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Integration of geriatric mental health screening into a primary care practice: a patient satisfaction survey

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Abstract

Objective—Colocation of mental health screening, assessment, and treatment in primary care reduces stigma, improves access, and increases coordination of care between mental health and primary care providers. However, little information exists regarding older adults' attitudes about screening for mental health problems in primary care. The objective of this study was to evaluate older primary care patients' acceptance of and satisfaction with screening for depression and anxiety.

Methods—The study was conducted at an urban, academically affiliated primary care practice serving older adults. Study patients ($N = 107$) were screened for depression/anxiety and underwent a post-screening survey/interview to assess their reactions to the screening experience.

Results—Most patients (88.6%) found the length of the screening to be “just right.” A majority found the screening questions somewhat or very acceptable (73.4%) and not at all difficult (81.9%). Most participants did not find the questions stressful (84.9%) or intrusive (91.5%); and a majority were not at all embarrassed (93.4%), upset (93.4%), or uncomfortable (88.8%) during the screening process. When asked about frequency of screening, most patients (72.4%) desired screening for depression/anxiety yearly or more. Of the 79 patients who had spoken with their physicians about mental health during the visit, 89.8% reported that it was easy or very easy to talk with their physicians about depression/anxiety. Multivariate results showed that patients with higher anxiety had a lower positive reaction to the screen when controlling for gender, age, and patient–physician communication.

Conclusions—These results demonstrate strong patient support for depression and anxiety screening in primary care.

Keywords

older; satisfaction; screening; depression; anxiety

Introduction

Mental disorders are common in late life and associated with significant disease burden. Approximately 10–15% of patients in geriatric primary care settings have a depressive disorder, and many also suffer from comorbid anxiety disorder (Gallo and Lebowitz, 1999; Lyness *et al.*, 1999; U.S. Department of Health and Human Services, 1999:331–381; Bruce *et al.*, 2004; Kroenke *et al.*, 2007; van't Veer-Tazelaar *et al.*, 2011). The presence of depression negatively affects disease progression, medical adherence, and functional status and increases mortality risk in older patients (Upadhyaya *et al.*, 2000). Although the majority of patients with geriatric depression are diagnosed in primary care settings, rates of appropriate treatment remain low in this venue (Bartels *et al.*, 2004; Chaney *et al.*, 2011).

An increasing body of evidence indicates that collaborative care models (CCMs) for depression are feasible, sustainable, effective for both short-term and long-term outcomes, and cost-effective (Katon *et al.*, 2005; Rost *et al.*, 2005; Gilbody *et al.*, 2006; Domino *et al.*, 2008; Chang-Quan *et al.*, 2010; Chaney *et al.*, 2011). In one variation, a non-physician care manager provides administrative coherence to primary care providers in assessing and treating patients with depression, often with the involvement of collaborating mental health specialists. Features of this model have been used in two major multisite investigations, Prevention of Suicide in Primary Care Elderly Collaborative Trial (PROSPECT) (Bao *et al.*, 2011) and Improving Mood Promoting Access to Collaborative Care Treatment (IMPACT) (Hunkeler *et al.*, 2006). Another model used in a large multisite study (Primary Care Research in Substance Abuse and Mental Health for the Elderly (PRISM-E; Substance Abuse and Mental Health Services Administration-VA) emphasizes in lieu of a care manager, the colocation of screening, assessment, and treatment by a team of mental health professionals on the premises of a primary care physician's office or in a group practice (Bartels *et al.*, 2004; Gallo *et al.*, 2004).

CCMs have been shown to reduce the stigma surrounding depressive disorders in older adults, improve access, and increase rates of utilization of depression treatment. CCMs also foster coordination of care between mental health and primary care teams (Hunkeler *et al.*, 2006) and in some settings may even enhance primary care physicians' satisfaction (Gallo *et al.*, 2004). A multicenter randomized controlled trial conducted in primary care demonstrated that a CCM approach integrating mental health screening and intervention was associated with reduced rates and severity of patients' depression, less functional impairment, and improved quality of life (Unutzer *et al.*, 2002). Finally, data from the PROSPECT study showed that suicidal ideation may also be decreased in primary care populations served by a collaborative mental health component (Alexopoulos *et al.*, 2009).

Given the importance of mental health screening for older people and the paucity of data about acceptability at the patient level, more research on patient reactions to screening is needed. Accordingly, this study evaluated patients' acceptance of and satisfaction with

screening for depression and anxiety in a primary care practice serving older adults. Determining the acceptability or tolerability of mental health screening for older patients within a geriatrics medical practice is an important initial measure before additional strategies to address mental health issues are developed and tested.

Methods

Design, setting, and sample

This study was part of a funded project that sought to integrate mental health services in a primary care practice serving older adults. The goals of the project were to implement systematic screening of all patients for anxiety and depression within the practice, assess patients who screened positive, and offer appropriate treatment. The funding supported a full-time mental health nurse practitioner and part-time geropsychiatrist who also ran a weekly mental health case conference for the faculty physicians and interdisciplinary staff. The practice is the ambulatory care arm of an academic Division of Geriatrics and Palliative Medicine within a major metropolitan teaching hospital.

Sample assembly

Subjects were recruited from patient panels of nine attending physicians during routine practice sessions from 7/09 through 1/10. On specified days, patients from panels of one to three physicians were scheduled for depression and anxiety screening and recruited. Practice physicians determined whether each patient was eligible for the study, and the physician asked patients during the visit if they would be willing to participate in a survey about their reactions to the screening process.

During the recruitment process, prospective subjects were given a detailed description of the purpose and nature of the study. They were told that because screening for anxiety and depression was a new innovation at the practice, staff wanted to know how it was experienced by the patients and how useful they found it to be. Unlike in the actual screening, the survey questions would not be about depression or anxiety. In addition, subjects were reassured that their responses would be confidential and would not affect their treatment or standing at the practice. Finally, they were given a candid preview of the types of questions that they would be asked.

To meet criteria for the current study, patients were required to be at least 65 years old, English speaking, and screened by their physician for depression and anxiety. Reasons for exclusion included cognitive impairment and hearing impairment. If patients were unable to stay for the interview on the day of their scheduled appointment, they were asked if they would be willing to be interviewed over the telephone within a 7-day period.

Three researchers (S.S., E.W., and C.S.) consented all participants and conducted all of the surveys and interviews. For face to face interviews ($n = 102$), patients were given a printed copy of the survey questions to follow as the interviewer read them. The survey administration and interview typically took between 15 to 20 min, in most cases conducted after the conclusion of the medical appointment. Five surveys were administered over the

telephone. The study protocol was approved by the institutional review board at Weill Cornell Medical College.

Measures: screening instruments

The mental health questionnaire included five questions adapted from screens for depression and anxiety used in primary care (Figure 1). Questions 1 and 2 were the first two items from the Patient Health Questionnaire-9 (PHQ-9) (Gilbody *et al.*, 2007), a screen for symptoms of depression, and questions 3 and 4 were the first two items from the General Anxiety Disorder (GAD)-7 (Spitzer *et al.*, 2006), a screen for symptoms of anxiety. Question 5, the last item from the PHQ-9, assessed suicidal ideation. The use of such ultra-brief tools to elicit core symptoms of anxiety and depression has been extensively validated as an approach to screening for generalized anxiety disorder and major depression, respectively (Whooley *et al.*, 1997; Kroenke *et al.*, 2003; Löwe *et al.*, 2005; Kroenke *et al.*, 2007). Moreover, in the larger screening trial, nearly 60% of patients who were screen positive for depression, anxiety or both were also given clinical mood disorder diagnoses and assigned to treatments, thus offering *de facto* validation of the overall screening strategy.

The five-question screen was given to patients who were then asked to complete it while waiting for their appointment. The following patient responses were considered to be positive screens: a response of “2” or “3” to questions 1, 2, 3, or 4 or a response of “1,” “2,” or “3” to question 5 (Figure 1). The attending physician saw the patient’s responses to this written screen at the beginning of the appointment. For patients screening negative, follow-up questions were typically not necessary.

Survey instrument to ascertain acceptability of screening process

The patient satisfaction survey instrument used in this study was adapted from existing instruments gauging patients’ reactions to screening questions (Zimmerman *et al.*, 1994; Lish *et al.*, 1997). The survey consisted of 16 multiple choice questions and inquired about the following: (1) length of mental health screening; (2) acceptability of mental health screening; (3) reactions to mental health screening including negative emotional reactions; (4) communication with physician; (5) beliefs about frequency of mental health screening in primary care; and (6) self-assessment of overall health. The responses for these 16 multiple choice questions were the following: “not at all,” “a little,” “somewhat” and “very.” One open-ended question at the end of the survey asked patients to provide general comments on the screening process. Additionally, patients were invited to provide comments and explanations of their answers to multiple choice questions.

Demographic data were collected regarding participants’ age, gender and race-ethnicity by reviewing patients’ medical records.

Analyses

Quantitative results—Frequencies are reported for univariate findings. Bivariate associations were assessed using Fisher’s exact, two-sided significance tests for comparison of proportions, and *t*-tests when comparing group means. Multivariate analyses were conducted using a stepwise regression analyses because of the exploratory nature of the

study and to avoid colinearity. Sensitivity analyses were conducted with a hierarchical approach based on findings from the stepwise regressions and colinearity diagnostics.

Factor analyses were conducted to create a “screening reaction scale” to measure participants’ reactions to the screening. The omega total was 0.91; the explained common variance (ECV) was 0.479; the Cronbach’s alpha was 0.735. The low ECV may be because of the low overall variance explained (the first eigenvalue was 2.874 and the second was 0.992). However, because the second and remaining eigenvalues are less than 1.0, there is support for essential unidimensionality. The final screening reaction scale consisted of six items: (1) “Did you find the depression and anxiety questions difficult?”; (2) “Did you find the questions stressful?”; (3) “Did you find the questions intrusive or too personal?”; (4) “How much were you embarrassed by being asked questions about depression and anxiety?”; (5) “How much did it upset you to be asked the questions about depression and anxiety?”; and (6) “How uncomfortable did it make you feel to be asked the questions about depression and anxiety?.” Items were dichotomized because of sparse data (a little/somewhat/very vs not at all). The screening reaction scale was scored such that a higher score indicated greater positive reaction to the screen.

Results

Of the 212 patients identified for screening during the study period, 136 (64.2%) met criteria for participation in the survey study and 76 (35.8%) did not meet criteria. Reasons for exclusion included the following: age <65 ($n = 12$); non-English speaking ($n = 7$); cognitive impairment as determined by the physician ($n = 18$); hearing impairment ($n = 1$); missed appointments or appointment cancellations ($n = 26$); and exclusion by the physician for other reasons, mostly concerning acuity of their medical condition ($n = 12$).

Of the 136 patients meeting the criteria to take the survey, 107 completed the interview (participation rate = 78.7%) and 8 (5.9%) declined. In the remaining cases, the patients had agreed to a telephone interview but could not be reached by telephone ($n = 6$), or the patients had been screened but were not asked to participate in the survey because of time constraints during the appointment ($n = 15$). [This subject flow is also displayed in tabular form (Table 1)]. Symptoms of depression or anxiety were in no case identified as the principal reason for patient refusal or exclusion. The mean age of participants was 81.2 (SD = 7.34; range = 65–97). Most were female (76%) and non-Hispanic white (90%).

Length of mental health screening

Patients were first asked about the appropriateness of the length of mental health screening (defined as the time it took to complete the five-question written screen, plus the time spent on any additional follow-up verbal questions and discussion with the physician). Ninety-three patients (88.6%) responded that the length of screening was “just right.” Ten (9.5%) thought that the screening process was “too short,” while two (1.9%) believed that the screening was “too long.” One patient answering that the screen was “just right” in length also felt that it could have been longer: ‘It’s not going to catch anybody, I think, who is in serious trouble and trying to hide it.’

Reactions to mental health screening questions

Patients were asked about the acceptability of mental health screening during their primary care visits. Sixty-six patients (62.9%) believed that the questions were “very acceptable.” In their comments, patients most frequently said that the screening questions were “important” and “good” and that they were “grateful to be asked [about depression and anxiety].” Other patients (19 of 105, 18.1%) reported that they were “indifferent” or “neutral,” indicating that the screening questions were acceptable because they did not bother them. Some patients, however, answered that the questions were “somewhat acceptable” (10.5% [$n = 11$]). Only five patients (4.8%) said that questions were “a little acceptable,” and four patients (3.8%) said that they were “not at all acceptable.” Some of the explanations given by these patients included that they were “caught unaware” and that the screening questions were “unexpected.” Others commented that the screen would be more acceptable to them if it were done only verbally with their physician; they were concerned about privacy with the written questionnaire. One patient called the questions “scary,” particularly the item about suicidal ideation. Another said, ‘It makes me sad because it shows that aging has many ways of showing itself.’

In addition to acceptability of screening questions, negative reactions to screening were assessed. Patients were asked if they found the depression and anxiety questions to be difficult. Eighty-six (81.9%) patients reported that the screening questions were not at all difficult (Table 2). For patients reporting that the screening questions were a little or somewhat difficult, explanations included the following: difficulty fitting self into the categories on the written screen; not enough guidance provided for answering the questions; disagreement with relative/caregiver on how to answer the questions; difficulty describing emotions; and contradictory feelings.

Patients were also asked if they found the questions to be stressful or intrusive or too personal (Table 2). Ninety patients (84.9%) found the mental health screen not at all stressful and 91.5% ($n = 97$) not at all intrusive. For patients who found questions stressful or intrusive, some of the reasons given were that the screening raised difficult emotions and heightened consciousness of mental health problems. One patient said that she was stressed by “seeing all the threes”—meaning that she was experiencing symptoms of depression and anxiety nearly every day. Other patients said they had difficulty in figuring out how to answer the screening questions, and that made the process stressful. A majority of participants were not at all embarrassed, upset, or uncomfortable during the screening process.

Patient–physician communication

To understand how relationships with their physicians might affect patients’ reactions to mental health screening, patients were asked how easy or difficult it was to talk with their physicians about depression and anxiety. One quarter of the surveyed patients (27 of 106, 25.5%) had not spoken with their physicians about depression and anxiety during the medical visit; these were the patients who had screened negative. A majority of patients who had talked with their physicians about their mental health during the visit reported that the discussions were “easy” (19.8% [$n = 21$]) or “very easy” (47.2% [$n = 50$]). Only 3.7% ($n =$

4) of screened patients reported that it was “difficult” to speak with their physicians. Many spoke about how the positive, trusting relationship they had with their physician facilitated discussions about their emotional health. Representative responses included the following: ‘It’s a safe environment...I didn’t feel like I was talking to a doctor; I felt like I was talking to a friend who was really concerned.’

Beliefs about frequency of mental health screening

Patients were asked how often their doctors should ask questions about mental health concerns. Over half (55 of 105, 52.4%) of the patients believed that their physician should ask these questions every time they see the doctor, and 20% (21 of 105) thought that such questions should be asked during yearly checkups. One in four participants believed that their physician should only assess their mental health when an emotional problem is suspected, while two patients (1.9%) thought that their doctors should never screen them for mental health problems. Representative patient comments included the following: ‘It should be part of a general medical checkup, same as taking your blood pressure. The symptoms might not be obvious; our physical health can be affected by our mental health; it should be asked routinely, whether it’s necessary or not; people might be relieved to be asked some of these questions.’

Multivariate results

Stepwise multiple regression analysis predicting participants’ reactions to the screening assessment resulted in the inclusion of only the GAD-2 ($B = -0.237$, $se = 0.068$, $p = .001$, other results not shown). Additional analyses including other covariates provided consistent results. The final model included the following: gender, age, GAD-2, and two items about patient–physician communication. Tolerance and variance inflation factor statistics were examined, and collinearity was not found to be a problem. The results of the final regression analysis are shown in Table 3. Participants with higher anxiety evidenced a lower positive reaction to the screen when controlling for gender, age, and patient–physician communication. The screening reaction scale was scored such that a higher score indicated greater positive reaction to the screen.

Discussion

Integrating mental health issues into primary geriatric practice has important implications for a burgeoning aging population. The majority of patients in this study found the mental health screening to be appropriate in length and an acceptable part of the medical visit. Few patients had negative emotional reactions to screening. Indeed, most did not find the questions to be difficult, stressful or intrusive; a majority of patients were not at all embarrassed, upset, or uncomfortable during the screening. Most patients believed that their primary care physicians should frequently pose questions about mood and anxiety. A majority also reported that it was “very easy” or “easy” to talk with their physicians about depression and anxiety. These results demonstrate strong patient support for periodic depression and anxiety screening in a primary care geriatrics practice. Assessing the experience of patients who screened positive for depression or anxiety with the follow-up

interventions they received was not part of this study. However, future investigations are needed to examine the actual delivery of on-site care.

Limitations of the study include the sociodemographic characteristics of the study population—that is, mostly older adults living on the upper east side of Manhattan who had chosen primary care providers at a geriatrics primary care practice—whose views might not represent those of a broader geriatric patient sample. The majority of participants were female; more males would be needed to fully assess the experiences of older patients regarding mental health screening. Additionally, the mental health screen had been limited to symptoms of depression and anxiety. Further studies are therefore necessary to address attitudes and satisfaction with respect to screening for other psychiatric disorders.

It is possible that patients experiencing more negative reactions to screening declined to participate, and the positive patient satisfaction could therefore be over-represented. However, a relatively small percentage of eligible patients declined to participate in the acceptability study. It is also notable that those patients screening positive had more negative reactions to the screening process. It has been shown that acute states of depression and anxiety may influence responses to questionnaires (Chien and Dunner, 1996). Determining the influence of mood might be accomplished by re-administering screen-positive patients the same acceptability questionnaire after they are treated and their symptoms have remitted. However, this approach was beyond the scope of the present study. Despite these limitations, this is one of the first studies of the reactions of an older cohort in a medical practice to universal mental health screening questions. The findings provide support for the acceptability of mental health screening among older community-dwelling residents seen in a geriatric primary care practice.

Conclusion

We found that screening older primary care patients for anxiety and depression was well-accepted by most; it was also for some patients a useful segue to in-depth discussions of mental health issues with their primary care physicians. Taken together, these findings suggest that such screening can facilitate psychiatric case finding in geriatric primary care settings. Further studies are needed to assess the process of screening for other psychiatric disorders and to evaluate the treatment provided.

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Key points

- Strong patient support for depression and anxiety screening in primary care.
- Few patients experienced negative emotional reactions to screening.

The PHQ-2 Patient Questionnaire*Please circle the correct answer for each question.*

Over the past 2 weeks, how often have you been bothered by the following problems?	Not at all	Several days	Over half the days	Nearly every day
1. Little interest in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3

The GAD-2 Patient Questionnaire*Please circle the correct answer for each question.*

Over the past 2 weeks, how often have you been bothered by the following problems?	Not at all	Several days	Over half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3

Mental Health Summary Questionnaire*Please circle the correct answer for each question.*

Over the past 2 weeks, how often have you been bothered by the following problems?	Not at all	Several days	Over half the days	Nearly every day
1. Thoughts that you would be better off dead, or of hurting yourself in some way	0	1	2	3

Figure 1.
Mental health screen.

Table 1

Subject recruitment flow chart

Patients not meeting criteria for survey study	76	35.8%
Age <65	12	15.8%
Non-English speaker	7	9.2%
Dementia/cognitive impairment	18	23.7%
Hearing impairment	1	1.3%
No show/appointment cancellation	26	34.2%
Excluded by physician for other reasons, for example, medical acuity	12	15.8%
Patients meeting criteria for survey study	136	64.2%
Participated in survey	107	78.7%
Declined survey	8	5.9%
Agreed to participate in survey by phone but could not be reached	6	4.4%
Not asked to participate in survey because of time constraints during the appointment	15	11.0%

Table 2

Patients' reactions to mental health screening

Questions	Response categories							
	Not at all		A little		Somewhat		Very	
	n	%	n	%	n	%	n	%
Did you find the depression and anxiety questions difficult?	86	81.9	8	7.6	11	10.5	0	0.0
Did you find the questions stressful?	90	84.9	8	7.5	7	6.7	1	0.9
Did you find the questions intrusive or too personal?	97	91.5	4	3.8	3	2.8	2	1.9
How much were you embarrassed by being asked questions about depression and anxiety?	99	93.4	4	3.8	2	1.9	1	0.9
How much did it upset you to be asked the questions about depression and anxiety?	100	93.4	2	1.9	2	1.9	3	2.8
How uncomfortable did it make you feel to be asked the questions about depression and anxiety?	95	88.8	8	7.5	3	2.8	1	0.9

Table 3Regression analyses predicting participant screening reaction score ($n = 92$)

	Unstandardized coefficients			95% Confidence interval for B		p-value
	B	Std. Error	Lower bound	Upper bound		
Constant	7.563	1.447	4.687	10.439	<0.001	
Female	-0.409	0.290	-0.985	0.167	0.162	
Age	-0.017	0.017	-0.051	0.018	0.337	
GAD-2 severity score (deviant)	-0.218	0.070	-0.356	-0.080	0.002	
How easy or difficult was it to talk with your physician about depression and anxiety?	-0.103	0.131	-0.363	0.157	0.433	
How often should your doctor ask a few questions about depression and anxiety as part of the medical visit?	-0.075	0.135	-0.344	0.193	0.578	