A Qualitative Study with Primary Care Providers: Barriers and Facilitators in Cognitive Care Planning

Katherine C. Britt[*], PhD, MSN, RN[1,2], Xaviera Xiao, MA[2], Kevin Sun[2], Shaoqing Ge, PhD, MPH, RN[2,3], Bin Huang, PhD[2]

[1] University of Pennsylvania, School of Nursing, NewCourtland Center for Transitions and Health, [2] BrainCheck, Inc., [3] The University of Texas at Austin, School of Nursing

[*]corresponding author

Abstract

Background and Objectives With a growing aging cognitive impairment and dementia population and with no present cure, there is an increased focus on improving quality of life and health while decreasing disease burden and hospitalization. An effective way to support this focus is through cognitive care planning: routinely and systematically assessing patient needs while documenting personalized recommendations to address neuropsychiatric and neurocognitive symptoms, functional limitations, and care resources. While beneficial and reimbursable, cognitive care planning remains underutilized.

Research Design and Methods By adopting a descriptive qualitative approach, we conducted semi-structured telephone interviews with nine primary care providers (seven identified as male; two identified as Asian American; work experience ranged from 8 to 38 years) who were actively providing care to older adults, including those with cognitive impairment and dementia in the Pacific Northwest area. Data were analyzed through content analysis.

Results Seven categories of barriers and facilitators informed by the Consolidated Framework for Implementation Research (CFIR) were constructed from the interviews: (a) caregiver characteristics, (b) organization characteristics, (c) patient characteristics, (d) provider characteristics, (e) condition characteristics, (f) workflow, and (g) outer setting.

Discussion and Implications Primary care providers described the barriers and facilitators experienced in cognitive care planning with patients. Primary care demands, time limitations, patient willingness, caregiver and family presence, lack of care planning structure, and uncertainty influence the implementation of cognitive care planning. These findings can help providers and clinical care teams support older adults with cognitive impairment and dementia and their caregivers facing a progressive illness.

Keywords: Alzheimer's, dementia, mild cognitive impairment, caregivers, cognition, cognitive decline, person-centered care, dementia care

Introduction

The management of cognitive impairment in Alzheimer's Disease and Related Dementias (ADRD) poses significant challenges for healthcare systems worldwide. As the prevalence of dementia continues to rise, effective care planning strategies are crucial to optimize patient outcomes and enhance the quality of life for individuals affected by these conditions (Alzheimer's Association, 2023). Among the various approaches to dementia care, cognitive care planning (CCP) stands out as a promising framework for systematically assessing patient needs and developing tailored interventions to address them (Livingston et al., 2020; Kim & Park, 2017).

Services such as CCP aim to improve diagnosis, care planning, and coordination for older adults with cognitive changes, essential for early detection and management of cognitive decline (Alzheimer's Association Expert Task Force, 2022). For patients who show signs of cognitive impairment during routine visits, a cognitive assessment at a separate visit is warranted to fully evaluate one's cognitive function to establish or confirm a diagnosis. If cognitive impairment is detected, providers could develop a comprehensive cognitive care plan through CCP, which includes a detailed history and patient exam. Providers examine and evaluate cognitive and physical function (i.e., Activities of Daily Living, dementia staging, etc.), neuropsychiatric and behavioral symptoms (i.e., depression, anxiety), patient records, medications, patient home and driving safety, social supports, and advance care planning needs (U.S. Centers for Medicare and Medicaid Services, 2024). The Care Plan includes neuropsychiatric symptoms, neurocognitive symptoms, functional limitations, and referrals to community resources for patient and caregiver education and support. These efforts, embodied in the HOPE (Health Outcomes, Planning, and Education for Alzheimer's) Act, further developed into a Current Procedural Terminology (CPT) code by Medicare (code 99483; Anonymous, Medicare Program, 2016) for reimbursement of these services (i.e., currently $268 reimbursement is provided by Medicare as of January 1, 2024). The CCP process is recommended for providers and healthcare professionals using validated screening and assessment tools with planning documentation. However, only 2.4% of traditional Medicare beneficiaries with a diagnosis of Alzheimer's disease or related disorder in 2021 received this service (U.S. Government Accountability Office, 2023).

Primary care providers (PCPs) are central in delivering healthcare services to individuals with cognitive impairment (Alzheimer's Association, 2020). Most patients with cognitive impairment first seek treatment from their PCPs. Many continue to receive most, if not all, of their care from their PCPs, as the number of patients with cognitive impairment in the US exceeds the capacity of the neurology specialists (Majersik et al., 2021; Dall et al., 2013). Indeed, given their frequent interactions with patients and comprehensive understanding of patients' medical histories, PCPs are well-positioned to implement cognitive care planning strategies within their practice settings (Tuijl et al., 2012). However, the successful integration of CCP into primary care faces various challenges, including time constraints (Wolff et al.,2021), lack of reimbursement (Alzheimer's Association Expert Task Force, 2022), and a shortage of expertise and standardized tools (Bradford et al., 2009).

Despite these challenges, previous studies have highlighted the potential benefits of CCP in improving patient outcomes and reducing healthcare utilization among individuals with cognitive

impairment (Kim & Park, 2017). Nevertheless, there remains a lack of research exploring the perspectives of PCPs regarding the barriers and facilitators associated with CCP implementation.

To address this gap, we conducted a qualitative study to elucidate the experiences and perceptions of PCPs regarding CCP in the management of cognitive impairment. Specifically, we aimed to (1) explore primary care providers' knowledge about, attitudes regarding, and experiences with CCP, and (2) describe the challenges and strengths of their current approach to CCP with older adult patients. By conducting in-depth interviews and employing content analysis, we identify key barriers hindering the adoption and implementation of cognitive care planning strategies and facilitators that may enhance its integration into routine primary care practice.

Methods

Design
We used a qualitative descriptive approach featuring semi-structured interviews (Kim et al., 2017). The present study is the first of a two-part qualitative study where we explored primary care providers' knowledge about, attitudes regarding, and experiences with cognitive care planning (CCP); PCPs described the challenges and strengths of their current approach to CCP with older adults. The second part of the study explored providers' perceptions of the benefits and limitations of two CCP tools to assist in CCP implementation. The study protocol was reviewed, and an exemption was obtained from the institutional review board of WIRB-Copernicus Group (WCG). To ensure the study's methodological quality, we used the Consolidated Criteria for Reporting Qualitative Research checklist (Tong et al., 2007).

Setting and Recruitment
Participants were recruited from three medical centers and one outpatient clinic in the Pacific Northwest area. Primary care providers were initially approached through email invitations, where the study's objectives, importance, and implications were explained. We additionally sought their informed consent to participate in the study. One researcher (XX) did the rolling recruitment of participants until data saturation was reached (Saunders et al., 2018).

Study Participants
We used a purposive sampling approach to identify and select a group of healthcare providers actively providing care to older adults. We included healthcare providers who regularly see (more than five patients per week) older adults and could comply with study requirements and activities. We excluded healthcare providers with previous experience using BrainCheck Plan, a cognitive care planning digital tool, due to its alignment with the aim of the second part of our study examining providers' perceptions of two CCP tools (this part of the findings is beyond the scope of the current study). Written informed consent was obtained from all eligible participants.

Procedure
The second author (XX) is a master's prepared researcher with a background in medical education, public health and experience in qualitative research and cognitive care planning. The first author (KCB) is a postdoctoral fellow in nursing with extensive clinical, qualitative, cognitive care, and research experience with older adults with MCI, AD/ADRD, and their

caregivers. The third author (SG) is an assistant professor of nursing with extensive training and expertise in qualitative research in aging, MCI, and AD/ADRD. The fourth author (KS) is a research manager at BrainCheck, Inc., with experience designing, managing, and conducting clinical studies. The fifth author (BH) is a principal scientist at BrainCheck, Inc., with expertise in computerized cognitive assessment and cognitive care planning. Authors (BH, KS) initiated the study based on their clinical experience and research knowledge of the low uptake of cognitive care planning in healthcare. The authors had no prior relationship with the participants.

The interview guide was developed by the research team (Supplementary Table 1), informed by the updated Consolidated Framework for Implementation Research (CFIR) (Damshroder et al., 2022), which covers five major domains that informed the creation and inclusion of our interview questions. These include a) the intervention, b) inner and c) outer setting, d) the individuals involved, and e) the process for advancing implementation science in practice, which deepened our approach and understanding by providing an overarching typology to explore components of implementation. From June to December 2023, the second author (XX) conducted Zoom video conferencing semi-structured interviews with each participant. Interviews were conducted conveniently for the providers in a quiet setting, in their medical office, or at participants' homes.

All participants were involved in one 60-90 minute interview, each audio-recorded by the second author (XX), transcribed by a speech-to-text service, and then reviewed by the second author. In addition, the second author used memos during the interview to inform understanding and meaning derived from the data. The first (KCB) and second (XX) authors reviewed the transcripts and audio recordings for accuracy and re-immersion before analyzing the data.

Analysis

All data were stored, managed, and analyzed in Dedoose Software. Deductive content analysis was used to code interview data, deriving codes and subcodes from the pre-existing CFIR (Damshroder et al., 2022; Hsieh & Shannon, 2005). Author (XX) reviewed the recordings and transcriptions to confirm accuracy before coding began. Two authors (KCB, XX) reviewed the transcripts independently, analyzed the data, and developed an initial coding framework using directed content analysis (Hsieh & Shannon, 2005) to interpret and summarize the data informed by CFIR domains through a systematic classification process of coding and identifying patterns. The authors met systematically throughout the process to compare findings and adjust the framework accordingly. They also met with the research team to discuss findings and further interpretation of data. Coding reports were summarized and cross-checked to ensure consistency of interpretation. Transcripts were re-reviewed and discussed whenever divergent interpretations occurred until a consensus was reached. Codes and subcodes were organized, and the coding framework was formed and re-formed throughout the analysis, informed by the updated CFIR framework to help align relevant subcodes to codes.

Study Trustworthiness

To enhance the trustworthiness of our study, we utilized numerous strategies recommended by Lincoln & Guba (1985): (1) we collected and triangulated multiple data sources (i.e., interviews, memos); (b) we frequently met to review, examine, and discuss codes and subcodes consistency in our developing framework; (c) author (XX) conducted member checking by following up with

the participants to confirm the final coding results were an accurate representation of their perceptions and experiences in cognitive care planning; and (d) we used audit trails for safe record keeping of decisions made throughout the analysis process.

Results
Participant Characteristics
Nine interviews were conducted, lasting between 46 to 62 minutes. Among the participants, eight were primary care physicians, and one was a primary care nurse practitioner—two were male, while the remaining seven were female. Eight participants practiced in medical centers, and one in an outpatient clinic. Two of the participants identified as Asian, while the remaining participants identified as white. Amongst the participants, six specialized in family medicine; three participants specialized in internal medicine. Participants' work experience ranged from 8 to 38 years.

The qualitative analysis is displayed as a fishbone diagram (See Figure 1) comprising seven branches informed by CFIR domains. The seven branches, hereon referred to as categories, consisted of 1) patient characteristics, 2) caregiver characteristics, 3) provider characteristics, 4) condition characteristics, 5) organization characteristics, 6) workflow, and 7) systemic characteristics. Each category contained subcategories outlining specific barriers and highlighting any identified facilitators.
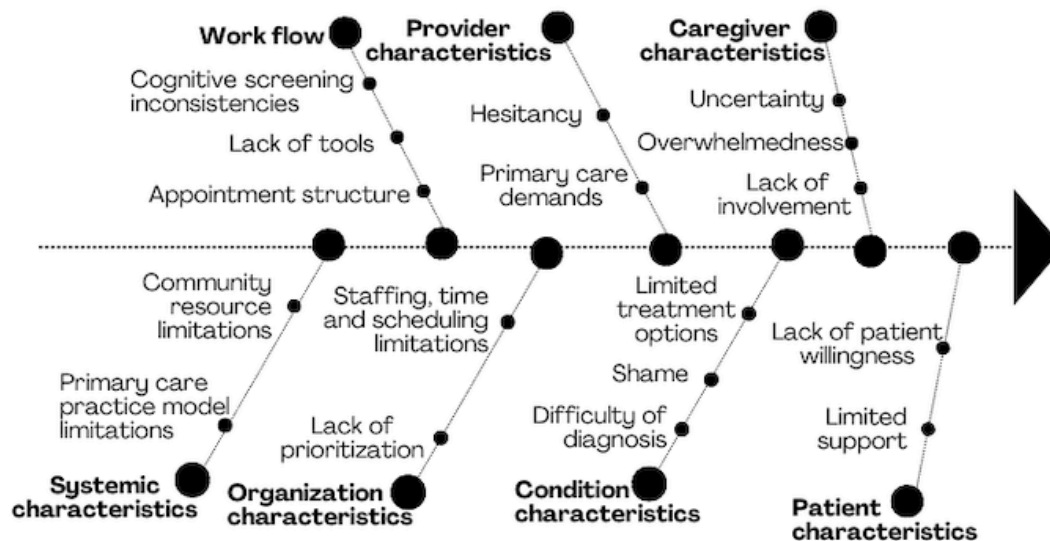

Figure 1. Fishbone diagram of categories and subcategories primary care provider's encounter when carrying out cognitive care and care planning services

Patient characteristics
The category of patient characteristics included the subcategories of lack of willingness and limited support. Providers highlighted that patients' willingness to engage in cognitive care and care planning is crucial to treating cognitive decline. Notably, providers described that it was

common for patients to be dismissive and, by extension, normalize cognitive impairment symptoms and associate said symptoms with the natural aging process.

> *"(T)hey'll say, oh yeah, but it's just old age, I just forget names…" (Family Medicine physician, female, 12+ years of experience)*

Beyond normalizing cognitive impairment symptoms, providers also described patients' feelings of denial as an obstacle in carrying out cognitive care.

> *"There's a couple of instances where the patient is not convinced that they have that problem and so they will not go to be further evaluated or be started on a medication…. that is a difficult time, we're not able to get them the necessary care that they need." (Family Medicine physician, female, 8+ years of experience)*

Providers also identified that patients with limited and unengaged support systems were less likely to receive adequate cognitive care and planning. One provider described that when patients came to appointments alone, ensuring they could adequately address the myriad health and safety issues that impact their patients was challenging.

> *"Well, if you're dealing with a person who has cognitive impairment and they don't share with their family…scheduling a follow-up appointment, then that gets dropped or the family members not present at the meeting. And so whatever you're covering is not remembered. So that's why you have to ask at the next meeting, 'can we make sure and ask the family to come with you?'" (Internal Medicine physician, male, 38+ years of experience)*

Without the patient's family or support system to provide details of the patient's condition, providers often felt as if they could not completely understand the patient's condition.

> *"A lot of them don't have family that can come help me get a clearer sense of what's going on at home." (Family Medicine physician, female 12+ years of experience)*

> *"… if I can get a family member involved, they can say 'but hey dad, you were doing this', or 'Hey, what about this time when you got lost and you were driving it, and so on and so forth.' So it's really helpful to have the validation from other family members that not just me is thinking there is a problem, that, there are other signs outside of just our visits." (Family Medicine physician, female, 12+years of experience)*

Caregiver characteristics

Caregiver characteristics included the subcategories uncertainty, overwhelmedness, and lack of involvement. Notably, caregivers' participation in the patient's cognitive care planning process greatly impacted the patient's health outcomes and quality of life. However, caregivers often face uncertainty in navigating the healthcare system and supporting patients.

> *"(C)aregivers are generally the ones stuck in the middle…caught in the middle of taking care of a family member and not knowing how to navigate (it)"* (Internal medicine physician and executive director, female, 20+years of experience)

Providers also described that feelings of overwhelmedness were common amongst caregivers, which impacted the care they were able to provide.

> *"So we tried different medications for the dementia, and his two daughters were involved and his wife. Unfortunately, the wife had some setbacks in her health. And, also experienced some delirium…so she wasn't as helpful."* (Family medicine physician, female, 27+years of experience)

Indeed, overwhelmed caregivers often have a negative impact on the quality of the patient's care and the patient's behavior.
> *"But if the caregiver is struggling, then I think there's more behavioral issues from the patient's perspective, and so making sure the caregiver feels adequately supported and getting breaks…If they get irritated, then that escalates behavioral issues on the patient's part."* (Internal Medicine physician, female, 14+ years of experience)

When engaged and proactive, caregivers considerably impact patients' quality of care. Indeed, providers described that caregivers are often the first to identify and start a conversation about the patient's cognitive decline. however, there are negative consequences when caregivers are not involved in the caretaking process.

> *"… in my mind, it is never gonna happen here cause I'll never get all those people in one place with a family engaged too…"* (Family medicine physician, female, 12+ years of experience)

Condition characteristics
The characteristics of cognitive impairment comprised three subcategories: limited treatment options, difficulty of diagnosis, and stigma. Several providers highlighted that when treating patients with cognitive impairment, they often felt limited in what they could offer to impede disease progression and improve quality of life due to the progressive nature of certain forms of

cognitive impairment.

> *"It's hard to measure just what effective means, you know, I feel like with so many other conditions you can be like, 'great, like I treated their blood pressure' and their blood pressure looks better the next time, but with cognitive diseases it's hard to know exactly what success looks like.   (Family Medicine Physician, female 12+ years of experience)*

One provider discussed the difficulty of treating patients with unique safety risks.

> *"I try to really hard not to overmedicate my dementia patients unless there's a big safety issue. I have one patient currently who's in a memory care unit but is hitting other patients at the memory care unit…It's not my favorite. I think it doesn't help the patient in the long run, but sometimes they have to be safe and they can't be hurting other people." (Internal medicine physician, female 8+ years of experience)*

Another barrier specific to cognitive impairment was the difficulty in diagnosis. Providers described the challenge of diagnosing patients who were also suffering from mental health issues and addiction.

> *"(I) oftentimes spend a lot of time trying to understand the role that anxiety and depression and mental health play in their experience of their cognitive function…to understand if we need to address that so that we can better understand which part of it is purely the neurological causes of cognitive decline." (Family medicine physician, female 12+ years of experience)*

Finally, providers described that shame played a considerable barrier to addressing cognitive impairment among patients. The shame and difficulty involved in discussing cognitive decline encouraged providers to approach the topic strategically.

> *"In the past I would be like 'Hey, I wish they would change it from speech therapy to brain therapy, but did you know they could help? Just like you go to cardiac rehab when you have a heart attack, they can help your brain stay sharp, they can help me make sure I'm not missing anything.'" (Family medicine physician, female, 12+ years of experience)*

Systemic characteristics

Providers highlighted the broader systemic conditions that created barriers to facilitating cognitive care and cognitive care planning. The following subcategories were identified: current primary care practice model limitations and community resource limitations.

Among participants, many addressed that the primary care practice appointment is not conducive to treating and supporting patients with cognitive impairment.

"(B)eing that in primary care, often we see people back over multiple visits to address different concerns. And sometimes with these kind of cognitive or memory evaluations, they take a lot of time and we might not be able to fit all of those things into a visit, so we pull back over time to do that." (Family nurse practitioner, female, 6+ years of experience)

Participants also mentioned that due to the piecemeal nature of the appointment, the quality of care often felt compromised.

"I think it's just broken up piecemeal, which probably creates a worse outcome to be fairly honest, because if it's done piecemeal…whereas if it were structured and all done in one place, that would be… far superior here…you'd have fewer people fall through the cracks." (Physician, male, 38+ years of experience)

Many described that primary care should be patients' primary point of contact; however, many providers described feeling reliant on referring patients to specialists.

"Because as the primary care team…we should be the place to go for 'em to get all of this information and remain that hub for that family as the inevitable slow decline happens. Right?...and shunting a patient who obviously is going to get weaker and more difficult to transport from one location to another specialist becomes less useful over time." (Internal medicine & Executive Director, female, 20+ years of experience)

Participants also described that limited community resources were a considerable barrier in providing care to patients with cognitive decline.

"You need that community built around the primary care doc to say, here, I can tell you that you can go here, but if that HERE doesn't exist, what do you do then? So whatever system the PCP works in that system needs to build all of that around the patient and the PCP. Without that, I don't know that I have much impact." (Internal medicine, female, 20+ years of experience)

Provider characteristics
Provider characteristics consisted of the subcategories of high multifaceted demands and feelings of hesitancy. For many providers, the multifaceted demands of primary care were a barrier to being able to prepare to address cognitive impairment with patients adequately.

"When you're bouncing back and forth between that and a woman with menopause or a kid with hallucinations or whatever, shockingly, yes, this is my week. You get easily distracted away from what you're doing." (Family medicine physician, female, 27+years of experience)

Treating cognitive impairment was also challenging because of the range of health issues that primary care providers are expected to address.

> *"...when primary care is sort of tasked with like everything all the time, like, 'oh we'll just have primary care take on this other thing' then it kind of gets lost in the shuffle." (Family medicine physician, female 12+ years of experience)*

Cognitive care planning amongst primary care providers needs to be implemented efficiently and not create more complexity.

> *"...'cause some days we're (primary care physicians) like, oh, some days we're really on top of our, our stuff, you know, when we remember all the pieces that we're supposed to write down Yeah. But other days we're tired or, you know… (we) just forget the pieces…the fewer things we have to just memorize, when we already are going through literally thousands of algorithms every day…the better it will be for us." (Family medicine physician, male, 9+ years of experience)*

Beyond the complexity of the primary care setting and its demands, providers also described a major barrier in providing cognitive care and planning as general hesitancy from a lack of education and confidence in cognitive care planning.

> *"I think lack of education because as an internist, this is not always everybody's cup of tea, and so maybe you get into a pattern of referring more complex problems like dementia to specialists." (Internal medicine physician, male, 38+ years of experience)*

Workflow

The category workflow consisted of the subcategories of inconsistencies in the cognitive screening process, lack of standardized tools, and appointment structure. Providers described that their process was often compromised due to inconsistencies in the cognitive screening process amongst clinical care team members (i.e., team task allocation), which led to compromised results.

> *"...we're finding that the way that we've set up those cognitive assessments can be really biased…because often it's very anxiety provoking, which is apparently not great for memory <laugh>"(Family medicine physician, male, 9+ years of experience)*

This occurrence resulted in the need to outsource the cognitive assessment process, which was also prompted by the lack of appointment structure in primary care.

> *"That's why we went with speech therapy doing the MoCA instead of having it done in the clinic just cause it would get done inconsistently." (Family medicine physician, female, 12+ years of experience)*

Providers also highlighted that technology created issues in facilitating cognitive care planning effectively and efficiently. Notably, electronic medical records were described as being poorly designed for ease in cognitive care planning, making it difficult to document the patient's progress and condition properly.

> *" I feel like (EMR) isn't set up to make it really user-friendly…pieces of it happen."* (*Family medicine physician, female, 12+ years of experience*)

Another significant workflow barrier faced by providers stemmed from not deploying a consistent approach to cognitive screening and care planning.

> *"We know those things piecemeal, but how do you incorporate all of those in a structural manner in an hour-long appointment, and then write out a plan for a patient." (Internal medicine physician & Executive Director, female, 20+ years of experience)*

A standardized approach would efficiently incorporate all clinical care team members.

> *" Like something they (care coordination team) could follow like a cookie cutter or recipe…and that care coordinator then has, or like a one page thing that you have filled out, okay, this is the patient, this is the concern, here's the checklist of all the things they need done." (Family medicine physician, female 12+ years of experience)*

Organization Characteristics

Additionally, the category organization characteristics comprised two subcategories detailing the obstacles within the organizational context that negatively impacted cognitive care and cognitive care planning. The subcategories included inadequate staffing, time and scheduling limitations, and lack of prioritization.

Providers elaborated that staffing made it difficult to complete even the basic aspects of providing care.

> *"It's like the lack of staffing... how do I get a cognitive care plan scheduled if I don't have schedulers and how do I know the patient is gonna have all these things done when even as something as basic as a visit with their physician, it's hard to make happen or you know, there's not enough people answering the phone…" (Family medicine physician, female, 12+ years of experience)*

Regular turnover created difficulty in continuity of care and managing training responsibilities.

".. in a clinic like ours where we struggle with a lot of turnover and burnout amongst the doctors and… providers… then as people then are having to establish and reestablished care with various people over time, then sort of the clearer we can be with the patients so that they understand the diagnosis and the clearer the notes are in the chart about like what is known and established, I think then helps things not get lost as people have to find new people to take care of them over and over every year." (Family medicine physician, female 12+ years of experience)

The logistics of scheduling an hour-long visit was perceived as a considerable barrier.

"I think the biggest limitation would be how far out it would take me to book a 60-minute appointment. It might be three to four months to get a 60-minute appointment." (Internal medicine physician, female, 14+ years of experience)

Providers elaborated that to make this change, there would need to be a cultural shift within their organizations.
"So there's got to be a mentality shift too, just on the importance of treating this population." (Family medicine physician, female, 27+years of experience)

Discussion
This study explored PCPs' experiences and perceptions of cognitive care planning with their older adult patients. We identified several key barriers hindering the adoption and implementation of cognitive care planning in practice and facilitators that enhance integration into routine primary care. These multifaceted barriers include systemic, caregiver, organizational, patient, provider, cognitive impairment, and workflow factors. We discuss our findings below under the domains of the updated CFIR which include innovation, outer setting, inner setting, individual, and implementation process (Damshroder et al., 2022).

For the innovation domain of the CFIR, CCP is an innovative process to improve health and quality of life among patients with cognitive impairment (Alzheimer's Association Expert Task Force, 2022). However, we found that providers reported complexity in diagnosing cognitive impairment and lack of consistent cognitive screening tools, prompting them to refer patients to specialists. Further, providers reported the benefit of and desire for a standardized approach to facilitate CCP. Although CCP steps and tools are outlined by the Alzheimer's Association (Expert Task Force, 2022) for assessing cognition, function, safety, neuropsychiatric and behavioral symptoms, reviewing medications, and assessing caregiver needs, less than half of providers conduct cognitive assessments as a standard protocol for older adults (Alzheimer's Association, 2019), let alone the other assessments. In addition, only around 16% of older adults report they receive regular cognitive assessments (Alzheimer's Association, 2019). Innovative cognitive assessment and care planning tools using technology (BrainCheck Inc., 2024; Thompson et al., 2023) to streamline the process for CCP are being developed, but many

providers are not aware of them or don't use them, which is supported by work from the Alzheimer's Association reporting 96% of providers requested more information about assessments and which tools to use (2019). Using these digital tools have several advantages in primary care settings including reduced time and cost of cognitive testing, reduced clinician time and likelihood of compromised scores, and provider burden (Thompson et al., 2023). Educating providers about these innovative tools may be essential to facilitate the integration of CCP into routine care.

Systemic characteristics reflect the outer setting domain, as described within the CFIR framework. Participants described the structural issues within primary care and the wider healthcare system that limited their ability to address cognitive issues as well as to carry out cognitive care planning. Notably, providers highlighted that the format of the primary care appointment was not conducive to providing adequate care for patients with cognitive impairment as these appointments and the related tasks would have to be carried out over the course of multiple appointments. Indeed, the issue of time and concerns about what can be accomplished during an appointment are explored across several other studies examining providers' experiences with cognitive care planning (cite). Further, the sub-category limited community resources reflected the lack of accessible and appropriate community-based resources and services needed for individuals with cognitive impairment to maintain their health and quality of life. The lack of community preparedness and integration of primary care and community-based resources is an issue of concern across healthcare systems. Indeed, Draper et al. (2019) have highlighted the development of policies and interventions in diverse healthcare systems to connect primary care providers with larger community organizations and services. Indeed, interventions to address the poor connection between primary care and larger community resources have enhanced patient health outcomes and improved resource optimization (Boll et al., 2021).

For the inner setting domain of the CFIR (Damshroder et al., 2022), we found that organization characteristics and workflow play crucial roles in implementing CCP in primary care settings. As for organizational characteristics, our findings indicate that primary care practices often are subject to inadequate staffing and scheduling limitations. These factors can significantly impact the smooth integration of cognitive care planning in this setting. On the other hand, workflow, another essential aspect of the inner setting, also emerged in our findings. We found that inconsistent workflow and inefficient technology use (e.g., poorly designed EMR system) were barriers impeding the implementation of cognitive care planning. Our findings suggest that flexible workflows and structured appointments designed with cognitive screening, assessment, and care planning will contribute to adopting these practices into primary care (cite). Additionally, EMR systems or other efficient technology with features specifically designed to support cognitive care planning can enhance the efficiency and accuracy of documentation, improving overall cognitive care quality.

The categories patient, provider, and caregiver characteristics correspond with the individual domain within the CFIR framework. Although difficulties vary considerably, given the unique experiences that patients, caregivers, and providers each navigate, there were some shared experiences and perceptions amongst the distinct categories of individuals involved. For instance, feelings of ambiguity among caregivers and providers were prevalent, as demonstrated

in the subcategories of uncertainty and hesitancy. Indeed, providers and caregivers expressed a general lack of preparedness regarding and familiarity with cognitive care and care planning. This finding is in line with prior studies that have shown that primary care providers demonstrate inadequate preparation and knowledge surrounding how to identify and manage dementia (Bernstein et al., 2019) and mild cognitive impairment (Emilie et al., 2022). Similarly, caregivers' preparedness was also recognized as crucial to the patient's experience. Notably, caregivers' preparedness to navigate the healthcare system and overall health literacy is primarily recognized as a factor associated with patients' health outcomes (Fields et al., 2018). While caregivers and providers require wholly different tools to prepare themselves for patients with cognitive decline, such as dementia, it is evident that further education and resources to support providers, as well as caregivers, are critical to improving patients' quality of care.

For the Implementation Process domain of the updated CFIR, we found variability in the clinical care team roles in the CCP process. Implementing CCP within the practice relied extensively on buy-in across multiple players, including the organization, the clinical care team, the patients, and the providers. Providers reported that patients resisted cognitive screening and often denied any need. Indeed, only 40% of older adults have ever discussed self-identified cognitive concerns with their healthcare provider, with only 15% reporting they have never brought up cognitive concerns on their own (Alzheimer's Association, 2019). Further, stigma about cognitive impairment and dementia may lead to underdiagnosis as patients report fear of the consequences of a diagnosis, which may prompt them not to seek care (Mansfield et al., 2019). However, a facilitator in our study was the presence of caregivers and family at CCP appointments. Caregivers accompanying a loved one with cognitive concerns can provide a more thorough understanding of their loved one's activities of daily living for context in CCP evaluations. In a study by Bandini et al. (2022), caregivers reported that early screening and diagnosis of cognitive impairment would be beneficial in decision-making and planning future care for their loved ones. Indeed, buy-in from the CCP deliverer and the recipients could greatly improve the uptake of CCP and early detection of cognitive impairment and improve quality of life and care not only for the patient but also for the caregiver. Strategies and innovative solutions such as demonstrated benefits of CCP, straightforward and streamlined process for integrating caregivers into CCP, and additional caregiver supports in the care plan are needed for increasing CCP integration in primary care to increase early identification of cognitive impairment, tailored lifestyle modifications, and to inform caregivers for future care and decision-making.

This study has limitations. First, all but one of the participants were recruited from three academic medical centers in the Pacific Northwest area and thus may not fully represent all PCPs across the US. Secondly, our participants were primarily white. Future studies should include diverse PCPs from across the US and include racially and ethnically diverse providers. Third, we did not explore patient and caregiver perspectives in this study, which would expound on providers' perspectives. Future studies should explore these perspectives to gather additional preferences and experiences for additional cognitive care planning and contextual understanding.

Conclusions
This study explored perspectives of primary care providers' perceptions and experience of cognitive care planning with older adult patients and their loved ones and identified several

implementation barriers and facilitators. Systemic characteristics such as limitations in current PCP practice models, organizational factors such as scheduling time limitations, inadequate staffing, and failure to prioritize, and workflow factors such as inconsistencies in cognitive screening processes and clinical care team task allocation exist. Individual characteristics were identified across caregivers (i.e., uncertainty of how to address cognitive changes in loved ones, personal health challenges, difficulty navigating the health care system), patients (i.e., reluctance to engage in cognitive screening), and providers (i.e., diagnosis inconsistencies in dementia, lack of training and confidence in cognitive care planning, competing complex health needs of patients). For those with cognitive impairment, limited treatment options exist, which leads to provider hesitancy and not prioritizing cognitive care planning. Facilitators identified included caregiver presence, established patient-provider relationship, structured tools, EMR integration, previous provider exposure or training in cognitive care planning, and proactive patients. These findings provide critical insight into the cognitive care planning process, prompting the need for cognitive care planning tools integrated within the EMR, provider/patient/organization buy-in, and reassessing the current PCP practice model for older adults. Older adults will soon outnumber children for the first time in history, so additional visits and extended visit times must be emphasized to manage complex health needs and the challenges patients and caregivers encounter with the healthcare system.

Conflict of Interest
The authors also work for BrainCheck, Inc.

Data Availability
The anonymous transcripts of the interviews can be viewed upon request. Please send requests to the following e-mail address: bin@braincheck.com

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Supplementary Table 1. The Interview Guide

Questions	Prompt
1. Tell me about your process, what kind of cognitive care do you provide for your patients with cognitive impairment such as dementia and memory loss?	
2. Have you ever heard of cognitive care planning?	If Yes, what is your understanding of cognitive care planning and what it is used for? If needed, please explain cognitive care planning with the following scripts: *If your patient shows signs of cognitive impairment during a routine visit, you can assess your patient's cognitive function thoroughly and develop a written care plan. Usually, cognitive care planning requires a detailed history and patient exams including cognitive and functional assessment, medical history review, neuropsychiatric and behavioral symptoms evaluation, home safety, etc. You will use the gathered information to create a written care plan to address neuropsychiatric symptoms, neurocognitive symptoms, functional limitations and referral to community resources as needed.*
Considering the domains of the updated Consolidated Framework for Implementation Research (CFIR) ● Innovation domain [cognitive care planning] ● Outer Setting [system, state, community, conditions, etc.] ● Inner Setting [clinic setting - type, location, characteristics, infrastructure, culture, incentives, resources, materials, etc.] ● Individuals domain [individual roles and characteristics, etc.] ● Implementation process domain [activities, strategies used for implementation - process, activities, delivery, etc.]	
Do you have any experience in cognitive care planning with patients?	If Yes, can you talk me through your process of implementing cognitive care planning? ● How often? ● Does this happen during a designated appointment? ● Can you tell me about your experiences developing cognitive care plans with patients? o What content do you include in the cognitive care plan?

	- o Do you feel confident in your ability to prepare a cognitive care plan? - o How do you decide who to use it with? - o Are there certain patient characteristics that prompt use? - Is there anything that you do to prepare yourself for appointments wherein you discuss cognitive care planning with patients? - What about your current approach to cognitive care planning works well? Why? Can you tell me about a time where your approach worked well for the patient? Why do you think it went well? - What about your current approach to cognitive care planning is not as effective as you would like? Why? Can you tell me about a time where your approach didn't work well for the patient? - What strategies do you use to make cognitive care planning? - Why do those strategies work or not? - Are there any tools you have tried for cognitive care planning? - Can you tell me about the resources (support staff, digital tools, specialists) that you rely on to provide cognitive care and facilitate cognitive care planning? If No, why not? - Do you know what should be included in a cognitive care plan? - Given the choice, who would you like to use it with and why? - What would you need in order to feel prepared to provide cognitive care and create a cognitive care plan? - Will you be interested in providing cognitive care planning? Why?