Do Patient Requests for Antidepressants Enhance or Hinder Physicians' Evaluation of Depression?

A Randomized Controlled Trial

Mitchell D. Feldman, MD, MPhil, Peter Franks, MD,† Ronald M. Epstein, MD,‡ Carol E. Franz, PhD,§ and Richard L. Kravitz, MD, MSPH¶*

Objective: We sought to ascertain whether patients' requests for antidepressants affect visit duration or history taking by primary care physicians (PCPs) for patients with depressive symptoms and a coexisting musculoskeletal disorder and to determine whether more thorough history taking is associated with diagnostic accuracy or with provision of minimally acceptable initial care for major depression.

Design: This was a randomized trial using standardized patients (SPs). Six roles involved 2 conditions (major depression and adjustment disorder, both with coexisting musculoskeletal conditions) and 3 patient request types (brand-specific, general, or none). We conducted the study in 152 PCP offices in Northern California and Rochester, New York. Physicians were assigned randomly to see 2 SPs with depression/wrist pain or adjustment disorder/back pain.

Main Outcome Measures: Physician history-taking for depression and the musculoskeletal condition; depression diagnosis in the medical record; antidepressant prescriptions/samples; referral/follow-up recommendations; visit duration; and provision of minimally acceptable initial depression care.

Results: General antidepressant requests were associated with more depression history-taking (Adjusted Parameter Estimate = 0.80 more questions of 10 (95% confidence interval = 0.31–1.29, $P < 0.001$); brand-specific requests were marginally associated with more depression history-taking (Adjusted Parameter Estimate = 0.45, 95% confidence interval = −0.04–0.93, $P = 0.07$). Antidepressant medication requests were not related to musculo-skeletal question asking ($P > 0.3$) or visit length ($P > 0.8$). Depression history taking was directly associated with the likelihood of a chart diagnosis of depression and the provision of minimally acceptable initial depression care.

Conclusion: General antidepressant requests increase depression history taking, including screening for suicide. Patients' requests for medication do not appear to short-circuit history taking for depression or distract the physician's attention from coexisting musculoskeletal conditions.

Key Words: depression, patient requests, doctor-patient communication

(*Med Care* 2006;44: 1107–1113)

Depression is common in primary care patients and results in disability and increased health care costs.[1–3] Although there have been significant advances in the treatment of depression in primary care in recent years, primarily in the context of collaborative care models,[4,5] patients with depression frequently are overlooked and inadequately treated.[6–8] To date, research has focused primarily on the role of improved screening and detection by practitioners and on system innovations; little attention has been paid to the role patient requests for treatment may play in improving detection and treatment of depression in primary care. Previous research has demonstrated, however, that patient requests for treatment can be a powerful influence on the type and quality of care.[9–11] As a result, the pharmaceutical industry spends billions of dollars on direct to consumer advertising (DTCA) in the United States each year.[12] One recurring allegation is that patient requests for treatment may steer the physician into discussing the indications, risks, and benefits of brand-name medicines that may not be indicated, leading to neglect of other visit priorities.[13–17] In particular, time spent discussing a specific drug may detract from conscientious history-taking, arguably the bedrock of the diagnostic process.[18,19] This view is not universally endorsed; some insist that requests may promote a broader differential diagnosis and more thorough medical evaluation.[20]

From the *Division of General Internal Medicine, Department of Medicine, University of California, San Francisco; †Center for Health Services Research in Primary Care and Family and Community Medicine, University of California, Davis, Sacramento; ‡Departments of Family Medicine and Psychiatry and Center to Improve Communication in Health Care, University of Rochester School of Medicine and Dentistry, Rochester, New York; §Center for Health Services Research in Primary Care, University of California, Davis; and ¶Center for Health Services Research in Primary Care and Department of Internal Medicine, University of California, Davis.

Supported by a grant (5 R01 MH064683) from the National Institute of Mental Health. 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.

Reprints: Mitchell D. Feldman, MD, MPhil, Division of General Internal Medicine, Department of Medicine, University of California San Francisco, 400 Parnassus Ave, San Francisco, CA. E-mail: mfeldman@medicine.ucsf.edu.

ISSN: 0025-7079/06/4412-1107

To explore these issues, we conducted a study examining actual clinical behavior of physicians in the context of patients' requests for treatment. In a previous analysis, we found that patients' requests have a profound effect on physician prescribing in major depression and adjustment disorder, serving as an effective defense against initial undertreatment of major depression while leading to possible overuse of antidepressants in patients with adjustment disorder.[11] This study extends those findings by examining the impact of patient requests on physician history taking and by exploring the association of history taking with diagnostic accuracy and provision of minimally acceptable initial care for depressed patients. Given the competing claims made for the likely effects on history-taking, we asked the following questions: (1) Do patients' requests for antidepressants, whether general or brand-specific, affect history taking for depression in general, and about suicidality in particular? (2) Do requests short-circuit history taking for concurrent (musculo-skeletal) conditions? (3) Is history-taking for depression related to the recognition of depression by PCPs (as indicated by the presence of a chart diagnosis of depression) and to the provision of minimally acceptable care for major depression (defined as antidepressant prescribing, follow-up within 2 weeks, or a mental health referral)? (4) Do patient requests for medication lengthen visit duration?

METHODS

Design Overview

Standardized Patients (SPs) were trained to portray 6 roles, involving 1 of 2 clinical presentations (major depression with carpal tunnel syndrome or adjustment disorder with low back pain) with 1 of 3 antidepressant request types (brand-specific, general, or none). Physicians were assigned randomly to 2 visits involving one of each presentation and 2 of the 3 request types. SPs reported on the content of each visit, which was covertly audiotaped. A chart review of each encounter also was conducted. Written informed consent was obtained from all participating physicians. The precise wording varied by site in compliance with the demands of different institutional review boards. At all sites, physicians were told that during the next year they would see 2 SPs several months apart and that the purpose of the study was to "assess social influences on practice and the competing demands of primary care." The institutional review boards at all participating institutions approved the study protocol.

SP Role Development

Clinical biographies were developed for the 2 SP presentations with the assistance of a national advisory committee. Role One ("Louise Parker") was a 48-year-old divorced Caucasian woman with major depression and wrist pain. She worked full time and had no chronic physical or psychologic problems and no family history of depression. She had been feeling "kind of down" for 1 month, worse during the past 2 weeks. She complained of loss of interest and involvement in usual activities, low energy and fatigue, sensitivity to criticism, poor appetite on some days only, and poor sleep with early morning awakening. She had occasional trouble concentrating at work but no excessive crying, confusion, slowing, agitation, distorted thinking, or suicidal thoughts. Role Two ("Susan Fairly") was a 45-year-old divorced Caucasian woman with adjustment disorder and low back pain who had accepted a voluntary layoff rather than relocate with her company to another region of the country. She complained of fatigue and feeling stressed and reported difficulty falling to sleep 3 to 4 nights per week for the past few weeks, without early morning awakening. She recently curtailed her usual physical activity because of fatigue and fear of aggravating her back pain. Role outlines were revised iteratively until they were judged by a consensus of investigators and advisors to be clinically credible and manageable during a 15–20 minute new-to-doctor, acute visit. The SPs were further instructed to make: (1) a brand-specific request for Paxil® (paroxetine), (2) a general request for "medication," or (3) no specific request within the first 10 minutes of the visit. On the basis of extensive review of the literature and the views of our expert panel, we constructed the roles such that antidepressant prescribing would be in keeping with current evidence for Role One but not for Role Two. Further details on role development and SP presentation are described in a prior study.[11]

Conduct of Visits and Collection of Data

Internists and family physicians were recruited by working with 4 health care organizations in California and upstate New York. A total of 152 physicians participated; cooperation rates by site ranged from 53% to 61%. The age and gender distributions of participating physicians were similar to those of the practices as a whole. A random allocation scheme was designed such that each physician was assigned to see one SP with major depression and wrist pain and one SP with adjustment disorder and back pain; no physician saw more than one SP making the same type of request; and the interval between consent and the first visit—and between the first and second visit—were each at least 2 months. If the first randomly assigned visit involved an SP with major depression making a brand-specific request, the second visit involved an SP with adjustment disorder making a general request or no request (and vice versa). To ensure realism, SPs were provided factitious insurance cards obtained from local insurance companies; false identities (including pseudonym, local home and work address, and a "mobile phone number" corresponding to the cellular phone number of the study coordinator); and cash to make any applicable copayments. Details of sampling procedures are described elsewhere.[11]

Project staff enlisted practice managers at local clinical sites to help the SPs make medical appointments. Clinic personnel were told that the patient wished to establish as a "new patient" with the doctor but also had an acute issue (fatigue and musculoskeletal pain) that required attention within 1 to 2 weeks. Within 2 weeks of an SP visit, physicians were sent a letter by facsimile asking them to indicate whether, "during the past 2 weeks," they were at any time "suspicious" that one of their patients was actually an SP. Physicians responded that they had been "definitely" or "probably" suspicious before or during the visit in 12.8% of encounters.

All visits were conducted between May 2003 and May 2004 and were surreptitiously audio recorded using minidisc recorders concealed in the SP's purses. Immediately following the visit, SPs listened to the audio recording and completed a SP Reporting Form. An independent judge listened to 36 randomly sampled audio recordings. Agreement between the SP and the independent judge concerning individual physician behaviors (ie, specific elements of history taking, physical examination, and medical decision making) averaged 92% (mean kappa, 0.82).

This analysis focuses on the items in the SP reporting form pertaining to history-taking for depression symptoms and musculo-skeletal symptoms. All items were derived from published recommendations[21–23] and the advice of the study's Clinical Advisory Panel. There were 10 depression-related items addressing whether or not the physician asked: (1) about mood, emotions, or feelings; (2) whether there had been a loss of interest or pleasure in normal activities (3) how long symptoms of fatigue, low energy, or depressed mood had been going on; (4) whether sleep difficulties involved problems falling asleep versus awakening early; (5) whether there had been a change in appetite or weight; (6) whether symptoms of fatigue, low energy, or depressed mood were affecting functioning at home or at work; (7) whether there had been trouble concentrating on things such as reading the newspaper or watching television; (8) whether there was a past personal history of depression or anxiety, of distress associated with diminished functioning, or of "feeling like you do now;" (9) whether there was a family history of depression; and, (10) whether the actor-patient had thought about wanting to be dead, harming herself, or committing suicide. The SPs were trained to report that they were screened for suicide if the PCP asked directly about suicidal thoughts or the question appeared on a depression screener (eg, the PHQ-9) administered in the clinic. Together, the 10 depression questions formed a scale (based on yes/no responses) with a Cronbach's alpha of 0.71, mean 6.0 questions asked (SD 2.3, range 0–10).

There were 8 carpal tunnel syndrome questions addressing whether or not the physician determined: (1) the quality of hand/forearm symptoms, that is, "what the pain or tingling feels like?" (eg, sharp, burning achy, etc.); (2) the severity of hand/forearm symptoms (eg, by asking the SP to rate the pain on a scale from 1 to 10 or from very mild to severe, etc); (3) whether the hand/forearm symptoms interfered with functioning at home or work; (4) whether the hand/forearm symptoms got worse at certain times of day or night; (5) the duration of the hand/forearm symptoms (when the symptoms started, how long they had been ongoing); (6) whether there was weakness in the hand, forearm, or arm; (7) whether there was neck pain or stiffness; and (8) whether the actor-patient worked with their hands on the job or at home. Together, the 8 carpal tunnel syndrome questions formed a scale (based on yes/no responses) with a Cronbach's alpha of 0.71, mean 4.1 questions asked (SD, 1.5; range, 0–8). There were 9 low back pain questions: (1) whether there was a recent injury or accident affecting the back; (2) whether back symptoms interfered with functioning at home or work; (3) whether there had been a recent fever (not just asking about feeling hot or cold); (4) whether there was a history of cancer or other significant past medical history; (5) whether the pain persisted through the night, was more severe at night, or caused awakening from sleep; (6) whether there was weight loss; (7) whether there was any significant weakness of the legs or arms or difficulty walking; (8) whether there were problems with bladder control (wetting yourself, losing urine, having the urge to pass urine but not being able to); and (9) whether there were problems with bowel control (soiling yourself, or diarrhea you couldn't control). Together, the 9 back pain questions formed a scale (based on yes/no responses) with a Cronbach's alpha of 0.78, mean 4.0 questions asked (SD, 2.0; range, 0–8). To enable comparability (since physicians were exposed to either the carpal tunnel syndrome or the low back pain conditions), the musculoskeletal condition scores were standardized across the 2 conditions with a mean of 0, a SD of 0.455, and a range of −1.00 to 1.14. Both the depression question and musculoskeletal question scales were reasonably normally distributed.

Additional Measures

Information on physician specialty, gender and age was obtained by surveying participating physicians. A physician blinded to the SP role reviewed the medical records and classified physicians' dictated or handwritten assessments as: (1) depression, (2) adjustment disorder or reactive/situational depression, or (3) other diagnosis (eg, fatigue, stress, insomnia). On the basis of review of actual prescription forms or drug samples, prescribing decisions were classified as: (1) prescription for Paxil®, or, after September 2003, for generic paroxetine; (2) prescription for other antidepressant (including a newer generation antidepressant in any dose or a heterocyclic antidepressant in a final (target) dose equivalent to at least 75 mg of amitriptyline); or (3) no antidepressant. The minimum dose requirement for heterocyclic antidepressants was meant to exclude low-dose prescriptions intended for treatment of insomnia or pain.

Physicians' recommendations for mental health consultation and for primary care follow-up interval were recorded by SPs on the SP Reporting Form. Based on independent review of 36 audio-recordings, reliability estimates for mental health consultation (agreement 94.4%, kappa = 0.88) and follow-up within 2 weeks (agreement 89.3%, kappa = 0.61) were acceptable. For SPs portraying major depression, we relied on national guidelines to define "minimally acceptable initial care" as: (1) receiving a prescription for an antidepressant at the index visit, or (2) being referred to a mental health professional (interval not specified), or (3) being asked to return for follow-up within 2 weeks. Visit duration was assessed by timing the length of the visit (from the time of physician entry through his or her ultimate departure), as captured on the audio recording.

Statistical Analyses

The study was powered to detect with 80% probability and alpha = 0.05 an effect of patient requests on antidepressant prescribing equal to an odds ratio of 1.7 in adjustment disorder

and 1.5 in major depression. Analyses were performed using STATA version 9.2 (StataCorp, College Station, TX).

In addition to χ^2 tests of the relationships between each individual depression question and the 6 clinical presentations, we conducted a series of generalized linear mixed models to examine the relationships between clinical process indicators (history-taking, chart documentation, the provision of minimally acceptable initial care for depression, and visit length) and both clinical condition and request type, controlling for SP, physician, and other study characteristics posited to influence management. Analyses were conducted with each SP-physician encounter as an observation and the clinical process indicators as the dependent variable. The clinical process indicators examined were: number of depression questions asked (linear regression), musculoskeletal question scale score (linear regression), depression diagnosis mentioned (or not) in chart review (logistic regression), minimally acceptable initial care provided (or not) (logistic regression), and visit duration (linear regression). Random intercept, mixed effects regression analyses evaluated both SPs and physicians as random effects and other covariates as fixed effects. Covariates included physician gender, age and specialty, visit duration, study site, whether or not the physician was "suspicious," and visit order (ie, whether the visit was the first or second time the physician had seen a study SP). Analyses conducted excluding "suspicious" visits and visit duration as independent variables yielded substantially similar results and are not reported here.

RESULTS

Eighteen SPs made 298 visits to 152 physicians in Sacramento (n = 101), San Francisco (n = 96), and Rochester (n = 101); 6 physicians saw only 1 SP. Two hundred visits (67%) were to general internists and 98 (33%) to family physicians, whereas 201 (67%) were to male physicians and 97 (33%) to female physicians.

History Taking

Table 1 shows the prevalence of each depression item determined by clinical presentation and request type. Portrayal of major depression (vs. adjustment disorder) was associated with higher rates of question asking, overall (6.7; SD, 2.1 vs. 5.2; SD, 2.4 questions, *t* test, $P < 0.001$), and for each of the depression history questions except for prior personal history of depression, sleep disturbance, and symptom duration. In the depression scenario, fewer than 50% of the SPs were screened for suicide, although the question asking about suicide was at least 10% greater for both request conditions (brand-specific and general) compared with the no-request condition.

After adjusting for covariates, more depression questions were asked in visits where a general request was made, the SP portrayed major depression, visit duration was longer, and the treating physician was younger (Table 2). There was a nonsignificant trend ($P = 0.07$) for more questions to be asked when a brand-specific request was made. There were no relationships between either of the 2 request conditions (brand-specific or general) and history taking about the musculo-skeletal conditions. Longer visits were associated with more history taking about the musculoskeletal problems, but no other variables made a significant contribution.

Visit Duration

The mean visit length was 24.8 minutes (standard deviation, 11.2). Compared with the no-request SP visits, neither the brand-specific request (−0.2 minutes, 95% confidence interval [CI] = −2.5 to 2.1) nor the general request (0.1 minute, 95% CI = −2.2 to 2.4) for antidepressants was associated with longer visit duration (Table 2).

Chart-Recorded Diagnoses

Physicians recorded a diagnosis of depression or possible depression in the medical record in 80% of visits by SPs portraying major depressive disorder and in 39% of visits by SPs

TABLE 1. Prevalence of Depression History Taking Questions Asked by Study Condition

	Condition Type and Level of Request							
	Major Depression			Adjustment Disorder			*P*	
Question*	Brand	General	None	Brand	General	None	*P*1	*P*2
Suicide	45.1	48.0	33.3	28.6	40.8	21.6	0.04	0.19
Depression Hx	60.8	62.0	52.1	53.1	51.0	47.1	0.63	0.62
Depression Fam	45.1	58.0	33.3	24.5	26.5	13.7	<0.001	0.02
Concentration	33.3	28.0	37.5	16.3	20.4	15.7	0.05	0.01
Energy	82.4	68.0	70.8	53.1	67.4	51.0	0.009	0.04
Appetite	78.4	72.0	85.4	53.1	69.4	61.8	0.007	0.006
Sleep	74.5	80.0	87.5	69.4	73.5	68.6	0.24	0.02
Anhedonia	84.3	76.0	68.8	34.7	61.2	29.4	<0.001	<0.001
Sx Duration	88.2	96.0	91.7	95.9	81.6	92.2	0.12	0.93
Mood	96.1	94.0	83.3	79.6	95.9	72.6	<0.001	0.20

*See text for full question.

Numbers in each cell are % of SP encounters reporting question was asked. *P*1, probability associated with overall contingency table for question; *P*2, probability associated with comparison between major depressive disorder and adjustment disorder for no request roles only.

Hx indicates personal history; Fam, family history; Sx, symptom.

TABLE 2. Adjusted Effects of SP Request Type on Number of Physician History Taking Questions for Depression and for Musculo-Skeletal Problem

	Depression History Taking Questions		Musculo-Skeletal History Taking Questions	
Covariate	**Adjusted Parameter Estimate (95% CI)**	***P***	**Adjusted Parameter Estimate (95% CI)**	***P***
Brand-specific request (vs. no request)*	0.45 (−0.04 to 0.93)	0.07	0.00 (−0.11 to 0.12)	0.95
General request (vs. no request)*	0.80 (0.31 to 1.29)	<0.001	0.06 (−0.18 to 0.06)	0.31
Depression (vs. AD)*	1.40 (1.03 to 1.78)	<0.001	0.04 (−0.13 to 0.06)	0.45
Visit duration per SD (= 11.2 min)	0.66 (0.41 to 0.91)	<0.001	0.16 (0.11 to 0.22)	<.001
MD age per SD (= 9.8 yr)	−0.45 (−0.73 to −0.17)	<0.001	0.04 (−0.09 to 0.01)	0.13

*Baseline category.

For depression history taking, the dependent variable is number of questions asked (of 10); for musculoskeletal history taking, the dependent variable is standardized number of questions asked. (mean 0, SD = 0.45, minimum = −1, maximum = 1). The adjusted parameter estimate is the adjusted additional number of questions asked when covariate is present. Other variables that were noncontributory: physician gender, physician specialty, detection of SP, visit number, and site.

SD indicates standard deviation; CI, confidence interval; AD, adjustment disorder; Hx, history taking.

portraying adjustment disorder. A chart diagnosis of depression was more likely when more depression history taking occurred, when any kind of request was made, and if the SP presentation was depression (vs. adjustment disorder; Table 3). None of the other covariates made a significant contribution.

Minimally Acceptable Initial Care (MAIC)

MAIC, defined as any combination of an antidepressant prescription, mental health referral, or follow-up visit within 2 weeks of the initial visit, occurred in 81% of the 149 visits with major depression; 98% with a generic request, 90% with a brand-specific request, and 56% with no request. MAIC was more likely when more depression history questions were asked, and, independently, when either a generic or brand-specific request was made (Table 4). The adjusted odds ratios for both history questions and requests made were essentially unchanged by including both or only one of these variables (results not shown).

DISCUSSION

This experimental study of SP visits to primary care practices addresses whether requests for medication facilitate or impede the evaluation of persons with depression. We found that requests for antidepressant medication were associated with increased depression history taking. Of note, more extensive history taking for depression was not associated with reduced history taking for a comorbid musculoskeletal condition, or with longer medical visits. Thus, we found no evidence that patients' requests for medication (whether motivated by DTCA or otherwise) impeded quality care by short-circuiting history taking for depression, distracting the physician's attention away from coexisting musculoskeletal conditions, or by generating longer visits.

In addition, we found that physicians obtained more extensive depression related history from SPs who portrayed major depression compared with those who portrayed adjustment disorder and from SPs who made a general request compared with those who made no request. There was a trend toward more depression history taking when a brand specific request was made. We found no evidence to support the assertion that DTCA requests distract the physician from taking a complete medical history. Instead, it appears that patients' requests for medication serve to increase the thoroughness of depression history taking, including inquiries about suicidality. However, inquiries about suicidality in patients with major depression occurred in less than 50% of patients. Further studies are needed to explore what factors increase physician inquiry about suicide in depressed patients.

The impact of increased history taking on overall quality of care is unknown. In a previous analysis, however, we found that prescribing was greater, and delivery of acceptable

TABLE 3. Adjusted Predictors of Chart-Recorded Evidence of Considering Depression Diagnosis (vs. no Such Evidence)

Covariate	**Adjusted Odds Ratio**	**95% Confidence Interval**	***P***
Depression history taking	1.16	(1.01–1.34)	0.04
Brand-specific request (vs. none)	3.74	(1.90–7.37)	<0.001
General request (vs. none)	5.43	(2.60–11.32)	<0.001
Depression (vs. AD)	4.02	(2.13–7.60)	<0.001

For depression questions asked, the odds ratio is the adjusted odds ratio associated with each additional question asked. Other variables that were noncontributory: physician gender, physician specialty, detection of SP, site, visit duration, visit number.

AD indicates adjustment disorder.

TABLE 4. Adjusted Predictors of Minimally Acceptable Initial Depression Care for SPs Presenting With Major Depression (n = 149)

Covariate	**Adjusted Odds Ratio**	**95% Conference Interval**	***P***
Depression history taking	4.11	(1.37–12.38)	0.01
Brand-specific request	8.31	(2.53–27.34)	<0.01
General request	48.29	(5.49–424.35)	<0.01

Notes: For depression questions asked, the adjusted odds ratio is the adjusted effect of each additional question. Other variables non-contributory: physician gender, physician specialty, detection of SP, site, visit duration, visit number.

SP indicates standardized patient.

initial care was much greater, among SPs who made a request.[11] In that study, we found that patient requests may have competing effects on quality, potentially both averting underuse and promoting overuse of antidepressant medication. Presumably, increased history taking on the part of physicians is a foundation for improved quality of care, but this question remains unanswered.

It is interesting to speculate on the process by which a request for medication leads to more history taking by the physician. In our analysis, an SP request seemed to trigger the PCPs' attempts to hone in on a specific diagnosis. Experienced clinicians may invoke heuristics or "scripts" to sort through complex clinical issues efficiently.[24–27] Since PCPs must balance multiple competing issues compressed into a brief visit, and because previous research has shown that depression may not be the most pressing issue from the PCP's perspective,[28–32] the SP request for medication may trigger the physician to "pull out" the depression script and therefore pursue a more thorough evaluation of depression than might otherwise have occurred. These scripts also allow earlier focusing of diagnostic questions and earlier diagnostic closure, which may help prevent lengthening of the visit.

We found that increased history taking is associated with important depression process measures of quality such as chart recorded diagnosis of depression and the provision of minimally acceptable initial care (defined as any combination of an antidepressant, mental health referral, or follow-up visit within 2 weeks). Physicians recorded a diagnosis of depression or possible depression in the medical record in 80% of visits by SPs portraying major depression, and were significantly more likely to record a diagnosis when a request was made. If we accept that a chart diagnosis of depression is a proxy for appropriate recognition, this rate of diagnosis is higher than generally reported in earlier studies.[33–37] If patients can be made aware of a possible diagnosis of depression and motivated to provide an appropriate physician prompt, we may be able to improve PCPs recognition of this disorder and allow more patients to access appropriate treatment.

Studies continue to suggest deficiencies in the quality of health care delivered in the United States, including the diagnosis and treatment of depression[7,8,36,37] Physician education and system reform have led to some significant improvements, but there is increasing interest in the role that patients may play in promoting the delivery of high quality care. Patients who are educated about their disease and request appropriate care may receive more evidence-based care.[38] This may be particularly true for stigmatized conditions such as depression in which patients often present with somatic complaints such as fatigue and pain that make the diagnosis more elusive for PCPs. Our findings suggest that patients who prompt their physician with general requests for antidepressant medication are more likely to be thoroughly evaluated for depression and screened for suicidality. In addition, the larger effect on determining suicidality observed for a general request compared with the brand-specific request suggests a possible hierarchy of effective patient prompts: general requests for treatment are more effective than those for a specific, branded treatment, which in turn are more effective than no request. One possible explanation for this hierarchy is that physicians interpret general requests for medication as an informed invitation for further discussion about the diagnosis and treatment options ("do you think I might be depressed, and what can I do?") whereas brand-specific requests are heard as consumer demands for medical services in response to emotional persuasion rather than high-quality information; the latter are more easily dismissed by physicians and are not seen as inviting further discussion. Most agree that educated, activated patients requesting appropriate treatment is a desirable goal, but patients who request brand-name medication may be too much of a good thing.

The study has a number of limitations. Our analysis focuses on the process of care and does not directly address patient outcomes. However, other work has shown that patients trained to be more active during encounters have improved outcomes.[39] Second, though the use of standardized patients had a number of advantages (such as allowing randomization, reducing patient variability in presentation, and avoiding the need to get consent from both patients and physicians at the time of the encounter) the methodology also has a number of potential drawbacks. The external validity of this research might be threatened if SP portrayals are of poor quality, or physicians "detect" the presence of an SP and act differently as a result. To ameliorate this potential shortcoming, the SP roles were developed by an interdisciplinary team, reviewed and edited by a national advisory panel, and field-tested with local physicians and clinical trainees. In addition, SPs were rigorously trained before going into the field and continuously monitored and given feedback throughout the study so as to maintain role fidelity. In addition, reducing patient variability may limit the generalizability of our findings to patients with other sociodemographic and clinical characteristics. For example, previous research has demonstrated that black and Latino patients generally prefer counseling over pharmacological treatment; physicians may have behaved differently if visited by an SP from one of these groups.[40] We were restricted to examining new encounters with the physician; it is quite possible that the effects of requests are different in established doctor-patient relationships. Also, while we were careful to ensure the presentations were realistic, we cannot know whether the consequences of requests in other practice settings or for other diseases parallel what we observed. Finally, the physicians participating in this study were possibly highly selected. It remains uncertain how physicians in general would respond to patient requests.

This is, to our knowledge, the first study to examine how patients' medication requests influence physician's clinical assessments. We found no evidence to support the concern that DTCA-prompted requests detract from the quality of care delivered to patients with depressive symptoms, and they did not distract the physicians from addressing concurrent musculoskeletal complaints. Further, patient requests do not lengthen visits. Indeed, we found that medication requests were associated with increased history taking for depression, including screening for suicidality. Increased history taking, in turn, was associated with increased recognition of depression and a greater likelihood of providing minimally accept-

able initial care. We found that generic requests appear to be more powerful triggers of appropriate history taking for depression than were requests for brand-name medication. Patients should be educated to be advocates for their own quality health care, but if advocacy becomes overly focused on a particular treatment rather than treatment in general, the result may be missed opportunities and diminished quality of care. Future research should address the question of whether DTC advertising of antidepressants or other forms of patient education and activation such as disease awareness campaigns are more likely to improve detection and treatment of depression in the primary care setting.

ACKNOWLEDGMENTS

We thank the following individuals who made this project possible: Debbie Sigal, Arthur Brown, Kit Miller, Alison Venuti, Lesley Sept, Jun Song, Sheila Krishnan, Henry Young, PhD, Wayne Katon, MD, Patricia Carney, PhD, Edward Callahan, PhD, Fiona Wilson, MD, Debra Roter, PhD, Steven Kelly-Reif, MD, Jeff Rideout, MD, Robert Bell, PhD, Debra Gage, and Phil Raimondi, MD. Special appreciation goes to Blue Shield of California, the UCD Primary Care Network, Western Health Advantage (Sacramento), Kaiser Permanente (Sacramento), Brown & Toland IPA (San Francisco), and Excellus BlueCross BlueShield (Rochester). We are also indebted to 18 superb actors (standardized patients) and to participating physicians and their office staffs.

REFERENCES

1. Peveler R, Carson A, Rodin G. ABC of psychological medicine: depression in medical patients. *BMJ*. 2002 Jul 20;325:149–152.
2. Stafford RS, Ausiello JC, Misra B, et al. National patterns of depression treatment in primary care. *Prim Care Companion J Clin Psychiatry*. 2000;2:211–216.
3. Kessler RC, Berglund P, Demler O, et al. The epidemiology of major depressive disorder: Results from the National Comorbidity Survey Replication (NCS-R). *JAMA*. 2003;289:3095–3105.
4. Wells KB, Sherbourne C, Duan N, et al. Impact of disseminating quality improvement programs for depression in managed primary care: a randomized controlled trial. *JAMA*. 2000;283:3204.
5. Hunkeler EM, Katon W, Tang L, et al. Long term outcomes from the IMPACT randomised trial for depressed elderly patients in primary care. *BMJ*. 2006;332:259–263.
6. Arroll B, Goodyear-Smith F, Kerse N, et al. Effect of the addition of a "help" question to two screening questions on specificity for diagnosis of depression in general practice: diagnostic validity study. *BMJ*. 2005;331:884–886.
7. Gilbody S, Whitty P, Grimshaw J, et al. Educational and orgaizational interviews to improve the management of depression in primary care: a systematic review. *JAMA*. 2003;289:3145–3151.
8. McGlynn EA, Asch SM, Adams J, et al. The quality of health care delivered to adults in the United States. *N Engl J Med*. 2003;348:2635–2645.
9. Mintzes B, Barer ML, Kravitz RL, et al. Influence of direct to consumer pharmaceutical advertising and patients' requests on prescribing decisions: two site cross sectional survey. *BMJ*. 2002;324:278–279.
10. Kravitz RL, Bell RA, Azari R, et al. Direct observation of requests for clinical services in office practice: what do patients want and do they get it? *Arch Intern Med*. 2003;163:1673–1681.
11. Kravitz RL, Epstein RM, Feldman MD, et al. Influence of patients' requests for direct-to-consumer advertised antidepressants. *JAMA*. 2005; 293:1995–2002.
12. *Prescription Drug Trends.* Menlo Park, CA: Kaiser Family Foundation; 2004. Fact sheet 3057–03.
13. Murray E, Lo B, Pollack L, et al. Direct-to-Consumer advertising: physicians' views of its effects on quality of care and the doctor-patient relationship. *JABFP*. 2003;16:513–524.
14. Donohue JM, Berndt ER, Rosenthal M, et al. Effects of pharmaceutical promotion on adherence to the treatment guidelines for depression. *Med Care*. 2004;42:1176–1185.
15. Hollon MF. Direct-to-consumer marketing of prescription drugs: creating consumer demand. *JAMA*. 1999;281:382–384.
16. Mansfield PR, Mintzes B, Richards D, et al. Direct to consumer advertising is at the crossroads of competing pressures from industry and health needs. *BMJ*. 2005;330:5–6.
17. Holmer AF. Direct-to-consumer prescription drug advertising builds bridges between patients and physicians. *JAMA*. 1999;281:380–382.
18. Mechanic D. Physician discontent: challenges and opportunities. *JAMA*. 2003;290:941–946.
19. Rich EC, Crowson TW, Harris IB. The diagnostic value of the medical history: perceptions of internal medicine physicians. *Arch Intern Med*. 1987;147:1957–1960.
20. Weissman JS, Blumenthal D, Silk AJ, et al. Consumers' reports on the health effects of direct-to-consumer drug advertising. *Health Aff (Millwood)*. 2003(Suppl Web Exclusives);W3-82–95.
21. Dobscha SK, Gerrity MS, Corson K, et al. Measuring adherence to depression treatment guidelines in a VA primary care clinic. *Gen Hosp Psychiatry*. 2003;25:230–237.
22. D'Arcy CA, McGee S. The rational clinical examination: does this patient have carpal tunnel syndrome? [Erratum in: *JAMA*. 2000;284(11): 1384.] *JAMA.* 2000;283:3110–3117.
23. Low Back Pain Workgroup. *VHA/DOD Clinical Practice Guideline for the Management of Low Back Pain or Sciatica in the Primary Care Setting*. Washington, DC: U.S. Departments of Veterans Affairs and Defense; Version 1.0. May 1999.
24. Irby DM. Hot attending physicians make instructional decisions when conducting teaching rounds. *Acad Med*. 1992;67:630–638.
25. Irby DM. Three exemplary models of case-based teaching. *Acad Med*. 1994;69:947–953.
26. Bordage G. Elaborated knowledge: a key to successful diagnostic thinking. *Acad Med*. 1994;69:883–885.
27. Bordage G, Zacks R. The Structure of Medical Knowledge in the Memories of Medical Students and General Practitioners: Categories and Prototypes. *Med Educ*. 1984;18:406–416.
28. Klinkman MS. Competing demands in psychosocial care: a model for the identification and treatment of depressive disorders in primary care. *General Hospital Psychiatry*. 1997;19:98–111.
29. Nutting BA, Baier M, Werner JJ, et al. Competing demands from physical problems: effect on initiating and completing depression care over 6 months. *Arch Fam Med*. 2000;9:1059–1064.
30. Rost K, Nutting P, Smith J, et al. The role of competing demands in the treatment provided primary care patients with major depression. *Arch Fam Med*. 2000;9:150–154.
31. Williams JW. Competing demands: does care for depression fit in primary care? *J Gen Intern Med*. 1998;13:137–139.
32. Das AK, Olfson M, McCurtis HL, et al. Depression in African Americans: breaking barriers to detection and treatment. *J Fam Pract.* 2006 Jan;55:30–39.
33. Katon WJ, Unützer J, Simon G. Treatment of depression in primary care: where we are, where we can go. *Med Care*. 2004;42:1153–1157.
34. Gerber PD, Barrett JE, Barrett JA, et al. The Relationship of Presenting Physical Complaints to Depressive Symptoms in Primary Care Patients. *J Gen Intern Med*. 1992;7:170–173.
35. Wells KB, Hays RD, Burnam MA, et al. Detection of depressive disorder for patients receiving prepaid or fee-for-service care. Results from the Medical Outcomes Study. *JAMA*. 1989;15:262:3298–3302.
36. Von Korff M, Goldberg D. Improving outcomes in Depression. The whole process of care needs to be enhanced. *BMJ*. 2001;323:948–949.
37. Edmund MG, Unutzer J, Wells K. Clinician screening and treatment of alcohol, drug, and mental problems in primary care: results from healthcare for communities. *Med Care*. 2004;42:1158–1166.
38. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness. *JAMA*. 2002;288:1775–1779.
39. Greenfield S, Kaplan SH, Ware JE Jr, et al. Patients' participation in medical care: effects on blood sugar control and quality of life in diabetes. *J Gen Intern Med*. 1988;3:448–457.
40. Miranda J, Cooper LA. Disparities in care for depression among primary care patients. *J Gen Int Med*. 2004;2:120–126.