitative (e.g., p values, effect sizes, sample size score reliability, quantitative results) information that yield a mixed research synthesis. Pg. 6

1.1.2. Subject each document selected as part of the literature review to summarization, analysis, evaluation, and synthesis. Pg. 5

1.1.3. Provide literature reviews that are comprehensive, current, and rigorous; that have been compared and contrasted adequately; and that contain primary sources that are relevant to the research problem under investigation, with clear connections being made between the sources presented and the present study. Pg. 4-5

1.1.4. Present clearly the theoretical/conceptual framework. Pg. 7-8; Pg. 10

1.1.5. Assess the findings stemming from each individual study and the emergent synthesis for trustworthiness, credibility, dependability, legitimation, validity, plausibility, applicability, consistency, neutrality, reliability, objectivity, confirmability, and/or transferability. Pg. 5

1.1.6. Present the goal of the study (i.e., predict; add to the knowledge base; have a personal, social, institutional, and/or organizational impact; measure change; understand complex phenomena; test new ideas; generate new ideas; inform constituencies; and examine the past). Pg. 5-6

1.2.1. Specify the objective(s) of the study (i.e., exploration, description, explanation, prediction, and influence). Pg. 5-6

1.3.1. Specify the rationale of the study. Pg. 6; Supplementary File 3

1.3.2. Specify the rationale for combining qualitative and quantitative approaches (i.e., participant enrichment, instrument fidelity, treatment integrity, and significance enhancement). Pg. 6-7

1.4.1. Specify the purpose of the study. Pg. 5-6

1.4.2. Specify the purpose for combining qualitative and quantitative approaches (e.g., identify representative sample members, conduct member check, validate individual scores on outcome measures, develop items for an instrument, identify barriers and/or facilitators within intervention condition, evaluate the fidelity of implementing the intervention and how it worked, enhance findings that are not significant, compare results from the quantitative data with the qualitative findings). Pg. 6; Pg. 13
Informing Person-Centred Quality Indicator Implementation

1.5.1. Avoid asking research questions that lend themselves to yes/no responses. Research objectives are presented rather than research questions in consideration of manuscript length, however objectives were designed to not illicit only yes/no responses.

1.5.2. Present mixed research questions (i.e., questions that embed both a quantitative research question and a qualitative research question within the same question) when possible. See note above.

2. Research Planning

2.1.1. Specify the initial and final sample sizes for all quantitative and qualitative phases of the study. Pg. 8; Pg. 11; Pg. 16-18,

2.1.2. Present all sample size considerations made for the quantitative phase(s) (i.e., a priori power) and qualitative phases (e.g., information-rich cases). Pg. 8; Pg. 11

2.1.3. Present the sampling scheme for both the quantitative and qualitative phases of the study. Pg. 8, 10-11

2.1.4. Describe the mixed sampling scheme (i.e., concurrent–identical, concurrent–parallel, concurrent–nested, concurrent–multilevel, sequential–identical, sequential–parallel, sequential–nested, and sequential–multilevel). Pg. 6

2.1.5. Clarify the type of generalization to be made (i.e., statistical generalization, analytic generalization, and case-to-case transfer) and link it to the selected sampling design, sampling scheme, and sample size(s). Pg. 7-9

2.2.1. Outline the mixed research design. Pg. 6

2.2.2. Specify the quantitative research design (i.e., historical, descriptive, correlational, causal–comparative/quasi–experimental, and experimental). The design is descriptive – Pg. 7

2.2.3. Specify the qualitative research design (e.g., biography, ethnographic, auto-ethnography, oral history, phenomenological, case study, grounded theory). Pg. 10

3. Research Implementation

3.1.1. Outline the mixed data collection strategy. Pg. 8-9; Pg. 12

3.1.2. Present information about all quantitative and qualitative instruments and the process of administration. Pg. 7, 11-12

3.2.1. Outline the mixed data collection strategy (i.e., data reduction, data display, data transformation, data correlation, data consolidation, data comparison, and data integration). Pg. 13

3.2.2. Provide relevant descriptive and inferential statistics for each statistical analysis. Pg. 14, Table 1; Pg. 15; Table 2; Pg. 17-18; Table 3

3.2.3. Discuss the extent to which the assumptions (e.g., normality, independence, equality of variances) that underlie the analyses were met, as well as any observations that might have distorted the findings (e.g., missing data, outliers). Pg. 29 (limitations)

3.2.4. Specify the statistical software used. Pg. 9
Informing Person-Centred Quality Indicator Implementation

3.2.5. Specify where the responsibility or authority for the creation of categories resided (i.e., participants, programs, investigative, literature, or interpretive), what the grounds were on which one could justify the existence of a given set of categories (i.e., external, rational, referential, empirical, technical, or participative), what was the source of the name used to identify a given category (i.e., participants, programs, investigative, literature, or interpretive), and at what point during the research process the categories were specified (i.e., a priori, a posteriori, or iterative). Pg. 9; Supplementary File 3, Pg. 2

3.2.6. Specify the name of the technique used to analyze the qualitative data (e.g., content analysis method of constant comparison, discourse analysis, componential analysis, keywords in context, analytic induction, word count, domain analysis, taxonomic analysis). Pg. 12-13

3.2.7. Specify the qualitative software used. Pg. 12

3.3.1. Discuss the threats to internal validity, external validity, and measurement validity and outline the steps taken to address each of these threats to internal validity, external validity, and measurement validity. Pg. 28-29 (strengths and limitations)

3.3.2. Discuss the threats to trustworthiness, credibility, dependability, authenticity, verification, plausibility, applicability, confirmability, and/or transferability of data and outline all verification procedures used. Pg. 28-29 (strengths and limitations)

3.3.3. Discuss mixed research legitimation types (i.e., sample integration legitimation, insider-outsider legitimation, weakness minimization legitimation, sequential legitimation, conversion legitimation, paradigmatic mixing legitimation, commensurability legitimation, multiple validities legitimation, and political legitimation). Not specifically mentioned, but the study uses sample integration legitimation and weakness minimization legitimation

3.4.1. Interpret relevant types of significance of the quantitative findings (i.e., statistical significance, practical significance, clinical significance, and economic significance). Pg. 25-26

3.4.2. Conduct post hoc power analysis for all statistically nonsignificant findings. N/A

3.4.3. Interpret the significance (i.e., meaning) of qualitative findings. Pg. 25-26

3.4.4. Discuss criteria for evaluating findings in mixed research studies (e.g., within-design consistency, conceptual consistency, interpretive agreement, interpretive distinctiveness, design suitability, design fidelity, analytic adequacy, interpretive consistency, theoretical consistency, integrative efficacy). Not specifically discussed criteria, but assessed on Pg. 28-29

3.5.1. Describe all steps of the mixed research process. Pg. 7-13

3.5.2. Describe the context in which the mixed research study took place. Pg. 7-8, 10-12

3.5.3. Ensure that the mixed research report is accurate and complete; does not distort differences within and among individuals and groups; is free from plagiarism or misrepresentation of the ideas and conceptualizations of other scholars; and contains findings that are adequately accessible for reanalysis, further analysis, verification, or replication. Confirmed

3.5.4. Present all ethical considerations that were addressed in the study (e.g., informed consent, confidentiality, incentives, funding sources, potential conflicts of interest, biases). Pg. 31-32
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3.5.5. Specify study approval in accordance with an institutional review board either in the report or in the cover letter submitted to the editor. **Pg. 6**

3.5.6. Present recommendations for future research that culminate in a validation, replication, or extension of the underlying study. **Pg. 29**