Oncology Providers' and Professionals' Experiences With Suicide Risk Screening Among Patients With Head and Neck Cancer: A Qualitative Study

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QUESTION ASKED: What are oncology providers' and professionals' experiences with implementing a suicide risk screening among patients with head and neck cancer?

SUMMARY ANSWER: Participants identified multilevel barriers, such as lack of patient engagement and clinician self-efficacy, and facilitators, such as care coordination, that affected suicide risk screening implementation in cancer care.

WHAT WE DID: Interviews were conducted with 25 oncology providers and professionals who played a key role in suicide risk screening implementation including nurses, medical assistants, patient access representatives, advanced practice providers, physicians, social workers, and informatics staff.

WHAT WE FOUND: Participants identified multilevel implementation barriers, such as intervention level (eg, patient difficulty with using a tablet), process level (eg, limited nursing engagement), organizational level (eg, limited clinic Wi-Fi connectivity), and individual level (eg, low clinician self-efficacy for interpreting and acting upon patient-reported outcome scores). Participants noted facilitators, such as effective care coordination across nursing and social work staff and the opportunity for patients to be screened multiple times.

BIAS, CONFOUNDING FACTORS, DRAWBACKS: This study was conducted at a National Cancer Institute–designated Comprehensive Cancer Center where behavioral and clinical providers are colocated, which may limit generalizability to other settings. Furthermore, it was beyond the scope of this study to assess patient perspectives. Additional research is needed to assess patient perceptions about suicide risk screening implementation barriers and facilitators.

REAL-LIFE IMPLICATIONS: Participants identified important intervention modifications, such as strengthening patient and clinician education and providing patients with other modalities besides a tablet for data entry (eg, desktop computer in the waiting room), that may be needed to optimize suicide risk screening in cancer care settings.

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CARE DELIVERY

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abstract

PURPOSE There has been limited study of the implementation of suicide risk screening for patients with head and neck cancer (HNC) as a part of routine care. To address this gap, this study assessed oncology providers' and professionals' perspectives about barriers and facilitators of implementing a suicide risk screening among patients with HNC.

MATERIALS AND METHODS All patients with HNC with an in-person visit completed a suicide risk screening on an electronic tablet. Patients reporting passive death wish were then screened for active suicidal ideation and referred for appropriate intervention. Interviews were conducted with 25 oncology providers and professionals who played a key role in implementation including nurses, medical assistants, patient access representatives, advanced practice providers, physicians, social workers, and informatics staff. The interview guide was based on the Consolidated Framework for Implementation Research. Interviews were transcribed and analyzed for themes.

RESULTS Participants identified multilevel implementation barriers, such as intervention level (eg, patient difficulty with using a tablet), process level (eg, limited nursing engagement), organizational level (eg, limited clinic Wi-Fi connectivity), and individual level (eg, low clinician self-efficacy for interpreting and acting upon patient-reported outcome scores). Participants noted facilitators, such as effective care coordination across nursing and social work staff and the opportunity for patients to be screened multiple times. Participants recommended strengthening patient and clinician education and providing patients with other modalities for data entry (eg, desktop computer in the waiting room).

CONCLUSION Participants identified important intervention modifications that may be needed to optimize suicide risk screening in cancer care settings.

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INTRODUCTION

Individuals with cancer are at increased risk for suicide compared with the general population.[1-5] A 2019 study estimated that suicide rates are up to four times higher among individuals with cancer compared with individuals without cancer.[5] Suicide risk occurs along the cancer care continuum, from new diagnosis through survivorship.[1,6-10] Demographics such as lower income and rural residence are associated with higher suicide risk.[5,11,12] Clinical factors, such as depression, lower quality of life, thoughts of suicidal ideation, prior suicide attempt, and certain cancer types, are also associated with increased suicide risk.[5,12-16] Compared with patients with other cancers, patients with head and neck cancer (HNC) are twice as likely to die from suicide.[14] Several factors contribute to higher suicide risk among patients with HNC, including substance use history, chronic pain, mood disorders, and cancer treatment and type.[17-20] Despite this elevated suicide risk, there has been limited study of interventions designed to prevent suicide among patients with HNC.

Routine suicide risk screening and follow-up among patients with cancer can reduce suicide rates and improve access to psychosocial care[21]; however, routine screening programs are underused in cancer care and for patients with HNC specifically.[22] Most studies to date on routine suicide risk screening among patients with cancer have focused on estimating prevalence and evaluating the impact of screening on suicide rates.[21,23] There have been limited studies examining implementation, information necessary for integrating suicide screening into routine cancer care delivery. Studies examining implementation of other patient-reported outcome measures (PROMs) suggest there are multilevel implementation barriers, such as lack of leadership support, low clinician self-efficacy for score interpretation, and limited patient engagement with PROM completion.[24-26] Studies on suicide risk screening in other clinical settings (eg, emergency departments) suggest there are additional barriers for assessing suicide risk, such as care coordination challenges, and clinician and patient hesitancy to discuss mental health concerns.[21,27-31] Therefore, studies are needed to identify barriers and facilitators of suicide risk screening programs in cancer care delivery.

To address this gap, this study assessed oncology providers' and professionals' perspectives about barriers and facilitators of implementing a suicide risk assessment among patients with HNC at Moffitt Cancer Center (Moffitt), a National Cancer Institute–designated Comprehensive Cancer Center. Information from this study can support future programs and policies aimed at expanding suicide risk screening among patients with cancer.

MATERIALS AND METHODS

Suicide Risk Screening Intervention

Starting in February 2021, all patients with HNC with an in-person visit completed a suicide risk screening on an electronic tablet. The screening assessed *passive death wish* through item 9 on the Patient Health Questionnaire (PHQ-9), which asks, "How often have you been bothered by thoughts that you would be better off dead, or thoughts of hurting yourself in some way over the past two weeks?"[32] The PHQ-9 item 9 was selected, given its brevity and past research demonstrating the association between passive death wish and suicide risk.[33-36] Patients reporting any response other than no thoughts at all about passive death wish were automatically referred to social work for *active suicidal ideation* (eg, thoughts and plans for self-harm) screening using the Columbia-Suicide Severity Rating Scale,[37,38] which has been validated in clinical settings (eg, Veterans Health Affairs).[39,40] Patients who identified as having active suicidal ideation received additional intervention (eg, suicide safety plan). The screening assessed distress using the National Comprehensive Cancer Network Distress Thermometer[41] and additional symptoms using the Edmonton Symptom Assessment System.[42] The PROMs were selected by Moffitt's Patient-Reported Information and Outcomes committee, an interdisciplinary group of clinicians, social workers, informatics staff, and researchers. The committee used three criteria for measure selection: ease of implementation in a clinical setting, prior implementation in a cancer center (eg, PHQ-9 item 9 is used by another cancer center),[21] and measure reliability and validity in English and Spanish since the tool was made available in both languages.

Data Collection

The research team developed one semistructured interview guide on the basis of the Consolidated Framework for Implementation Research (CFIR) that identifies multilevel *barriers* and *facilitators* to intervention implementation (Data Supplement, online only).[43] The guide assessed organizational-level (eg, staffing), process-level (eg, training), intervention-level (eg, usability), and individual-level (eg, self-efficacy for using scores) factors affecting implementation.

The research team e-mailed oncology providers and professionals who played a key role in implementation including *patient access representatives* (PARs) who provided patients with a tablet to complete the screening, *medical assistants* (MAs) who helped patients complete the screening (eg, use the tablet), *nurses* who reviewed the data and ensured appropriate clinical action was taken, *social workers* who screened for active suicidal ideation among patients reporting passive death wish, *advanced practice providers* (APPs) and *physicians* who were responsible for addressing concerning symptom scores that could not be managed by nursing staff, and *informatics staff* who were responsible for developing and overseeing implementation of the cloud-based application that allowed for in-clinic data collection on tablets and electronic health record (EHR) integration. The research team contacted all individuals involved with implementation and received a response from 25 out of 49 individuals (51% response rate). Common reasons for declining to participate were lack of time and competing priorities. Two individuals trained in qualitative methods (C.G. and A.M.) conducted the interviews via videoconference (mean time: 31.4 minutes; standard deviation: 12.3 minutes). Participants provided verbal informed consent before the interview. The interviews were audio-recorded and transcribed verbatim. The interviews were conducted during the first three months of implementation (February-April 2021) so that information gathered from the interviews could inform intervention refinement. Participants did not receive any incentives (eg, gift cards).

Qualitative Data Analysis

The research team used a hybrid approach to analyze the qualitative data[44,45] by developing an initial codebook on the basis of CFIR constructs and additional codes on the basis of patterns that emerged from the data. The transcripts were coded by two independent coders (C.G. and A.M.) using NVivo 12 Plus (Burlington, MA) until a consensus in coding was achieved. Once agreement was established, the coders independently coded the remaining transcripts. The coders set a threshold for assessing data saturation as the point at which no new themes were generated from a given transcript.[46] Saturation was reached at 25 interviews; therefore, we did not recruit additional participants. We adhered to the Consolidated Criteria for

Reporting Qualitative Research for study description and reporting.[47] This study was deemed exempt from oversight by Moffitt's Institutional Review Board of Record, Advarra. Human investigations were performed after exemption was obtained.

RESULTS

Interviews (N = 25) were conducted with nurses (20%), MAs (16%), PARs (12%), APPs (12%), physicians (8%), social workers (16%), and informatics staff (16%; Table 1). On average, participants had worked for Moffitt 7.9 years (standard deviation: 6.1). Participants described implementation barriers and facilitators that fell into four CFIR domains: (1) intervention characteristics; (2) process; (3) organizational characteristics; and (4) individual characteristics. Illustrative quotations are presented in Table 2.

Intervention Characteristics

Participants indicated that patients may feel more comfortable sharing sensitive information electronically and may be more honest in their responses than if the information were assessed verbally. Second, the intervention provided care team members with additional information that was not available before implementation and identified unmet patient needs (eg, unmanaged pain) that may have otherwise gone unaddressed. Social work staff also appreciated the use of evidence-based measures, such as the PHQ-9. There was disagreement, however, about the evidence strength for the intervention; physician participants indicated lack of familiarity with the measures and questioned whether the measures were validated.

TABLE 1. Oncology Provider and Professional Characteristics

Characteristic	Interview Participants (N = 25)
Occupation, No. (%)	
Nurse	5 (20.0)
MA	4 (16.0)
PAR	3 (12.0)
APP	3 (12.0)
Physician	2 (8.0)
Social worker	4 (16.0)
Informatics staff	4 (16.0)
Job tenure, years, mean (SD)	7.9 (6.1)
Sex, No. (%)	
Female	16 (64.0)
Male	9 (36.0)
Race/ethnicity, No. (%)	
Non-Hispanic Black/African American	3 (12.0)
Asian American	5 (20.0)
Hispanic/Latinx	4 (16.0)
Non-Hispanic White	13 (52.0)

Abbreviations: APP, advanced practice provider; MA, medical assistant; PAR, patient access representative; SD, standard deviation.

Oncology providers and professionals identified intervention characteristics that served as implementation barriers. Using a tablet to collect suicide risk information required patients to be able to read text with a small font size on a small screen and have sufficient dexterity to type on the tablet keypad. Participants explained that this was particularly challenging for some older adults and adults with arthritis. Participants indicated concerns about the PHQ-9 item 9 question that combines thoughts about death and thoughts of hurting yourself in the same item. Participants thought it may be beneficial to distinguish between these responses to prioritize patients for active suicidal ideation screening (eg, patients reporting thoughts of self-harm may need to be seen more quickly than patients reporting thoughts about death).

Implementation Process

Nurses, MAs, PARs, and social work staff described feeling well prepared for implementation and valued the train-the-trainer format that allowed team members to train their colleagues who were unable to attend the training on the suicide risk screening tool. There was a lack of consensus about the training, however; APPs and clinicians reported lack of familiarity with the suicide risk screening tool and expressed a desire for more training.

Participants identified areas where the implementation process encountered challenges, such as double documentation and lack of stakeholder engagement. Before suicide risk screening implementation, distress was verbally assessed by MAs. When the suicide risk tool was implemented, MAs were asked to discontinue verbally screening patients for distress; however, some MAs continued to verbally screen for distress. This led to double-documentation of distress and confusion among the clinic team when conflicting distress scores for the same patient were reported. Nursing staff also expressed concerns that most of the responsibility for implementation fell on nurses who were not included in the process for deciding how the intervention would be designed and implemented. Nurses also felt that patient education specialists did not have the opportunity to review the suicide risk screening tool, which may have improved intervention usability (eg, small font size).

Organizational Factors

Interviewees indicated that coordination across social work and nursing staff was a key facilitator of implementation. Furthermore, interviewees described that social work staff were proactive in communicating with nursing staff anytime a referral was received for a patient reporting passive death wish. APPs and physicians also indicated that the ability to automatically pull PHQ-9 and other PROM scores (eg,

TABLE 2. Illustrative Quotations for Implementation Barriers and Facilitators, N = 25

Construct and Theme	Quotation
Intervention characteristics: Attributes of the intervention likely to affect implementation	
Evidence strength and quality: *Perceptions about the validity of the items*	[Perception that intervention is not evidence-based] "Was this an internally developed scale or is it validated? I didn't come across it before anywhere else. That's part of the problem is the questions—I'm not sure if they're validated."—Physician, 106 [Perception that intervention is evidence-based] "The questions are directly taken out from the PHQ-9, which I felt like is essential to have some type of an evidence-based question being used. So, I thought in that way it was useful and helpful."—Social worker, 105
Relative advantage: *Perception that the screening tool is more or less advantageous than verbal assessment from care team*	[More honest responses] "I think it's great. I think it offers security for the patient and they don't feel obligated to answer to a human being. They sometimes get worried when the MAs are asking their questions and they just feel like they can't be truthful to them. So, I feel like they're more able to be truthful because they're not feeling judged or they're not—in that moment—they're by themselves able to answer questions."—Nurse, 108 [Identifying unmet needs] "I think we've used it to tap into patient care needs that often go overlooked or, a lot of times, patients won't admit that they feel that way to a person. And so, when they're answering the questions on an iPad, sometimes they're a little more honest. So, I think it's capturing and identifying greater needs that patients have that might go overlooked more often."—Social worker, 115 [Additional information] "I know that MAs ask about pain and distress and everything, but we never had a survey or anything that tells us regarding diarrhea, lack of sleep."—Nurse, 107
Design quality and packaging: *Perception of the quality of the screening tool items and packaging (eg, display)*	[Question display] "Just the set-up, there's things that I would just do differently and how the questions appear because a lot of times what happens, they come up and they're like, 'I've answered the same question five times.' That one happens a lot. And we're like, 'No, no, No.' And we had to explain the general question is at the top and you've got to read the specifics at the bottom. So I think maybe finding a way to highlight how each is different."—PAR, 114 [Screen size] "I know a lot of them come in. And they're older. They can't really work iPads or something like that. Most of them are like, 'Oh, I can't really see this,' or, 'I can't do it,' because some of them just are not tech savvy."—PAR, 109 [Lack of specificity of suicidal ideation measurement] "So, I think the distress is telling them more about anxiety and, 'Are you depressed?' or anything like that. With the suicidal ideation, I believe in the question, it talks about death. And, 'Are you bothered by any thoughts about death?' I think a lot of the cancer population patients do think about death and not necessarily meaning that they're gonna have a plan and do something about it. Just saying, that might be there for them. They might not have a cure or a surgery or chemo or radiation that they can do to take the cancer away."—Nurse, 103 [Problems with Spanish translation] "I have seen an instance in clinic, where a Spanish patient I think really said yes to the suicidal ideation question and really that was not the case at all. I think they misinterpreted the wording may be because of how it is written in Spanish, and said yes, several days or something like that."—Nurse, 104 [Making suicide risk more prominent in the EHR] "It definitely needs to be more prominent in the EHR. Not sure if there is a way to add it to the tracking board or to highlight it in red."—Physician, 106
Process: Activities associated with design and planning likely to affect implementation	
Engaging: *Perceptions about the involvement of key stakeholders during project planning*	[Lack of engagement with nurses] "I was not involved in this decision, and now whose fault does it lie on if the patient is not getting to the social worker? Whose fault is that going to be? Mine."—Nurse, 104 [Lack of engagement with patient education] "A couple of weeks ago, I had our patient education specialist look at these questions for me because I don't think they are patient friendly, and she looked at them and said that she doesn't think these are patient friendly. This looks more like a research type question, and that she doubts that anyone from patient education was involved in this, or she wondered if any patient advocates that we have here at Moffitt were involved. She asked me if I knew of any patient advisors that had been asked to look at these questions because she didn't feel the questions, she felt that the questions needed to be redone. They weren't clear."—Nurse, 107
Planning: *Perceptions about the implementation training*	"The super user training was very helpful. It was very clear all the steps that would be needed and then I was able to pass that information on to my colleagues and answer. It was very intuitive"—PAR, 114

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TABLE 2. Illustrative Quotations for Implementation Barriers and Facilitators, N = 25 (continued)

Construct and Theme	Quotation
Reflecting and evaluating: *Perceptions about implementation evaluation*	"I was so excited to hear that they were going to follow-up with this Survey and interview, needless to say, so I think that's good, and I'd have to say also that at least I know we are a pilot for this. They are doing this first, so that hopefully they can learn from what we've had to go through and make improvements. I think there are those good things needless to say to point out."—Nurse, 104,
Executing: *Perceptions about whether intervention was implemented according to plan*	[Duplication of effort] "Well, it would be essential if the MAs weren't asking those questions at all, but the MAs are still asking the questions. Therefore, I don't feel that it's very essential."—Nurse, 110
Organizational characteristics: Attributes of the organization likely to affect implementation	
Available resources: *Staffing shortages in social work*	"I think, in the beginning, just a backup person or somebody that I could've relied on for other consults or other patient needs so that people's needs didn't go left unaddressed."—Social worker, 115 "Well, I think that this has required a lot of work on the part of our social workers in an already busy environment and so I do think that we need more staff. If the screening tool were to be rolled out to more clinics—which I think that's the plan at some point—I don't think that the way that we're structured right now in social work that we can absorb the increased staff it's gonna take to do all these immediate suicide risk consults."—Social worker, 105
Available resources: *Dynamic documentation*	"We just started dynamic documentation which makes this easier. We can just pull in the scores directly into the note."—Physician, 101
Available resources: *Wi-Fi Connectivity and IT glitches and support*	[Data delays due to Wi-Fi connectivity problems] "If there's no way for the MA that sees every patient to notify us through the tracking system that there's a problem, then it falls on me to make sure that I check every single patient before they leave the room. If the MA tells me there is no assessment because there isn't one that they can see, I have to make it my business to go and check every single patient that says that and make sure do they have one or not have one."—Nurse, 106 [IT glitch on open-ended item] "There is a glitch on the eighth question, where they have to fill in the response. If they are experiencing additional symptoms and have to type it in, when they click go, it shuts the whole thing down and you have to restart it because the 'continue' button gets stuck behind the words. And then they get frustrated because it does not save their answers and they have to start over."—PAR, 104 [Insufficient IT support] "There's no implementation staff to tell them I'm not getting my assessments, I've got this many people and nobody has assessments. There's been problems and I'm sure they are aware. There's been problems with the actual wireless system that things aren't getting sent over, so they've tried to fix that. I don't know if that's still a problem, but that's my other complaint is that the implementation staff isn't available any longer. They kind of dumped it on us and now this is ours."—Nurse, 104
Networks and communication: *Communication between nursing and social work*	"Now, fortunately, we caught [a suicidal ideation report] because the social worker is getting notified quicker or they know to watch for the notifications. A lot of times if I do have [a patient] that says yes, the social worker will actually tell me before I even hear from the MA."—Nurse, 104
Access to information about the intervention: *Perceptions about access to information about the intervention's goals, origin, and process*	[Inability to explain the purpose to patients] "Because a lot of them when they come in, they're like, 'Oh, I didn't have to do this the last time I was here. Why do I have to do this now?' or, 'What is this?' And the only thing that we can explain to them was because it wasn't really that deeply explained, the only thing we can say is, 'Oh, you have to fill this out before you're checked in.' We don't really have an idea of saying, 'Oh, this is here to help you,' because we don't really know the background of what it's there for."—PAR, 109 [Lack of understanding about the origin] "Is this a Medicare initiative? Is this something that the government says we need to do?"—Nurse, 104 [Lack of understanding about why certain symptoms were selected] "I think it more asks things like—to me, it doesn't really pertain to the head and neck patients because it says things like, 'constipation', 'diarrhea.' I'm not sure why those [symptoms] got selected."—PAR, 110
Individual characteristics: Attributes of the individual that affect implementation	
Self-efficacy for using data: *Lack of knowledge about how to use and interpret the scores*	"I can't say that it meaningfully impacts my clinical decision making because usually that's dependent on my conversations about the patients about what are you doing. I'm not necessarily looking at these scores all the time and saying oh, you scored an 8. Tell me about this."—Physician, 106 "It's easy to get to. You just click on the flow sheets and look at the results before you go into see the patient. So, it's fine. Plus, like I say, even though we're still using the assessment the MAs are still coming and telling us of positive screenings and also putting it on the tracking board."—Nurse, 110

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TABLE 2. Illustrative Quotations for Implementation Barriers and Facilitators, N = 25 (continued)

Construct and Theme	Quotation
Beliefs and attitudes about the intervention: Usefulness of the data	"Well, I think it's very important. There have been a lot of conversations that have been really significant that I've had with patients about just thinking about death and dying. Sometimes they've led to talks about hospice care. Sometimes they've led to talks about just general goals of care, like what matters to you, what's your quality of life. And those are all very important conversations. And it's interesting that it has stemmed from the question directed toward suicidal risk. So, it almost feels like two-part."—Social worker, 115 "Now we're looking at like, how can we address everything that they're saying to us and make sure that they know that we addressed it because that can also affect how they feel. They'll go, 'Well, I told them I had this and nothing was really much said or done for me.' I wouldn't want them to feel like that. So, I think it is beneficial. We just have to make sure we're able to have those results to follow-up on them."—Nurse, 103
Beliefs and attitudes about the intervention: *Patient perceptions about intervention burden*	"It's a mixed bag. Some of them really seem to like it even though the majority of them always ask why they're being asked the same questions over and over again. Some of our patients, they just refuse to even do the assessment now because they know that they're gonna get asked the questions whenever they get back and the MAs do a good job of explaining."—Nurse, 110 "Some of them come every day. Or some of them come every week. And they're not wanting to do that often, especially with new patients because they already have that long 45-minute thing they have to fill out. When they come in, they don't wanna do the tablet again even though it's 5 minutes. They don't wanna do it because they feel like they've already answered all those questions."—PAR, 109

Abbreviations: EHR, electronic health record; MA, medical assistant; PAR, patient access representative; PHQ-9, item 9 on the Patient Health Questionnaire.

Edmonton Symptom Assessment System) into the provider note made documentation easier.

Although it was uncommon, there were a few instances where participants noted challenges with Wi-Fi connectivity in the clinic. When internet was unavailable due to poor Wi-Fi connectivity, several problems occurred, such as patient data being lost as they were entered into the tablet application, and failure of the data to upload into the EHR in real time. As a result, nurses described having to check the EHR multiple times to see whether the data were available or asking the patient to complete the screening a second time. Participants also described confusion about the intervention purpose. PARs and MAs described how their lack of understanding about the overall purpose made it difficult for them to answer patients' questions about why the information was being collected or how it was being used. APPs and physicians, who were less directly involved with implementation, described limited understanding of the process (eg, who was responsible for data collection, where to locate the data within the EHR, and what symptoms were collected).

Individual Characteristics

Participants believed the data were useful for starting conversations around mental health concerns and for eliciting additional information about patient concerns (eg, advanced care planning). Interviewees appreciated that there were multiple opportunities for patients to be screened (eg, available at each visit). There were some participants, however, who cited this as a barrier and indicated that patients found it burdensome to complete suicide risk screening at each visit. Participants shared that some patients refused to complete it because the purpose of the assessment was not clear. Social workers and nursing staff reported feeling confident in their ability to interpret the data and act upon the scores (eg, what to do when a patient reports a high pain score). Conversely, APPs and physicians tended to report feeling unsure about how to interpret the scores or use the data in their clinical practice, which served as a barrier to communicating with patients about their scores.

Recommendations

Participants recommended revising the screening tool, providing alternative options for data entry, changing the EHR display, strengthening patient and provider education, and hiring additional staff (Table 3). Participants suggested increasing the font size of the screening questions and bolding or underlining the symptom being assessed (eg, pain) to make it easier for patients to distinguish between each item. Participants recommended offering the tool in additional languages beyond Spanish and English (eg, Mandarin) and adding additional items specific to HNC (eg, swallowing difficulty) and common among patients with cancer (eg, financial toxicity). Interviewees recommended giving patients who had difficulty using the tablet other ways to submit data, such as setting up a desktop computer in the waiting room. Participants suggested changing the EHR display so that positive suicidal ideation results were more prominent (eg, placement on dashboard) and concerning scores were color-coded (eg, pain score > 7 shown in red text).

Interviewees highlighted the need for additional clinician training on how to interpret and act upon the scores and how to have conversations about suicidal ideation and other mental health concerns (eg, depression). Participants recommended more patient education about the purpose of data collection (why is this information being collected and how will it be used) and how to use the tablet (eg, how to use the on-screen keypad). Nurses and social work staff also recommended hiring additional social work staff to

TABLE 3. Recommendations, N = 25

Recommendation	Quotation
Questionnaire modifications	[Adding financial toxicity] "…Is this cancer journey depleting you financially, or causing you to struggle, or like is this cancer diagnosis and treatment causing you to struggle financially and then 0 to 10 kind of thing? I think that addressing that, I think patients don't wanna talk about it because they feel embarrassed or whatever, but it is a drain on them financially. So, I feel like that would be a question that would be helpful."—Nurse, 112 [Putting questions on the same time scale] "The questions at the very beginning say, 'Please look at these questions and think of these within the last day.' Okay. It puts that out there. This is just for the last day, but then on the very last question, it says, over the last 2 weeks."—Nurse, 104 [Changing suicidal ideation item wording] "Honestly, I think the wording of the question. I think it needs to be a little bit more clear. And maybe separate the question. I think if it said, 'Have you had thoughts to harm yourself and your life' or—how do you say it these days? You know, kill yourself. I guess, it needs to be very clear. And that is an emergent page. And I respond to clinic immediately. Now, if a patient is thinking about death and dying, honestly, every cancer patient thinks about death and dying. That's a different question. And it could be addressed in person or it could be a phone conversation. And it's not as urgent of a need. You know what I mean?"—Social worker, 115 [Grouping similar questions] "Even if it's split up…even if it's categorized or something like that. I just think that the whole layout, even just the whole design would be easier if it was one question at the top and it may restate, but if the specific part that it's asking is included in that top question versus being on the bottom, underneath the scale, I think that would help them a lot. And even the font size, the specific font, not to sound like a nerd"—PAR, 114 [More language options] "I have a few patients who speak Mandarin who are not able to complete it. So I think it would be great to expand the language options beyond Spanish and English."—Nurse, 107
Revising EHR display	"If they're color-coded then if it's like yellow or red, for example, then you know that the clinical team probably needs to go more into the details of the inventory and figure out what's going on…But having said that, some individual components may get missed. So, there's got to be a way that we can focus on key item questions, right? See their overall score and suicidal ideation. So, you flag if it's more than X amount of score, then that gets color-coded and/or if they're positive for suicidal ideation or something, right?—Physician, 106
Clinician education	"The only thing that I would suggest is that maybe they may need some type of education toward that psych piece of it, so that they feel more comfortable asking those questions."—Nurse and IT staff, 118 "It would be great to go over how to use the scores. I'm not sure what I'm supposed to be reviewing outside of what the nurses do or what to do with the information."—APP, 102
Patient education	[Early arrival and iPad use] "I think so or some patient education in terms of, if they have to come in, maybe just 5 minutes earlier so maybe instead of just the time that we allot right now. I think we do have to take into consideration that it may take a little bit longer, but some patient education of how to actually use the iPad. Again, there are certain patients of ours that do not know how to use any electronics, so definitely a barrier."—Nurse, 111 [Purpose] "I think it should have been explained to them before being just thrown at them because they just come in and get the tablets. And they're like, 'What is this?' I think it should have been someone explaining to them, 'Hey, we're rolling something out for you guys to give a try,' because I think they were blindsided by it."—PAR, 109
Hiring or dedicating social work staff to implementation	"I think that would be helpful to have more social work staff available…when something that needs to be addressed right away. I guess the social workers would, additional social workers that specialized, just coming in, addressing that and having that time because they don't have other responsibilities to take on, something like that."—Nurse, 112

Abbreviations: APP, advanced practice provider; EHR, electronic health record; PAR, patient access representative.

oversee suicide risk screening. Staff cited concerns that social work staff were being overburdened with implementation and would not have enough capacity to support scaling up suicide risk screening to other clinics.

DISCUSSION

Overall, our study participants found the information collected by the suicide screening tool to be valuable for identifying patients with unmet needs and for starting conversations around mental health concerns and unmanaged symptoms. Participants identified factors that supported implementation (eg, care coordination among nursing and social work staff) and important intervention modifications that may be needed to optimize suicide risk screening in cancer care settings, such as provider and patient education, and capture of HNC-specific symptoms.

Study findings suggest that clinician education is needed to support suicide risk screening implementation. Participants noted two training gaps, namely facilitating conversations around mental health and use of PROMs in clinical practice. Research has shown that suicide prevention training can increase clinicians' knowledge and self-efficacy for identifying and treating patients at risk for suicide.[48-54] However, clinician suicide prevention training has been understudied in oncology. Consistent with prior research, our study found that clinicians reported low self-efficacy for using PROMs in clinical practice.[55,56] To increase clinician self-efficacy for PROM implementation, researchers have recommended strategies, such as developing scripts for care providers to discuss PROM benefits with patients[57] and training on how to interpret PROMs using real patient cases.[58,59] Further studies are needed to test such approaches in the context of suicide risk screening.

Participants highlighted the importance of patient education about suicide risk screening. Similar to other PROM implementation studies, our participants described that lack of patient understanding about how to use technology (eg, tablets) and lack of understanding about the purpose of PROM collection served as implementation barriers.[60,61] Studies have pilot-tested approaches such as developing marketing materials to educate patients on PROMs, involving patients in the co-design of PROM interventions, and empowering patients by providing access to easy-to-interpret visualizations of PROM scores.[62-64] However, a recent systematic review found that patient engagement in PROM initiatives was rare.[65] Further studies are needed to develop and test strategies to support patient education and engagement around suicide risk assessment.

Although the suicide risk screening tool was piloted in the HNC clinic, the tool was designed to include common cancer-related rather than disease-specific symptoms to ensure scalability across clinics. Therefore, the tool needs further refinement for patients with HNC. Participants in our study mentioned financial toxicity, swallowing difficulty, and taste changes as key symptoms to consider for patients with HNC. Prior studies demonstrate that patients with HNC are at increased risk for financial toxicity[66,67] and employment loss after treatment because of long-term side effects, such as persistent speaking impairment.[67-69] Research shows that financial hardship and employment loss are associated with suicide risk among US adults[70,71]; therefore, it may be valuable to assess for financial toxicity as part of a suicide risk screening program for patients with HNC. Our participants also suggested inclusion of symptoms that capture the physiologic impairment caused by HNC treatment, such as swallowing difficulty and taste changes, which contribute to poor quality of life and distress, and should be considered in future suicide risk screening among patients with HNC.[72]

Our study was conducted in a National Cancer Institute–designated Comprehensive Cancer Center, where it may be easier to coordinate care across behavioral health and oncology teams because of colocation of services. We conducted this study within the first three months of suicide risk screening implementation; therefore, the findings may not be representative of later-stage implementation (eg, some barriers may have improved or worsened over time). Our study does not include the patient perspective, as it was beyond the scope of the current study; however, we plan to assess patient perspectives in the future. We focused on the clinician perspective to capture information on organizational- and process-level barriers, key considerations for implementation. Furthermore, our study is unable to compare approaches across cancer centers.[21] For example, another cancer center screens for passive death wish before screening for active suicidal ideation.[21] In other medical settings, other suicidal screening tools have been used (eg, Ask-Suicide-Screening Questions) that assess passive death wish and active suicidal ideation simultaneously.[73] Future studies should compare suicide risk screening implementation across oncology settings. Additionally, this study was implemented in a HNC clinic. Research is needed to scale up screening to additional settings (eg, radiation oncology clinic) where patients with HNC may receive care.

In conclusion, routine screening for suicide risk is a public health priority for cancer care delivery, especially among patients with cancer who are at increased risk, such as individuals with HNC.[14] Our study outlines key implementation issues that should be considered when integrating suicide risk screening into routine care delivery for patients with cancer. Future studies are needed to develop and test implementation strategies that overcome barriers to suicide screening implementation, such as data display and visualization, patient and provider education, and integration with other PROMs.

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DISCLAIMER

The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH. K.T. attests that the authors had access to all the study data, take responsibility for the accuracy of the analysis, and had authority over manuscript preparation and the decision to submit the manuscript for publication.

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

Oncology Providers' and Professionals' Experiences With Suicide Risk Screening Among Patients With Head and Neck Cancer: A Qualitative Study

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