

What Drives Referral from Primary Care Physicians to Mental Health Specialists? A Randomized Trial Using Actors Portraying Depressive Symptoms

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BACKGROUND: Referral from primary care to the mental health specialty sector is important but poorly understood.

OBJECTIVE: Identify physician characteristics influencing mental health referral.

DESIGN: Randomized controlled trial using Standardized Patients (SPs).

SETTING: Offices of primary care physicians in 3 cities.

PARTICIPANTS: One hundred fifty-two family physicians and general internists recruited from 4 broad practice settings; 18 middle aged Caucasian female actors.

INTERVENTION: Two hundred and ninety-eight unannounced SP visits, with assignments constrained so physicians saw 1 SP with major depression and 1 with adjustment disorder.

MEASUREMENTS: Mental health referrals via SP written reports; physician and system characteristics through a self-administered physician questionnaire.

RESULTS: Among 298 SP visits, 107 (36%) resulted in mental health referral. Referrals were *less likely* among physicians with greater self-confidence in their ability to manage antidepressant therapy (adjusted odds ratio [AOR] 0.39, 95% confidence interval [CI] 0.17 to 0.86) and were *more likely* if physicians typically spent $\geq 10\%$ of professional time on nonclinical activities (AOR 3.42, 95% CI 1.45 to 8.07), had personal life experience with psychotherapy for depression (AOR 2.74, 95% CI 1.15 to 6.52), or usually had access to mental health consultation within 2 weeks (AOR 2.94, 95% CI 1.26 to 6.92).

LIMITATION: The roles portrayed by SPs may not reflect the experience of a typical panel of primary care patients.

CONCLUSIONS: Controlling for patient and health system factors, physicians' therapeutic confidence and personal experience were important influences on mental health referral. Research is needed to determine if addressing these factors can facilitate more appropriate care.

KEY WORDS: mental health; primary care; referral patterns; specialty consultation; health services research.

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Brief psychotherapies are beneficial in depressive disorders,¹⁻⁵ but generalist physicians are not typically trained in their use.⁶ Primary care depression guidelines therefore emphasize mental health referral as a valid option for most patients.⁷ Although some patients with depression seek mental health specialty care directly, referral is a critically important yet poorly understood mechanism of access.⁸

Referrals may driven by patient factors, physician factors, the patient-physician interaction, or features of the health care delivery system. Many studies have examined system and patient factors affecting mental health referrals⁹⁻²³ but few have assessed physician factors. Glied²⁴ reported that family physicians were more likely than internists to diagnose and refer patients with mental health disorders. Alvidrez and Areán²⁵ found that physicians who were female, considered psychotherapy effective, or frequently employed "psychosocial techniques" were more willing to refer older depressed patients. Williams et al.²⁶ reported that physicians with greater self-reported knowledge of depression and greater confidence in their ability to treat mental illness were less likely to refer. These studies were limited by incomplete adjustment for patient factors such as condition severity and visit expectations as well as for system factors like availability of specialty mental health services.

We used unannounced Standardized Patients (SPs) to examine the antecedents of mental health referral. We focused on critical clinician-level "risk factors" (personal and professional characteristics, diagnostic process, and self-efficacy) for mental health referral while controlling experimentally for patient factors, namely depression severity (major depression vs adjustment disorder with depressed mood) and request making. A secondary objective was to examine health system factors by describing the process of mental health referral in 4 diverse practice settings.

METHODS

Design Overview

The study was designed as a randomized controlled trial.²⁷ Eighteen SPs were trained to portray 6 roles, created by crossing 2 clinical conditions (symptoms consistent with major de-

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pression or adjustment disorder) with 3 medication request types (brand-specific, general, or none). Participating physicians gave advanced consent to see 2 unannounced SPs presenting with physical and psychological symptoms. The study protocol was approved by the institutional review boards at all participating institutions.

Sampling of Practices

Details of sampling procedures are described elsewhere.²⁷ Internists and family physicians were recruited from: (1) an academically affiliated primary care network in inland Northern California (CA-PCN); (2) a group-model health maintenance organization in inland Northern California (CA-HMO); (3) an independent practice association in the San Francisco Bay area (CA-IPA); and (4) a regional health insurer in upstate New York (NY-RHI). Physicians in the CA-PCN see patients covered by multiple insurance plans, some of which “carve out” mental health coverage to a mental health benefits manager. Many of the CA-HMO offices offer on-site mental health consultation, while others utilize more traditional mechanisms of referral. Within the CA-IPA, affiliated physicians practice independently in solo-, single-specialty group, and multi-specialty group practices and have referral options limited by the patient’s insurance. SPs presenting to the CA-IPA physicians were given an insurance plan with a mental health carve-out. Finally, the NY-RHI offers a variety of preferred provider organization (PPO) plans. Affiliated physicians practice independently of the insurer, and all mental health care is “carved-in.”

A total of 152 physicians participated in the study. Cooperation rates²⁸ by site ranged from 53% to 61%. The age and gender distributions of participating physicians were similar to those of non-participating physicians within each system. Six physicians saw only 1 SP, making a total of 298 SP visits.

Role Development and Standardization

Detailed clinical biographies were developed for the 2 presentations. Role 1 was a 48-year-old divorced, Caucasian woman with major depression of moderate severity and wrist pain consistent with carpal tunnel syndrome. Role 2 was a 45-year-old divorced Caucasian woman with adjustment disorder and low back pain. Actors were instructed to make: (1) a brand-specific request for Paxil[®] (paroxetine), (2) a general request for “medication that might help,” or (3) no specific request. While the prevalence of antidepressant requests on the first visit in general practice is not known, requests for new medications occur in 11% of primary care visits and requests for advertised medicines in up to 7% of such visits.^{29–31} Key elements of each role have been summarized in the paper by Kravitz et al.²⁷; details are available by request.

Visit Conduct and Data Collection

By random assignment, physicians had 1 encounter with an SP portraying major depression with wrist pain and another encounter with an SP portraying adjustment disorder with back pain. Immediately following the visit, SPs completed an SP Reporting Form that captured a list of clinician behaviors. Overall agreement between the SP and an independent judge on 36 randomly selected visit audiorecordings was 92% (mean κ , 0.82). Using a detection form faxed to the doctor’s office

within 2 weeks, physicians reported that 12.8% of visits “probably or definitely” involved an actor.^{27,32}

Main Measures

Referral to a mental health professional was assessed by asking: “Did the physician you saw today suggest or recommend that you seek care from a mental health professional?” There was good correspondence between SP reports on this item and the judgment of the independent audiotape reviewer (agreement 94.4%, $\kappa=0.88$). If the SP responded affirmatively, she was asked to indicate whether the doctor or staff: (1) “suggested I see a mental health provider but did not give me any information on how to do so”; (2) “told me to call my health plan”; (3) “recommended a specific person” or “gave me a list of specific places to call”; or (4) “helped me to make an appointment.” Standardized patients were also asked to record whether the referral was to a psychiatrist, psychologist, social worker, marriage and family counselor, or “other/unspecified” mental health professional.

Antidepressant prescribing decisions were classified as: (1) prescription for Paxil[®]; (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’ personal and professional characteristics and attitudes were ascertained from a self-administered questionnaire mailed at the end of the study. Relatively stable characteristics included *age, gender, race/ethnicity, and medical specialty*. For analytic purposes physicians were classified as Caucasian or nonCaucasian. Potentially mutable factors included *percentage of time providing patient care and confidence (self-efficacy) in managing antidepressant therapy* (measured by 2 questions, each on a scale from 1 [not at all confident] to 4 [very confident]). One question referred to simple (1 medication) therapy, and the other to complex therapy (2 or more medications). We dichotomized the total score (maximum of 8) as very confident (≥ 7) versus not (< 7).

Personal experience and biographical factors may inform clinical decision making.³³ We inquired about physicians’ previous *experiences with depression in their personal life* by asking: “Have you, an immediate family member, or a close friend ever been treated for symptoms of depression, and if so, were they treated with “medication, psychotherapy, both or neither?” For the analyses, responses were classified as: (1) no experience with depression in personal life; (2) some experience with depression in personal life, treated with medication only; or (3) some experience with depression in personal life, treated with psychotherapy (with or without medication). We also asked “how would you describe the results of treatment?” (excellent, good, fair, or poor).

Perceived access to mental health services was assessed by asking, “When you refer a patient for evaluation of moderately severe depression, how soon is that patient typically able to see a licensed mental health professional?” (1 = within 24 hours, 2 = within a few days, 3 = more than a few days but less than 2 weeks, 4 = 2 to 4 weeks, 5 = at least 4 weeks, 6 = usually unable to obtain access). For analytic purposes responses were dichotomized as < 2 weeks versus otherwise.

Table 1. Mental Health Referral as a Function of Psychiatric Condition, Patient Prompting, and Antidepressant Prescribing

Psychiatric Condition	Overall (n=298) No. referrals/No. visits (%)	Patient Prompting*			Antidepressant Prescribing		
		Medication Request Made (n=199)	No Request Made (n=99)	P-Value	Antidepressant Prescribed (n=131)	Antidepressant Not Prescribed (n=167)	P-Value
		No. referrals/No. visits (%)	No. referrals/No. visits (%)	No. referrals/No. visits (%)	No. referrals/No. visits (%)	No. referrals/No. visits (%)	No. referrals/No. visits (%)
Major depression	59/149 (39.6%)	50/101 (49.5%)	9/48 (18.8%)	<.001	39/80 (48.8%)	20/69 (29.0%)	.014
Adjustment disorder	48/149 (32.2%)	33/98 (33.7%)	15/51 (29.4%)	.60	13/51 (25.5%)	35/98 (35.7%)	.20

*Data previously reported in different form.²⁷

Chart Recorded Diagnoses. To assess the physicians' diagnostic process, a physician reviewed SPs' medical records and classified physicians' dictated or handwritten assessments as (1) depression or dysthymia ($n=178$); (2) adjustment disorder or reactive/situational depression ($n=19$); or (3) other diagnosis (including no mental health diagnosis) ($n=101$). For analytic purposes the latter 2 categories were collapsed.

Statistical Analysis

Analyses were performed using STATA version 8.2 (StataCorp, College Station, TX). In addition to χ^2 tests of the relationships among factors affecting referral likelihood, we used logistic mixed models to examine the relationships between the dependent variable (mental health referral or not) and patient, physician, and health system factors. Patient factors included: condition (depression vs adjustment disorder) and prompting (any medication request vs none). Physician factors included age, gender, race/ethnicity, medical specialty, percentage time in patient care, perceived access to mental health referral, confidence in managing antidepressant therapy, and prior experience with depression in self, family or friends. The latter was represented by 2 dummy variables: 1 for experience with pharmacological treatment for depression versus no experience with depression, and another for experience with psychotherapy for depression versus no experience with depression. Analyses were conducted with each SP-physician encounter as an observation. Random intercept, mixed effects regression analyses evaluated both SPs and physicians as random effects and other covariates as fixed effects. Ancillary analyses adjusted for whether or not the physician was "suspicious" that the patient was an SP. The detection variable was not significant, did not materially affect the other parameter estimates, and is not further reported.

RESULTS

Overall Referral Patterns

Among 298 visits by SPs with depressive symptoms, 107 (36%) resulted in a suggestion or recommendation for mental health referral: 4% to psychiatrists, 39% to clinical psychologists, 10% to social workers, and 47% to counselors or unspecified mental health providers. The physician or clinic staff helped secure a mental health appointment in 18% of referrals, recommended a specific person or provided a list of qualified mental health professionals in 34%, told the patient to call

their health plan in 20%, and offered no active assistance in 28%.

Effect of Patient and Health System Factors

As reported previously,²⁷ referral rates varied little by clinical condition ($P=.18$, Table 1). In visits for major depression, MH referral was more commonly recommended when SPs prompted the physician by making a request for antidepressant medication than when they simply presented with symptoms (50% vs 19%, $P<.001$, Table 1). In contrast, during visits for adjustment disorder, the likelihood of MH referral did not vary significantly according to whether SPs requested medication (40% vs 32%, $P=.18$, Table 1). Irrespective of requests, the likelihood of MH referral was significantly higher when SPs received an antidepressant prescription (as opposed to no prescription) in major depression ($P=.014$) but not in adjustment disorder ($P=.20$) (Table 1).

Mental health referral rates converged to a narrow range (36% to 42%) at 3 of 4 study sites but were significantly lower within the CA-PCN (17%, $P<.001$). Use of doctoral-level health professionals (psychiatrists and psychologists) ranged from 14% (CA-PCN) to 72% (CA-HMO) ($P<.001$). Provision of "active assistance" (helped to make an appointment or recommended a specific person or list of persons) ranged from 0% (CA-PCN) to 88% (CA-HMO). The percentage of physicians able to obtain mental health consultation within 2 weeks ranged from 7% (CA-PCN) to 73% (CA-HMO) ($P<.001$).

Physician-Level Predictors of Referral

In unadjusted analyses, physicians who were male or Caucasian, who spent less than 90% of their professional time providing direct patient care, who reported being able to obtain mental health consultation within 2 weeks, who were less than "very confident" about their ability to manage antidepressant therapy, or who had experience in their personal lives with psychotherapy for depression were significantly more likely to make a mental health referral ($P<.05$ in each case, Table 2). Referral rates did not vary significantly by age or specialty (Table 2).

Multivariable Analysis

In a random intercepts mixed-effects logistic regression model focusing on main effects and examining physician characteristics while controlling for patient and health system factors, making an antidepressant medication request was significant-

Table 2. Physician Characteristics Related to Referral

Characteristic	Number of Visits	Referred to Mental Health Professional (%)	P-Value
Physician age			
Less than 40 y	94	38.3	.28
40 to 54 y	151	37.8	
55 y or older	53	26.4	
Physician gender			
Male	201	39.8	.044
Female	94	27.8	
Physician race/ethnicity			
Caucasian	210	39.5	.044
Non-Caucasian	88	27.3	
Physician specialty			
General internal medicine	200	36.0	.96
Family medicine	98	35.7	
Percentage of time providing patient care			
Less than 90%	104	49.0	.001
At least 90%	194	28.9	
Physician confidence in ability to manage antidepressant therapy			
Very confident (≥ 7 on 8-point scale)	140	27.9	.006
Less than very confident	158	43.0	
Self-reported ability to obtain mental health consultation			
Usually within 2 wk	144	43.8	.006
Usually greater than 2 wk	154	28.6	
Personal or vicarious experience with depression and its treatment			
No previous experience	114	29.8	.001
Treated with medication only	58	24.1	
Treated with psychotherapy (with or without medication)	122	48.4	

n's vary due to missing data.

ly associated with mental health referral (adjusted odds ratio [AOR] 3.53, 95% confidence interval [CI] 1.65 to 7.55, $P=.001$; Table 3). In ancillary analyses, there was a significant interaction between mental health condition and making a medication request ($P=.04$); stratifying on condition showed that the AOR for mental health referral associated with making a medication request was greater in major depression (AOR 5.5,

95% CI 2.0 to 15.1) than in adjustment disorder (AOR 1.4, 95% CI 0.6 to 3.3) (data not shown in table).

Physicians spending at least 10% time on nonclinical activities (teaching, research, or administration) were much more likely to refer, as were those who reported being able to obtain mental health consultation within 2 weeks. Those with a high level of confidence in their ability to manage antidepressant therapy were less likely to refer (Table 3). Physicians reporting previous personal or vicarious experience with psychotherapy (but not antidepressant medication alone) were also more likely to refer to a mental health professional (Table 3). These estimates were unaffected by adjusting for the physician's report of whether their experience with psychotherapy resulted in a good outcome (data not shown). The physician random effect was significant ($\rho=0.31$, $P=.012$), indicating that individual physicians differed in their propensity to refer.

To explore the mediating effect of mental health diagnosis on physicians' clinical decisions, we calculated the percentage of visits in which a) an antidepressant was prescribed or b) a mental health referral was made, stratified by SP role and by chart-recorded diagnosis. Among 298 visits, physicians diagnosed depression or dysthymia in 119 of 149 (80%) of SPs portraying major depression and 59 of 149 (40%) of SPs portraying adjustment disorder (Table 4). Antidepressant prescribing was strongly associated with chart-recorded diagnosis regardless of the role portrayed (Table 4). Mental health referral rates, conversely, were sensitive to diagnosis among SPs portraying major depressive disorder (MDD) (referral recommended in 52% of MDD visits in which depression was diagnosed versus 23% when depression was not diagnosed, $P<.01$) but not among those portraying adjustment disorder (48% vs 39%, $P=NS$, Table 4).

DISCUSSION

The probability of referring to a mental health provider in this study was higher for physicians who devoted more time to nonclinical activities, perceived mental health consultation to

Table 3. Influence of Patient, Physician, and System Characteristics on Referral for Mental Health Care (n=294)

Characteristic	Odds Ratio	95% CI	P-Value
Patient characteristics (design variables)			
Psychiatric condition is major depression (vs adjustment disorder)	1.60	0.86, 2.97	.14
Antidepressant request (vs no request)	3.53	1.65, 7.55	.001
Site (CA-PCN is the reference category)			
CA-HMO	2.07	0.42, 10.1	.37
NY-RHI	1.89	0.45, 7.90	.38
CA-IPA	1.98	0.46, 8.59	.36
Physician characteristics			
Specialty=family medicine (vs internal medicine)	1.20	0.53, 2.72	.66
Age (vs <40 y)			
40-54 y	0.90	0.38, 2.12	.81
>=55 y	0.46	0.13, 1.56	.21
Female gender (vs male)	0.56	0.23, 1.38	.21
White race/ethnicity (vs other)	1.89	0.72, 4.99	.20
At least 10% of professional time devoted to teaching, research, or administration	3.42	1.45, 8.07	.005
High degree of confidence in management of depression (vs moderate-low confidence)	0.39	0.17, 0.86	.020
Personal/vicarious experience			
With medication only	0.81	0.26, 2.51	.72
With psychotherapy (alone or in combination with medication)	2.74	1.15, 6.52	.022
Usually able to obtain mental health consultation within 2 wk (physician self-report)	2.94	1.26, 6.92	.013

Results obtained using random intercepts, mixed effects logistic regression. Bold numbers are significant, $P<.05$.

Table 4. Proportion of Standardized Patients Receiving an Antidepressant Prescription or a Mental Health Referral, Stratified on SP Role and Recorded Diagnosis

	Antidepressant Prescribing		Mental Health Referral	
	Depression or Dysthymia Diagnosis, N=178	Other or No Diagnosis, N=120	Depression or Dysthymia Diagnosis, N=179	Other or No Diagnosis, N=120
Major depression role (n=149)	73/119 (61.3)	7/30 (23.3)***	62/119 (52.1)	7/30 (23.3)**
Adjustment disorder role (n=149)	34/59 (57.6)	17/90 (18.9)***	28/59 (47.5)	35/90 (38.9)

**P < .01.

***P ≤ .001.

be more readily available, had less confidence in their ability to manage antidepressants, and had personal life experience with psychotherapy for depression.

The idea that physicians with academic or administrative responsibilities practice differently than full-time clinicians is consistent with the work of Borowsky et al.³⁴ who found that mental health referrals are extremely common in academic generalist practices

The association between availability of health care services availability and utilization is a time-honored theme in health services research.^{35,36} Physician-reported availability of mental health consultation within a 2-week window varied 4-fold across study sites and was, after adjustment, associated with a 3-fold increase in the odds of recommending care from a mental health professional.

Increased knowledge in a particular clinical domain usually increases referrals,^{37,38} possibly because more knowledgeable doctors are more attuned to clinical complexities.³⁹ However, consistent with Williams et al.²⁶ we found that physicians with greater confidence in their ability to manage antidepressant therapy were substantially less likely to recommend consultation with a mental health provider. Perhaps therapeutic self-efficacy⁴⁰ operates differently than diagnostic sophistication, in which recognition of the complexities of a topic might lead to greater appreciation of the value of consultation.

Seventy percent of participating physicians reported that they (or a close friend or relative) had been treated for depression, and nearly half had direct or vicarious experience with psychotherapy. Physicians reporting such experience were more likely to offer patients a mental health referral. The association does not owe to enhanced outcomes expectancies,⁴¹ because referral rates were high regardless of perceived effectiveness. Although these observational results do not prove that exposing health professional students to psychotherapy would alter their propensity to make mental health referrals once in practice, the hypothesis deserves further exploration. Alternatively, a common predisposing factor (such as a tendency toward self-reflection)⁴² may bring physicians to acquire greater familiarity with psychotherapy and to recommend it to patients.

Taken as a whole, relatively stable physician characteristics (age, gender, race/ethnicity, and primary care specialty) have little influence on mental health referral while more mutable conditions of practice, self-efficacy, and life experiences carry greater weight. Curiously, referral decisions were associated with chart-recorded diagnosis when SPs portrayed major depression but not adjustment disorder. This suggests that physicians view the basis for referral differently in the 2 con-

ditions, perhaps seeking specific management assistance in major depression and diagnostic validation or general psychosocial support in adjustment disorder.

Apart from identifying factors influencing referral, our study highlights important aspects of the referral process. Psychiatrists were rarely consulted, perhaps reflecting the "occupational transformation of the mental health system."^{43,44} In addition, except in the CA-HMO (fully integrated) system, a minority of patients were given meaningful assistance with making an appointment. Most were told to call a toll-free number, call their health plan, or use the phone book.

This study has several limitations. The SP roles represent a narrow spectrum of primary care practice. Only first visits were studied, precluding conclusions about referral behavior over time. Future therapeutic decision making (including whether to refer) would ordinarily hinge on the patients' response to initial therapy, among other factors. Furthermore, referral is a process that extends far beyond the primary care physician's recommendation. We only examined the most proximal part of the procedure, so our estimated referral rates represent an upper bound on actual referral. Finally, the small number of sites limits generalizability to other geographic regions and conditions of practice.

In summary, this study indicates that primary care physicians' perceptions of mental health services availability, personal life experiences, and therapeutic self-confidence are important influences on mental health referral in depression. Further research is needed to determine whether interventions designed to enhance the referral process can lead to better outcomes, especially for patients with more severe depression, in whom the need for combined therapy with medication and psychotherapy might be most compelling.

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