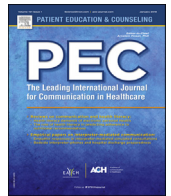




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Stakeholder views regarding a planned primary care office-based interactive multimedia suicide prevention tool

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ABSTRACT

Objectives: Nearly half of all men who die by suicide visit a primary care clinician (PCC) in the month before death, yet few disclose suicide thoughts. We solicited stakeholders' views to guide development of a tailored multimedia program to activate middle-aged men experiencing suicide thoughts to engage with PCCs.

Methods: We conducted semi-structured interviews with 44 adults self-identifying as: suicide attempt survivor; family member/loved one of person(s) who attempted or died by suicide; PCC; non-PCC office staff; health administrator; and/or prevention advocate. We coded recorded interview transcripts and identified relevant themes using grounded theory.

Results: Two thematic groupings emerged, informing program design: *structure and delivery* (including belief the program could be effective and desire for use of plain language and media over text); and *informational and motivational content* (including concerns about PCC preparedness; fear that disclosing suicide thoughts would necessitate hospitalization; and influence of male identity and masculinity, respectively, in care-seeking for and interpreting suicide thoughts).

Conclusion: Stakeholder input informed the design of a primary care tailored multimedia suicide prevention tool.

Practice Implications: In revealing a previously unreported barrier to disclosing suicide thoughts to PCCs (fear of hospitalization), and underscoring known barriers, the findings may suggest additional suicide prevention approaches.

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1. Introduction

Nearly 1 million people worldwide die by suicide annually [1]. In the United States (U.S.), about 80% of suicide deaths occur in men, and rates have increased by 31.6% among 35–64 year-old men (hereafter, middle-aged men) since 1999. Suicide is now the fourth leading cause of death in this group in the U.S., ahead of diabetes, pneumonia, and other common conditions, at staggering human and economic costs [2–5]. Similarly sobering findings have been

observed globally [6]. Thus, reducing suicide among middle-aged men is a high priority worldwide [1,2].

Nearly half of all adults who die by suicide see a primary care clinician (PCC) within the month prior to death; about 20% see a mental health specialist [7,8]. Yet most clinical efforts to reduce suicide target specialty mental health settings [9–14]. Such approaches have value, but do not reach most at-risk individuals, suggesting the critical role of primary care initiatives [15,16].

An impediment to primary care suicide prevention is that in current practice the topic is rarely broached by individuals with thoughts of suicide. Prior research indicates that patients generally are open to clinician inquiry about suicide thoughts [17], yet clinicians inquire rarely and inconsistently [18,19], even when risk factors are present [20–27]. Indeed, currently PCCs may detect only

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10–20% of suicidal patients [19,28]. Factors limiting middle-aged men's disclosure of suicide thoughts to PCCs include gender-linked norms [29,30]; stigma [31,32]; the belief that PCCs are not equipped to deal with mental health issues [33]; and competing health concerns in brief visits [34]. PCCs also struggle with competing demands in brief visits, and many lack up to date training and resources to engage optimally with suicidal patients [35–40].

While clinician-targeted risk assessment skills training interventions have increased detection of suicidal patients, still many visiting trained clinicians go undetected, indicating room for improvement [19]. No primary care interventions have sought to address reticence to disclose suicide thoughts by activating affected patients to disclose or signal their receptiveness to discussing the thoughts with a clinician, thereby prompting clinician inquiry and intervention.

We previously developed a personally-tailored interactive multimedia program aimed at encouraging adults with depression symptoms to disclose their symptoms to a PCC and increase treatment receptivity. Used in primary care offices before visits, the program went beyond the typical depression screener in providing motivational video and text messages tailored to patients' symptom levels, visit agenda, perceptions about depression (e.g., causes, stigma), and comfort discussing mental health. Patients controlled how much material to view, a motivation-enhancing feature [41]. In a randomized controlled trial (RCT), beyond other salutary effects the program led to greater discussion of suicide thoughts, despite containing only one screen addressing suicidality [42,43]. Given these findings, we envisioned a new tailored multimedia program – Men and Providers Preventing Suicide (MAPS) – that would activate middle-aged men with recent thoughts of suicide (regardless of depression status) to disclose the thoughts to their PCC. We envisioned elements of the program that might increase receptivity to participating in three months of integrated follow-up collaborative care, delivered telephonically by a therapist working with the PCC and a psychiatrist. Together these approaches were theorized to remove barriers in addressing suicide thoughts among middle-aged men [44,45].

Here, we describe a qualitative study using semi-structured interviews to solicit the views of stakeholders in primary care-based suicide prevention. The study was conducted to guide development of MAPS before finalizing the program and examining its effects in a RCT [46]. We had two aims: (1) to verify (or not) that factors previously reported to influence patient disclosure of, and PCC inquiry about, suicide thoughts remained relevant to address; and (2) to discover additional themes relevant to program design not elaborated in prior studies. The latter aim was important since few studies had solicited stakeholders' views related to suicide prevention, and none had focused on elucidating factors influencing disclosure of and engagement in treatment for suicide thoughts among middle-aged men in primary care [30,33,47–51].

2. Methods

2.1. Design and ethical approval

Study design and ethical approval was provided by the University of California Davis (UCD) Institutional Review Board (protocol #752713). All participants gave their informed written consent to participate.

2.2. Eligibility criteria, exclusion criteria, and recruitment

From June 2015 to March 2016, we recruited and conducted semi-structured individual interviews with adults aged 18 and older who belonged to one or more of the stakeholder categories in Table 1 and met the inclusion criteria listed there. Suicide attempt survivors, family members/loved ones of person(s) who attempted or died by suicide, and local suicide prevention advocates were recruited by sending an email message soliciting study participation to liaisons at several partner agencies and asking them to disseminate the message to their clientele. The organizations contacted were: American Foundation for Suicide Prevention, Northern California [52]; California Mental Health Services Authority [53]; Friends for Survival [54]; Men's Health Network [55]; National Alliance on Mental Illness, Santa Clara County [56]; Sacramento County Behavioral Health Services [57]; and Turning Point Community Programs [58]. For individuals contacting the study recruitment line, research personnel completed eligibility screening and, if appropriate, enrollment.

We targeted specific PCCs, other primary care office staff, and health system administrators by email and telephone for study enrollment, based on our awareness or trusted colleagues' knowledge of their roles, experiences, and ability to provide thoughtful, candid comments relevant to the study focus. We sought representation of such individuals from the UCD Health (Sacramento area) and Palo Alto Medical Foundation (San Francisco bay area) systems, both slated to participate in a subsequent RCT of MAPS [46].

2.3. Study conceptual framework

We drew on theory relevant to *patient activation* in conceptualizing the design and deployment of MAPS. *Activated* patients have the knowledge, skills, and confidence needed to carry out behaviors required to self-manage their health concerns successfully [59–61]. Further, suboptimal activation and self-management behaviors can be improved with targeted interventions that enhance relevant knowledge, skills, and confidence [61]. In U.S. national samples, activation levels are lower in middle-aged to older versus younger adults, in men versus women, and in persons with mental health versus other health concerns [62]. Thus, middle-aged men with suicide thoughts might be expected to benefit substantially from activating interventions.

Table 1
Stakeholder Categories and Eligibility Details.

Category	Eligibility details
Individuals who previously attempted suicide	Suicide attempt(s) occurred ≥ 3 months prior to screening for study participation
Individuals with family member(s) or loved one(s) who attempted or died by suicide	Family member(s) or loved one(s) suicide attempt(s) or death(s) occurred ≥ 1 year prior to screening for study participation
Health system administrative leaders (e.g., medical directors)	Administrative leadership position held in the UCD or PAMF health system
Primary care clinicians	Practicing family physician, general internist, primary care nurse practitioner or physician assistant in a UCD Primary Care Network or PAMF health system primary care office
Non-PCC primary care office staff	Employed as staff in a UCD Primary Care Network or PAMF health system primary care office
Suicide prevention advocates	Self-identified role in local, regional, or California statewide efforts to reduce suicide

Abbreviations: PAMF, Palo Alto Medical Foundation; UCD, University of California Davis.

In designing MAPS, we included elements that prior work suggested would be likely to enhance knowledge, skills, and confidence around disclosure and self-management of suicide thoughts (Fig. 1, box 1) [41–43,63,64]. We designed MAPS for use by men with recent suicide thoughts in primary care offices while waiting for a visit, aiming for a 15–20 min usage time, commensurate with the typical office wait time in the U.S. [65]. We anticipated that use of the program would activate men to disclose and discuss their suicide thoughts with their PCC during the visit, and would indirectly increase PCC inquiry regarding suicide thoughts (Fig. 1, box 2). In turn, we hypothesized that these patient and PCC behaviors would facilitate both the detection of men with recent suicide thoughts and their engagement in treatment (Fig. 1, box 3).

2.4. Interviews

Each stakeholder completed a 45–60 min semi-structured individual interview, conducted by telephone or in person, per participant preference. Each interview was conducted by a team member experienced in qualitative research (DP), and facilitated using a semi-structured interview guide (Supplemental Appendix). The interview guide was developed based on the study aims and conceptual framework (Fig. 1), and the clinical and research backgrounds of the team members (primary care health services, sociology, psychiatry, psychology). The guide explored strategies and challenges to addressing suicidality, including factors relevant to middle aged men and primary care offices (e.g., patient flow, treatment resources). Participants viewed and listened to a description of six screen shots from our prior tailored depression activation program, including the single screen addressing suicide thoughts [42,43]. All interviews were digitally audio-recorded and transcribed.

2.5. Qualitative data analysis

After removing personal identifying information, interview transcripts and field notes were imported into ATLAS.ti version 7 (ATLAS.ti Scientific Software Development GmbH). We then employed a multistage inductive approach to coding, iteratively reviewing transcripts as well as field notes (as a check on the fidelity of the transcript data) for persistent themes related to the study's conceptual framework and guiding interview questions. All transcripts were independently reviewed and coded by two members of the study team (DP and BB). Each coder created

margin notes, assigning descriptive labels to key passages. Similarly-labeled passages were grouped and thematically labelled. The few discrepancies in thematic coding were resolved by the reviewers through discussion of the cases in question and, when necessary, via consultation with a study team clinician (AJ).

We focused on themes identified based on shared experiences apparent across stakeholder categories (Table 1). Corroborating evidence for each theme was obtained through iterative and systematic sorting and comparing of interview data by the two coders across stakeholder categories, a validity-enhancing process known as triangulation [66]. To further enhance validity, the coders searched simultaneously for discordant passages that might disconfirm thematic coding.

3. Results

3.1. Sample characteristics

Forty-four individuals were interviewed; Table 2 shows their socio-demographic characteristics by stakeholder category. Individuals who had previously attempted suicide and family members/loved ones of individuals who had attempted or died by suicide were predominantly middle-aged, white, and well-educated, with wider variation in annual household income (Table 2). Most PCCs, other primary care office staff, and health system administrators (6 of 8, 6 of 6, and 8 of 9, respectively) were recruited from the UC Davis site.

Beyond their self-designated primary stakeholder category, 28 (64%) of the participants identified as belonging to one or more secondary categories. Accounting for both primary and secondary self-designations, the numbers of individuals in each category were: suicide prevention advocate, 20; family member/loved one of person(s) who had attempted or died by suicide, 14; PCC, 13; person who had previously attempted suicide, 11; health system administrator, 10; primary care office personnel, 9.

3.2. Themes in stakeholder feedback regarding MAPS

Two broad thematic groupings emerged from stakeholder interviews: themes related to *MAPS structure and delivery*, and themes concerning *MAPS information and content*.

3.2.1. MAPS structure and delivery

Within this grouping, three themes emerged across stakeholder groups. The first was the *belief that MAPS could aid in suicide*

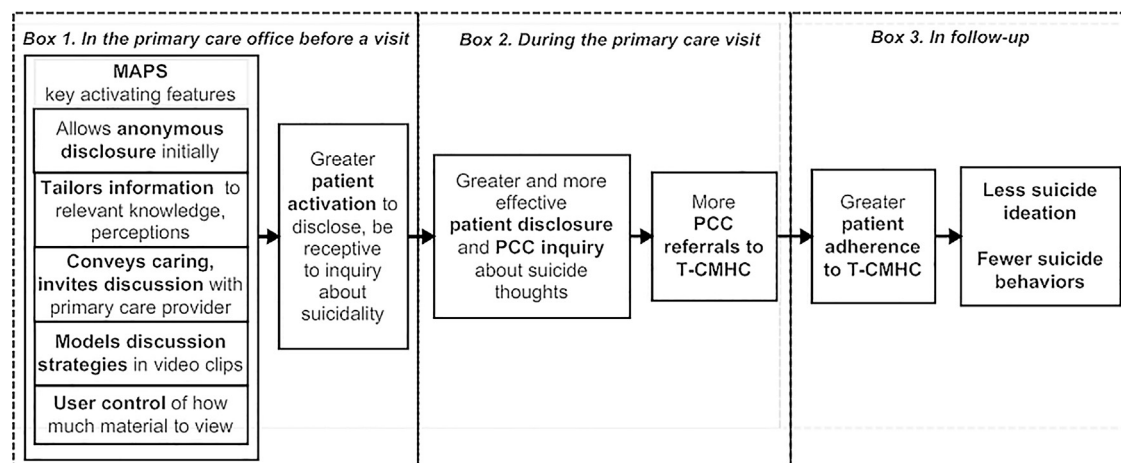


Fig. 1. Conceptual Model Guiding Development and Deployment of the Men and Providers Preventing Suicide (MAPS) Program. PCC, primary care clinician; T-CMHC, telephonic collaborative mental health care.

Table 2

Socio-demographic Characteristics of Study Participants by Self-Designated Primary Stakeholder Category.

Characteristic	Self-designated primary stakeholder category ^a				
	Person who previously attempted suicide (N = 11)	Family member/loved one of person who attempted or died by suicide (N = 9)	Primary care clinician (N = 8)	Other primary care office personnel (N = 6)	Health system administrator (N = 9)
Age, years, mean (SD)	50 (15.8)	56 (9.9)	50 (9.2)	48 (9.6)	50 (11.3)
Male gender, no.	4	2	5	1	7
Non-Hispanic White, no.	7	9	3	4	9
Any graduate level education	5	4	8	1	9
Annual household income, no.					
<\$35,000	4	1	–	–	–
\$35,000 to <\$75,000	3	2	–	–	–
>\$75,000	3	5	–	–	–
Decline to answer	1	1	–	–	–

Abbreviation: SD, standard deviation.

^a One additional individual – a 54 year-old, Non-Hispanic White woman with graduate level education – primarily self-identified as a suicide prevention advocate.

prevention. Stakeholders agreed that a personally-tailored multimedia intervention to address male suicide would provide a useful opportunity for patient education and activation. PCCs believed MAPS would prompt men with suicide thoughts to discuss them more often and earlier in visits, giving clinicians an opportunity for effective intervention. Suicide prevention advocates, men with previous suicide attempts, and family members/loved ones of such men valued the immediate and discrete feedback that would be provided by MAPS. Many participants welcomed that the tailored features of the program would allow patients to move at their own pace, and would provide personalized feedback, allowing users to “see themselves” in the materials. Interaction with the computer was perceived as a low-threat approach, with potential to mitigate the self-stigma of suicide thoughts and stimulate reticent men to discuss them with the PCC.

The second theme in this grouping was *the desire for plain language information*. Many stakeholders noted their perceived utility of MAPS was prompted partially by its use of plain language. Men with prior suicide attempts and clinicians described program messaging as “familiar” and “accessible.” The third theme in this grouping was *the need to emphasize media over text*. Some suicide prevention advocates worried that our initially planned approach was too text-heavy, particularly for men suffering with depression, which could impair attention to written passages. Persons across stakeholder groups emphasized that greater use of graphical and video elements might be more effective and reduce the need for text. They also indicated that having more images throughout the program would enhance relatability and, coupled with accessible language and tailored feedback, create the conditions for patient activation and reduce user worries about stigmatization by PCCs.

3.2.2. MAPS informational and motivational content

The four themes in this grouping were: 1 – *concerns about PCC preparedness* to engage effectively with and care for men with suicide thoughts; 2 – *the fear that disclosing suicide thoughts to a clinician necessitates psychiatric hospitalization*; 3 – *the influence of male identity* (how men “present themselves”) in *care seeking for suicide thoughts*; and 4 – *the influence of masculinity* (qualities traditionally associated with men in the prevailing U.S. climate) in *interpreting suicide thoughts*. Table 3 provides illustrative quotes for each theme.

Stakeholders in all groups shared *concerns about PCC preparedness* to effectively engage with and care for suicidal men. Interviewees were doubly concerned that successful activation of such men through use of the MAPS program could exacerbate

these issues. There was also broad support of the notion that PCCs generally do not receive sufficient training in how to approach discussions with patients who have suicide thoughts. PCCs cited the relatively low frequency at which they encounter such patients in daily practice as a barrier to providing effective care. The clinicians also pointed to inadequate time to discuss suicide thoughts during brief visits and to a lack of access to up-to-date, reliable, and effective resources to help them with managing suicidal patients once detected. Both men with prior suicide attempts and clinicians made comments indicating that lack of PCC training and preparedness sometimes leads to suboptimal interactions with patients who have suicide thoughts, triggering the patient *fear that disclosing suicide thoughts to a clinician necessitates psychiatric hospitalization* – even in situations when hospitalization is not required.

Within Theme 3 – *influence of male identity in care-seeking for suicide thoughts*, two sub-themes emerged: 3a – *presenting one's self as a man (socialization)*, and 3b – *feeling the real or perceived negative consequences of expressing vulnerability as a man (stigmatization)* (Table 3). Stakeholders believed these aspects of male identity were important to men's experience and created resistance to seeking care for suicide thoughts and, therefore, were critical to address in MAPS.

Two sub-themes emerged within Theme 4 – *influence of masculinity in interpreting suicide thoughts*, based on comments across stakeholder groups: 4a – *self-isolation as a way of coping with suicide thoughts*, and 4b – *interpreting suicide thoughts as “normal”* (Table 3). Isolation in men who attempted or died by suicide was most often commented on by family members/loved ones, who explained that their male relative had dealt with suicide thoughts and concurrent mental health issues by separating themselves from others. Some family members felt that for their loved one, this may have been based on a feeling that they did not belong or were a burden. As a result, the family members had difficulty in recognizing the suicidality until late in the process. Some men who had attempted suicide indicated that for long periods in their lives, before receiving treatment, they had viewed having suicide thoughts as “normal” and “just me, just (an aspect of) who I am.”

3.2.3. Conflicting views regarding the assessment of suicide intention in MAPS

There was uncertainty and disagreement across stakeholder categories regarding the use of MAPS to assess suicide intent. Some argued MAPS should assess suicide intent. For example, a family member said, “Patients may not be honest about thoughts of taking

Table 3

Themes Emerging from Stakeholder Perspectives and Concerns Related to MAPS Informational and Motivational Content.

Theme	Subthemes (where applicable) and illustrative Interview excerpts
1. Concerns about primary care clinician preparedness to engage effectively with and care for men with suicide thoughts	<p>● <i>A health system administrator</i>: "It seems like more training needs to be available for providers in the circumstance, in just the sensitivity and how they interact with the individual patients . . ."</p> <p><i>Interviewer</i>: "What do you think the training would involve, or what would some of those elements be?"</p> <p><i>Administrator</i>: "Simulations with patients who are in this or have gone through a similar circumstance . . . actually practicing these conversations in terms of assessment and follow-up steps . . ."</p> <p>● <i>A family member/loved one</i>: " . . . I know that some primary care doctors aren't educated in this kind of thing so they're not going to be able to maybe provide the support." The same family member also indicated the need for PCCs to involve family members and other supportive social contacts in intervening: " . . . part of me really believes that the doctors . . . really need to be open to what the person who is living with (<i>the mentally ill person</i>) is seeing . . ."</p> <p>● <i>A man who previously attempted suicide</i>: "There's a way they go to a level like a very superficial level . . . this look of fear that flashes through their eyes. If the patient happens to be looking at the doctor, it's a clear giveaway . . ."</p> <p><i>Interviewer</i>: "Well, so, what would be especially helpful for you at that point? What would help look like?"</p> <p><i>Man</i>: " . . . the person has just opened themselves up. They're very vulnerable at that moment. The doctors usually jump right into, 'We need to get help for this person right away, because I'm not a psychiatrist' . . . if they could just hold on a little longer by asking a few more (questions)..."</p> <p>● <i>Interviewer</i>: " . . . what kind of things might you say are important for a primary care provider to discuss or to bring up, or to address that might actually prompt a conversation?"</p> <p><i>A different man who previously attempted suicide</i>: " . . . I guess my answer then would be for primary care is just to ask, 'Do you ever have any suicidal thoughts? What are those thoughts like? How often do you have them?' Because I never had a primary care doctor ask me that. I didn't really get any help for it until I checked myself into the hospital after years of having those thoughts."</p>
2. Fear that disclosing thoughts of suicide to a clinician necessitates psychiatric hospitalization	<p>● <i>A primary care clinician</i>: "The only way that I feel we would consistently approach the situation is to call 911 if someone were actively suicidal. Or if we're on the phone with someone, and they express suicidal thoughts, we have the police go reach out to them."</p> <p>● <i>A man who previously attempted suicide</i>: " . . . they start with, 'Do you feel like hurtin' yourself?...' Really, I'm gonna tell you . . . after I've seen wA <i>primary care clinician</i>: " . . . The patient says, 'Well, I have thought about if I was going to do it, I would maybe hang myself.' Then the patients will tell me, 'Yeah, then, the doctor will leave the room, and then 15 minutes later, the doctor will come back with a police officer. hat you guys do (<i>referring to involuntary psychiatric hospitalization</i>)?'"</p> <p>● . . . What some doctors will do is they just hear that 'Oh my God, this person has a way that they're going to kill themselves. I need to get a police officer here right now.'"</p>
3. Influence of male identity in care-seeking for suicide thoughts	<p>Subtheme a: presenting one's self as a man (socialization)</p> <p>● <i>A family member/loved one</i>: "Men they are not taught to emote . . . it's a sign of weakness to say you need help."</p> <p>● <i>A primary care clinician</i>: "What struck me was that he was sweating profusely. Then it finally came out that he had a plan that day. He told me he was Japanese and in their culture people would . . . people lost their self-esteem if they are unable to provide for their family . . . He couldn't work well and was about to lose his job, etc."</p> <p>● <i>A primary care clinician</i>: "We have these strong values with regards to family and supporting our families and things like that."</p> <p>● <i>A primary care clinician</i>: "We are in this culture where men are supposed to be the breadwinner of the family, strong, take care of their wives and children, and yet just plow through their physical symptoms. . . . because of the way you were raised up you're supposed to not have all these symptoms. These symptoms can be overwhelming and that's pushing you to consider your life."</p> <p>Subtheme b: feeling the real or perceived negative consequences of expressing vulnerability as a man (stigmatization)</p> <p>● <i>A man who previously attempted suicide</i>: " . . . one of the challenges, I should say, is when you are suicidal or having ideations or are on the beginning of serious depression, I think that the number one challenge, outside of what we've talked about, it's the barrier of stigma."</p> <p>● <i>A primary care clinician</i>: "Because so many patients I've spoken with have said they're afraid of feeling judged or they will get something out and then they'll be judged."</p> <p>● <i>A suicide prevention advocate</i>: "I think the most critical component for suicide would be actually some information on the numbers of people who-normalizing it. Something to help normalize that fact that you're actually feeling this and reduce stigma that we talked about earlier."</p> <p>Subtheme a: self-isolation as a way of coping with suicide thoughts</p> <p>● <i>A family member/loved one</i>: "He had friends and people that he could talk to but he would often not want to reach out for support in those times of need because he didn't want to burden anybody."</p> <p><i>Interviewer</i>: "Do you know what kinds of things may have made him [your son] feel uncomfortable about addressing those concerns?"</p> <p><i>Family Member</i>: "Just feeling like a burden or feeling like he would be perceived as weak."</p> <p>Subtheme b: interpreting suicide thoughts as "normal."</p> <p>● <i>A man who previously attempted suicide</i>: "Although this sounds strange, I just thought that that (<i>having suicide thoughts</i>) was normal. I've never really talked to anybody about it. I just thought everybody just had those thoughts. I had them a lot. Driving down the road thinking of driving off the road. Different ways to hurt myself. I just thought that was normal."</p> <p>● <i>A man who previously attempted suicide thoughts</i>: " . . . the depression is something real and it's a medical issue that I need to take care of because prior to that I always thought I had—it's just me,</p>
4. Influence of masculinity in interpreting suicide thoughts	

Table 3 (Continued)

Theme	Subthemes (where applicable) and illustrative Interview excerpts
	that I—it was just me, you know, and I had to try to take care of it on my own. That was really painful, but at the same time I—so I think I just wasn't aware of the obvious."

their own life . . . if questions about suicidal ideation are presented separately from (intent) questions." Others asserted MAPS should not assess suicide intention. One individual who had attempted suicide stated, "Why ask all of the 'little questions?' Just start by asking one big question: 'Have you thought about taking your own life?'" Others expressed concerns about unintended consequences of assessing suicide intent with MAPS. Some PCCs worried this might reveal the need for treatment and resources not readily accessible in their offices. Interviewees from various categories believed that asking about suicide intent in MAPS could reduce patient willingness to discuss suicide thoughts with a clinician, and might exacerbate suicidality.

4. Discussion

Our analysis revealed two groupings of themes relevant to MAPS, broadly supported by comments across stakeholder categories, addressing its structure, delivery, and content. Some of the structure and delivery-based themes have been reported previously in the context of other educational and motivational interventions. These included the desire to receive relevant information in plain language, and the preference for use of media (e.g., video) over on- screen text alone [67]. By contrast, the theme affirming the resonance and perceived efficacy of MAPS was a novel finding. Stakeholders across groups believed that a personally-tailored multimedia program like MAPS could be a useful tool for activating men with suicide thoughts. They felt the program, if deployed in primary care offices immediately before visits, would effectively encourage men to discuss suicide thoughts with their PCC, and would enhance their openness to treatment aimed at reducing suicide thoughts.

Our second grouping of themes, MAPS informational and motivational content, shed light on nuanced aspects of the suicide experience for men, including self-expectations and perceptions about PCC responses to men with suicide thoughts. Here, another previously unreported theme emerged: the fear that disclosing suicide thoughts to a PCC must always result in hospitalization. Concerns about mandatory hospitalization after disclosure of suicide thoughts have been reported by patients cared for in other settings (e.g., emergency departments). However, to our knowledge this is the first time such concerns have been identified around disclosure in primary care. Some men in our study who had previously attempted suicide specifically cited the fear of mandatory hospitalization as a likely barrier to their disclosure of suicide thoughts to a PCC, should such thoughts recur. In response to this theme, we added an item to the MAPS tailoring questionnaire asking whether the user agreed or disagreed with the statement: "A man who tells his doctor about thoughts of suicide must always be admitted to a psychiatric hospital." We also added a brief video patient vignette to the program (presented only to users agreeing with the statement about hospital admission) addressing this concern and clarifying that hospitalization usually is not necessary.

Many of the remaining content-related themes emerging from our analysis resonated broadly with the findings of prior (mostly non-qualitative) studies, and provided general support for planned MAPS program elements and approaches. The influence of masculinity and male identity in interpreting and care-seeking for suicide thoughts was a strong and pervasive theme, across

stakeholder categories. Beyond being consistent with prior work on mental health care-seeking in men [29,30,68,69], this theme also resonates with the concept of perceived burdensomeness to others, a key construct in the Interpersonal Theory of Suicide that is predictive of suicide behaviors [70]. Stakeholders' observations that men are generally taught not to express emotion and that some men with suicide thoughts may lack the words to express what they are experiencing prompted further adjustments to MAPS. This included modifying a patient video vignette to include a segment showing a man during his primary care visit telling his clinician about recent suicide thoughts, normalizing and role-modeling the disclosure process for men who might otherwise struggle with this task.

The theme of concerns about PCC preparedness to engage effectively with activated men who have suicide thoughts also echoed the findings of prior studies [18,19,33,71]. Here again, we felt that most of the comments supporting this theme underscored the appropriateness of planned MAPS elements (e.g., a video clarifying that all PCCs receive training in and frequently care for mental health concerns including suicide thoughts). However, responding to comments about lack of appropriate treatment and follow-up resources in primary care, we developed one additional video, presented to all men using the program. It depicted a man who previously had suicide thoughts describing his favorable experience with collaborative mental health care (offered to all men participating in the subsequent RCT of MAPS as noted previously), summarizing the team members, their roles, the process, and how the approach contributes to resolution of suicide thoughts [72–74].

There was uncertainty and disagreement among stakeholders regarding whether MAPS should include questions assessing suicide intent. Ultimately, we included such items in the program, for two reasons. First, while some stakeholders worried that asking about suicide intent could reduce a man's likelihood of disclosure of suicide thoughts and increase suicide risk, prior research indicates this is unlikely [35]. Second, we felt deploying MAPS in primary care offices immediately before visits and offering follow-up collaborative mental health care to all men using the program would address stakeholders' concerns regarding access to appropriate treatment and support for men with high intent.

Stakeholders' comments also prompted us to change another planned aspect of our RCT: the inclusion of complementary training for all PCCs participating in the trial, to avoid activating men with MAPS only to have them experience unprepared clinicians. Prior to stakeholder engagement, we had planned for the clinicians to be briefed on a popular suicide risk assessment and triage tool. However, as noted in Table 3 (Theme 1), some stakeholders felt clinicians already tend to fall into a de-empowering risk management mode once a patient endorses suicide thoughts, and in doing so may fail to convey empathy and solicit the circumstances and emotions contributing to thoughts of suicide. Thus, we substituted a set of brief video modules that encourage clinicians to conduct risk assessment within a broadly empathetic, empowering, patient-centered framework [75].

Strengths of our study were the elicitation of feedback from multiple categories of stakeholders in suicide prevention, and the use of a rigorous qualitative analytic approach. Our study also had limitations. It involved a relatively small, highly selected convenience sample of mostly well-educated, white participants.

Whether the findings may generalize to other types of individuals is uncertain, requiring exploration with more diverse samples. For our category of interviewees who had previously attempted suicide, we had hoped to enroll only middle aged men, given our focus. However, despite multiple recruitment strategies, we struggled to do so and therefore also enrolled women. Still, the women we interviewed (including those who had previously attempted suicide) all had a male family member or loved one who had attempted or died by suicide. Future studies limited to men who previously attempted suicide would be useful, though may be difficult to achieve.

In deliberately focusing the interviews on gaining information to inform the development of MAPS, we may not have solicited information relevant to other potential approaches to primary care-based suicide prevention. Likewise, some themes we identified might be broadly applicable across settings, but others might be fairly circumscribed, a product of local norms, health care delivery, or health policy.

4.1. Conclusion

In interviews with stakeholders in primary care-based suicide prevention, two broad groupings of themes emerged of relevance to the development of the MAPS intervention and to primary care-based suicide prevention in general. One thematic group related to program structure and delivery, encompassing the themes *belief that MAPS could aid in suicide prevention, the desire for plain language information in the program, and the need to emphasize media over text*. The second thematic group related to MAPS informational and motivational content, containing the themes *concerns about PCC preparedness to engage effectively with and care for men with suicide thoughts; the fear that disclosing suicide thoughts to a clinician necessitates psychiatric hospitalization; the influence of male identity* (how men “present themselves”) *in care seeking for suicide thoughts; and the influence of masculinity* (qualities traditionally associated with men) *in interpreting suicide thoughts*. While these themes and specific stakeholder comments largely supported our planned intervention approach, some prompted additions and refinements, both to MAPS and to complementary clinician-targeted training.

4.2. Practice implications

Our analyses uncovered a previously unreported barrier to patient disclosure of suicide thoughts to a PCC: the fear this will result in immediate psychiatric hospitalization. Some other themes we observed have been reported previously, most notably concerns about PCC training and skills in caring for patients with suicide thoughts, and the strong influences of male identity and masculinity on care seeking related to suicide thoughts. The re-emergence of these themes in our analyses underscores their importance. We believe our findings will be useful in guiding further suicide prevention efforts, an important contribution given the scope and seriousness of the problem of suicide worldwide.

Declarations of interest

None.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.pec.2018.09.007>.

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