RESEARCH AND THEORY

Providers’ Perspectives on the Implementation of Mandated Local Health Networks for Older People in Québec

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Introduction: In many countries, integrated care has been implemented to improve the quality, efficiency and patient experience of services. Understanding how integrated care is adopted in different settings may give insights into where, how and why different components of the organisational design work. The aim of this article is to understand how and why integrated care for older people has been implemented in different contexts from the perspective of providers.

Theory and methods: The study uses an innovative composite framework for the implementation of integrated care models, which posits that structural, organisational, provider, innovation and patient factors influence implementation along six dimensions of integration. A qualitative multiple case study was done of three cases in Québec using document analysis and semi-structured interviews of 28 providers. Descriptive comparisons and thematic analysis were performed.

Results: Providers considered that structural (government policy) and organisational (mergers) factors highly influenced the implementation of organisational and functional dimensions of integration, at the detriment of clinical integration. Provider, innovation and patient factors mildly or moderately influenced the implementation of integration.

Conclusion: Structural and organisational factors were necessary conditions for the implementation of administrative components of integration, with great variability in the implementation of some clinical components.

Keywords: Integrated care; older people; implementation factors; providers

Introduction

Healthcare systems in developed countries try to improve the quality, coherence and continuum of services to specific vulnerable populations with complex needs, while concurrently improving the cost-efficiency of services by implementing community-based integrated health and social care programs [1–3]. These programs generally involve inter-organisational and inter-professional cooperation [4], coordination [4] and management of inter-organisational interdependence [4] in delivering services to patient groups that suffer most from the fragmentation of health care systems, such as cancer patients [5], people with cognitive disorders [6], or frail older people [7]. In this context, over the past two decades several integrated care programs for older people have been put in place around the world, notably the Program of All-inclusive Care for the Elderly (PACE) [8] and Social Health Maintenance Organisation (SHMO) [9] in the United States, Coordination for Professional Care for the Elderly (COPA) [10] in France, SA Health Plus [11] in Australia, Comprehensive Home Option for Integrated Care of the Elderly (CHOICE) [12], and Program of Research to Integrate the Services for the Maintenance of Autonomy (PRISMA) [13, 14] in Canada.

Several studies have demonstrated that the benefits of integrating care for older people in research settings include better patient satisfaction, better continuity of services, better care coordination, better quality of services, lower cost of services, less fragmentation of services, and better interdisciplinary collaborations [13, 15–20]. Despite these benefits, however, routine use of integrated care models is far from optimal, and there is a big gap between the implementation of experimental projects and the implementation of integrated care models in any given territory. As of now, there are no consistent guidelines on implementing integrated care models in everyday practice [21], and the still-significant gap between research and practice reduces the impact of integrated care models in real life settings. This gap may result from the complexities of implementing an integrated care program [21].
Current healthcare literature suggests that implementing an integrated care program involves a complex interaction of multiple actors, such as strategic actors (policymakers), tactical actors (managers), operational actors (health and social care providers), and users (patients and caregivers) [22] who may be located in different organisations (public organisations, community organisations, and private organisations) [22] within a healthcare system. Furthermore, the implementation of an integrated care program may be influenced by systemic factors [19] and characteristics of the innovation itself [19]. A better understanding of factors that influence the implementation of integrated care models for older people with complex socio-sanitary needs helps inform policymakers, managers, and providers regarding successful implementation, routinization and sustainability strategies. However, to date the factors that influence the implementation of integrated care models for older people have been infrequently studied or reported on in integrated care literature. Mackie and Darvill [19] systematically reviewed the literature on factors influencing the implementation of integrated health and social care for adults, reporting co-location of staff and teamwork, communication, integrated organisations, management support and leadership, resources and capacity, national policy, and information technology systems as the main enablers [20, 23–27]. They concluded that there was limited evidence on factors influencing the sustainable implementation of integrated care and that more studies were needed to enhance the validity of the available evidence.

Health and social care providers, as operational actors, play an essential role in routinizing integrated care as they carry out their day-to-day routine tasks [22]. They deliver care to patients directly and assume important coordination roles such as case management. Organisational support for the innovation, participants’ attitudes to the innovation, and training activities have all been reported as factors that influence the implementation and routinization of integrated care by providers [28, 29]. The purpose of this study is to understand the implementation of integrated care models for older people as perceived by providers. Factors that influence the implementation of an innovation often have the potential to be either facilitating factors or barriers depending on the circumstances [24] (e.g. good leadership/poor leadership). Hence, in this article we use the term “influencing factors” rather than either “facilitating factor” or “barrier”.

This research sets two objectives:

1. To describe and compare the implementation of an integrated care model for older people in three different contexts according to the perspectives of providers.
2. To identify and understand factors that providers perceive as influencing the implementation of integrated care models for older people.

Theoretical framework
The Rainbow Model of Integrated Care of Valentijn et al. [30] is a descriptive framework that distinguishes 59 items within six interlinked dimensions of integration: **clinical integration** (referring to clinical care coordination), **professional integration** (inter-professional coordination of services between various providers), **organisational integration** (inter-organisational coordination of services between various organisations), **systemic integration** (alignment of rules and policies within a system), **functional integration** (coordination of support systems) and **normative integration** (the extent of shared values and missions within the integrated system). This framework was used to generate a descriptive comparison [31] of the innovation along the lines of the six dimensions of integration.

The multilevel health innovations analysis model of Chaudoir et al. [32] is a renowned implementation science model that posits that five groups of factors influence the implementation of an organisational innovation. These include **structural factors** (factors linked to the external setting, such as the socio-economic and policy context in which the innovation is implemented), **organisational factors** (factors linked to the organisation where the innovation is being implemented such as organisational leadership), **provider factors** (factors linked to the providers implementing the innovation such as their willingness to change), **innovation factors** (factors linked to the innovation being implemented such as its complexity), and **patient factors** (factors linked to patients involved in the innovation, such as their health related beliefs).

**Figure 1** illustrates the theoretical basis of this research. The composite framework for the implementation of integrated care networks posits that five groups of factors (structural, organisational, innovation, provider, and patient) influence the implementation of six dimensions of integration (clinical, professional, organisational, systemic, functional and normative) of an integrated care model for older people. This study’s descriptive comparison and explanatory analysis is based on this framework.

Context of the study
Québec is the second most populous province of Canada with a population of about 8.3 million people [33]. It has a publicly administered tax-funded health insurance system, ensuring universal medical coverage. The Ministry of Health and Social Services allocates block funding to health institutions such as hospitals and community health centres.

During the organisational reforms of the Québec health system in 2004, 95 Health and Social Services Centres were created, through the merger of public organisations (local community health centres, long-term care facilities, and some hospitals) [34]. The administrative merger of public organisations was the main mechanism the government of Québec chose to promote integration of health and social services [34–36]. These Health and Social Services Centres were mandated by government to create Local Health Networks through formal and informal inter-organisational agreements [37, 38]. Various Local Health Networks addressing the needs of different sub groups of the population living on their territories were developed such as the Local Health Networks for Older People [39]. Its main components consists of: i) a joint governing board, ii) case management, iii) a Multicienentele Assessment Tool, iv) an individualised service plan, v) a health information system, vi) a common access
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Methodology

Study design
Qualitative research methods are most suited to studying the experiences of participants while including their perspectives on social matters in a given context [41]. Holistic multiple case study is a qualitative methodological approach that facilitates the in-depth study of a situation in multiple units through multiple data sources [41]. This study is part of a wider international project, the iCOACH (Implementing Community-based models of care for Older Adults with Complex Health and social needs) project, carried out by a team of researchers from Québec, Ontario, and New Zealand [42]. This manuscript focuses on the perspective of providers regarding the implementation of a Local Health Network for Older People in three different contexts of Québec.

Settings and participants
This project studies the implementation of Local Health Networks for Older People in three cases in Québec, representing three settings: highly urban (C 1), urban (C 2), and semi-urban (C 3). These cases were not selected to represent wider practices in Québec, but rather because they offered insights into implementing models of integrated care in their respective contexts [43]. In fact, one may consider that the organisation of health services differs depending on the level of the urbanisation of the setting. The three cases differ in terms of population density, geographic settings, and number of healthcare organisations [44]. Table 1 describes some characteristics of the different cases.

Data collection
Twenty-eight semi-structured face-to-face interviews, ranging from 50 to 90 minutes, were conducted by the researchers between May 2015 and December 2016. Each participant was provided with information about the aims, procedures, and ethical aspects of the study. An informed consent was obtained from all participants.}

Figure 1: Composite conceptual model (combining the models of Valentijn et al. and Chaudoir et al.).
Table 1: Characteristics of the three cases studied.

| Description               | Case 1                      | Case 2                      | Case 3                      |
|---------------------------|-----------------------------|-----------------------------|-----------------------------|
| Geographical setting      | Highly urban area           | Urban area                  | Semi-urban area (urban      |
|                           |                             |                             | zones and rural zones)      |
| Total population          | 421,342                     | 164,666                     | 41,927                      |
| Surface area              | 282 km²                     | 325 km²                     | 5,964 km²                   |
| Population density        | 1,494 people/km²            | 466.5 people/km²            | 7 people/km²                |
| Historical context        | Historical pilot site for a  |
|                           | project on the integration  |
|                           | of care for older people in |
|                           | Quebec.                     |                             |                             |

consent form was signed by each participant before the interview. Data saturation was deemed to have been achieved when the last three interviews added no new information, after which no further providers were invited for interview [45]. All interviews were audio recorded and transcribed verbatim.

Researchers from the Québec branch of the iCOACH project collaboratively developed a topic list for interviewing providers. The six main themes covered were: 1) Organization of care for older people living with complex social and health needs; 2) Links to community resources; 3) Self-management support; 4) Innovation and evidence to support care (also known as clinical decision support); 5) Health information systems they used; and 6) Organizational approach and culture in the change of care. Piloting indicated that the interview structure and questions were clear and suitable for the purposes of the study. Each interview started with an open-ended question that encouraged interviewees to talk freely about their experiences, thereby reporting what they perceived as being most important. Subsequently, they were prompted with more specific questions to help clarify their answers.

Other data sources included yearly government reports on the monitoring of Local Health Networks for Older People. We searched for specific information from specialised websites, such as the Statistics Canada website.

Data analysis
Qualitative data analysis was done using the NVivo 11 software package [46]. The Québec research team refined the iCOACH projects’ provider codebook, adapting the codes and themes to better match the Québec data. Then two researchers (WP and LB) independently coded the first three interviews, after which they met, compared codes for providers’ perspectives, and discussed any differences. The coding of the next three interviews showed a significant overlap in the coding of both researchers, with an inter-judge reliability greater than 80% [47, 48]. Thereafter, one researcher coded the remaining interviews.

For the descriptive comparison [31] of the three cases, the Rainbow Model of Integrated Care framework was used as a codebook to organise the data. WP initially made an extensive and detailed descriptive summary of each case. Subsequently, a highly synthesized and simplified descriptive summary of each case was prepared, which facilitated the comparison of the three cases according to the six dimensions and 59 items of the Rainbow Model of Integrated Care [30] descriptive framework (Figure 1). Next, MB, LB, YC and DG both reviewed the detailed and simplified descriptive summaries. Differences in opinions were discussed and the final descriptive comparison of the three cases was reached by consensus.

The thematic analysis technique [31, 49] was used for the identification and analysis of factors influencing the implementation of the Local Health Network for Older People. This was done in two steps. First, the Multilevel Health Innovations Analysis Model was used to create a codebook which facilitated the identification of factors that providers perceived as positively or negatively influencing the implementation of the Local Health Network for Older People. Then the dimensions of integrated care that were most likely to be influenced by each factor were identified by induction and organised on the Rainbow Model of Integrated Care. Next, the team reviewed the themes of factors influencing the implementation of each dimension of a Local Health Network for Older People, and together agreed on the degree of influence of each, expressed on a three-point scale (mild, moderate, or high), according to the providers’ perspective and documentary analysis. Differences in opinions were discussed so that the final thematic analysis of the three cases was reached by consensus.

The quotes used to illustrate the results have been translated from French to English for the purpose of this article.

Ethics
This study was approved by the Research Ethics Committee of Charles-Le Moyne Hospital (ref. number CE-HCLM-15-001).

Results
How the Local Health Network for Older People was implemented
Descriptive comparison of the implementation of each of the six dimensions of integration are presented in table form under each of the following sections, with similar cross-case perspectives in a merged row and differing perspectives in a fragmented row.
The clinical dimension of integration

The clinical dimension consists of 12 items. Table 2 presents the similarities and differences in their implementation. The “case management” and “population needs” items differed across the three cases. Three different models of care coordination through “case management” were implemented in each case.

Regarding provider-patient interactions, all providers reported sharing decision-making with patients and their caregivers. This facilitated patients’ participation in the elaboration and implementation of care plans, transmission of information to the patient, prioritisation of the needs patients felt most strongly about, and self-management support.

“I tell them [patients] all the time, I’m here for you, to present you the situation, I show you what I know about the services, and you make the decisions.” (Nurse C2)

Though fragmented care still existed in the Local Health Networks, mechanisms such as liaison nurses and inter-organisational referral forms (the Demande de Services Inter Établissements – DSIE) ensured temporal continuity of services.

Table 2: Providers’ perspectives on the implementation of the clinical dimension of the Local Health Network for Older People.

| Component                          | Case 1                                                                 | Case 2                                                                 | Case 3                                                                 |
|------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|
| 1) Centrality of client needs      | – Focused on the physical, mental, and social aspects of users’ health as indicated by the Multiclientele Assessment Tool. | – Difficulties balancing patients’ needs to the services offered.     |                                                                         |
| 2) Case management                 | – Only social workers were “case managers”.                             | – Only nurses are “main providers”.                                     | Social workers or nurses could be “case manager”.                      |
|                                    | – Any provider (nurse, social worker, occupational therapist) could be a “main provider”. |                                                                        |                                                                        |
| 3) Patient education               | – Educating patients as part of their informed consent and shared decision-making activities. |                                                                        |                                                                        |
| 4) Client satisfaction             | – Providing care for client’s needs with the resources available.       | – There are no formal mechanisms to measure the client’s satisfaction. |                                                                        |
| 5) Continuity                      | – Fragmented care still existed in the Local Health Networks, though mechanisms were put in place to facilitate care continuity. |                                                                        |                                                                        |
| 6) Interaction between professional and client | – Patient engagement during shared-decision making and consent. | – Administrative and legal obligations such as explaining their roles or duties, sometimes hindered interactions. |                                                                        |
| 7) Individual multidisciplinary care plan | – Creating multidisciplinary individualised care plans for patients. | – Variable use of care plans within and across the cases. |                                                                        |
| 8) Information provision to clients | – Variable criteria of access to certain local resources, (e.g. local clinics), sometimes they are not known. |                                                                        |                                                                        |
| 9) Service characteristics         | – Services were provided, depending on the individual patient’s needs and the capacity of the Local Health Network. | – There were patient waiting lists for some services.                   |                                                                        |
| 10) Client participation            | – Endeavouring to engage all patients in shared decision making, though this was not always possible in practice. |                                                                        |                                                                        |
| 11) Population needs               | – Providers were more focused on the needs of the patients than those of the wider population. | Interpretation services were offered for the multicultural population. | Some community organisations offered relief services for exhausted caregivers. |
|                                    |                                                                        |                                                                        | Transport services were needed for patients in rural zones of the territory. |
| 12) Self-management                | – Self management support that aimed at increasing the autonomy of patients were mostly information on local community services. |                                                                        |                                                                        |
The organisational dimension of integration
The organisational dimension consists of 13 items. Table 4 presents the similarities and differences in their implementation.

The integrated care network was organised around the Health and Social Services Center which established partnerships with organisations on its territory. The number of partnerships differed across the three contexts, with the mega-urban case (C1) establishing more partnerships than the urban and semi-urban cases.

“Our patients are placed in those four [private] long-term care centers... We are overwhelmed in our CHSLDs [public long-term care centers], there is no room. We purchased some beds... 162 beds in the four [private] long-term care centers.” (Nurse C1)

Partner organisations mostly provided complementary services, which eventually led to a sort of organisational inter-dependence. The perspectives on organisational features and learning organisations differed in the three cases.

Notably, providers did not have much information on managerial-level items such as inter-organisational governance, or competency management.

The systemic dimension of integration
The systemic dimension consists of six items. Table 5 presents the similarities and differences in their implementation.

All providers shared the same socio-economic and political climate marked by frequent organisational reforms mainly championed by the government. The semi-urban case (Case 3) lacked human resources, and it also had an ageing population that was sparsely distributed over a large rural territory.

“Of course, from time to time we also have difficulty recruiting people to provide services... it’s more difficult, I think, in rural areas.” (Social worker C3)
Providers did not have much information on the governance level item.

The functional dimension of integration
The functional dimension consists of six items. Table 6 presents the similarities and differences in their implementation. Feedback mechanisms varied across the three cases. Providers reported having multiple computerised information systems that were mostly unaligned, and this hindered information continuity.

“So they [nurses] have access to my computerized patient notes, [...] while I do not have access to the details of their [patient] notes, [...] but given my role as a case manager, it’s a big barrier.” (Social worker C2)

The staff of partner organisations generally worked together in the community, and resources were mostly managed by the Health and Social Services Centre. Only Case 1 reported any feedback of performance indicators. Providers did not have much information on support systems and services.

The normative dimension of integration
The normative dimension consists of 11 items. Table 7 presents the similarities and differences in their implementation. No difference was found across the three cases. The benefits of maintaining complex patients at home with quality care for as long as possible with available resources was clearly understood by all providers, who reported shared values and satisfactory inter-professional
collaborations. On the other hand, provider–manager collaboration was not always smooth.

Several items of this dimension were not assessed by providers.

In summary, the descriptive comparison brought forth two main observations. First, despite the major reforms carried out by the government at the systemic level of integration, there was significant overlap in how the Local Health Network for Older People were implemented in the three cases studied. Second, providers were able to discuss most items of the clinical, professional and functional dimensions of integration adequately, but often had very limited information on items in the organisational, systemic, or normative dimensions of integration. Both observations suggest that, despite the overall conceptual similarity in the implementation of integrated care in the three cases studied, providers generally had a limited knowledge of normative processes at the managerial and policy level of integration, which may reflect a certain loss of the primary purpose of the innovation.

Factors which influenced the implementation of the six dimensions of the Local Health Network for Older People

Structural factors
Most providers reported that government policies and funding support for the Health and Social Services Centres greatly influenced implementation of the Local Health Network for Older People (Table 8). As one respondent expressed, articulated government support (laws and policies) could directly influence providers.

“According to Bill 90 (of 2002), it is us, the nurses, who have to put in place the [treatment] plan, the
Articulated government support could also influence providers indirectly. For instance, different laws and policies drove the mergers of public health organizations (leading to the creation of the Health and Social Services Centres), while at the organisational level government policies mandated and empowered the Health and Social Services Centres to create partnerships with organisations of their territories to deliver care to older people. Concrete government support in the form of budgetary, material and human resource allocations to the Health and Social Services Centre helped form inter-organisational links through mechanisms such as the provision of financial subsidies or personnel to partner organizations. Government policies and support also aided other components of the Local Health Network for Older People, as in the case of the multidisciplinary evaluation tool, which facilitated professional and clinical integration.

On the other hand, more than a decade after the creation of Health and Social Services Centres, some components, such as case management, that were neither clearly defined at the ministerial level nor supported by the government, were poorly implemented in two cases.

“... The procedures were ... Well, in fact, they still are not clear. Great! You appoint me case manager, starting today, here are your pagers, but people are phoning ... my role, the procedures are not yet available. So I think that’s a major shortcoming...” (Social worker C1)
Managers and policymakers regularly used data generated from the evaluation of patients with the multidisciplinary evaluation tool. Though most providers did not have any feedback on the usage of these statistics, some providers in Cases 1 and 3 indicated that their performance was partially measured with this data. This motivated them to regularly carry out patient evaluations with the multidisciplinary evaluation tool. This pressure to measure the volume of activity has detracted from the clinical dimension of the evaluation.

Some providers felt that they did not have much of a say in managerial issues in their Local Health Network.

“There is no interest, at present, for management, to seek out the knowledge of senior staff [providers]. In the past, during our clinical committee meetings, senior staff were always there to guide the younger ones. We are senior staff, the most… our expertise is no longer desired by the clinical committee, by the boss.” (Nurse C3)

In a broader sense, this may lead to a lack of provider engagement in the design, execution, or monitoring phases of Local Health Network for Older People implementation. This lack of engagement may explain why providers had limited knowledge of processes at the managerial and policy levels of implementation of their Local Health Network for Older People.

Characteristics of the population, such as the relative proportion of immigrants, also influenced Local Health Network for Older People implementation.

“There are different community organizations, but that’s because we have a lot of cultural communities […] with [different] challenges, because they are often communities that want to keep [their patients] at home for very, very, very long. And sometimes it can be difficult in terms of the resources that can be mobilised.” (Social worker C1)

Specifically, the organisational mergers generated two main barriers: 1) the loss of physical proximity between providers and the managerial level, impeding transmission of information to the relevant manager, which inevitably resulted in neglect of the providers’ needs; 2) in the larger merged organisations, most of the human and material resources seemed to be directed towards the acute healthcare unit (hospital emergency services) at the expense of the other units. Hence, the large-scale managerial administrative structure undermines the project’s ability to integrate services within clinical practice, at least in the short term.

Meanwhile, the merged organisation (the Health and Social Services Centre) formed extensive networks and

| Factors                          | Clinical dimension | Professional dimension | Organisational dimension | Systemic dimension | Functional dimension | Normative dimension |
|----------------------------------|--------------------|------------------------|--------------------------|--------------------|----------------------|---------------------|
| Merging organisations            | +                  |                        | +++                      | +++                | ++                   | +                   |
| Networks and collaborations       | +                  | ++                     | +++                      | +++                | ++                   | ++                  |
| Shared vision                    | +                  |                        | +++                      | +++                | ++                   | ++                  |
| Formal or informal strategies of communication | +                  |                        |                          |                    |                      |                     |
| Shared decision making           | ++                 |                        | +++                      |                    | ++                   | ++                  |
| Engagement of providers by managers | +                  |                        |                          |                    |                      |                     |
| Health information system        | +                  | ++                     | +++                      | +++                | ++                   | +                   |

Degree of influence: + mild influence; ++ moderate influence and +++ high influence.

“I am convinced that it has deteriorated. I started in [X] local community health centre when we were a very small team. So, when there was shortage of staff, well, we just crossed the corridor to meet the human resources manager, she would immediately find a replacement […]. We later merged with [Y] local community health centre. Well what we noticed, was that, strangely, we didn’t know the human resource manager anymore and all of a sudden there was no more equipment. Subsequently we merged with [Z] hospital, which was even worse. There, if you call in to have a replacement, well, the priority is the emergency room; it is not the home care unit so there is no one… no one to replace us. We don’t have equipment anymore, we often get calls informing us not to hospitalise patients, as there are no beds available in the hospital. So I don’t know, where did they all go to?” (Nurse C1)
collaborations with partners. For example, in Case 1 the Health and Social Services Centre purchased 162 beds in four private residential facilities on its territory. Such networks and collaborations between partner organisations in the Local Health Network were perceived as enhancing the implementation of the Local Health Network for Older People by facilitating organisational, professional, and functional integration.

Providers shared the vision of maintaining patients at home for as long as possible in the best medical state possible. This reflected effective top-down communication of the vision held at the strategic and tactical levels of the Local Health Network which aimed to control healthcare costs while improving the quality of health services by caring for patients with complex needs in their homes. Hence, providers frequently reported having to advocate, through formal or informal means, on behalf of their patients at different points in the Local Health Network, especially when the patients’ clinical states were deteriorating. This shared vision fostered professional, organisational, systemic, functional, and normative integration.

Providers reported that shared decision-making with patients and caregivers was a central principle that was encouraged by their respective organisations, though it was sometimes difficult to implement.

“I explain to them what is happening and then I ask them, are there any other services you would like? There, I ... I do it very openly. Then, when I talk to them, I check if it is possible or not, then I explain to them what is possible or not in reality.” (Nurse C2)

This enabled providers to actively engage users in the process of care delivery, informing them on their clinical state and services they would need, obtaining their consent, and providing self-management support to the client. This process facilitated the education of users and enhanced client satisfaction by addressing the needs they felt most strongly about. In the long run, providers established a trusting relationship with patients, thereby improving patient adhesion to care.

Some providers had positive experiences while using health information systems.

“Then in (X) health information system, we are able to see the path our colleague would take on a given day. You know, I click on the provider, and then I want to know, for example, the nurse in the other area, where, how many patients she has, then where she goes, if she goes in the neighbourhood of ... of one of my patients. Can she visit one of my patients?” (Nurse C1)

Nurses in Case 1 reported that electronic health information systems helped them coordinate care with their colleagues, maintain relational continuity of care with the patient, and organise their schedules/caseloads during their group meetings. Despite all of these benefits, several barriers were reported, namely, the existence of multiple unaligned health information systems, older versions of software that were difficult to use, and difficulties in transferring information between different software applications.

Provider factors

Most providers had a positive attitude towards several components of the Local Health Network for Older People and were therefore very likely to implement the innovation (Table 10). The continuity produced by the integrative model had an effect in terms of inter-professional collaboration.

“Interdisciplinarity, it is a plus for the patient [...] And we ... we draw up [individualized] care plans. So what makes us ... we ... we have lots of ... software of ... of ... how do we call it? The evaluation grids, there, we became pros at that, so ... we have so much material to be able to assess the situation well, to follow up on all this. Therefore, interdisciplinarity is ... it is facilitated by all these work tools.” (Social worker C2)

Providers were generally enthusiastic about, and felt empowered by, working together in multidisciplinary

Table 10: Provider factors perceived as influencing the implementation of six dimensions of the Local Health Network for Older People.

| Factors                          | Clinical dimension | Professional dimension | Organisational dimension | Systemic dimension | Functional dimension | Normative dimension |
|----------------------------------|--------------------|------------------------|--------------------------|--------------------|-----------------------|---------------------|
| Attitude to the intervention     | +                  | +                      | +                        | +                  | +                     | ++                  |
| Multidisciplinary teams          | +++                | ++                     | ++                       | ++                 | +                     |                     |
| Personal attributes              | +                  | +                      | +                        | +                  | ++                    |                     |
| Level of education               | +                  | +                      |                          |                    |                       | ++                  |
| Workloads                        |                    |                        |                          |                    |                       |                     |
| Willingness to work in semi-urban zone | + | + | | | | |

Degree of influence: + mild influence; ++ moderate influence and +++ high influence.
teams, which was further facilitated by the clinical tools provided by the innovation. Sometimes, difficulties in accessing physicians were perceived as a barrier to teamwork, but we also noted that physicians generally did not report difficulties in accessing other health professionals. In fact, the physicians seemed to appreciate the ready availability of the multidisciplinary teams, especially case managers (where they existed), who contributed substantially to maintaining continuity between the physician and the multidisciplinary team. Generally, providers reported that personal attributes such as openness, agreeableness, and conscientiousness facilitated group work. All providers seemed to be generally satisfied with their team work.

In all three cases, the case manager function was assumed by providers from different disciplines, but with at least a relevant university degree. Providers' level of education became a barrier to the implementation of the case management function in Case 3 since there was insufficient qualified personnel in that semi-urban setting. Some providers, especially those in the semi-urban setting, perceived their workloads as being too high. This may be related to the fact that the semi-urban zone was relatively understaffed as compared to the other settings, as providers were not very willing to work in semi-urban zones.

### Innovation factors

Remarkably, the case management role was highly adaptable and trialable (Table 11). Adaptability was clear from the fact that in Case 1 only social workers were case managers, while in Case 2 all health providers could be case managers, and in Case 3 no case managers were deployed, for the reasons previously explained. Providers in Case 1 reported that different models of case management had been tried over the years. They had started off by having different types of providers (social workers, nurses, occupational therapists, etc.) as case managers, then switched to assigning a few social workers in the home care unit as case managers, and finally settled on designating all social workers in the home care unit as case managers.

Other components of the innovation, such as the multidisciplinary evaluation tool, were perceived as cumbersome.

> "I often have social workers calling me from the hospital 'Mrs. X is in the hospital and... We wanted to check on her level of functional autonomy at home and the services she received.' I sometimes think maybe they don't have time to check the multidisciplinary assessment tool. I have often told them that they can check it on the health information system, you know... But it has 19 pages, the multidisciplinary assessment tool is not concise." (Social worker C1)

Other providers reported that it took too much time to complete one multidisciplinary evaluation using the tool, even though the government required them to do at least one evaluation per year.

#### Patient factors

Providers reported that patient characteristics also influenced how they carry out their duties.

> "Because it's for sure that... for me, most people I meet have cognitive disorders. So, if I want to have a fair evaluation, I need to talk to the immediate entourage of the person." (Social worker C3)

Providers also noted that, since it is much easier to work with patients and caregivers who receive support from their immediate and extended families, in some cases they would set up meetings with the patient’s family to discuss the needs of the patient and how the family can support the patient and caregiver. A family meeting is a strategy to simultaneously address the needs of the patient and to invite the support of family members. On the other hand, providers were reluctant to provide care to aggressive patients, especially at their homes, where the provider is in an unfamiliar environment.

Patient satisfaction was a very important factor, which motivated providers to involve patients as much as possible in decision-making related to their own care.

> "The person... has to be satisfied with the care. But it is certain that one tries as much as possible with

### Table 11: Innovation factors perceived as influencing the implementation of six dimensions of the Local Health Network for Older People.

| Factors              | Clinical dimension | Professional dimension | Organisational dimension | Systemic dimension | Functional dimension | Normative dimension |
|----------------------|--------------------|------------------------|--------------------------|--------------------|----------------------|---------------------|
| Adaptable            | ++                 |                        |                          |                    |                      |                     |
| Trialability         | +                  | +                      | +                        |                    |                      |                     |
| Cumbersome            | +                  |                        | +                        |                    |                      |                     |
| Lengthy duration     | +                  |                        |                          |                    |                      |                     |
| Complexity            | +                  |                        |                          |                    |                      |                     |
| Flexibility of provider | +               |                        |                          |                    |                      |                     |
| Applicability        | +                  |                        |                          |                    |                      |                     |

Degree of influence: + mild influence; ++ moderate influence and +++ high influence.
the person, has decision making... But it's really case by case.” (Physician C2)

Providers reported being more likely to provide care that was immediately beneficial to the patient.

Discussion
The aims of this multiple case study were to describe and compare the implementation of an integrated care model for older people in three different contexts and to explore providers’ perspectives on factors influencing the implementation of such a model. The Rainbow Model of Integrated Care framework [30] facilitated a descriptive comparison along six dimensions of integration of the Local Health Network for Older People as perceived by the providers in the three cases studied.

Overall, the descriptive comparison revealed a high degree of similarities in the implementation of integrated care models across the three cases studied. This finding may reflect government’s influence in the top-down approach chosen to implement this integrated care model, and the profound structural changes they championed [34]. This is in line with contemporary literature on the implementation of mandated innovations, where the “mandator” may greatly influence the implementation of an innovation by creating enabling conditions [50]. On the other hand, the implementation of some items, less structural ones, differed across the cases (e.g. case management). Contemporary literature suggests that elements of the local context (availability of resources, organisational culture or the willingness to adopt new practices by local actors) may significantly shape the local implementation of innovations [51]. The most relevant aspects of the descriptive comparison of the six dimensions of integration are discussed in the next paragraphs.

In principle (e.g. ministerial policy), integrated care models aim at promoting the patient-centred care, a needs-oriented system of care delivery [35, 52]. The clinical dimension of integration (Table 2) was marked by difficulties balancing patient needs with services offered, suggesting that though the policy document promotes a needs-oriented system, providers viewed the system as still being service-oriented. Though providers reported that they engaged users (patients/caregivers) in shared decision-making activities which improved provider-client interactions, and an understanding of their specific needs, they still faced challenges related to the limited resources available and fragmentation of services within and between different units of the integrated care model. This was compounded by the fact that the three cases studied had different care coordination models through case management. This could be attributed to the mandator’s (the government) lack of specific directives on the “case management” function in Quebec [14].

Contemporary literature concurs that inter-professional collaboration is an essential component of integrated care models [53–55]. The government issued “Multiclientele Assessment Tool” (Table 3) was perceived as improving information sharing between various providers. Though the providers reported formal (e.g. pilot projects) and informal (ad hoc meetings) collaboration models, the team work dynamics weighed on the side of the medical needs at the expense of the social needs of the patient [34].

The most interesting results of the organisational dimension (Table 4) and normative dimension (Table 7) is what providers did not report. Little information was reported on four items of the organisational dimension (inter-organisational governance, informal managerial networks, learning organisations, and competency management) and four items of the normative dimension (conflict management, visionary leadership, reputation and transcending domains and perceptions). Basically, providers displayed knowledge gaps of managerial and governance level items. This raises the question of the lack of engagement of providers, or the disinterest of providers in the implementation process of the integrated care model [14]. Meanwhile, several studies suggest that engaging multiple stakeholders, including providers, in the design, implementation and monitoring of innovations may enhance their adoption [14, 56, 57]. The ‘natural bias’ concept, where frontline staff tend not to know much about structural, managerial and organisational issues in any organisation, may also explain these knowledge gaps [58]. Managerial perspectives may shed more light on these items.

The government of Quebec created major structural reforms that promoted centralised governance as enabling conditions for the implementation of integrated care models (Table 5). These reforms were perceived as being better implemented at the administrative levels of the three cases, at the expense of the clinical level of integration. There were inherent systemic inequities in human resources allocation such as underserviced rural zones, and the population contexts of the three cases varied from a dense multicultural immigrant population in case 1 to a sparse older population in case 3. These systemic inequities and variable population contexts suggests that population needs should be taken into consideration in the local implementation of integrated care models [14, 35]. Turgeon et al. [34] pointed out that frequent successive structural health system reforms, as is the case of Quebec, do not allow enough time for frontline stakeholders to adopt, make sense of, and routinize clinical practice.

Merging organisations, which was the favoured mechanism to integrate services by the government, were perceived as providing managers with the means to control the internal environments of their respective organisations so as to achieve integration goals. Several components of the functional dimension (Table 6) were viewed as partially or inadequately implemented. This suggest that despite the administrative mergers, additional efforts are needed at the local level to improve the implementation of health information systems, service management and human resources management. It will be important to dig in and understand the full dynamics of functional integration components such as health information systems, resources and services management in integrated care models.

The results of the second objective revealed several factors providers perceived as having a mild, moderate, or
Table 12: Patient factors perceived as influencing the implementation of six dimensions of the Local Health Network for Older People.

| Factors                  | Clinical dimension | Professional dimension | Organisational dimension | Systemic dimension | Functional dimension | Normative dimension |
|--------------------------|--------------------|------------------------|--------------------------|--------------------|----------------------|---------------------|
| Patients characteristics | +                  | +                      |                          |                    |                      | +                   |
| Family support           | ++                 | ++                     | ++                       |                    |                      |                     |
| Patient satisfaction     | +                  |                        |                          |                    |                      | ++                  |
| Benefit to patients      | +                  |                        |                          |                    |                      | ++                  |

Degree of influence: + mild influence; ++ moderate influence and +++ high influence.

high potential influence on the implementation of integrated care models for older people (Tables 8 to 12). Most of these factors had been previously reported in the literature on implementation of integrated care [19, 21, 24, 59], while some were new. It should be noted that, unlike England’s health system, where health care is provided by the National Health Service (NHS) and social care is provided by local governments, the Québec health system has combined health and social care since its inception in 1971. Hence, some factors commonly found in studies, such as co-location or integrated care trusts [26], intended to integrate health and social care organisations, were not salient in this study.

The single most salient factor that providers perceived to have influenced the implementation of their integrated care model was government policy and funding support (Table 8). In fact, the three cases shared the same socioeconomic and political context, marked notably by the merger of several establishments in 2004, which created the Health and Social Services Centres and empowered them with resources to create Local Health Networks for specific vulnerable populations in their territories. This support influenced the implementation of all dimensions of integration. For instance, government policy and funding facilitated the establishment of inter-organisational linkages and the implementation of administrative components of the Local Health Network, at the expense of clinical components, such as the case management function, which government has not made a priority to this date.

Our findings regarding the influence of merging organisations on the implementation of integrated care agree with those of Demers [60], who pointed out that mergers do not automatically lead to integrated practices because they can in fact negatively affect clinical practice. Nevertheless, the mergers seemed to create useful conditions even from the point of view of providers, for example by creating bridges with physicians. Several other factors that providers perceived as influencing the implementation of integrated care models in the structural, organisational, provider, innovation, and patient domains were consistent with those previously reported in integrated care literature [19, 59, 61]. Some factors that were not previously reported in implementation of integrated care studies included: use of the innovation by managers and policymakers, flexibility of the provider, willingness to work in semi-urban zones, cumbersoness of the innovation, and lengthy duration of the innovation. Furthermore, these factors were consistent with several theoretical frameworks on the implementation of health care innovations [56, 62, 63], which suggests that they may influence the implementation of healthcare innovations in general [64], not just integrated care models. For instance, Damschroeder et al. [56] included adaptability, trialability, and complexity of the innovation in their model.

The authors recognise that these findings do not represent the only factors influencing the implementation of integrated care. A more complete picture will include the perspectives of other actors of implementation: policymakers, managers, and users (patients and caregivers). Recruiting providers from different units of the integrated care network (e.g. local community health centre, hospital, rehabilitation centre) strengthened this study by allowing triangulation of different perspectives across the continuum of care for older people. Most of the research participants were nurses and social workers, which may skew the results of this study towards their perspectives, causing information bias.

Conclusion
The results reveal great similarities and moderate differences in the implementation of integrated care across the three cases, respectively showing the influence of the mandate of the innovation and the local context on the implementation of the integrated care model. Structural factors such as government policies and support, and organisational factors such as mergers positively influenced the implementation of systemic and organisational dimensions of integration at the expense of professional and clinical dimensions, reflecting the prioritisation of administrative components of integration over clinical components. Provider, innovation, and patient factors mildly or moderately influenced the implementation of the dimensions of integrated care. Stakeholders such as policymakers, managers, and providers should be informed concerning factors that they can strengthen to improve the routinisation and sustainability of similar integrated care models. This study also contributes to the scientific literature by proposing an innovative theoretical framework for analysing the implementation of integrated care and by identifying heretofore unreported factors that can influence the implementation of health care innovations. Hence, the present findings can guide future research on
the implementation of health care innovations. Finally, it would be interesting to analyse the chronological process of implementing integrated care models.

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Competing Interests
The authors have no competing interests to declare.

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