Rationale & Objective: Despite growing interest in individualizing care, routine dialysis processes, including the interdisciplinary plan of care, often fail to account for patient-identified priorities. To better align dialysis care with patient priorities and improve care planning experiences, we implemented a person-centered care plan program at a single clinic. We also sought to gain insight into key implementation considerations and areas for program improvement.

Study Design: 6-month quality improvement project with research substudy.

Setting & Participants: 49 hemodialysis patients and 14 care team members at a North Carolina dialysis clinic.

Quality Improvement Activities: Implementation of My Dialysis Plan, a person-centered care plan program.

Outcome(s): Participant perspectives and care plan meeting characteristics (quality improvement); pre- to postprogram change in patient-reported autonomy support, patient-centeredness of care, and dialysis care individualization (research).

Analytical Approach: We used the Consolidated Framework for Implementation Research to guide implementation and evaluation. We conducted pre-, intra-, and post-project interviews with clinic stakeholders (patients, clinic personnel, and medical providers) to identify implementation barriers, facilitators, and perceptions. We compared pre- and post-project care plan meeting content and patient-reported outcome survey scores.

Results: We conducted 54 care plans with 49 patients. Overall, care teams successfully used My Dialysis Plan to elicit and link patient priorities to actionable aspects of dialysis care. Participants identified interdisciplinary team commitment, accountability, and the structured yet flexible meeting approach as key implementation elements. Throughout the project, stakeholder input guided program modifications (eg, implementation practices and resources) to better meet clinic needs, but follow-up on care plan–identified action items remained challenging. Among the 28 substudy participants, there was no difference in pre- to post-project patient-reported outcome survey scores.

Limitations: Single clinic implementation.

Conclusions: My Dialysis Plan has the potential to enhance dialysis care individualization and care plan experiences. Evaluation of program impact on patient-reported and clinical outcomes is needed.

Individuals receiving dialysis prioritize well-being and quality of life over laboratory values and even death, yet most dialysis clinical and quality measures focus on the latter. In 2017, a Centers for Medicare & Medicaid Services (CMS) Technical Expert Panel with 50% patient representation recommended using patient “life goals” to guide dialysis care. International experts suggested a similar approach in 2018 when KDIGO (Kidney Disease: Improving Global Outcomes) proposed replacing the traditional concept of “dialysis adequacy” with “goal-directed dialysis.” The CMS Conditions of Coverage support the use of patient goals to inform dialysis care, mandating the development of interdisciplinary plans of care that consider the “patient’s needs, wishes, and goals.” Despite this intention, patients and providers believe that dialysis care plans are often formulaic, focusing on biochemical markers and failing to capture patient priorities.

Incorporating the philosophy of person-centered care may promote better alignment of dialysis care and patient priorities. In person-centered care, clinicians and patients act as partners, engaging in shared decision making to coordinate care that is effective for and meaningful to the whole person over time. This approach has been shown to strengthen patient–care team relationships and promote patient engagement, better health outcomes, improved quality of life, and greater care and job satisfaction in primary care, mental health, and geriatric populations.

However, there are barriers to person-centered care adoption in the dialysis setting, including lack of resources, regulatory factors, and infrastructure, as well as rigid interdisciplinary roles. Integrating person-centered care into existing dialysis care processes, such as the development of interdisciplinary plans of care, may be one
There is growing interest in making dialysis care less protocolized and more individualized. The required interdisciplinary plan of care is an opportunity to incorporate patient priorities more meaningfully into dialysis care. We implemented My Dialysis Plan, a person-centered care planning program that equips patients and care team members with tools to hold patient priority–driven and shared decision-making–focused care plan meetings, in a single outpatient hemodialysis clinic. We demonstrated that this program has potential to enhance patient and care team experiences and is feasible to incorporate into existing care processes. Future studies should assess the program’s impact on outcomes and costs.

**METHODS**

**Overview**

We implemented My Dialysis Plan in a North Carolina dialysis clinic as a quality improvement (QI) project and conducted a research substudy to assess program potential for improving patient perceptions of care. The QI project was approved by the dialysis clinic’s leadership and determined to be nonhuman subjects research by the University of North Carolina Institutional Review Board (17-0193). We performed, analyzed, and reported the QI project in accordance with Standards for Quality Improvement Reporting Excellent Guidelines (SQUIRE; Table S1).18 The research substudy was approved by the University of North Carolina Institutional Review Board (19-0743), and participants provided informed consent.

**Intervention: My Dialysis Plan**

My Dialysis Plan is an interdisciplinary plan-of-care program designed to align dialysis care with patient priorities, enhance the care-planning experience, and improve health through better education, patient–care team communication, and shared decision making. This person-centered care program provides a flexible yet tailorable structure to assist care teams in individualizing care plans. Supporting program materials include patient education (informational video to encourage active participation in care planning and brochure about what to expect and how to prepare for the care plan meeting) and care team resources (training and care plan meeting materials). Open-source program resources are available at go.unc.edu/MyDialysisPlan.

Figure 1 displays an overview of My Dialysis Plan. In summary, care teams invite patients to participate in their care plan meetings in a private setting, and before the meeting, the care team collectively reviews individual assessments. During the meeting, the team elicits patient–identified priorities to guide the collaborative development of an individualized care plan with specific follow-up action items for care teams and patients. At the meeting conclusion, the care team reviews the plan with the patient to confirm understanding and agreement. After the meeting, designated care team members perform and document assigned actions, provide progress updates, and follow up with the patient to identify changing priorities.

**Setting and Participants**

The participating dialysis clinic, a joint venture between the University of North Carolina and a large dialysis organization, serves approximately 130 in-center hemodialysis patients and operates 2 daytime shifts. All adult hemodialysis patients (end-stage kidney disease [ESKD] or acute kidney injury) due for a care plan during the 6-month project period were eligible to participate. Patients received written letters about the QI project and its opt-out option (N = 1). All clinic personnel and nephrology providers participated in the QI project. All patient QI participants were eligible to participate in the research substudy except for non–English speakers. Research recruitment methods included dialysis clinic fliers and in-person clinic interactions with research personnel. Research participants received $75 remuneration.

**Implementation Approach and Data Collection**

Before the 6-month QI project, we conducted interviews with clinic stakeholders to identify barriers to, facilitators of, and strategies for My Dialysis Plan implementation. We then created a preliminary implementation guide rooted in principles of the Consolidated Framework for Implementation Research (CFIR). The CFIR is a conceptual framework to guide program design, implementation, and evaluation, as well as identify factors that influence intervention effectiveness.19 The framework has 5 domains (intervention characteristics, outer setting, inner setting, characteristics of the individuals involved, and implementation process), each with constructs associated with effective implementation (Table S2). Throughout the project, we collected data on implementation practices and perceptions through interviews, direct observation, and surveys.
Interviews and Observations
A trained interviewer conducted semi-structured interviews with participating patients, clinic personnel, and medical providers before, during, and after program implementation (Table S3). Interviews occurred in person and responses were recorded on standardized note templates. Pre-project interviews assessed clinic needs, resource availability, and program perceptions. Monthly intra-project interviews assessed program barriers and facilitators, acceptability, and feasibility. Post-project interviews assessed participants’ perceptions of program impact and sustainability potential. We supplemented interview data with field observations of clinic personnel on the treatment floor and during care team meetings to assess clinic workflow, culture, and team dynamics. Observations were recorded on standardized templates.

Participant Characteristics
We abstracted demographic, health, and prior care plan data from the electronic health records (EHRs) of all patient participants.

Surveys
Research participants completed the following questionnaires before and after project implementation: Modified Health Care Climate Questionnaire (MHCCQ), Client-Centered Care Questionnaire (CCCQ), and Dialysis Care Individualization Questionnaire. The MHCCQ is a 6-item instrument measuring patient-perceived autonomy support from a single clinician or group of care providers; it has been validated in primary care and breast cancer populations.20-22 The CCCQ is a 15-item instrument evaluating the client-centeredness of care and services of a new intervention; it has undergone reliability testing in medically frail populations.23,24 We modified select MHCCQ and CCCQ items to correspond with dialysis care processes (Table S4). The Dialysis Care Individualization Questionnaire is a research team–developed 5-item measure assessing patient-perceived individualization of dialysis care.

Data Analyses
Qualitative Data
We analyzed interview and observation data to identify barriers to and facilitators of My Dialysis Plan implementation. Data were entered into tables organized by time of interview (pre-QI, intra-QI, and post-QI), interviewee type (patient, clinic personnel, and medical
provider), and content (implementation practices, program components, participant perceptions, and experiences). Using the CFIR as our analytic framework, we coded text according to the 5 CFIR domains and 15 selected constructs, evaluating for patterns or themes in the data.25,26 Findings were used to iteratively update our implementation approach and program materials.

**Quantitative Data**

Descriptive statistics (eg, count and percentage and median with interquartile range) were used to report participant and pre- and post-program care plan characteristics. We calculated pre- and post-project MHCCQ and CCCQ scores according to instrument scoring instructions, and we calculated Dialysis Care Individualization Questionnaire scores according to the team-developed scoring system. We used paired t tests to compare pre- and post-project survey scores.

**RESULTS**

**Participant Characteristics**

Table 1 displays participant characteristics. There were 63 QI participants: 49 patients and 14 care team members (6 medical providers, 4 nurses, 2 dietitians, and 2 social workers). Patient participant mean age was 60 ± 16 years, with mean dialysis vintage of 4 years, 17 (35%) women, 27 (55%) of Black race, and 9 (18%) of Hispanic ethnicity. Of the 42 eligible patients, 28 (67%) enrolled in the research substudy. Overall, substudy participants had similar characteristics to patient QI participants.

**My Dialysis Plan Care Plan Meetings**

During the 6-month program, we conducted 54 care plans with 49 unique patients: 6 with acute kidney injury, 2 with initial ESKD, 3 with 90-day ESKD, and 43 with annual ESKD care plans. Meetings averaged 23 ± 7 minutes, 43 (80%) occurred off the treatment floor, and 8 (15%) used interpreter services.

Table 2 provides an overview of elicited priorities. Those most frequently elicited were related to symptom management (32 [59%] meetings), social support (25 [46%]), transplantation (16 [30%]), and maintaining or cultivating independence (13 [24%]).

Table 3 displays examples of patient-identified priorities, action items, and responsible parties. Action steps were most often assigned to medical providers (eg, specialist referral and medication or dialysis prescription change), social workers (eg, insurance coordination and financial assistance), and patients (eg, attend appointments and communicate about symptoms). Of the 78 identified care team action items, 41 (53%) had evidence of follow-up in the EHR or clinic-based electronic communication system.

Of the 37 patients who had EHR evidence of a care plan meeting at the participating clinic both before and during My Dialysis Plan implementation, we found that 6 (16%) patients were accompanied by a care partner or family member with My Dialysis Plan (vs 0 prior) and 33 (89%) meetings were held off the treatment floor (vs 2 [5%] prior). Moreover, 26 (70%) My Dialysis Plan care plans documented a nonmedical patient priority and associated action item (vs 4 [11%] prior). However, there was no change in documented advanced care planning (eg, advance directives and end-of-life preferences) discussions pre- to post-program, with no evidence of such discussions in any of the 37 pre- or post-program care plan notes.

### Table 1. Participant Characteristics

| Characteristic                  | QI Project | Research Substudy |
|--------------------------------|------------|-------------------|
| No. of participants            | 49         | 28                |
| Age, y                         | 60 [49-73] | 59 [49-70]        |
| Female sex                     | 17 (35%)   | 7 (25%)           |
| Race                           |            |                   |
| Black                          | 27 (55%)   | 18 (64%)          |
| White                          | 20 (41%)   | 8 (29%)           |
| Other                          | 2 (4%)     | 2 (7%)            |
| Ethnicity                      |            |                   |
| Hispanic                       | 9 (18%)    | 1 (4%)            |
| Not Hispanic                   | 40 (82%)   | 27 (66%)          |
| Non–English speaking           | 7 (14%)    | 0 (0%)            |
| Highest level of education     |            |                   |
| completed                      | —          | 10 (36%)          |
| <High school                   | —          | 10 (36%)          |
| High school graduate or GED    | —          | 10 (36%)          |
| Some college                   | —          | 2 (7%)            |
| ≥4-y college degree            | —          | 6 (21%)           |
| Acute kidney injury            | 3 (6%)     | 1 (4%)            |
| Dialysis vintage, y            |            |                   |
| <1                             | 6 (12%)    | 4 (14%)           |
| 1-5                            | 26 (53%)   | 14 (50%)          |
| ≥6                             | 17 (35%)   | 10 (36%)          |
| Comorbid medical conditions    |            |                   |
| Diabetes                       | 24 (49%)   | 12 (43%)          |
| Heart failure                  | 23 (47%)   | 9 (32%)           |
| Heart disease                  | 17 (35%)   | 6 (21%)           |
| Cancer                         | 12 (24%)   | 1 (4%)            |
| History of transplant          | 3 (6%)     | 3 (11%)           |
| Transplant status              |            |                   |
| Listed                         | 5 (10%)    | 5 (18%)           |
| Evaluation in process          | 3 (6%)     | 2 (7%)            |
| Evaluated and did not qualify  | 20 (41%)   | 12 (43%)          |
| Not under evaluation           | 21 (43%)   | 9 (32%)           |
| Clinic personnel and medical providers |            |                   |
| No. of participants            | 14         | —                 |
| Professional role              |            |                   |
| Medical provider               | 6 (43%)    |                   |
| Nurse                          | 4 (29%)    |                   |
| Dietitian                      | 2 (14%)    |                   |
| Social worker                  | 2 (14%)    |                   |

Note: Participant characteristics at time of QI project start. Values are listed as number (percent) or median [interquartile range].

Abbreviations: GED, general education diploma; QI, quality improvement.
Table 2. Priorities and Needs Elicited in My Dialysis Plan Care Plan Meetings

| Topics                                      | Meetings (N = 54) |
|---------------------------------------------|-------------------|
| Medical                                     | 45 (83%)          |
| Physical symptoms                           |                   |
| • Fatigue, energy, shortness of breath, weakness, pain, constipation, poor appetite, syncope, decreased libido | 27 (50%)          |
| Transplant                                  | 16 (30%)          |
| • Interest, education, evaluation, unsure of status (listed/unlisted %) |                   |
| Services                                    | 10 (19%)          |
| • Physical therapy, occupational therapy, mental health therapy, home health |                   |
| Mood symptoms                               | 9 (17%)           |
| • Hopelessness, depression, anxiety, fear   |                   |
| Medications                                 | 7 (13%)           |
| • Questions, needs                          |                   |
| Medical concerns                            | 7 (13%)           |
| • Forgetfulness, pain management, impaired vision, reduced hand dexterity |                   |
| Care coordination                           | 4 (7%)            |
| • Updated skilled nursing facility orders, scheduling of other care around dialysis |                   |
| Psychosocial                                | 34 (63%)          |
| Social support                              | 25 (46%)          |
| • Spend time with family, attend church, host events, visit friends, cook for neighbors |                   |
| Independence                                | 16 (30%)          |
| • Driving, relocating, self-sufficiency for activities of daily living and/or finances, vocational rehabilitation |                   |
| Financial                                   | 8 (15%)           |
| • SSDI/SSI applications, community resources, insurance |                   |
| Transportation                               | 8 (15%)           |
| • Medical appointments, social gatherings, volunteering, work, shopping |                   |
| Housing and food                            | 7 (13%)           |
| • Housing and food insecurity; skilled nursing, assisted living, senior care options |                   |
| Personal                                    | 23 (43%)          |
| Hobbies                                     | 16 (30%)          |
| • Video-gaming, bowling, going out to eat, camping, horseback riding, yardwork, music, painting, backpacking, driving, gardening, fishing |                   |
| Physical activity                           | 12 (22%)          |
| • Exercise, play sports, hike, ride bike, climb flight of stairs |                   |
| Travel                                      | 9 (17%)           |
| • Local, distance, dialysis planning        |                   |

Note: Data reflective of both patient-identified and care team-identified priorities, all discussed during the care plan meeting.

Abbreviations: SSDI, Social Security Disability Insurance; SSI, Supplemental Security Income.

Application of CFIR Constructs in Program Implementation and Evaluation

Table 4 displays project-tailored definitions and applications of the 15 CFIR constructs that guided My Dialysis Plan implementation. Key implementation features (CFIR domain) included clinic stakeholder buy-in to the care plan approach and the underlying person-centered care philosophy (characteristics of individuals and inner setting), clinic program champion identification (process), stakeholder involvement in development and modification of implementation strategies and resources (process and intervention characteristic), and program alignment with existing CMS guidance and regulations for interdisciplinary care plans (outer setting).

My Dialysis Plan Implementation Experience and Findings

Figure 2 displays the project timeline. Before My Dialysis Plan implementation, we built clinic capacity through program presentations and training sessions. At project start, the QI support team provided on-site administrative assistance and transitioned to no support by project end. Table 5 displays interview findings and responsive program updates.

Before implementation, care team members expressed enthusiasm about My Dialysis Plan, viewing it as an opportunity to apply underused clinical skills, build relationships, and individualize care. There was apprehension around care plan meeting duration, scheduling challenges, language barriers, and patient transportation.
Some questioned whether patients would participate in meetings held outside of dialysis treatment times. However, most patients were willing, citing the significance of fewer distractions (eg, intradialytic symptoms and beeping machines) and a more private environment. In addition, the “newness” of My Dialysis Plan was attractive to some, offering a change from everyday clinic routines. A few patients doubted the program could meaningfully alter their care, with one stating “…there’s not a whole heck of a lot you can do after 5 years [on dialysis]. I’ve already established what I’m willing to do and what I’m not willing to do.”
Throughout program implementation, stakeholders described improved interdisciplinary teamwork and patient partnerships. Compared with previous care plan meetings, My Dialysis Plan meetings yielded greater insight into the patient as a whole person, providing context to support shared decision making and build rapport for subsequent interactions. In general, care teams found meetings less time-burdensome than expected, noting increased efficiency with experience. However, challenges with scheduling, communication, meeting content, and follow-up necessitated program modifications.

Initially, patients self-selected a care plan meeting time, but this was impractical to coordinate due to care team schedules, monthly meeting burden (often >10 care plan meetings per month), and an unexpectedly high volume of patients opting for private meetings which required additional planning compared to chairside meetings. As such, patients were offered multiple meeting times from which to choose, but scheduling remained arduous. In project month 3, patients were offered specific meeting times and were encouraged to propose alternatives if they or other planned attendees had conflicts. This approach was acceptable to most patients because the clinic coordinated transportation.

Care teams experienced some initial discomfort facilitating meetings (ie, initiating and closing conversations, embracing silence, and eliciting priorities). In response, clinic personnel and the QI support team developed scripts to simplify meeting introductions (ie, set expectations for meeting purpose, approach, and length) and closings (ie, review meeting notes, assess patient agreement, and adjourn) and sample “use” cases tying frequently cited patient priorities to actionable aspects of care. Care teams also found that acute kidney injury care plans warranted

**Figure 2.** Quality improvement (QI) project implementation timeline with iterative program updates. Pre-/post-program data were collected through individual interviews with patients, clinic personnel, and medical providers in the months preceding and following the 6-month project period. Iterative program changes were made in response to intra-project feedback from clinic stakeholders (eg, scheduling approach, program resources).

**Figure 3.** Consolidated Framework for Implementation Research (CFIR) domains and constructs that guided My Dialysis Plan implementation and evaluation. The figure outlines the 5 CFIR domains (light green boxes) and the 15 selected constructs (gray boxes) that guided My Dialysis Plan implementation and evaluation.
### Table 5. Interview Findings, Responsive Program Updates, and Future Recommendations

| Component       | Key Findings                                                                 | Responsive Update(s)/Recommendation(s)                                                                 |
|-----------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| **Before Implementation**                                                                                                                                         |
| Overall impressions | • Program resources clear and helpful for planning                           | • Review transportation at time of patient CP invitation                                               |
|                  | • Program burden similar to that of existing CP processes                     | • Discuss rationale and potential benefits of privacy                                                  |
|                  | • Patients welcomed option for private meetings to address personal matters  | • Use interpreter services                                                                             |
|                  | • Enthusiasm about prospect of improving care plans, individualizing care, and applying different skill sets |                                                                                                       |
| Barriers         | • Unreliable patient transportation with difficult-to-adjust pick-up/drop-off times |                                                                                                       |
|                  | • Perceived patients as unwilling to participate in activities requiring more clinic time |                                                                                                       |
|                  | • Non–English-speaking patients                                                | • Schedule meetings based on patient and care team availability                                       |
|                  | • Time investment in private meetings and associated scheduling challenges     |                                                                                                       |
| Facilitators     | • Patient interest in meetings focused on their priorities                     | • Show patient video as part of meeting invitation                                                    |
|                  | • Clinic champion to lead invitations, scheduling, and care team coordination  | • Dietitian selected to lead CP program                                                                |
|                  | • Buy-in, enthusiasm, and commitment to improving CPs                          | • Maintain through group trainings, engagement of key stakeholders in addressing barriers, and flexibility |
| **During Implementation**                                                                                                                                           |
| Overall impressions | • Patients amenable to private meetings due to interest sparked by meeting invitation, privacy, and opportunity for family/care partner inclusion | • Continue to encourage meetings off the treatment floor, reference potential benefits during CP invitation |
|                  | • Private meetings reduce distractions, increasing range/depth of discussed topics | • Incorporate CP findings into routine patient interactions                                             |
|                  | • Questions elicit different information than previous CP meetings (eg, motivations, priorities), building rapport and positively affecting patient–care team relationships |                                                                                                       |
|                  | • Priority-based discussions facilitate patient education                      | • Discuss CP experiences during monthly staff meetings to cultivate cross-clinic enthusiasm and buy-in |
|                  | • Overall enhanced sense of interdisciplinary teamwork and patient partnership  |                                                                                                       |
| Barriers         | Communication                                                                 | • Use shared online communication system                                                              |
|                  | • Difficult to share information across care team members (eg, schedule changes, follow-up updates) on a frequent enough basis | • Place printed monthly schedule at nursing station                                                    |
|                  | • Meeting schedule not relayed to treating nurses and PCTs, resulting in patients starting/leaving treatment before CP meeting | • Perform brief team huddle before CP meetings                                                         |
|                  | • Individual assessment findings not discussed with other care team members    | • Individual care team member follow-up as needed                                                     |
|                  | • Some patients prefer to discuss matters with individual care team members    |                                                                                                       |
| Process          | • Meeting scheduling and patient invitations time consuming                    | • Develop standardized monthly scheduling template                                                    |
|                  | • CP meeting beginnings and endings unscripted and often inefficient           | • Create meeting scripts to support meeting facilitator                                               |
|                  | • CP meeting facilitator sometimes overlooked conversation guide questions     | • Restructure conversation guide                                                                      |
|                  | • CP follow-up tasks were sometimes missed and/or not communicated to others   | • Create shared online communication system                                                            |
|                  | • CP meeting notes not consistently shared with other clinic personnel         | • Place copy of developed care plan at nursing station                                                |

(Continued)
greater focus on laboratory values than ESKD care plans because patient priorities were often related to kidney injury recovery status. Finally, care plan follow-up was occasionally missed or not communicated to others. In response, the clinic adopted a Health Insurance Portability and Accountability Act–compliant electronic platform to share information.

Despite intermittent scheduling and communication hurdles, care teams thought that program advantages outweighed the challenges, electing to continue My Dialysis Plan post-program. Overall, participants found the program's educational resources to be helpful, observing that the brochure adequately described care plan meetings and the video equipped patients for active participation. Patients reported feeling heard and better informed about their dialysis care. One patient commented, “I feel like [the care team] listened and if they needed clarification, they asked for it. If I needed clarification, it was provided [to

| Component | Key Findings | Responsive Update(s)/Recommendation(s) |
|-----------|--------------|---------------------------------------|
| CP meetings for patients with acute kidney injury felt inadequate when laboratory values de-emphasized | • Include laboratory test review in acute kidney injury meetings | |
| Care team turnover and [un]planned care team member absences | • Redelegate tasks and cross-train individuals | |
| Facilitators | • Use of a consistent CP meeting facilitator and note taker (learned roles) | — |
| | • Conversation guide assisted with difficult-to-facilitate meetings | |
| | • Active listening supported shared decision-making processes | |
| | • Private meetings beneficial for clinic flow (fewer people on treatment floor) and patients (more physical space for family/care partner to join) | |
| | • Satisfied patients encouraged others to attend and participate in private meetings | |
| After Implementation | • Care team commitment to and investment in the program positively affected overall dialysis care provision | — |
| | • Meetings elicited important information not elicited in prior CP approach | |
| | • A standardized monthly approach to scheduling and invitations eased implementation, but flexibility in approach was paramount | |
| | • Patient priority-based meetings led to meeting variety that enhanced patient and care team engagement | |
| Remaining barriers | • Unexpected clinical emergencies that delay care team members, affecting CP meeting schedule and clinic workflow | • Remain flexible/communicative, identify make-up CP meeting days or alternative options (eg, telephone call) |
| | • Some medical providers felt frustrated when only nonmedical patient priorities elicited, especially when solutions were difficult (eg, resources) | • Reinforce role of addressing nonmedical priorities in enhancing patient activation in medical issues; encourage medical providers to identify links between non-medical priorities and medical issues |
| | • Inconsistent sharing of information from CP meetings with other clinic personnel | • Provide RNs access to developed CPs |
| | • Lack of structure for individualized follow-up led to overlooked action items | • Develop interteam accountability through identified days/times to complete follow-up and documentation |
| Facilitators | • Clear documentation with designated follow-up actions promoted accountability | • Communicate about and document follow-up efforts |
| | • Shared understanding about patient needs/challenges and available community resources among all clinic stakeholders | • Continue resource and knowledge sharing at staff meetings and during informal care team interactions |
| | • Ongoing commitment and buy-in, reinforced as program experiences showed the patient and care team value of individualizing care based on patient priorities | |

Note: Data ascertained from semi-structured interviews with hemodialysis patients, social workers, dietitians, nurses, PCTs, and medical providers at participating clinic. Data summarized and reported in aggregate to protect participant privacy. Abbreviations: CP, care plan; PCT, patient care technician; RN, registered nurse.
me].” Although care team members were occasionally frustrated by their inability to address some patient priorities due to limited resources or interventions, they recognized that heightened awareness supported deeper patient–care team relationships. One care team member said, “It enhances relationships... Getting to know [patients] and understanding them, helping them see we are invested...that’s a valuable end point.” A patient described, “I love talkin’ just like we did in that meeting. It showed that they care, and they will do something to try to help. That’s what matters to me. I know it’s not always possible for things to go the way I want them to go.” Despite program benefits, care teams continued to struggle with completing and communicating all follow-up action items. Despite this lack of follow-up, most patients identified the team’s interest in their priorities as a program benefit.

**Research Findings**

Among the 25 research participants with pre- and post-project data, there was no significant change in pre-to post-project survey scores of perceived autonomy support from providers (0.3 ± 1.3; \( P = 0.3 \)), patient-centeredness (1.2 ± 5.2; \( P = 0.2 \)), or dialysis care individualization (0.1 ± 0.8; \( P = 0.5 \)).

**DISCUSSION**

Our findings suggest that My Dialysis Plan, an interdisciplinary plan-of-care program rooted in person-centered care principles, has the potential to support more individualized dialysis care and improve care plan experiences. Project participants identified interdisciplinary team commitment, accountability, and the structured yet flexible care plan meeting approach as key implementation elements. Our report also underscores the significance of incorporating diverse stakeholder input throughout implementation of new programs to promote buy-in, feasibility, and sustainability.

Despite initial implementation concerns raised by project stakeholders and others,16 we found that in most cases, the dialysis care team could use My Dialysis Plan to elicit and link patient priorities to actionable aspects of dialysis care. In shifting the care plan focus from problems to priorities, patients felt acknowledged and respected as whole persons, and care teams better understood patient behaviors (eg, tardiness due to lack of driver’s license) and motivations (eg, symptom management). As such, care teams could more easily connect medical advice to patient priorities, engendering patient buy-in and increasing the likelihood of adherence.

Care plan meetings did not have to be long to garner rich information, as evidenced by brief discussions with skeptical patients who chose not to deeply engage in the process. In these instances, care team members still found the person-centered care approach worthwhile, citing that even a small amount of new information (eg, life experiences and stressors) benefitted future interactions. In cases without simple solutions or overt connections between patient priorities and dialysis, patients still felt empowered from the opportunity to be heard. These experiences fostered trust, improved care experiences, and reminded care team members why they chose to work in dialysis.

In addition, these conversations cultivated shared decision-making, a process in which clinicians support patient autonomy by providing comprehensive information (eg, education and treatment options) and working with patients to reach informed decisions that match their individual preferences.27,28 Studies in other chronic illness populations have shown that shared decision making increases patient knowledge and self-efficacy, strengthens care team–patient relationships, fosters patient activation, improves patient-reported outcomes, and decreases health care use.27,31

In My Dialysis Plan care plan meetings, shared decision making often manifested as trade-off discussions. For example, a patient with a history of high interdialytic weight gains described feeling too fatigued to eat lunch with their grandchild after treatment. In response, the care team provided salt and fluid intake counseling, explaining that lower weight gains and the resultant gentler fluid removal might mitigate treatment-associated fatigue. Upon understanding the potential link between fluid control and post-dialysis fatigue, the patient was more receptive and ultimately adherent to the suggested dietary restrictions. Care team members found program resources helpful in supporting these conversations, appreciating the structured conversation guide and case examples. Moreover, and consistent with the existing literature,32,33 engaging in shared decision making left patients and care team members feeling more connected and aligned in care goals.

These findings are particularly relevant given the recent release of the CMS End-Stage Renal Disease Treatment Choices payment model.34 The model aims to give ESKD beneficiaries enhanced freedom and choice and encourage greater use of home dialysis and kidney transplantation. These goals align closely with the intent of My Dialysis Plan. As such, program resources may be useful in facilitating patient-care team conversations about modality selection and transplantation. More broadly, the resources could support additional goals of the model by fostering shared decision making and promoting patient activation.

Despite program successes and care team commitment to the person-centered care philosophy, there were challenges with incorporating My Dialysis Plan into clinical practice. Some were easily resolved by collaboratively modifying program resources, such as developing scripts to ease meeting facilitation and adding resources to support shared decision making. Conversely, care plan meeting scheduling required iterative attempts to establish a sustainable approach. Still other challenges persisted throughout the project, namely insufficient interteam communication and lack of infrastructure for care plan
follow-up. These require additional attention in future implementations. Integrating My Dialysis Plan—elicited information into the EHR would be one way to streamline communication, document priorities, and promote accountability for follow-up.

Finally, we observed no change in documented advance care planning discussions pre- to post-program, suggesting that patients and/or care teams may need additional support to comfortably engage in these conversations. As such, future program iterations could place greater emphasis on the topic and equip participants with existing serious illness conversation resources.35,36

Project strengths include incorporation of stakeholder input throughout My Dialysis Plan implementation, selection of a large dialysis clinic in which logistical barriers were likely to be encountered, and collection of end-user experiential data throughout the project.

Limitations relate to the transferability of findings due to study implementation at a single clinic, since varying clinic sizes and cultures, patient populations, and/or ownership structures may present different implementation climates, facilitators, and barriers. In addition, we relied on qualitative data to support our conclusion that My Dialysis Plan has the potential to individualize dialysis care and promote more meaningful care plan experiences. Our research substudy findings showed no significant pre- to post-project change in patient-reported perceived autonomy support from providers, patient-centeredness of care, or dialysis care individualization. These results stand in contrast to the overall positive sentiments expressed in participant interviews.

Potential explanations for these somewhat discrepant findings may relate to differences in participants in the research substudy and overall QI project or biases in survey responses. For example, response-shift bias occurs in settings in which a respondent’s frame of reference for a measured construct(s) changes between pre- and posttesting.37 In our project, many patients answered the pre-implementation survey questions with the highest possible level of agreement, verbalizing unawareness of the possibility or need for improvement in the measured constructs. However, during post-project interviews, many explicitly described a meaningful change in these areas. Because there were not more positive response options available on the post-project surveys, respondents indicated the same highest level of agreement as they did on preproject surveys. Other types of response bias related to social desirability (eg, lack of privacy during administration of surveys) and/or acquiescence bias (eg, survey fatigue) are also possible.38

Finally, our small pilot study was not designed or powered to evaluate for statistically significant differences in outcomes in the pre- and post-project periods. Future studies examining program impact on patient-reported outcomes such as care satisfaction, activation, and health-related quality of life, as well as clinical outcomes such as hospitalizations and use of palliative and hospice services, are needed.

In conclusion, we demonstrated that a person-centered care planning approach has the potential to enhance patient and care team experiences and is feasible to incorporate into the current structure of care. Future studies are needed to assess program sustainability and effect on patient-reported and clinical outcomes, as well as develop implementation practices for diverse clinics.

SUPPLEMENTARY MATERIAL

Supplementary File (PDF)
Table S1. SQUIRE guidelines and manuscript section with the relevant content.
Table S2. CFIR constructs and definitions.
Table S3. Interview guide topics, questions, and probes.
Table S4. Research substudy surveys with source and adapted questions.

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Can individualized care plans improve the dialysis experience?

**Conclusion:** My Dialysis Plan™, an interdisciplinary plan-of-care program rooted in person-centered care principles, has potential to support more individualized dialysis care and improve care plan experiences.

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