ORIGINAL RESEARCH

Potential Factors Influencing Adoption of a Primary Care Pathway to Prevent Functional Decline in Older Adults

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ABSTRACT

Introduction

To help recognize and care for community-dwelling older adults living with frailty, we plan to implement a primary care pathway consisting of frailty screening, shared decision-making to select a preventive intervention, and facilitated referral to community-based services. In this study, we examined the potential factors influencing adoption of this pathway.

Methods

In this qualitative, descriptive study, we conducted semi-structured interviews and focus groups with patients aged 70 years and older, health professionals (HPs), and managers from four primary care practices in the province of Quebec, representatives of community-based services and geriatric clinics located near the practices. Two researchers conducted an inductive/deductive thematic analysis, by first drawing on the *Consolidated Framework for Implementation Research* and then adding emergent subthemes.

Results

We recruited 28 patients, 29 HPs, and 8 managers from four primary care practices, 16 representatives from community-based services, and 10 representatives from geriatric clinics. Participants identified several factors that could influence adoption of the pathway: the availability of electronic and printed versions of the decision aids; the complexity of including a screening form in the electronic health record; public policies that limit the capacity of community-based services; HPs' positive attitudes toward shared decision-making and their work overload; and lack of funding.

Conclusions

These findings will inform the implementation of the care pathway, so that it meets the needs of key stakeholders and can be scaled up.

Key words: frailty, shared decision-making, screening, integrated care, home- and community-based care and services, autonomy and self-efficacy, person-centered care, preventive care

INTRODUCTION

In Canada and other countries of the Organization for Economic Co-operation and Development, the demographic weight of people aged 65 and older is expected to increase from 15% in 2010, to about 25% by 2030.(1) Population aging is leading to an increase in the prevalence of chronic diseases and age-related disabilities(2) and in the number of older adults living with frailty.(3) Frailty consists of a reduction in the physiological reserves of multiple systems (endocrine system, musculoskeletal system, central nervous system, immune system), resulting in increased vulnerability to stressors.(4) Frailty, therefore, predisposes individuals to functional decline, falls, institutionalization, and death.(4) The increasing number of older adults living with frailty increases the pressure on health-care systems,(3) and preventing and delaying functional decline are therefore public health priorities.(5,6)

Screening for frailty is often recommended as a first step in managing frailty,(5,7,8) as a recent systematic review has shown that frailty can be limited or delayed with appropriate interventions such as strength exercises and protein supplementation.(9) Primary care is a logical place to screen and manage frailty because it is the first point of contact for patients, and primary-care health professionals (HPs) regularly interact with older adults.(10) Several studies, national policies, and guidelines have called for screening for frailty in primary care.(11,12) In addition to screening, primary-care redesign to manage frailty should include shared decision-making to choose a care plan based on the best available evidence about the risks and benefits of all available options, while ensuring that the patient's values and preferences are considered.(13–16) Finally, to support implementation of the care plan, HPs should coordinate care processes with other health, social, and community services,(17) as older adults typically do not know community-based services well and may have difficulty reaching them.(18–20) We therefore plan to implement and evaluate a novel care pathway to address these needs. This will include screening to identify older adults at risk for adverse outcomes, patient and family engagement in shared decision-making, and optimized technology-enabled care coordination.

This paper reports on the first phase of this broad research initiative, in which we planned the implementation of the pathway, before evaluating its impact on patient and provider experience and patient quality of life in a second phase. Given the acknowledged gap between the identification of evidence-based innovations and their consistent and widespread adoption in health care,(21) we intend to tailor this pathway and the implementation strategies to user needs prior to implementation, to improve implementation success. We therefore used theory to explore the potential factors influencing the adoption of this novel care pathway in primary care clinics in the province of Quebec, with the ultimate goal of tailoring it to the needs of key stakeholders and supporting its implementation.

METHODS

Study Design

This descriptive qualitative study involved individual interviews and focus groups with key stakeholders in three regions of the province of Quebec. As mentioned above, it is part of a larger quasi-experimental research project designed to evaluate the impact of the care pathway in nine primary care practices in three Canadian provinces.(22,23) This project was approved by the *CIUSSS de la Capitale-Nationale en santé des populations et première ligne research* ethics committee (2017-2018-12 MP), and we obtained written and signed informed consent from participants.

Intervention

The proposed primary care pathway has three components. First is the InterRAI preliminary screener (www.interRAI.org),(24) which allows classification of patients according to their level of frailty. Second is the e-TUDE professional distance training program on shared decision making,(25) which includes five patient decision aids in printable and web-based formats. The decision aids were developed from a template,(26,27) and describe the benefits and harms of options to prevent functional decline. Third is a web-based directory of community-based support services—Caredove (Caredove, Orillia, ON)—to help HPs make referrals to local health services or community-based support services and enable implementation of the selected preventive option.

Recruitment

We recruited four primary care practices in the province of Quebec through our teams' networks. In each practice, we recruited a convenience sample of HPs from any professions (e.g., nurses, social workers, physicians) who practiced there and the managers of the practices. We also recruited convenience samples of representatives of community-based support services, and of geriatric services near the practices. We also recruited six to eight patients who were a subsample of the 280 patients recruited as part of the broader project to assess the impact of the care pathway,(22) and who had varying levels of functional autonomy. Patients living with neurocognitive disorders were included in the study if they were accompanied by a caregiver who agreed to participate in the study and complete the questionnaires on behalf of the person for whom they were responsible.

Data Collection

We conducted semistructured focus groups and individual interviews using interview guides. Interviews with HPs, managers, and representatives of community-based support services and geriatric services were conducted face-to-face and lasted approximately 1 hour. They covered current experiences with providing care for older adults, the challenges and required resources they expected to need to adopt the proposed pathway, which we described to them in detail. Interviews with patients were conducted by telephone and lasted approximately 30 min. They concerned patients' experiences of care. We conducted new interviews until we reached saturation, that is, until no further recurring themes emerged from the analysis.(28)

Data Analysis

Our thematic data analysis combined deductive and inductive approaches,(29) by first looking for domains described in the *Consolidated Framework for Implementation Research* (CFIR),(30) and then for emergent themes and subthemes. The CFIR is a meta-theoretical framework that includes 39 constructs that are divided into 5 domains, for understanding the factors that influence implementation.

Two students (including CF) and one researcher (AG) collaborated on the analyzes. The two students first analyzed a portion of the data independently, and then met with the researcher to agree on an initial list of themes and subthemes. Any disagreements were resolved through discussion. Then, a single student (CF) analyzed the remaining data while validating any new themes with the other student. The researcher corroborated the results at the end of the analysis. Analysis of the qualitative data was facilitated by the use of software (NVivo12; QSR International (Americas) Inc., Burlington, MA).

Data Availability Statement

The analytic code, data coding schemes, and interview guide materials for this study can be shared with other researchers, and are available directly from the corresponding author upon request.

RESULTS

Participant Characteristics

We conducted 47 semistructured interviews and 8 focus groups with a total of 32 HPs, 27 patients, 8 managers, 16 representatives of community-based support services, and 6 representatives of geriatric services (Table 1). Two practices were located in the same area (practices #1 and #2), so we recruited a single sample of representatives from community support services and geriatric clinics for both. Very few caregivers of patients living with neurocognitive disorders participated in the broad-based pathway impact evaluation project, and none in the first phase presented here.

Study Findings

The following sections present the prevailing views of participants on key factors to consider when developing an implementation plan, grouped by CFIR domains and constructs. The citations mentioned in this section (C1 to C16) are reported in Table 2. The Appendix A presents a more detailed report on all themes and subthemes.

Intervention Characteristics

Participants were generally positive about the proposed care pathway. Several of them appreciated that it would help reduce hospitalizations and unnecessary care (C1). On the other hand, some participants expressed concerns about the time needed to implement the pathway, which could lead to work overload. Some of the managers expressed concerns about the availability of funding to sustain the pathway in the future.

Representatives of community-based support services felt that screening by physicians would allow effective identification of frailty and a timely monitoring of patients (C2), but they noted that the proposed pathway would increase demand for their services. Some HPs also felt that screening could open a Pandora's box of questions, while physicians may lack the time to answer all of them (C3). One physician noted that asking a series of short questions is a far cry from the usual practice of getting the person to talk to understand their problem (C4).

Participants generally felt that decision aids would help to meet the different needs of patients, involve patients in the care process, and empower them (C5). They also felt that decision aids could raise patients' awareness of prevention options. However, several participants pointed out that these tools could be too complex for people with low literacy skills. A number of participants welcomed the fact that the decision aids were available in different formats, and called for them to be integrated into electronic health records.

Participants generally felt that the web-based directory of support services would meet a public need to find and access the right local services (C6). Others pointed out the constraints on older people to access to this technology, such as technological illiteracy and financial constraints (C7).

Outer Setting

Patients' Needs & Resources

In general, patients reported good communication with HPs. However, some indicated that they lacked information about community-based services and that their HPs rarely or never recommended such services to them (C8). Many participants pointed out that older adults often need support during the referral process, and that long waiting lists for services make it difficult to meet patients' needs in a timely manner. Several of the participating patients said that they lacked information on how to manage their health properly (C9), while others saw it as their responsibility to take care of their health themselves—for example, by searching for health information online.

Cosmopolitanism

Information sharing between community services and primary care practices was reported as lacking. Most HPs reported referring their older patients to local community service centers. Representatives of community service stated that they received requests and referrals from a variety of sources, but

TABLE 1.
Participant characteristics at each of the participating clinics

Clinic	*Patient (n =28) Functional Autonomy*			*Health-care Provider (HP) (n =29)*			*Manager (n=8)*	*Representative of Community Support Services (n =16)*	*Representative of Geriatric Services (n =10)*
	High (n = 8)	*Moderate (n = 10)*	*Low (n =10)*	*Physician (n = 20)*	*Nurse (n =7)*	*Other (n =2)*			
#1	2	3	2	6	4	1	1	7	2
#2	2	2	4	3	2	-	3		
#3	2	2	2	-	-	-	-	5	6
#4	2	3	2	11	1	1	4	4	2

TABLE 2.
List of citations mentioned in the text

Citation Number	*Citation (Source)*
C1	"I think it's great how you work in prevention, because screening can prevent many things. By the time the files are passed on to the social workers, things are usually pretty advanced and the situation is serious. So it's fantastic that people can be seen in the medical clinic and that the family doctor is involved from the beginning! Let's hope the doctors gets on board. (CS #1, Practices #1 and #2)
C2	"I think we can significantly delay the onset of functional decline for those who're just beginning to lose some independence, because we know that physical activity can help people stay independent longer. [...] We also know that the message that comes from a doctor has more impact than the message that comes from a neighbor." (CS #6, Practice #4)
C3	Physician #1: "It seems to me that it [author's note: screening questionnaire] opens a real Pandora's Box with every question [...]. I've a lot of patients, so if I start asking these kinds of questions, it'll take a long time."
C4	Physician: "In this case [author's note: screening questionnaire], it's a model of overwhelming the person with questions, and that's not a method we want to teach our residents. But that's what this questionnaire is all about." (HP, Practice #2)
C5	"I think when you get a diagnosis and you've a tool from the beginning, it's empowering. You feel like you can do something about it [...]. You can take back control of what's happening to you. Knowing what you can do about it is empowering." (CS #1, Practices #1 and #2)
C6	"It'll give people better access. I'm sure a tool like this will make things easier for everyone. Not just for the new doctors who start here and with whom we've to meet to explain all the resources available [...]. They can never remember them all. So we put together written documents, we make information sheets, and then when they're in the middle of their work, they forget! This is a tool that they can access from anywhere, like from their iPhone or whatever. In my opinion, this tool could be really useful!" (manager, Practice #2)
C7	"The other challenge I see is that many older people don't have Internet access or don't yet know how to use it... For future generations, that won't be the case, but right now it's a challenge. Plus, some older people with low incomes can't afford Internet access. In addition, people who experience functional decline tend to disconnect from others and reject services." (CS #5, Practices #1 and #2)
C8	Moderator: "Do you discuss your health care goals with your doctor?" Patient: "No, right now, no. Despite my age, I haven't started asking him that question yet. I'll do that a little later." (patient #26, Practice #2)
C9	Moderator: "Do you discuss your health care goals with your doctor?" Patient: "No, right now, no. Despite my age, I haven't started asking him that question yet. I'll do that a little later." (patient #26, Practice #2)
C10	"When it comes to knowledge of community-based services, physicians in primary care practices are always in a hurry. They do their best, but I think there's a lack of tools to refer patients. I think the social worker in the practice should do more to educate physicians about prevention and give them the tools they need, or it could be his or her job." (Practice #3; CS #01)
C11	"OK, the program is great and all, and I hope it works, but what good is it to me in the long run to advertise it? I already have too many requests. They keep coming, and that's not going to stop anytime soon, and I'm out of volunteers. [...] It's really hard to find volunteers. [...] I don't think I can do it if it [the directory] has a big impact. I certainly hope it does, but I just don't have the team to do it." (CS #3, Practices #1 and 2)
C12	"The population is getting older and the budgets just aren't there. Only in election years is there a significant increase in the health care budget. So things are gradually getting worse because we're not doing enough to index health care funding." (CS #2, Practices #1 and 2)
C13	Physician: "Often the referring person is the social worker." Facilitator: "In practice, is it easy to refer to the social worker?" Physician: "We call him without the patient having to go through the social worker. If we just have a question, we often pick up the phone and ask our question." (HP, Practice #1) (HP, Practice # 1)
C14	"The sticking point in this project - I know I keep talking about it - is time. But I'm absolutely convinced of the value of the project and the tools." (manager, Practice #1)
C15	"As a physician, I always use the MoCA and Folstein with my partner nurse. My most important tool, in my opinion, is my instinct... it's my assessment of the person sitting in front of me that allows to really identify the risk factors. And what I find with my clients is that when the husband or wife is talking to me alone, I can tell if there's a potential health issue. So how can we involve the spouse or the family to get a better understanding of the situation if they're not always present at the same time?" (Practice #2, HP)
C16	Moderator: "Should it be the doctor who determines…?" Practice manager: "I think so. Because our more anxious patients are going to be a problem. They're going to want to talk about it. If we evaluate them and don't tell them about it, there's going to be trouble." (manager, Practice #2)

CS = representatives of community-based support services.

rarely from physicians in primary care practices. They felt that physicians in primary care practices were generally unaware of the services offered by community support services and that this role could best be filled by social workers in these practices (C10).

Representatives of community support services also pointed to their lack of communication channels with physicians. Several of them also expressed concern that it would be a challenge to keep up with the potential increase in demand due to the implementation of the directory. They also pointed out that this could lead to additional pressure on their system, compounded by the lack of volunteers, time, and financial resources (C11).

Geriatric clinicians pointed to the lack of a coherent communication system between them and primary care practices, which hindered coordination and continuity of care, and potentially led to treatment delays.

Peer Pressure

Some participants reported competition between the proposed InterRAI preliminary screener and the Prisma-7 implemented in Quebec. Project overload was also cited as a barrier to implementation of the pathway.

External Policy & Incentives

Participants suggested that the components of the pathway be aligned with the province's Alzheimer's Plan to improve care for older adults with neurocognitive disorders. In addition, inconsistent government funding for community-based services was seen as a major barrier to implementation (C12).

Inner Setting

Networks & Communication

HPs' communication channels include interprofessional team meetings to keep track of patients and discuss treatment, and the electronic health record for standard internal communication and patient follow-up. HPs generally turn to the social workers in the practice when referring patients to community services (C13).

Implementation Climate

Participating HPs and managers generally felt that the care pathway was compatible with their current systems and practice processes.

Readiness for Implementation

All participating managers stressed the importance of HP training before implementation. Funding, time, and resources to implement and maintain the pathway were also a concern. Most managers and HPs estimated that implementation would increase the workload of HPs, especially that of physicians (C14).

The electronic health record was seen as important for information sharing between HPs during implementation and for coordination, but it was also reported that additions to the electronic health record were difficult because they had to be approved by the regional health authority.

Characteristics of Individuals in Primary Care Practices

Knowledge & Beliefs About the Intervention

HPs generally saw added value in the pathway to support their current practice, but some felt that their experience was more valuable than the proposed screening (C15).

Self-efficacy

Training was perceived as a means to improve HPs' self-efficacy in implementing the pathway.

Other Attributes

Some of the participants from geriatric or community services expressed concern that primary care HPs would not follow the proposed pathway.

Process

Planning

Managers were all uncertain about task assignment. Most concluded that the new tasks needed to implement the pathway should be assigned to nursing assistants or nurse practitioners, with support from physicians who could intervene only as needed. However, one of the managers preferred that physicians be responsible for implementing the pathway because patients would feel more comfortable (C16).

Several managers considered having a nursing assistant screen patients in person or by telephone before the appointment. They also considered annual screening of all elderly patients in their practices, and indicated that the responsible person could create clickable notes or alerts in the electronic health record to indicate when screening is complete.

Formally Appointed Internal Implementation Leaders

Practice managers suggested that some physicians could take on the role of implementation leader and be responsible for overseeing training. However, they also made clear that some of the individuals who would be best suited for this role would either be unwilling to participate in the project or might decline the role because they are already busy with other tasks.

DISCUSSION

We explored key stakeholders' views on the potential factors influencing the adoption by primary care practices of a care pathway to prevent functional decline in community-dwelling older adults. Our findings suggest four main factors to consider in implementing this pathway: defining HPs' role in implementation; integrating resources for the pathway into the electronic health record; ensuring communication between community-based support services and primary care practices; and increasing funding for community-based support services. Each of these factors is discussed below.

Practice managers should be offered multiple implementation scenarios with different roles for HPs to facilitate adaptation of the trajectory to their environment. Some of these scenarios should delegate screening and shared decision-making to nurses, and referral to community-based services to social workers, to limit physician workload. This is consistent with reports from Canada and other countries where preventive care is largely provided by primary care nurses.(31,32) However, primary care practices in Quebec typically have two nurses for every 10 physicians,(33,34) so nurses are pressed for time. Making elder care a priority for government and local health authorities could ensure that the care pathway take precedence amid all the competing demands on HPs.(35) For example, the BETTER program was successfully implemented by hiring additional staff for screening and prevention in primary care practices.(36) This acknowledged the ongoing roles and workload of HPs, which has been shown to be a key factor in the adoption of innovation.(37)

All the resources needed for implementation should be available in the electronic health record, which is reported to be essential for interdisciplinary teamwork.(38) However, the different systems used in participating practices do not allow for rapid integration of these resources and are not compatible with each other or with the systems used in other facilities. This lack of interoperability is a consequence of the decentralised management of health care in Canada.(39,40) The proposed InterRAI screening tool is part of a suite of instruments that complement each other to assess older adults in a variety of settings such as nursing homes and home care,(41) but they are rarely used in the province of Quebec.

Communication between settings is crucial for the implementation of the proposed pathway, and is facilitated by the directory and by improving HPs' awareness of local resources. However, the proposed care pathway still lacks strategies to enable information sharing from community-based service representatives to primary care HPs. This lack of information sharing may explain the apparent contradiction between the HPs' and the other participants' statements about whether the HPs actually referred their elderly patients to local community-based services. The technology we proposed in this project—Caredove—includes features that allow HPs to formally refer older patients to community services and track the status of their referrals, as well as the services actually provided. The system also allows information to be shared with patients about services in their area and the ability to choose a service together with the patient. Previous research has shown that the creation of new partnerships and collaborations between primary care practices and community programs can increase HPs' willingness to refer patients outside the health system.(35) Such partnerships can also make it easier to reach vulnerable populations and provide comprehensive services.(42–44) They can also support the implementation of new practices.(45)

Representatives from community-based support services expressed concern about whether they would be able to keep up with the potential increase in demand following the introduction of the pathway. Recent policy reforms in Canada have increasingly shifted social services delivery to community-based support services, which are funded on a project-by-project basis without covering basic operating costs.(46) As a result, community-based support services can only serve a limited number of clients and are struggling with growing waiting lists, declining volunteer numbers, and staff burnout.(46) To support the implementation of the pathway, long-term funding is needed to help community-based support services fulfill their roles.(46)

Study Strengths & Limits

The CFIR allowed for a systematic examination of potential implementation issues to revise planned strategies and improve the chances of successful implementation. It is a strength that during this process we assessed the compatibility of the care pathway with patients' perspectives on their care and needs, because it has already been noted as a limitation of studies using the CFIR that patients' perspectives and experiences are not taken into account.(47,48) A limitation of this study is that participant age and gender were not considered as potential factors influencing pathway adoption. Intersectional factors should have been included to help illuminate how the interaction between social factors such as age and gender, as well as power structures, might influence decision-making and behavior, and to allow for consideration of these factors when developing implementation strategies.(49) Another limitation is that nonphysician HPs in some practices participated less in the discussions, so the results do not reflect well the determinants or logistical issues associated with implementation for these professional groups. The lack of caregivers in our sample also limits the transferability of our findings to older adults who rely on the support of a friend or family caregiver.

CONCLUSIONS

This study made it possible to identify the success factors in the implementation of a complex multicomponent intervention. The next steps will be to tailor the intervention to address limitations prior implementation. Identifying determinants of intervention implementation at multiple levels using a comprehensive theoretical framework should allow the intervention to be improved and support the success of implementation. While some of these determinants are easier to meet—for example, at the level of innovation or the internal context of primary care practices; others at the level of the external environment—for example, communication with community support services and external policies and incentives, may require longer-term efforts before implementation. This study will enable a focus on these determinants in the coming years to ensure that care for older adults includes preventive measures, starting with screening for frailty.

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CONFLICT OF INTEREST DISCLOSURES

We have read and understood the *Canadian Geriatrics Journal*'s policy on disclosing conflicts of interest and declare that we have none.

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APPENDIX A. Detailed themes and subthemes that emerged from the thematic data analysis

TABLE 1.
Characteristics of the proposed intervention that may influence its implementation, based on the CFIR(30)

Theme and Subthemes
Intervention Source
(+) Helps meet needs by presenting locally available services (1 CS)
Relative Advantage
(+) Allows preventive action to be taken (1 manager, 1 CS)
(+) Features easy-to-understand language (1 CS)
(+) Helps improve understanding of services (1 CS)
(+) Helps avoid unnecessary care (1 CS)
Complexity
(-) Insufficient time (1 manager, 1 CS)
(-) Too many stages in the proposed intervention (1 HP, 1 CS)
(-) Does not help empower patients (1 CS)
Cost
(+) Reduces hospitalizations and related costs (1 GC)
(-) Lack of funding to sustain intervention (1 CS)

HP = focus group with health-care providers from the primary care practice; manager = interview with a manager of the primary care practice; CS = interview with a representative of community support services; GC = interview with a representative of geriatric services; patient = interviews with a patient; (+) = support/facilitator to the implementation of the intervention; (-) = limitation/barrier to the implementation of the intervention.

TABLE 2.
Specific characteristics of the proposed frailty screening that may influence implementation, based on the CFIR(30)

Theme & Subtheme
Relative Advantage
(+) Boost demand for services tailored to their needs and provided by community organisations (7 CSs)
(+) Allows for timely and appropriate monitoring of patients (5 CSs)
(+) Tool is quick to use (2 managers)
(+) Allows for monitoring of people with varying degrees of loss of autonomy (2 CSs)
(+) Enables effective identification of risk factors related to aging (2 CS)
(+) Has been validated by HPs (1 manager)
(+) Facilitates collaboration by allowing transmission of relevant information among professionals (1 CS)
(+) Supports physicians in their tasks (1 CS)
(+) Screening may have greater impact when used by a physician (1 CS)
Complexity
(-) Follow-up of patient after screening with tool is complex (1 GC)
(-) Concerns about the time set aside for screening (1 manager, 1HP)
(+) Frequency of use needs to be determined (1 HP)
(-) Screening might only help identify people at high risk who are too late for prevention (1CS)
(-) Posing a series of brief questions is a far cry from the usual practice of getting the person to talk to understand their problem (1 HP)
Design Quality and Packaging
(-) Difficult to add the questionnaire to the electronic health record (3 managers, 2 HPs)

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TABLE 3.
Characteristics of the proposed patient decision aids that may influence implementation, based on the CFIR(30)

Theme & Subtheme
Relative Advantage
(+) Help meet the different needs of patients more effectively (4 CSs)
(+) Help empower patients and their loved ones regarding care (1 manager, 1CS)
(+) Enable patients to be involved in the care process (1 CS)
(+) Provide a way to reach patients who refuse to visit a CLSC local community health center (1 manager)
(+) Increase demand for community organisations to reach more clients by raising their awareness of the availability of different services (4 CSs)
(+) Provide patient with easy-to-access information (3 CSs)
Complexity
(-) Complex for people with low literacy (3 CSs)
(-) Risk levels are lacking certain options (1 manager)
(-) Too much information to digest for older adults (1 HP)
(-) Decision aids need to be reworded in layperson's terms (1 CS)
Design Quality and Packaging of Intervention Model
(+) Various formats available (1 manager)
(+) Avoids paper documents (1 CS)
(-) Difficult to incorporate decision aids into electronic health record (1 HP)

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TABLE 4.
Characteristics of the proposed directory of local community resources that may influence implementation, based on the CFIR(30)

Theme & Subtheme
Relative Advantage
(+) Helps direct patients to local services (1 manager, 2 CSs)
(+) Facilitates access to local services (2 CSs, 1 HP)
(+) Helps forestall behavioral problems (1 CS)
(+) Increases the client base of local community organisations by facilitating access to and referral to their services (1 CS)
(+) Helps by providing a description of services available per neighborhood (1 CS)
Complexity
(-) Some patients do not need community services (5 patients)
(-) Technology not adapted to older adults (5 CSs)
Adaptability
(+) Creates direct patient communication with agencies upon referral (1 CS)
(-) Website needs to be regularly updated (1 CS)
(-) Access to site should be tailored according to the agencies' capacity (1 CS)
Design Quality and Packaging of Intervention Model
(+) Web-based directory format meets a public need (1 CS)
(-) The directory should be presented by a health-care professional (1 CS)

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TABLE 5.
Factors relative to the outer setting that may influence implementation, based on the CFIR[30]

Theme & Subthemes
Patient Needs & Existing Resources to Meet Those Needs
Needs Met
(-) Patients experienced good communications with HPs (18 patients)
(+) Patients can take advantage of advice, decisions, and competencies of professionals (9 patients)
(+) HPs provide advice to patients to help manage their health (7 patients)
(-) Ability to be referred to other services as needed (2 patients)
Unmet Needs
(+) Patients' lack of information on community services (17 patient, 5 CSs)
(+) Patients' lack of information on how to manage their health properly (14 patients)
(-) Long wait lists for services (6 patients, 3 CS)
(-) Turnover in staff responsible for patient's follow-up (2 patients, 2CS)
(-) Older adults do not use technology (4 CSs)
(+) Lack of shared decision making between patients and physicians (3 patients, 1 CS)
(+) Difficulty accessing services and care (3 patients)
(+) Patients prefer to stay in their community (2 CS)
(+) Lack of preventive measures (1 patient)
(-) Financial constraints for some patients (1 CS)
Cosmopolitanism (or network)
Communication Between Clinics & Community Support Services
(+) Lack of direct information exchange between community services and family practice clinics (11 CSs, 1 HP)
(-) Capacity of community organizations is limited (11 CS)
(+) Lack of standard referral procedures to community services (2HP, 8 CSs)
(+) Physicians' lack of knowledge of the services offered by community support services (8CS)
(+) Need to create collaborations between clinics and community agencies (4 CSs)
(+) Partnerships with organizations and issue tables should be created (4 CSs)
(-) Easy communication between social workers in clinics and community service organizations (3 CSs)
(+) Need to integrate community services into the service chain of command (1 CS)
(-) Limited access to services due to centralization of care (1 CS)
Communication Between Clinics & Geriatric Services
(-) Limited exchange of information between primary care practices and geriatric services (2 GCs)
(-) Internal referrals are difficult (2 GCs)
(-) Lack of coaching and staff turnover (1 GC)
(-) Access to geriatric clinics limited to certain age groups (1 GC)
Peer Pressure
(-) Overburdening of clinics due to other projects (1 CS)
(-) Use of PRISMA-7 tool (2 CS, 1 manager)
External Policy & Incentives
(+) Intervention alignment with Alzheimer's Plan (1 manager,1HP,1 GC)
(-) Lack of government funding for community services (2 CS)
(-) The new reform of the health and community services network makes organization of services difficult (1 CS)

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TABLE 6.
Factors related to the internal context (in this case, primary care practices), the characteristics of the individuals working there, and the implementation process, based on the CFIR[30]

Theme & Subthemes
1. Inner Setting (primary care practices)
1.1 Networks and Communications
(+) Electronic health record facilitates access by HPs to patient information (1 HP)
(+) Regular multi-professional follow-up meetings (1 CS)
(+) Social worker guides physicians for community service referrals (1 HP)
1.2. Implementation Climate
1.2.1 Compatibility
(+) Screening is incorporated into the current work system (1 CS, 1 manager)
1.3. Readiness for Implementation
1.3.1 Access to Knowledge & Information
(+) Organization of training sessions for all HPs (2 managers, 2 CSs, 1 GC)
(-) Access to the DB site must be made available by CIUSS (1 manager)
(+) Rely on computerized systems (electronic health records) for access to information by clinics (2 MNDs)
(-) Clinic is planning to change computer system provider (1 manager)
(+) Provide access to Excel screening worksheets (1 manager)
(+) Hand out paper version of DBs to attendees (1 manager)
1.3.2 Available Resources
(-) Lack of time/ creates additional workload for HPs (3 HP, 2 managers, 1 CS)
(-) Clinic funds are limited (1 manager)
2. Characteristics of Individuals Who Work in Primary Care Practices
2.1 Knowledge and Beliefs about the Intervention
(+) An important contribution to the practice of HPs (1 CS)
(+) Active participation by HPs in shared decision making (2 HPs)
(+) HPs have a positive attitude toward Caredove, the directory of community support services (1 HP, 1 GC)
2.2 Self-efficacy
(+) Community organizers feel capable of participating in the intervention (1 CS)
(+) Deliver the training via managers (1 manager)
2.3 Other Personal Attributes
(-) Physicians influence the service process (1 CS)
(-) Physicians do not complete the questionnaires (1 CS)
(-) Medical experience is more valuable than screening tools (1 HP)
3. Implementation Process
3.1 Planning
(+) Conduct over-the-phone screening prior to appointment (2 managers)
(+) Create a screening clinic (1 manager)
(+) Conduct screening in the reception room (2 managers)
(+) Have interventions monitored by a physician (3 managers)
(+) Have interventions monitored by an nursing assistant (2 managers, 1 HP)
(+) Have interventions monitored by a nurse practitioner (2 managers)
(+) Create reminders related to interventions in the electronic health record (3 managers)
3.2 Formally Appointed Internal Implementation Leaders
(-) Absence of a leader for intervention training

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