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Suicide Related Discussions With Depressed Primary Care Patients – Gender and Quality Gaps. A mixed methods analysis.

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Title: Suicide Related Discussions With Depressed Primary Care Patients – Gender and Quality Gaps. A mixed methods analysis.

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Role of Funders and Data
Funding for this study was provided in part by the National Center for Research Resources (KL2RR025015) and Agency for Healthcare Research and Quality (5R01HS013172-03). The design, conduct, data collection, analysis, and interpretation of the results of this study were performed independently of the funders. The funding agencies also played no role in review or approval of the manuscript.

Role of Contributors: Steven Vannoy and Lynne Robins planned and conducted the quantitative and qualitative analyses collaboratively. Doug Brock provided access to

and structure of data. Doug Brock and Lynne Robins were co-investigators for the original data collection.

Abstract

Objective: Characterize suicide risk discussions in depressed primary care patients.

Design: Secondary analysis of recordings and self reports by physicians and patients. Descriptive statistics of frequency and predictors of depression and suicide related discussion, withqualitative extraction of disclosure, inquiry and physician response.

Setting: Twelve primary care clinics.

Participants: 48 primary care physicians and 1776 adult patients.

Measures: Presence of depression or suicide related discussions during the encounter as evidenced by qualitative coding. Patient and physician demographics. Depression symptom severity and suicide ideation (SI) as measured by the PHQ9. Physician's decision making style as measured by the Medical Outcomes Study Participatory Decision-Making Scale. Support for autonomy as measured by the Health Care Climate Questionnaire. Trust in their physician as measured by the Primary Care Assessment Survey. Physician response to suicide related inquiry or disclosure.

Results: Of the 1776 encounters, 128 involved patients who scored greater than 14 on the PHQ9. These patients were seen by 43 of the 48 physicians. SI was endorsed by 59% (n = 75) of participants. Depression was discussed in 52% of the encounters. Suicide related discussion occurred in only 11% (n = 13). Suicide was

discussed in only 1 encounter with a depressed male. Variation in elicitation and response styles demonstrated preferred and discouraged interviewing strategies.

Conclusions: Suicide ideation is present in a significant proportion of depressed primary care patients, but rarely discussed. Men, who carry the highest risk for suicide are particularly unlikely to disclose their ideation in the encounter and perhaps more disturbingly, not be asked about it. Patient-centred communication and positive health care climate do not appear to increase the likelihood that suicide will be discussed. Physicians should be encouraged to ask about suicide ideation in their depressed patients, and when disclosure occurs, facilitate discussion and develop targeted treatment plans.

Article Summary

Article Focus

- Determine frequency of suicide related discussions in routine primary care encounters with depressed patients along with demographic predictors
- Identify process variables that may or may not influence the likelihood that suicide will be discussed in primary care
- Analyze interview style related to inquiring about suicide and responding to patient responses to inquiry as well as unsolicited disclosure

Key Messages

- Suicide is addressed in a small minority of encounters with depressed patients in primary care

- Suicide is rarely discussed with depressed male patients who are at high risk for suicide
- Physician inquiries related to suicide are often made with patients who have lowest levels of ideation and the inquiries themselves are often biased to elicit a denial of ideation

Strengths and Weaknesses

- The study involved a large number of primary care physicians and patients representing real world patient encounters
- It is unknown if the topic of suicide had been discussed in previous encounters and how such discussion influenced the present encounter
- We were unable to identify significant predictors of suicide related discussion, yet we were able to demonstrate that some likely candidates such as participatory decision making style and trust were not sufficient.

For inquiries regarding access to de-identified data please contact Dr. Vannoy at svannoy@uw.edu

Introduction

Depression treatment in primary care patients is common and has been increasing for more than two decades. (1-3) Unmet need makes it likely that primary care will continue to be the dominant source of depression treatment in years to come (4). Depression is a robust risk factor for suicide. (5,6) Suicide is a stigmatized behavior accounting for more than 30,000 deaths (7) and more than 300,000 self-harm related emergency department visits (8) per year in the United States. Despite strong evidence that people who die by suicide are more likely to have seen a primary care provider than mental health provider prior to their death, (9,10) suicide related discussions in primary care appear to be rare. (11) There is evidence that effective depression treatment in primary care can reduce suicide ideation. (12,13)

Under detection and treatment of depression in primary care has been a long-standing concern (14-16) and focus of quality improvement efforts. (17) The problem is pronounced for men, (14) who are also at more than four times the risk of suicide across the lifespan. (7)

Little is known about the detection of and response to suicide risk in depressed primary care patients. Using standardized patients portraying depression and adjustment disorder, Feldman et. al. (18) identified several factors that predicted a physician would inquire about suicide including: severity of depressive symptoms, patient initiated request for antidepressant medication, academic practice setting, and personal experience with depression on behalf of the physician. Equally important, Feldman et. al. did not find significant associations between physician age, gender, type

of specialty, perceived barriers to or confidence in treating depression and communication style as measured by the Measure of Patient Centred Communication. (19) They were left with 57% of the variance attributable to unmeasured physician factors.

Patient centeredness with respect to both communication and environment has been emphasized as an important process variable related to quality care. We sought to identify additional process variables that might predict the likelihood that suicide would be discussed in routine primary care visits.

Methods

The Establishing Focus (EF) study, conducted from 2002 through 2006, was a randomized controlled trial of a brief intervention to increase physician skills at organizing and prioritizing encounter time with particular emphasis on using a patient centred approach. The study was conducted in a large metropolitan city and recruited physicians from two settings, an academic medical centre and a large managed care organization.

Physicians were randomized to an educational seminar or no-intervention. Physicians completed several questionnaires immediately after each encounter (details below). Following the intervention, patients were recruited at the time of appointment, on a sequential basis, for all of the physicians enrolled in the trial. Consenting patients completed a battery of questionnaires (details below) prior to the session and agreed to have the encounter audio recorded. Inclusion criteria assured that patients had seen the physician at least once prior to the index encounter.

Primary outcomes for the EF study included protocol (agenda setting) behaviours demonstrated during the early, middle, and late phases of encounters, encounter length, number of concerns raised, patient satisfaction, trust, and functional status. All procedures for the original study, as well as the current analysis, were approved by relevant institutional review boards.

Patient Measures

Patient demographics included gender, age, income, and race-ethnicity categorized as White, Black, Mixed and Other. The Patient Health Questionnaire (PHQ9) (20) was used to assess depression symptom severity. Scores greater than 14 were coded as positive for depression. Any response greater than “Not at All” on item 9 was coded as positive for suicide ideation (SI). Patients also reported current pain on a 6 point Likert-type scale.

The Medical Outcomes Study Participatory Decision-Making Scale (21) was used to assess differences in patients’ perceptions of their physician’s decision-making style.

The Health Care Climate Questionnaire (22) (HCCQ) contains 15 Likert-type items assessing how supportive of their autonomy patients believed their physicians were on the day of the visit.

The trust sub-scale of the Primary Care Assessment Survey (23) (PCAS) assesses differences in patients’ confidence about their physician’s integrity, competence, and willingness to act in their behalf. This sub-scale contains 8 Likert-type items assessing patient trust and has been demonstrated to predict self-reported health improvement. (23) One patient satisfaction item from the PCAS was also used.

Physician Measures

Physician measures included gender, whether or not they had been assigned to the original study's experimental condition, and the type of practice environment in which they worked, either a health maintenance organization (HMO) or an academic affiliated clinic. Physicians rated how fatigued and how rushed they felt during the encounter by two single items, responses were represented on 7-point scales.

Session Coding

We utilized a qualitative approach to identify adult primary care encounters in which depression or suicide was discussed. Two research assistants were trained to identify depression and suicide related discourse. The training included a glossary of depression and suicide related terms and feedback on a sub-set of encounters screened by one of the authors (SV). Raters were instructed to use a very liberal interpretation of depression or suicide discourse, such that any content that appeared to have a psycho-social focus was to be included. All discrepancies between initial ratings were resolved by one of the authors (SV) in conjunction with the raters. The raters listened to each session and coded it as positive or negative for both depression and suicide content. For each session they noted the time within the session that the first occurrence of depression/suicide discourse occurred and who initiated it. For positively coded encounters, they transcribed the text segment associated with the positive coding(s).

All transcribed text segments were subjected to discourse analysis, including 1) how the topic of suicide was introduced into conversation, 2) by whom the topic was

introduced, and 3) the response (or non-response) that followed patient disclosure of SI. Responses that appeared to follow up on the patient's disclosure of SI were coded as engaging. We applied a liberal interpretation to being "on topic", coding responses that were related to the topic of depression or treatment of depression or requests for clarification as being engaging. Responses that appeared to shift topic or reinforce denial of ideation were coded as disengaging.

Results

The trial enrolled 48 physicians who saw 1,776 consenting patients. Of these, 43 physicians saw 128 patients who scored positive for depression. Nearly 2/3 of the depressed sample was female. Only lower levels of pain predicted that a depression discussion would occur, while only female gender predicted that a suicide related discussion would occur. Depression was discussed in 52% of the encounters. SI was endorsed by 59% (n = 75) of participants, yet suicide related discussion occurred in only 11% (n = 13) encounters. Although SI was endorsed in equal proportions by males and females, suicide was discussed in only 1 encounter with a depressed male. The overall age range in the sample was 18 to 83, in the depressed group (18 to 76) and in the suicide discussion group (18 to 76). Detailed patient-level demographics are presented in Table 1.

Physician gender and practice type predicted likelihood of discussing depression, no physician variables were associated with discussing suicide (Table 1).

Only higher ratings of physician decision making style were associated with discussing depression, and no process variable predicted suicide related discussion (Table 2).

Categorical endorsement of any suicide ideation versus none on PHQ9 item 9 was equal for men and women, yet about 5% more men endorsed SI more than "several days" than women. (Table 3).

When suicide was discussed, the conversation was more frequently initiated by physicians (n = 8) than by patients (n = 5). No male patients initiated suicide related discussion. One female patient raised the issue of suicide ideation in a declaration that she was not feeling suicidal, the other four declared the presence of ideation.

In seven of the eight instances physicians introduced the topic of suicide by asking explicitly whether the patient wanted to hurt or harm, themselves or commit suicide (Figure 1). In five of the eight questions, physicians used words or phrases that are characterized by linguists as having "negative polarity". These words and phrases are held to reveal (in their formulations) that the questioner "has grounds for preferring one answer to another – in this case a negative answer." (24) (See also Borkin (25), and Heritage (26)).

The four of the five patients who initiated suicide related discussion endorsed the presence of suicide ideation, one explicitly denied it despite having indicated on her PHQ9 that she was being bothered by thoughts of death or hurting herself more than half the days in the past two weeks (Figure 2).

Physicians responded to disclosure of SI in equal numbers with respect to

engaging versus disengaging communication style. Interestingly, they were twice as likely to use an engaging rather than disengaging communication style when the patient denied SI. (Figure 3).

Discussion

Depression continues to be under addressed in PC. We found high rates of suicide ideation in this sample of depressed primary care patients. Consistent with other reports, suicide was rarely discussed. Of note, in the few cases in which physicians asked about suicide, it was with patient's who had the lowest levels of suicide ideation as reported on the PHQ9. This raises the question as to why patients with frequent ideation are not getting identified. Perhaps most disturbingly, while SI was equally prevalent in males and females, it was only discussed in one encounter with a male patient.

We know of no research investigating the impact of micro-linguistic interviewing strategies on patient disclosure of SI. In a study aimed at eliciting patient concerns (26) it was demonstrated that even a single word can influence whether patients share all of their concerns in a PC encounter. Our findings suggest that when physicians ask about suicidal ideation, the often do so with negative polarity, which may inhibit full disclosure. Furthermore, there may be compounded effects when a question is negatively polarized and the physician follows up a patient denial in a way that reinforces the negative answer (e.g. "that's good"). Future research on how patients and providers collude to avoid important disclosures about suicide and depression is warranted.

Based on our findings, we recommend interventions that explicitly teach patients to “ask your doctor” about depression (ala public health campaigns) or teach physicians that discussing suicide should be part and parcel with addressing depression through education programs or quality improvement efforts.

Patient centeredness does not guarantee that discussions about suicide will occur in primary care encounters. Specific methods for increasing suicide related discourse in primary care is needed.

Limitations

Although this sample is large, the number of identified suicide related conversations was small, reducing our statistical power to perform inferential analyses. It is possible that the low occurrence of depression and suicide related conversation is due to the fact that the patient and provider had discussed this topic at previous visits. However, from a clinical risk management perspective this is not an adequate justification for not assessing for the presence and intensity of SI in depressed patients.

Conclusions

Suicide ideation is present in a significant proportion of depressed primary care patients, but rarely discussed. Men, who carry the highest risk for suicide are particularly unlikely to disclose their ideation in the encounter and perhaps more disturbingly, not be asked about it. Patient disclosure of suicide ideation is an important first step in preventing suicide. Physicians should be encouraged to ask about suicide ideation in their depressed patients, particularly with men who are at the highest risk to die from suicide.

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Table 1 – Participant & Physician Demographics and Clinical Characteristics			
PATIENTS	**Total Depressed (n = 128)**	**Discussed Depression (n = 66; 52%)**	**Discussed Suicide (n = 13; 11%)**
Female	64%	68%	93%+
Age	47 (sd =14.2)	45 (sd =13.7)	41 (sd =15.9)
Income	$50,000	$50,000	$30,000
Race-Ethnicity			
White	69%	78%	77%
Mixed	12%	14%	15
Black	9%	5%	8%
All Other	10%	3%	0%
Exp Cond	59%	58%	46%
PHQ9	20.1 (sd=3.62)	21.2 (sd=4.47)	21.7 (sd=4.52)
PHQ9 item 9	1.0 (sd=1.07)	1.0 (sd=1.05)	1.1 (sd=1.14)
Pain (1 to 6)	4.0 (sd =1.4)	3.5* (sd =1.5)	3.6 (sd =1.4)

Physician Demographics				
PHYSICIANS	**Total (n = 48)**	**Saw Depressed Patient (n = 43; 90%)**	**Discussed Depression (n = 32; 66%)**	**Discussed Suicide (n = 11**; 23%)**
Female	42%	44%	58%*	62%
Academic Clinic	65%	70%	84%*	75%
HMO	35%	30%	16%	25%
Experimental Cond	46%	58%	57%	50%

"Depressed" indicated by PHQ9 score > 14
* indicates statistically significant predictor of discussing depression ($p < .05$)
+ indicates statistically significant predictor of discussing suicide ($p < .05$)
"Exp Cond" indicates the physician was a part of the original intervention
** Two physicians had two encounters in which suicide was discussed; hence only 11 unique physicians for 13 encounters.
"Experimental Cond" indicates the physician was a part of the original intervention

Table 2 - Process Variables as Predictors of Depression/Suicide Discussion			
	Total Depressed (n = 128)	**Depression Discussed (n = 66)**	**Suicide Discussed (n = 13)**
MOS Participatory Decision Making Style	4.1 (sd = .81)	4.3* (sd = .74)	4.1 (sd = .73)
Health Care Climate Questionnaire	6.1 (sd = .91)	6.3 (sd = .84)	6.1 (sd = .98)
Trust Sub-Scale of the Primary Care Assessment Survey	6.2 (sd = .82)	6.3 (sd = .72)	6.4 (sd = .82)
* Indicates characteristic predicted that a depression related discussion would occur ($p < .05$)			

Table 3 - Distribution of Responses to PHQ9 Suicide Item		
In the past two weeks, how often have you been bothered by thoughts that you'd be better of dead or of hurting yourself in some way?	**Females (n = 82) % (n)**	**Males (n = 46) % (n)**
Not At All	41% (34)	41% (19)
Several Days	28% (23)	24% (11)
More Than Half the Days	16% (13)	24% (11)
Nearly Every Day	14% (12)	11% (5)

Figure 1 - Physician Phrases Initiating Suicide Discussion	**Patient Response**	**PHQ9 item 9**
1. Since we talked on the phone the other day, I know you're down, but you're **not**, like, thinking of hurting yourself or **anything**?	No	0
2. Sometimes people, when they have thoughts of feeling really sad, they have thoughts of harming themselves. Have you **ever** had thoughts of suicide or killing yourself?	Mmm-mm (no)	0
3. Okay. Do you have thoughts of hurting yourself or **anything** like that?	No	0
4. Okay, well, those are definitely depression symptoms. Do you feel like harming yourself?	Mmm, not really	1
5. Have you had **any** thoughts of hurting yourself?	Yeah	2
6. You're definitely not thinking about hurting yourself or **anything** like that?	You know, I have to be honest… (patient goes into long description of stressors and attitudes towards suicide,	1

	with ultimate denial of intent but clearly has thoughts of wishing she were dead)	
7. Are you suicidal?*	No not yet, I haven't thought about it	1
8. Some people get so down that they are having thoughts about ending your life.	No	0
* Denies it to the physician but reports being bothered by thoughts of death or of hurting herself "Several days" in the past two weeks on the PHQ9 Bolded text indicates negative polarity		

Figure 2 - Patient Phrases Initiating Suicide Discussion

Patient Disclosure	PHQ9 item 9*	Physician Responses
1. I just feel that I haven't had any suicidal ideation in a year or so, and it's been very pervasive in the last month.	2	Are you (inaudible) at the sleep lab
2. I don't know. I just don't know. I just don't – I'm tired of living like this. I'm so tired of living in pain, I don't want to. I can't-you know	3	You just save it up for me
3. I've had suicidal things going on with me.	3	Oh, I'm sorry to hear that
4. I think I should just be buried.	0	Mm-hmm. Let's see. Shortness of breath
5. I'm ***not*** thinking of suicide anymore**	**2**	That's good

* Item nine asks, "How often in the past two weeks have you been bothered by thoughts of death or of hurting yourself?" Response options are "Not at all = 0", "Several days = 1", "More than half the days = 2", or "Nearly every day = 3"

** Spontaneously denies presence of suicide ideation but indicated being bothered by thoughts of death or hurting herself "more than half the days" in the past two weeks on the PHQ9.

Figure 3 - Engaging and Disengaging Physician Responses

Physician Responses to Patient Denial of Ideation
Engaging
1. Anybody in the family ever had suicidal? Let me look through the family history that I do have. Any family history of depression or anxiety that you're aware of?
2. Have you been taking your Zoloft?
3. You don't get that?
4. Okay. Do you get out and get things done that you want to get done?
Disengaging
1. Uh huh. Let's see. Have we checked your thyroid?
2. I didn't think so

Physician Responses to Patient's Endorsement of Ideation
Engaging
1. When was the last time?
2. Let me search the (hospital) and see if one of their psychiatrists who has started*
3. Oh, I'm sorry to hear that
Disengaging
1. Are you (inaudible) at the sleep lab?
2. You just save it up for me!
3. Mm-hmm. Let's see. Shortness of breath
* patient interrupts physician at this point, he returns to referral after interruption

No checklist for mixed methods qualitative studies that are observational.

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Abstract

Objective: Characterize suicide risk discussions in depressed primary care patients.

Design: Secondary analysis of recordings and self reports by physicians and patients. Descriptive statistics of depression and suicide-related discussion, with qualitative extraction of disclosure, inquiry and physician response.

Setting: Twelve primary care clinics between July 2003 and March 2005.

Participants: 48 primary care physicians and 1,776 adult patients.

Measures: Presence of depression or suicide-related discussions during the encounter. Patient and physician demographics. Depression symptom severity and suicide ideation as measured by the PHQ9. Physician's decision making style as measured by the Medical Outcomes Study Participatory Decision-Making Scale. Support for autonomy as measured by the Health Care Climate Questionnaire. Trust in their physician as measured by the Primary Care Assessment Survey. Physician response to suicide-related inquiry or disclosure.

Results: Of the 1,776 encounters, 128 involved patients scoring greater than 14 on the PHQ9. These patients were seen by 43 of the 48 physicians. Suicide ideation was endorsed by 59% (n = 75). Depression was discussed in 52% of the encounters (n=66). Suicide-related discussion occurred in only 11% (n = 13) of encounters. Ninety-two percent (n = 12) of the suicide discussions occurred with patients scoring < two on PHQ9 item nine . Suicide was discussed in only one encounter with a male. Variation in

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elicitation and response styles demonstrated preferred and discouraged interviewing strategies.

Conclusions: Suicide ideation is present in a significant proportion of depressed primary care patients, but rarely discussed. Men, who carry the highest risk for suicide, are unlikely to disclose their ideation or be asked about it. Patient-centred communication and positive healthcare climate do not appear to increase the likelihood of suicide related discussion. Physicians should be encouraged to ask about suicide ideation in their depressed patients, and when disclosure occurs, facilitate discussion and develop targeted treatment plans.

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Article Summary

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- Determine frequency of suicide-related discussions in routine primary care encounters with depressed patients along with demographic predictors.
- Identify process variables that may or may not influence the likelihood that suicide will be discussed in primary care.
- Analyze interview style related to inquiring about suicide and responding to patient responses to inquiry as well as unsolicited disclosure.

Key Messages

- Suicide is addressed in a small minority of encounters with depressed patients in primary care.

- Suicide is rarely discussed with depressed male patients who are at high risk for suicide.
- Physician inquiries related to suicide are often made with patients who have lowest levels of ideation and the inquiries themselves are often biased to elicit a denial of ideation.

Strengths and Weaknesses

- The study involved a large number of primary care physicians and patients representing real world patient encounters.
- It is unknown if the topic of suicide had been discussed in previous encounters and how such discussion influenced the present encounter.
- We were unable to identify significant predictors of suicide-related discussion, yet we were able to demonstrate that some likely candidates such as participatory decision making style and trust were not sufficient.

For inquiries regarding access to de-identified data please contact Dr. Vannoy at svannoy@uw.edu

Introduction

Depression treatment in primary care patients is common in the U. S.(1-4), Europe (5-7), and world-wide (8). Unmet need makes it likely that primary care will continue to be the dominant source of depression treatment in years to come. (9) Depression is a robust risk factor for suicide. (10,11) Suicide is a stigmatized behaviour (12) accounting for more than 30,000 deaths (13) and more than 300,000 self-harm related emergency department visits (14) per year in the United States. In 2007, the most recent year with available data, suicide was the 8th leading cause of death for U.S. males aged > 17, occurring at a rate of 23.3/100,000; for females, it was the 17th leading cause of death occurring at a rate of 5.75/100,000. (13) Despite strong evidence that people who die by suicide are more likely to have seen a primary care provider than a mental health provider prior to their death, (15,16) suicide-related discussions in primary care appear to be rare. (17) U.S. adults are more than twice as likely to have seen a primary care provider (45%) than a mental health specialist (20%) in the month preceding their death. (15) Frequency of general practitioner visits in the month prior to suicide in Europe are similar. (18,19) There is evidence that effective depression treatment in primary care can reduce suicide ideation, (20-23) particularly in older adults who are at highest risk. (24,25)

Under detection and under treatment of depression in primary care has been a long-standing concern (26-28) and focus of quality improvement efforts. (29) The

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problem is pronounced for men, (26) who are also at more than four times the risk of suicide across the lifespan. (13)

Little is known about the detection of and response to suicide risk in depressed primary care patients. Using standardized patients portraying depression and adjustment disorder, Feldman et al. (30) identified several factors that predicted a physician would inquire about suicide including: severity of depressive symptoms, patient initiated request for antidepressant medication, academic practice setting, and personal experience with depression on behalf of the physician. Equally important, Feldman et al. did not find significant associations between physician age, gender, type of specialty, perceived barriers to or confidence in treating depression and communication style as measured by the Measure of Patient-Centered Communication. (31) They were left with 57% of the variance attributable to unmeasured physician factors.

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Patient centeredness with respect to both communication and environment has been emphasized as an important process variable related to quality care. We sought to identify additional process variables that might predict the likelihood that suicide would be discussed in routine primary care visits.

Methods

This is a secondary analysis of recordings and self reports by physicians and patients participating in The Establishing Focus Study. Conducted between 2002 and 2006, the Establishing Focus study was a randomized controlled trial of a brief intervention to increase physician skills at organizing and prioritizing encounter time with

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particular emphasis on using a patient-centred approach. The study was conducted in a large metropolitan city and recruited physicians from two settings, an academic medical centre and a large managed care organization.

Physicians were randomized to an educational seminar followed by on-site coaching or no-intervention. Physicians completed several questionnaires immediately after each patient encounter (details below). Patients were recruited at the time of appointment, on a sequential basis, for all of the physicians enrolled in the trial. Consenting patients completed questionnaires (details below) prior to their clinic session and agreed to have the encounter audio recorded. Inclusion criteria assured that patients had seen the physician at least once prior to the index encounter.

Primary outcomes for the Establishing Focus study included protocol (agenda setting) behaviours demonstrated during the early, middle, and late phases of encounters, encounter length, number of concerns raised, patient satisfaction, trust, and functional status. All procedures for the original study, as well as the current analysis, were approved by the University of Washington and Group Health Cooperative institutional review board.

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Patient Measures

Patient demographics included gender, age, income, and race-ethnicity categorized as White, Black, Mixed and Other. The Patient Health Questionnaire (PHQ9) (32) was used to assess depression symptom severity. Scores greater than 14 were coded as positive for depression. Any response greater than “Not at All” on item 9

was coded as positive for suicide ideation. Patients also reported current pain on a 6-point Likert-type scale.

The Medical Outcomes Study Participatory Decision-Making Scale (33) was used to assess differences in patients' perceptions of their physician's decision-making style.

The Health Care Climate Questionnaire (34) (HCCQ) contains 15 Likert-type items assessing how supportive of their autonomy patients believed their physicians were on the day of the visit.

The trust sub-scale of the Primary Care Assessment Survey (35) (PCAS) assesses differences in patients' confidence about their physician's integrity, competence, and willingness to act in their behalf. This sub-scale contains 8 Likert-type items assessing patient trust and has been demonstrated to predict self-reported health improvement. (35) One patient-satisfaction item from the PCAS was also used.

Physician Measures

Physician measures included gender, whether or not they had been assigned to the original study's experimental condition, and the type of practice environment in which they worked, either a health maintenance organization (HMO) or an academic-affiliated clinic. Physicians rated how fatigued and how rushed they felt during the encounter by two single items, each on 7-point scales.

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Session Coding

We utilized a qualitative approach to identify adult primary care encounters in which depression or suicide was discussed. Two research assistants were trained to

identify depression and suicide-related discourse. The training included a glossary of depression and suicide-related terms and feedback on a sub-set of encounters screened by one of the authors (SV). Raters were instructed to use a very liberal interpretation of depression or suicide discourse, such that any content that appeared to have a psycho-social focus was to be included. All discrepancies between initial ratings were resolved by one of the authors (SV) in conjunction with the raters. The raters listened to each session and coded it as positive or negative for both depression and suicide content. For each session they noted the time within the session that the first occurrence of depression/suicide discourse occurred and who initiated it. For positively coded encounters, they transcribed the text segment associated with the positive coding(s).

All transcribed text segments were subjected to discourse analysis, including 1) how the topic of suicide was introduced into conversation, 2) by whom the topic was introduced, and 3) the response (or non-response) that followed patient disclosure of suicide ideation. Responses that appeared to follow up on the patient's disclosure of suicide ideation were coded as engaging. We applied a liberal interpretation to being "on topic", coding responses that were related to the topic of depression or treatment of depression or requests for clarification as being engaging. Responses that appeared to shift topic or reinforce denial of ideation were coded as disengaging.

Quantitative Analyses

We conducted univariate logistic regression analyses to identify potential predictors of depression-related and suicide-related discussions using Stata version 10. (36)

Participants and Setting

Between July 2003 and October 2004, Establishing Focus investigators invited all physicians (n= 75) in a convenience sample of twelve community-based primary care clinics serving the Puget Sound region to participate in this study. A total of 59 (79%) physicians consented to participate. Forty-eight physicians participated in all aspects of the study. Thirty-one worked in a university-affiliated primary care network consisting of eight neighborhood clinics. Seventeen physicians worked in a consumer-governed, non-profit health care system. Due to difficulties in study logistics, Establishing Focus investigators elected not to collect data from one clinic with six consented physicians. Hence, in the final data, 33 participating physicians were affiliated with a university-affiliated primary care network (of these, 31 completed all components of the study - 2 disenrolled); 20 physicians were affiliated with a consumer-governed, non-profit health care system (of these 17 completed all components of the study - 3 disenrolled).

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Patient recruitment began approximately 6 months following completion of the Establishing Focus physician training and lasted one year (March 2004 – March 2005). Eligibility criteria included: being 18 years or older, acting as their own legal guardian, having seen the physician at least twice in the previous two years, having no serious cognitive impairment, and fluency in English. Clinic staff advised study coordinators

when eligible patients arrived. The majority (71%) of patients approached agreed to participate. Most (98%) participants completed the study questionnaires following the visit.

Results

The 48 enrolled physicians saw 1,776 consenting patients. Of these, 43 physicians saw 128 patients who scored positive for depression. Nearly 2/3 of the depressed sample was female. Only lower levels of pain predicted that a depression discussion would occur, while only female gender predicted that a suicide-related discussion would occur. Depression was discussed in 52% of the encounters. Suicide ideation was endorsed by 59% (n = 75) of participants, yet suicide-related discussion occurred in only 11% (n = 13) of encounters. Although suicide ideation was endorsed in equal proportions by males and females, suicide was discussed in only 1 encounter with a depressed male. The overall age range in the sample was 18 to 83, in the depressed group (18 to 76) and in the suicide discussion group (18 to 76). Detailed patient-level demographics are presented in Table 1.

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Physician gender and practice type predicted likelihood of discussing depression. No physician variables were associated with discussing suicide (Table 1).

Only higher ratings of physician decision-making style were associated with discussing depression, and no process variable predicted suicide-related discussion (Table 2).

Categorical endorsement of any suicide ideation versus none on PHQ9 item 9 was equal for men and women; however, men were 5% more likely to endorse suicide ideation greater than “several days” (Table 3).

When suicide was discussed, the conversation was more frequently initiated by physicians (n = 8) than by patients (n = 5). No male patients initiated suicide-related discussion. One female patient raised the issue of suicide ideation in a declaration that she was not feeling suicidal; the other four declared the presence of ideation.

In seven of the eight instances physicians introduced the topic of suicide by asking explicitly whether the patient wanted to hurt or harm, themselves or commit suicide (Figure 1). In five of the eight questions, physicians used words or phrases that are characterized by linguists as having “negative polarity”. These words and phrases are held to reveal (in their formulations) that the questioner “has grounds for preferring one answer to another – in this case a negative answer.” (37) (See also Borkin (38), and Heritage (39)).

Four of the five patients who initiated suicide-related discussion endorsed the presence of suicide ideation, while one explicitly denied it despite having indicated on her PHQ9 that she was being bothered by thoughts of death or hurting herself more than half the days in the past two weeks (Figure 2).

Physicians responded to disclosure of suicide ideation in equal numbers with respect to engaging-versus-disengaging communication style. Interestingly, they were twice as likely to use an engaging rather than disengaging communication style when the patient denied suicide ideation (Figure 3).

Discussion

Depression continues to be under addressed in primary care. We found high rates of suicide ideation in this sample of depressed primary care patients. Consistent with other reports, suicide was rarely discussed. Of note, in the few cases in which physicians asked about suicide, it was with patients who had the lowest levels of suicide ideation as reported on the PHQ9. This raises the question as to why patients with frequent ideation are not getting identified. Perhaps most disturbingly, while suicide ideation was equally prevalent in males and females, it was only discussed in one encounter with a male patient.

We know of no research investigating the impact of micro-linguistic interviewing strategies on patient disclosure of suicide ideation. In a study aimed at eliciting patient concerns, (39) it was demonstrated that even a single word can influence whether patients share all of their concerns in a primary care encounter. Our findings suggest that when physicians ask about suicidal ideation, they often do so with negative polarity, which may inhibit full disclosure. Furthermore, there may be compounded effects when a question is negatively polarized and the physician follows up a patient denial in a way that reinforces the negative answer (e.g. “that’s good”). Future research on how patients and providers collude to avoid important disclosures about suicide and depression is warranted.

Based on our findings, we recommend that education programs be designed to teach patients to ‘ask your doctor’ about depression through public health campaigns

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and quality improvement efforts implemented to teach physicians that suicide-related discourse should be part and parcel of addressing depression.

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Patient centeredness does not guarantee that discussions about suicide will occur in primary care encounters. Specific methods for increasing suicide-related discourse in primary care is needed.

Training for physicians varies a great deal in the U.S. Physicians who train with patient populations that carry a high burden of suicide may receive more guidance for engaging patients around suicide and this may account for physician variance related to how frequently they broach the topic and the style of inquiry used. Educational interventions should be developed and tested to determine the ability to modify these important physician behaviors.

Limitations

Although this sample is large, the number of identified suicide-related conversations was small, reducing our statistical power to perform inferential analyses. It is possible that the low occurrence of depression and suicide-related conversation is due to the fact that the patient and provider had discussed this topic at previous visits. It is also possible that many patients were being followed by mental health specialists and addressing suicide risk there. While some physicians may have been aware that the patient in question was being followed in specialty care, a prudent clinical action would include assessing for recent specialty care visits and intent for ongoing management in specialty care - something we did not see. From a clinical risk management perspective

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deferring all aspects of suicide risk management to mental health specialists is not likely to assure optimal care delivery.

All patients and providers were aware that their session was being audio recorded. It is possible that both parties were inhibited from discussing suicide due to this fact. Given the stigma associated with suicide, providers may have felt it was too personal to include in an audio-recorded session.

Physicians may have been reluctant to talk about suicide for fear of actually inducing or increasing suicide ideation. (40,41) While this concern appears frequently in suicide prevention discourse, there is little data to support or refute the concern. However, recently, Crawford et al., (42) found that there was no increase in suicide ideation at follow up with primary care patients screened for suicide. This argument is akin to thinking that asking about smoking or drug use would induce such behaviours. In addition to fear of inducing suicide-related behavior, Stoppe et al. (41) found physicians often cited that asking about suicide was "not necessary", implying that they were drawing from indirect means whether or not the patient was at risk for suicide.

The large discordance between patient disclosure on the PHQ-9 and spontaneously disclosing to their physician is concerning. In comparing patient self-report to clinician ratings of suicide-related behaviour, Trivedi et. al. (43) found that patients were more likely to endorse suicide intent and plans than physicians. This finding suggests a need for promoting best practices for identifying risk.

There was no follow-up data collection in this study, hence we were unable to document suicides or suicide attempts following the visit.

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Conclusions

Suicide ideation is present in a significant proportion of depressed primary care patients, but rarely discussed. Men, who carry the highest risk for suicide, are particularly unlikely to disclose their ideation in the encounter, and perhaps more disturbingly, not be asked about it. Patient disclosure of suicide ideation is an important first step in preventing suicide. Physicians should be encouraged to ask about suicide ideation in their depressed patients, particularly with men who are at the highest risk to die from suicide.

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Table 1 – Participant & Physician Demographics and Clinical Characteristics			
PATIENTS	**Total Depressed (n = 128)**	**Discussed Depression (n = 66; 52%)**	**Discussed Suicide (n = 13; 11%)**
Female	64%	68%	93%+
Age	47 (sd =14.2)	45 (sd =13.7)	41 (sd =15.9)
Income	$50,000	$50,000	$30,000
Race-Ethnicity			
White	69%	78%	77%
Mixed	12%	14%	15
Black	9%	5%	8%
All Other	10%	3%	0%
Exp Cond	59%	58%	46%
PHQ9	20.1 (sd=3.62)	21.2 (sd=4.47)	21.7 (sd=4.52)
PHQ9 item 9	1.0 (sd=1.07)	1.0 (sd=1.05)	1.1 (sd=1.14)
Pain (1 to 6)	4.0 (sd =1.4)	3.5* (sd =1.5)	3.6 (sd =1.4)

Physician Demographics				
PHYSICIANS	**Total (n = 48)**	**Saw Depressed Patient (n = 43; 90%)**	**Discussed Depression (n = 32; 66%)**	**Discussed Suicide (n = 11**; 23%)**
Female	42%	44%	58%*	62%
Academic Clinic	65%	70%	84%*	75%
HMO	35%	30%	16%	25%
Experimental Cond	46%	58%	57%	50%

"Depressed" indicated by PHQ9 score > 14
* indicates statistically significant predictor of discussing depression ($p < .05$)
+ indicates statistically significant predictor of discussing suicide ($p < .05$)
"Exp Cond" indicates the physician was a part of the original intervention
** Two physicians had two encounters in which suicide was discussed; hence only 11 unique physicians for 13 encounters.
"Experimental Cond" indicates the physician was a part of the original intervention

Table 2 - Process Variables as Predictors of Depression/Suicide Discussion			
	Total Depressed (n = 128)	**Depression Discussed (n = 66)**	**Suicide Discussed (n = 13)**
MOS Participatory Decision Making Style	4.1 (sd = .81)	4.3* (sd = .74)	4.1 (sd = .73)
Health Care Climate Questionnaire	6.1 (sd = .91)	6.3 (sd = .84)	6.1 (sd = .98)
Trust Sub-Scale of the Primary Care Assessment Survey	6.2 (sd = .82)	6.3 (sd = .72)	6.4 (sd = .82)
* Indicates characteristic predicted that a depression related discussion would occur ($p < .05$)			

Table 3 - Distribution of Responses to PHQ9 Suicide Item		
In the past two weeks, how often have you been bothered by thoughts that you'd be better of dead or of hurting yourself in some way?	**Females (n = 82) % (n)**	**Males (n = 46) % (n)**
Not At All	41% (34)	41% (19)
Several Days	28% (23)	24% (11)
More Than Half the Days	16% (13)	24% (11)
Nearly Every Day	14% (12)	11% (5)

Figure 1 - Physician Phrases Initiating Suicide Discussion	**Patient Response**	**PHQ9 item 9**
1. Since we talked on the phone the other day, I know you're down, but you're **not**, like, thinking of hurting yourself or **anything**?	No	0
2. Sometimes people, when they have thoughts of feeling really sad, they have thoughts of harming themselves. Have you **ever** had thoughts of suicide or killing yourself?	Mmm-mm (no)	0
3. Okay. Do you have thoughts of hurting yourself or **anything** like that?	No	0
4. Okay, well, those are definitely depression symptoms. Do you feel like harming yourself?	Mmm, not really	1
5. Have you had **any** thoughts of hurting yourself?	Yeah	2
6. You're definitely not thinking about hurting yourself or **anything** like that?	You know, I have to be honest… (patient goes into long description of stressors and attitudes towards suicide,	1

	with ultimate denial of intent but clearly has thoughts of wishing she were dead)	
7. Are you suicidal?*	No not yet, I haven't thought about it	1
8. Some people get so down that they are having thoughts about ending your life.	No	0
* Denies it to the physician but reports being bothered by thoughts of death or of hurting herself "Several days" in the past two weeks on the PHQ9 Bolded text indicates negative polarity		

Figure 2 - Patient Phrases Initiating Suicide Discussion

Patient Disclosure	PHQ9 item 9*	Physician Responses
1. I just feel that I haven't had any suicidal ideation in a year or so, and it's been very pervasive in the last month.	2	Are you (inaudible) at the sleep lab
2. I don't know. I just don't know. I just don't – I'm tired of living like this. I'm so tired of living in pain, I don't want to. I can't-you know	3	You just save it up for me
3. I've had suicidal things going on with me.	3	Oh, I'm sorry to hear that
4. I think I should just be buried.	0	Mm-hmm. Let's see. Shortness of breath
5. I'm ***not*** thinking of suicide anymore**	**2**	That's good

* Item nine asks, "How often in the past two weeks have you been bothered by thoughts of death or of hurting yourself?" Response options are "Not at all = 0", "Several days = 1", "More than half the days = 2", or "Nearly every day = 3"

** Spontaneously denies presence of suicide ideation but indicated being bothered by thoughts of death or hurting herself "more than half the days" in the past two weeks on the PHQ9.

Figure 3 - Engaging and Disengaging Physician Responses

Physician Responses to Patient Denial of Ideation
Engaging
1. Anybody in the family ever had suicidal? Let me look through the family history that I do have. Any family history of depression or anxiety that you're aware of?
2. Have you been taking your Zoloft?
3. You don't get that?
4. Okay. Do you get out and get things done that you want to get done?
Disengaging
1. Uh huh. Let's see. Have we checked your thyroid?
2. I didn't think so

Physician Responses to Patient's Endorsement of Ideation
Engaging
1. When was the last time?
2. Let me search the (hospital) and see if one of their psychiatrists who has started*
3. Oh, I'm sorry to hear that
Disengaging
1. Are you (inaudible) at the sleep lab?
2. You just save it up for me!
3. Mm-hmm. Let's see. Shortness of breath
* patient interrupts physician at this point, he returns to referral after interruption

No checklist for mixed methods qualitative studies that are observational.