Improving Effective Mental Health Consultation for Rural Older Adults Living With Depression and Pain:

Learning From the Experiences of Rural Primary Care Physicians

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ABSTRACT

Objective: Novel approaches are needed to assist rural primary care physicians (PCPs) in caring for older patients living with depression and pain who are at an elevated suicide risk. To refine and improve a model of care (PREDICTOR: Pharmacy Identification and Primary Care Intervention of Older Adults at Risk for Suicide), we conducted qualitative interviews with rural PCPs about (1) caring for seniors with depression, pain, and suicidality and (2) their favored procedures for working with psychiatric consultants and the professional characteristics desired in an effective consultant.

Methods: The study utilized a best-practice approach (including double coding) for qualitative interviews with 10 PCPs practicing in rural Pennsylvania. PCPs were interviewed about 3 themes related to caring for older adults with depression, pain, and suicidal ideation and working with psychiatric consultants. The study was conducted from January 2019 to May 2019.

Results: Four primary themes emerged from the interviews. (1) Rural PCPs become comfortable managing depression in older adults out of necessity, but desire collaboration on more complex mental health care. (2) Comorbid depression and pain are universally described as related through a vicious cycle in older adults. (3) Rural PCPs experience varying comfort with prescribing opioids for pain management in older patients, but most prefer not to prescribe opioids, and some refuse to do so. (4) PCPs endorsed the PREDICTOR remote consultation model as potentially beneficial to themselves and their older patients, but strongly desired that the consultant work with them as collaborators and for a collegial professional relationship with the mental health specialist.

Conclusions: Rural PCPs are comfortable with remote consultation for older patients living with depression but desire collegial relationships with these consultants, supporting a collaborative approach. We describe explicit plans for implementing these findings as we refine PREDICTOR, in efforts to promote PCP practice change.

Prim Care Companion CNS Disord 2021;23(2):20m02725

To cite: Karp JF, Hamm ME, Cameron F, et al. Improving effective mental health consultation for rural older adults living with depression and pain: learning from the experiences of rural primary care physicians. *Prim Care Companion CNS Disord.* 2021;23(2):20m02725.

To share: https://doi.org/10.4088/PCC.20m02725

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Rates of suicide are higher in older adults than any other age group.[1] This is particularly true in rural areas, wherein rates of suicidal ideation among patients receiving telemental health care are approximately 40% for all ages,[2] complicated by limited access to mental health specialists.[3] The actual contributors to this age-related heightened risk are medical and psychiatric comorbidities, psychosocial challenges and social isolation, and cognitive changes.[4–7] Foremost among these modifiable risk factors are pain and depression.[8,9] The lifetime prevalence of suicidal ideation among patients with chronic pain is 20%,[10] and among older adults who die by suicide, the most prevalent chronic conditions are depression (odds ratio [OR] = 6.44), bipolar disorder (OR = 9.20), and severe pain (OR = 7.52).[11] A focus on screening and intervention for older adults with depression and chronic pain in rural areas may reduce suicide.

However, the current system for identifying rural patients at risk of suicide and taking action in primary care settings is broken. For example, while most older patients receive care for depression and pain in primary care,[12,13] 51% of older adults who complete suicide visited their primary care physician (PCP) within 4 weeks.[5,11,14] This finding indicates that systematic screening and risk reduction techniques may not be consistently implemented. In rural areas, patients are sicker,[15] which may interfere with the time PCPs can devote to screening and treating neuropsychiatric conditions and preventing suicide. As PCPs adjust to the increased practice of telemedicine in response to the coronavirus disease 2019 (COVID-19) pandemic, and the reduced frequency with which patients are currently seeing their PCP because of social distancing, the routine screening and management of depression and associated risks for suicide by PCPs may not be routinely implemented. Novel approaches to screen for depression and pain by trusted health professionals who have relatively regular telephonic and in-person contact with patients should be considered.

Mental health screening in community pharmacies may be a strategy to identify older adults with depression and pain who are at elevated suicide risk, since patients who are prescribed opioid analgesics for chronic pain must present to the pharmacy at least every month to collect their prescription. Thirty-nine

Clinical Points

- Rural primary care physicians (PCPs) describe comorbid depression and pain as related through a vicious cycle in older adults.
- Rural PCPs value remote geriatric mental health consultation but desire a relational approach that supports collaborative care.
- PCPs prefer written correspondence (versus physician-to-physician calls) with the option for a phone call follow-up if clarification is needed.

percent of adults aged 65 years and older are prescribed ≥5 medications,[16] and this is especially true for those living with depression and chronic pain,[17] which may indicate additional trips to the pharmacy throughout the month. These pharmacy trips present frequent opportunities for screening and possible referral.

Once identified, these complex older adults are best managed in primary care using a multidisciplinary approach that includes mental health consultation and physician education in behavioral health clinical best practices[18,19] along with care coordination.[20] Intervention studies utilizing this approach for older adults in primary care settings have shown encouraging results in reducing symptoms of depression, pain, and suicidal ideation.[21–24] While there are a variety of remote telehealth models available to assist rural PCPs in the care of older patients with these conditions (eg, ECHO [Extension for Community Health Outcomes],[25] telepsychiatry), blending pharmacy identification, remote assessment by a mental health clinician, and focused consultation recommendations provided to both patient and PCP is a unique care approach for rural areas to identify patients at risk and improve outcomes.

We named this rural pharmacy screening and intervention approach PREDICTOR: Pharmacy Identification and Primary Care Intervention of Older Adults at Risk for Suicide. Part of the clinical model development was to qualitatively assess rural PCPs to (1) ascertain attitudes to caring for older adults with depression, pain, and suicidal ideation; (2) determine favored procedures for receiving clinical consultation and identify professional characteristics that PCPs desire in an effective consultant; and (3) use this feedback to refine the PREDICTOR model of screening and intervention. This article describes these qualitative surveys and how we used the results of these surveys to refine our model of remote consultation and collaboration with rural PCPs to improve the care of these complex patients.

METHODS

Overview

These qualitative interviews were the initial part of our treatment development project, as we assessed clinical support needs and refined our consultation model. Rural and suburban PCPs were interviewed about the 3 themes (described previously) related to caring for older adults with depression, pain, and suicidal ideation and working with psychiatric consultants. We followed best practice for qualitative interviews, coding, and analysis, and these interviews were all led by an experienced qualitative researcher (M.E.H.). The University of Pittsburgh Institutional Review Board approved all research procedures as well as our obtaining recorded verbal consent, which was provided by all participants. The study was conducted from January 2019 to May 2019.

Recruitment

Rural PCPs who sent prescriptions to our partnering community pharmacies were targeted via direct letter (n = 111). If agreeable, the interviewer contacted the PCP first via e-mail and then, if necessary, via phone to coordinate the interview. Ten interviews were selected because of the high likelihood of achieving thematic saturation.[26] Recruitment continued until we completed interviews with 10 PCPs (each from a different practice) practicing in rural southwest and central Pennsylvania, and the qualitative interviewer rated a high level of confidence that thematic saturation had been reached.

Interview Guide Development and Data Collection

The interview was developed in an iterative fashion using expert stakeholders from geriatric psychiatry, primary care, geriatric medicine, community pharmacy practice, and an anthropologist with expertise in formative evaluation of behavioral and programmatic interventions and qualitative methodology. Given the experience of the interviewer (M.E.H.) and the consensus from stakeholders, we did not pilot the interview prior to commencing the project.

All interviews were conducted by phone by the same experienced qualitative methodologist (M.E.H.). Interviews lasted approximately 30 minutes and followed a semistructured interview guide, ensuring that participants were asked the same questions, but allowing for individualized follow-up at the interviewer's discretion to more deeply probe our areas of interest. The questions asked in the guide (Supplementary Appendix 1) addressed treatment of depression, suicidal ideation, and chronic pain both individually and as comorbidities in rural older adults, barriers and facilitators to care in the PCP's practice area, and what could be done to improve care. Following these general practice questions, interviewees were given a brief description of the proposed PREDICTOR approach to remote consultation and asked whether they thought this would help in the care of these challenging older patients and how they would like the remote consultation implemented. Interviews were audio recorded and subsequently transcribed verbatim, with any identifying details such as name or exact practice location redacted. PCPs provided verbal consent prior to initiating the interviews and were compensated $100.

Analysis

Analysis followed established principles for conducting a thematic analysis, including transcription of verbal data,

Table 1. Participant Demographics (N=10)[a]

Age, y	Years in Practice	Specialty/Area[b]	No. of Practice Locations/ Solo or Group Practice	Estimated Practice Census	Patients Seen/d	Average Appointment Time, min	% Patients Aged > 60 y
61	32	Family practice/small town	1/group	3,000	15–20	30	40
43	14	Internal medicine/small town, rural	1/solo	3,500	20	20	40
67	38	Family practice/small town, rural	1/group	8,000	17	30	95
56	27	Family practice/suburban[c]	Multiple/group	7,000	21	20	50
53	23	Family practice/rural	1/solo	3,000	20	15	50
58	40	Internal medicine/rural	1/solo	4,000	24	10	80
63	36	Family practice/small town, rural	Multiple/solo	6,000	30	10	20
37	6	Family practice/small town, rural	Multiple/group	Unknown	15	20	33
51	22	Family practice/rural	1/solo	3,100	25–30	30	33
63	36	Family practice/small town, rural	1/solo	3,000	30	15	70

[a]All primary care physician participants were male.
[b]A federally based definition of rurality was not used, such as that utilized by the US Census Bureau or Federal Office of Rural Health Policy. Primary care physician participants shared their own perception of whether they were practicing in a rural, small town, suburban, or urban area.
[c]Although this primary care physician described his practice location as "suburban," all practices were located > 40 miles from any metropolitan area.

familiarization with the data through close reading of transcripts, generating initial codes, refining those codes, searching coded data for themes, and then refining those themes though further review of the data.[27] The interviewer inductively generated a qualitative codebook based on the interview content via a process sometimes known as "editing," in which an analyst reads through available data searching for meaningful segments of text that highlight important concepts.[28] This codebook was then applied to all 10 transcripts by the original interviewer and an additional coder who also had prior qualitative research experience (F.C.). All coding disagreements were adjudicated by the 2 coders to full agreement. The interviewer/primary coder then summarized the data and generated themes, which were then checked for accuracy and expanded by reviewing the codes relevant to each theme. Themes were shared with and corroborated by the secondary coder and then presented to the larger research team of content experts for discussion as a form of investigator triangulation.

RESULTS

Ten rural PCPs participated in the interviews (Table 1). All were male with an average of 27 years of experience in family or internal medicine in small towns and rural settings. A median of 45% of the practice populations were older than 60 years of age. Four primary themes from the interviews are described. Table 2 lists representative quotes for each theme.

Theme 1: Rural PCPs Are Comfortable Managing Depression in Older Adults Out of Necessity, But Desire Collaboration on More Complex Mental Health Care

All PCPs interviewed were comfortable treating and managing depression in older patients. This comfort was borne out of familiarity and necessity. Depression is common in their patients, and a lack of available specialty psychiatric care in their areas resulted in PCPs learning more than they otherwise might have about how to independently manage late-life depression. All PCPs had encountered suicidal ideation enough to know what to do if a patient became suicidal, although at that point they cease to manage care on their own and refer to any available service, including emergency departments, psychiatric hospitals, and psychiatric specialists, depending on what is geographically available. However, nearly half felt they lacked adequate emergency services, and one noted that in the winter, the mountainous terrain could make transit out of the community to reach an emergency department for a suicidal patient especially treacherous. Of those with access to emergency services, almost all noted a lack of personal relationship with psychiatric providers that made coordinated care difficult. The PCPs were uncomfortable managing depression on their own if a patient's depression proved to be treatment resistant or complicated by bipolar disorder or psychosis.

Nearly all PCPs engaged in routine, universal depression screening. Several universally screened for suicidality as well, but it was more common to screen for suicide among patients who were depressed or expressed suicidal thoughts in the past. Despite their general comfort managing depression, the providers frequently described a desire for a psychiatrist colleague with whom they could collaborate on depression care. Some had previously had such a collegial relationship, but their psychiatric colleagues had retired or closed practice, while others had always experienced a dearth of psychiatric collaborators in their areas. PCPs described rarely receiving communication from psychiatrists who do see their patients, possibly due to HIPAA concerns but also because they felt these providers were too busy to send a report and because they might rotate in and out of the community frequently if they were hospital affiliated. Collaborative relationships were described as lightening the burden of mental health care on PCPs and improving patient care.

Theme 2: Comorbid Pain and Depression in Late Life Are Universally Described by Rural PCPs as Related Through a Vicious Cycle

PCPs described chronic pain as ubiquitous in their older patients, and all described chronic pain and depression as interacting with each other in a vicious cycle. Metaphors used to describe that cycle included "chicken and egg" and the notion that depression and pain are "two sides of the

Table 2. Representative Quotes by Theme

Theme	Representative Quotes
Theme 1: Rural PCPs are comfortable managing depression in older adults out of necessity, but desire collaboration on more complex mental health care.	**Question**: Do you feel comfortable managing depression in your practice? **Answer**: Yes. **Question**: Yes, okay and tell me a little bit about why you feel comfortable? **Answer**: Because I deal with it a lot, and I don't have or we don't have a lot of psychiatric support. So, out of necessity and probably just because of the frequency that we deal with it, I've become comfortable with it. (PCP #5)
	Question: Do you feel comfortable managing depression in your practice? **Answer**: Yes, out of necessity if nothing else. Actually, knowing where I wanted to practice in a rural area, I did extra rotations in medical school with … geriatric psychiatry. (PCP #9)
	Question: Do you feel comfortable managing depression in your practice? **Answer**: Well, I think in theory it would always be helpful to hear from a psychiatrist as a part of my ongoing medical education about their approach to that situation and their approach to depression and the elderly in general. I think, ideally, those kinds of discussions, either one on one or in a small group setting, would be wonderful. (PCP #4)
	Question: What challenges do you face in consulting with mental health specialists? So, even assuming you can get in touch with one, are there any challenges to consulting or is there anything that would make consultation easier? **Answer**: Well, to be able to talk to them to give them my take on it, you know, and then to start communicating. I mean, yeah, you might send a note, the office note with your impressions on it, doesn't mean anybody sees it or takes the time to look at it. But actually consulting, you know, actually discussing or actually having access to somebody that I could say, "Well, this is what I'm seeing. I cannot get them to you" because of all these [barriers] that we already talked about. "But this is what I tried, this is what I'm thinking about, what's your take on it?" or whatever I mean I would be more than welcome to participate and get people to work with like a telehealth sort of thing. That would be … we would be made for that here. (PCP #9)
	Question: What challenges do you face in consulting with mental health specialists? So, even assuming you can get in touch with one, are there any challenges to consulting or is there anything that would make consultation easier? **Answer**: Accessing psychiatric treatment here is a disaster. **Question**: Okay. And, so, could you tell me about that? **Answer**: So, all the good psychiatrists have retired or aren't taking new patients or have moved away. And then you get, you know, you'll get something like the local [name of psychiatric hospital redacted] here. They, you know, they get a psychiatrist, they stay for a month or 2 and then they leave. So it, the local mental health [name of psychiatric hospital redacted], they're tremendously backed up. Um, you know, so get 'em in to see a counselor. So, getting something emergently is really difficult. (PCP #1)
Theme 2: Comorbid pain and depression in late life are universally described by rural PCPs as related through a vicious cycle.	**Question**: Could you tell me about how you think depression and pain interact? **Answer:** There's a bidirectional interaction in my opinion between pain and depression in folks who are, um, experiencing depression [and they] are often sensitized to the pain signals coming from various areas of their body. I also think that chronic pain is such that it changes our mentality and likely neurotransmitter levels probably, increasing our risk of depression. (PCP #2)
	Question: Could you tell me about how you think depression and pain interact? **Answer:** Well, I mean my understanding is that, you know, a lot of the same neurotransmitters that are used to, that transmit signals for pain, are also active in depression and so often those 2 things go hand in hand. And, I think it's kind of common sense. I think that if you live in constant pain then you're probably gonna have some element of depression with that. You can't live the same life. You know, your, just your quality of life is less than it once was. That being said, I think that also we see a lot of people who are impacted by, they have physical pain based off of emotion—you know their emotional state. I think that there are, depending on again all the types of pain, that you also have people [who] have migraine stuff that might respond to like amitriptyline. And, so, it makes sense to me that a lot of these medicines can be used for more than one thing … like Cymbalta … you know the fact that you can use these kinds of depression medicines for pain doesn't seem too surprising to me. (PCP #8)
	Question: Could you tell me about how you think depression and pain interact? **Answer:** I think that certainly if you're in chronic pain and not able to get around you're gonna be at high risk and become depressed. So, it's, you know, I see that in the geriatric population as well as [in] younger people. So, I think [they] kind of go hand in hand. (PCP #5)
Theme 3: Rural PCPs experience varying comfort with prescribing opioids for pain management in older patients, but most prefer not to prescribe opioids, and some refuse to do so.	**Question:** Could you tell me about your experience caring for older adults living with chronic pain? **Answer:** Yeah, so that's a tremendous diff—that's a terrible situation um. It, you know, uh, the pain has gotten worse now [so] if you use a narcotic on somebody you're demonized. So, I had an experience with somebody who has, you know, chronic neck pain and also kind of, you know, other things, and I tried to put him on just a little bit of Tylenol with codeine, and I got things from the insurance company saying "Well have you done a urine drug test? And, do you have a drug plan of care?" you know and all this kind of stuff and it's like "This is a little bit of Tylenol with codeine in an 80-year-old." [Laughter] You know like, "Are you kidding?" (PCP #1)
	Question: Could you tell me about your experience caring for older adults living with chronic pain? **Answer:** Well, it's more cumbersome to prescribe an opioid or a benzodiazepine because of the recent changes but it's things that I'm willing to do because I believe very, very strongly that we have a major problem and that doctors should do anything they can to become part of the solution rather than part of the problem. (PCP #3)
	Question: Could you tell me about your experience caring for older adults living with chronic pain? **Answer:** Because of the issues with opioids now, if I inherit new patients who come in on opioids with chronic pain, I am telling them that I do not prescribe opioids for chronic pain. I make it very easy. [Laughter] You may come to my practice, but I do not prescribe opiates for chronic pain. That presents them with a problem because there are very few groups in my area, very few pain medicine physicians, who are accepting new patients with chronic pain. So, I have some people that never come back. I'd say probably 50 to 60 percent, and the remainder, we just work on other strategies. (PCP #7)

(continued)

Table 2 (continued).

Theme	Representative Quotes
Theme 4: Rural PCPs endorsed the PREDICTOR consultation model as potentially useful to themselves and their older patients, but strongly desired that the PREDICTOR team work with them as collaborators.	**Question:** Would this sort of intervention be useful for you and your patients? **Answer:** Very. **Question:** Very? Okay, and what do you think would be useful about it? **Answer:** I think just having things written out clearly, you know, objectively, I think that would be objective and not just emotional, you know, a response. Yeah, yeah, I think it would be very useful. **Question:** Okay. And how comfortable would you be implementing recommendations that you got for patient care through this sort of intervention? **Answer:** I'd be pretty comfortable. **Question:** Okay. And how would you like to receive a report and recommendations on your patients? Like would you value receiving both a written report and a phone call, or would you prefer to just receive one or the other? **Answer:** Well, well, I would prefer written, because I can keep referring back to them. (PCP #6)
	Question: Do you think that sort of intervention would be useful for you and your patients? **Answer:** Yeah, it would be very useful […] because it would bring in another set of eyes and ears. It would help kind of like lessen the load or the risk. You know, look, I got someone else to look at this it's not all on, you know, on me. Get 'em in to counseling quickly, you know, or [make me] a little bit more aware of the resources, because there's probably resources I'm just not aware [of]. And, you know, having a relationship, right? With the psychiatrist so we can actually talk and then I can pick things up or, you know, because yeah this person really needs to go to the next level and especially you're talking a lot of people with pain, right? **Question:** Right. **Answer:** Yeah, well that would be very helpful. (PCP #1)
	Question: Do you think that sort of intervention would be useful for you and your patients? **Answer:** I wouldn't want someone say from the health plan just calling my patients like going through the charts saying, "This person has depression, I'm gonna call them and then see how they're doing." I would not like that. If it was someone that I could call and say, "Hey, here's a patient that maybe I could, you know it'd be nice if someone would check in on them and see how they're doing and let's go." I mean that's a different story. Like I could have, kind of consult them. That I could see some, some cases where that might be helpful, yeah. **Question:** Okay, and would you be comfortable implementing the recommendations that the remote psychiatrist made? **Answer:** I think it depends on what the recommendation is, because sometimes, you know, it would have been in similar situations the recommendations haven't really coincided with what I know about the patient, and I'm not comfortable just throwing that out the window just because someone else talked to them on the phone. (PCP #8)

Abbreviations: PCP = primary care physician, PREDICTOR = Pharmacy Identification and Primary Care Intervention of Older Adults at Risk for Suicide.

same coin." Some providers regarded this vicious cycle as physiologic (ie, they described older depressed patients as being physiologically sensitized to pain or "chronic pain affecting levels of neurotransmitters, leading to depression." Others regarded the vicious cycle as being more circumstantial in nature—ie, if one is depressed, they will focus more on the pain, and if one is in pain, they will be less active, leading to isolation and depression. PCPs occasionally viewed chronic pain as "psychosomatic" in patients who either held stigma toward mental health or whose social networks held such stigmatic beliefs. This was described as mental pain manifesting as physical pain. This physical pain could more easily be expressed to their PCP, who could then acknowledge and treat it.

Most interviewees preferred to treat comorbid pain and depression in these older adults simultaneously, stating that treating them as unlinked conditions is ineffective. Some used treatment of chronic pain as a gateway to treating depression for older patients who held more stigma toward mental health. In such cases, PCPs would address pain first, and then convince patients that the pain was wearing them out and causing depression, and that treating both simultaneously might yield greater success. In addition to using duloxetine (an antidepressant approved by the US Food and Drug Adminsitration for both depression and several pain conditions), PCPs described other treatments for chronic pain including physical therapy, support groups and pets, acetaminophen, non–steroidal anti-inflammatory drugs (NSAIDS), gabapentin, opioids, and, rarely, medical marijuana and cannabidiol (CBD).

Theme 3: Rural PCPs Experience Varying Comfort With Prescribing Opioids for Pain Management in Older Patients, But Most Prefer Not to Prescribe Opioids, and Some Refuse to Do So

Providers were split about opioid prescribing in the context of the current epidemic. A minority of providers felt that in the current climate, they were "demonized" for prescribing opioids, and that older patients prescribed opioids long term were likewise now stigmatized. These providers felt that either older patients do not experience addiction, and thus do not contribute to the crisis, or that it was unfair to older patients who had no other options for controlling pain, citing as examples patients who described that if their pain could not be controlled they would not want to live.

Most providers, however, described avoiding opioids given the current crisis. Some noted that it had become more cumbersome to prescribe opioids due to restrictions from the state and insurance companies. These providers may prescribe a limited number of opioids for acute pain, but none for chronic pain, and some refused to prescribe them for chronic pain even for those patients whose chronic pain

failed to respond to any other treatments. Others were even more conservative and simply refused to prescribe opioids at all; incoming patients on existing opioid regimens were told that they would need to find another provider or be referred to pain management if they wished to continue opioids. Providers who refused to prescribe opioids took this approach because of personal experiences with patients who overdosed, had requested opioids for nonanalgesic or euphoria-inducing use, or had diverted medications or the PCP was concerned about geriatric-specific adverse events such as delirium and falls.

Regardless of their personal opioid prescribing practices, providers noted that treating older patients with chronic pain without opioids is challenging since some comorbid conditions made the use of acetaminophen and NSAIDS unsafe. Physical therapy was discussed as a useful, but limited, treatment due to cost and travel. A few providers explored medical marijuana and CBD (medical marijuana was legalized in Pennsylvania in 2016), although a drawback was relatively high costs due to lack of insurance coverage. PCPs described pain management clinics as often unpleasant for their older patients because they felt like they were viewed as "drug addicts" in the clinics.

Theme 4: Rural PCPs Endorsed the PREDICTOR Consultation Model as Potentially Useful to Themselves and Their Older Patients, But Strongly Desired That the PREDICTOR Team Work With Them as Collaborators

Providers interviewed were nearly universally positive in response to the description of the PREDICTOR approach, which included (1) pharmacy-based screening for older patients with pain and/or depression and case identification as a method to efficiently identify at-risk patients via a frequently accessed and highly trusted community pharmacist when picking up prescriptions, (2) remote patient consultation about depression and pain management by a mental health clinician, and (3) receipt of the report with specific treatment recommendations. Earlier in the interview, some providers identified teleconsult as a potential means of addressing the provider shortage and long wait times that make accessing psychiatric care in their areas so difficult. Some participants felt that PREDICTOR could reduce individual risk and professional burden of caring for older patients' psychiatric and pain problems: PCPs would not be the only physician responsible for the patient. Others thought they might improve their own clinical skills in providing high-quality late-life psychiatric and pain care.

However, providers' vision of potential benefit of PREDICTOR was heavily grounded in the prerequisite that interactions with the remote psychiatrists be relational and promote collaborative care. Provided that the consultation permits them to develop the collegial and collaborative relationship with psychiatrists, they were enthusiastic about participating and thought that their patients could benefit. Providers said that they would feel comfortable accepting recommendations made through the remote consultations, although several cautioned that they would implement them only if they "agreed with" the recommendation. This caveat about buy-in reinforced the need for remote psychiatrists to be aware of current practice patterns of rural PCPs and to be prepared to offer clinical education about best practice for these conditions.

Providers were nearly unanimous in wanting to receive written correspondence from the remote consultants. Written correspondence was preferred to telephonic physician-to-physician communication because it could be referred to repeatedly and because it provided documentation. Providers wanted the option for a phone call follow-up if clarification was needed, and they viewed such calls as a way to establish and maintain a relationship with the consultant.

DISCUSSION

In this qualitative study of rural PCPs' experiences with and approaches to treating depression, pain, and suicidality in older adults, we found that PCPs have become comfortable managing depression due to a dearth of mental health services in their areas, but that they desire collaborators when managing more severe mental health conditions. Rural PCPs identify comorbid depression and chronic pain as linked through a vicious cycle, endorse discomfort with the prescription of opioids to treat pain (whether that discomfort is driven by current restrictions on prescribing or by desire to avoid opioids because of geriatric-specific concerns), and describe being challenged by the lack of other analgesic options for older adults. Furthermore, rural PCPs are comfortable with remote consultation to improve the care of their older patients living with depression and pain, but desire collegial relationships with these consultants that support a collaborative approach to ongoing care.

While most all PCPs said they routinely screened for depression and even suicide in their older patients, the elevated rates of depression, suicide, and pain in rural seniors[29–31] suggest that (1) the PCPs may overestimate their consistency in screening for and treating these conditions or (2) the treatments offered (eg, dose, duration, follow-up) by these rural PCPs do not sufficiently match the patient's diagnoses and clinical needs. Both possibilities support the novelty and clinical effectiveness of the PREDICTOR model of screening and identification in rural community pharmacies with subsequent remote consultation to provide more thorough mental health and pain evaluation and geriatric-specific treatment recommendations (made especially relevant given the COVID-19 pandemic and need for older patients to access screening and treatment via unique providers). In retrospect, it would have been ideal to include more questions about how to better integrate primary care and pharmacy settings and survey the PCPs about additional ways to harmonize care between these 2 clinical sites.

While there are a handful of qualitative studies surveying rural PCPs about the care of depression in both older[32] and younger adults,[33] and no qualitative studies of rural

PCPs' attitudes toward caring for older adults living with pain, to our knowledge, this is the first qualitative study of rural PCPs about their attitudes toward (1) caring for older patients living with these comorbid conditions and (2) the professional characteristics they desire in an effective consultant. PCPs reported a lack of any collegial relationships with local psychiatric services, making care coordination difficult, and that they were dismayed by rarely receiving written communication from psychiatrists who see their patients. We observed that PCPs (1) feel comfortable accepting recommendations that were made through the remote consultations, (2) prefer to receive written treatment recommendations (as opposed to physician-to-physician phone consultations) about their patients, and (3) envisioned that the best relationship they could have with remote consultants is one that is "relational and geared towards collaborative care of patients." The IMPACT (collaborative care of late-life depression)[34] and PROSPECT (collaborative care to reduce late-life suicide and depression)[35] projects both support the clinical benefit of this approach. PREDICTOR attempts to expand collaborative care for depression and pain by shifting case identification from the PCP practice to customers at rural community pharmacies, potentially increasing scalability and the chance to capture a greater number of at-risk patients.

These findings replicate those of a recent qualitative survey[36] of urban and rural PCPs to better understand reasons for poor uptake of a telephone-based intervention for neuropsychiatric conditions. In that study,[36] PCPs desired greater integration of the mental health specialist into their practice. While the PCPs appreciated expert psychiatric recommendations, they rarely changed their practices, and this practice change was negatively influenced by the limited relationship between the mental health specialists and PCPs. Another qualitative study (this of mental health and social service workers) in rural Australia reinforced the notion that the most significant barrier to improving rural mental health across the life span was the lack of communication at the individual, case management, and organizational levels.[37] It appears that clinical trust and a "professional friendship" between PCPs and mental health consultants is essential for PCPs and may be necessary for them to consistently implement the clinical recommendations provided by remote psychiatric consultations.

It is a limitation that all participants were men (by virtue of who responded to our outreach, not as an intentional sampling strategy), and all were drawn from the same region. It is possible that providers of different racial, ethnic, or gender backgrounds or from different rural regions (ie, different states that have a unique local culture of prescribing opioids, recreational marijuana laws, or different blend of family practice versus internal medicine providers) would have highlighted different issues or had different opinions. Future studies should seek a more diverse sample of PCPs. It should also be acknowledged that the self-selected PCPs who participated may reflect a subset of clinicians agreeable to being interviewed; a larger, more systematic assessment may have yielded other opinions.

These replicated observations are precisely the sort of information we hoped to obtain as we develop and test the PREDICTOR model of care. Indeed, the goals of qualitative work in medicine are to ascertain the lived experiences of a specific population about a topic that may improve care. Qualitative interviews provide the groundwork for developing, refining, implementing, and testing interventions and models of care. Using the data obtained from this qualitative project, and in the spirit of iterative intervention development, we have refined the PREDICTOR model in the following ways. First, as part of the written consultation, we explicitly state to PCPs that (1) we view our roles as collaborators in the care of these rural older patients, but ultimately the PCP remains the physician of record and care resides with the PCP; (2) these are clinical recommendations for the PCP to consider, and if they disagree with any or are uncomfortable implementing a suggestion, we would like the opportunity to discuss other treatment options; (3) we are available to the PCP to provide ongoing clinical decision support and are available for "curbside consults" by e-mail or phone; and (4) we will provide regular opportunities for clinical education via planned webinars to further develop trust and professional relationships between our clinical research team and these rural PCPs.

Community pharmacies are a trusted clinical space at which patients from many different PCP offices visit on a regular basis to pick up prescriptions. Given the lack of a common electronic medical record (of note, none of the PCP participants shared an electronic medical record system with us), screening at community pharmacies based on prescription status and then providing decision support to the prescribing PCPs may be more efficient than trying to screen from a variety of disconnected PCP practices. As we move forward with testing PREDICTOR on a larger scale, the lack of a shared electronic medical record across primary care practices will require implementation of creative communication solutions to assure PCPs receive remote mental health consultations in a consistently useful manner.

Submitted: September 22, 2020; accepted September 29, 2020.

Published online: March 18, 2021.

Potential conflicts of interest: **Dr Karp** has received medication supplies for investigator-initiated trials from Pfizer and Indivior within the last 5 years, has received compensation from Otsuka for development and presention of a webinar from Otsuka (disease state, not product focused), and serves as an advisor to NightWare and Aifred Health. **Drs Karp** and **Reynolds** receive compensation from American Association for Geriatric Psychiatry for service on the editorial board of *The American Journal of Geriatric Psychiatry*. **Dr Reynolds** has received research support from the National Institutes of Health (NIH), the Patient Centered Outcomes Research Institute, the Center for Medicare and Medicaid Services, the American Foundation for Suicide Prevention, the Brain and Behavior Research Foundation, and the Commonwealth of Pennsylvania and Bristol-Meyer Squib and Pfizer have provided pharmaceutical supplies for his NIH-sponsored research. **Drs Hamm**, **Maher**, and **Kincman**; **Ms Cameron;** and **Mr Lightfoot** report no conflicts of interest related to the subject of this article.

Funding/support: This project was supported by Grant SRG-0-200-17 awarded to Dr Karp from the American Foundation for Suicide Prevention.

Role of the sponsor: The funder had no role in the design and conduct of the study; collection, management, analysis, and interpretation of

data; or preparation, review, or approval of the manuscript.

Disclaimer: The content is solely the responsibility of the authors and does not necessarily represent the official views of the American Foundation for Suicide Prevention.

Supplementary material: See accompanying pages.

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Supplementary material follows this article.

THE PRIMARY CARE COMPANION
FOR CNS DISORDERS

Supplementary Material

Article Title: Improving Effective Mental Health Consultation for Rural Older Adults Living With Depression and Pain: Learning From the Experiences of Rural Primary Care Physicians

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DOI Number: https://doi.org/10.4088/PCC.20m02725

List of Supplementary Material for the article

1. Appendix 1. Semi-Structured Interview Guide

Disclaimer

This Supplementary Material has been provided by the author(s) as an enhancement to the published article. It has been approved by peer review; however, it has undergone neither editing nor formatting by in-house editorial staff. The material is presented in the manner supplied by the author.

Appendix 1. Semi-Structured Interview Guide

To begin with, I'd like to ask some general questions about you and your practice:

1) How old are you?
2) How many years have you been practicing medicine?
3) What is your specialty (i.e., internal medicine, family medicine)?
4) Do you have subspecialty training (i.e., in geriatrics or sports medicine)?
5) Do you work in a solo practice or a group practice?
6) Do you primarily work in a rural, urban, suburban or small-town setting, and/or do you work in multiple locations?
7) How many patients do you estimate are in your practice?
8) On average, how many patients do you see every day?
9) On average, how much time do you spend with each patient?
10) What percentage of your patients are > 60 years old?
11) I can guess this, but to be thorough, what is your gender?

Now I'd like to move into more open-ended questions.

1) Tell me how you approach caring for older patients with depression? (follow-up questions – Do you routinely screen for depression or other mental health problems? Do you feel comfortable managing depression in your practice (why or why not?)? What is your general approach for treating depression? (follow-up question – what medications do you usually use for first- and second-line treatment?).
2) Tell me about your experience caring for older adults living with chronic pain. Are there any unique challenges to treating older adults living with chronic pain? If so, what are they?

3) Given concerns about opioid misuse and overdose and the opioid epidemic, have you adjusted your prescribing patterns for opioids? If so, what adjustments have you made?
4) Tell me about how you think depression and pain interact? These conditions are frequently comorbid – what is your approach to treating them when they are both present?
5) Tell me about your suicide screening practices. (follow-up question: Do you screen every patient for suicide? If not, when do you screen for suicide?)
6) Tell me about an experience in which you had a suicidal older adult in your office. What did you do to help a patient who expressed suicidal thoughts or behaviors (for example, did you call 911, involve the family, screen for firearm access, screen for stockpiling medications)? If you've never had such a patient in your office, tell me what you think you would do if you did? How well-prepared do you feel for these situations?
7) Tell me about getting your older adults with depression, pain, and possibly suicidal ideation into specialty treatment. Do you have access to mental health specialists in your area? Do you have geriatric mental health specialists in your area? What is the process (i.e., and wait time) to get a patient into care? Do you receive written or verbal feedback or a consultation report from the mental health specialist about your patient's care and the expert's clinical recommendations?
8) Can you identify other barriers to care that may interfere with an older adult seeing a mental health specialist? What could be done to improve access to and quality of specialty mental health care other specialty treatment in your area? (For example, referring patients to a pain clinic or physical therapy to address pain issues).
9) What challenges do you face in consulting with mental health specialists? What would make such consultation easier?
10) What type of information would you find most helpful in your care of patients with depression, pain, and risk for suicide? (For example, information about local mental

health resources/services, information about safe pain medication use, polypharmacy/medication interactions, suicide protocols/addressing suicidal thoughts/302 procedures, etc.).

11) We are planning an intervention in which researchers would assess the mental health and pain care needs of older patients by phone, and communicate the results of these "remote" assessments to the patients' physician, along with specific clinical recommendations? Would this sort of intervention be useful for you and your patients? Why or why not? Tell me about how comfortable you would be implementing these recommendations.
12) How would you like to receive such a report and recommendations? Would you value receiving both a written report in addition to a phone call from the psychiatrist to clarify the recommendations, discuss the patient, and permit you to ask questions about their mental health and pain care?
13) Do you have any other thoughts or concerns about how to improve the mental health and pain care and reduce risk for suicide in older adults living with these conditions?
14) Is there anything else that we didn't cover that you think it might be important for us to know?