Published in final edited form as:

Anxiety Stress Coping. 2013 September ; 26(5): 526–538. doi:10.1080/10615806.2012.752461.

Religion and anxiety treatments in primary care patients

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Abstract

Earlier data suggested religious physicians are less likely to refer to a psychiatrist or psychologist. This follow-up study measures how religious beliefs affect anxiety treatments in primary care. We surveyed U.S. primary care physicians and psychiatrists using a vignette of a patient with anxiety symptoms. Physicians were asked how likely they were to recommend anti-anxiety medication, see the patient for counseling, refer to a psychiatrist, refer to a psychologist or licensed counselor, encourage meaningful relationships and activities, and encourage involvement in religious community. We experimentally varied symptom severity, whether the patient was Christian or Jewish, and whether she attended religious services. Physician attendance at religious services was assessed in the survey. The response rate was 896 out of 1427 primary care physicians and 312 out of 487 psychiatrists. Religious physicians were more likely to promote religious resources. There was no statistically significant difference between physicians' recommendations for religious and non-religious patients. There was no statistically significant difference in religious and non-religious physicians' referrals to a psychologist, licensed counselor, or psychiatrist. Ultimately, we did not find a difference in religious and non-religious physicians' support for mental health referrals, however religious physicians were more likely encourage using religious resources.

Keywords

anxiety; primary care; religion; spirituality; psychiatry; anti-anxiety medication

Introduction

Historically, religion and psychiatry have been viewed as at-odds with each other. Freud described religion as neurosis. (Freud, 1964) Psychiatrists tend to be less religious than the general population, and less religious than other physicians. (Curlin, Odell et al., 2007) And clergy and secular therapists potentially conceptualize a person's problems differently, with

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Conflicts: The authors have no financial relationships with commercial interests.

the caricature being that one emphasizes sin as the problem and recommends repentance and submission, while the other emphasizes guilt as the problem and recommends self-acceptance and self-actualization.

More recently though, there is growing awareness that psychiatry and religion are not so clearly at odds. Psychiatrists are still less religious than the general population, but not so much as in previous decades. (Curlin, Odell et al., 2007) Psychiatrists endorse religion as important for patients. (Curlin, Lawrence et al., 2007) And empirical data support that many patients suffering from mental health concerns benefit from religion. (Koenig, 2009; Koenig, Larson, & Weaver, 1998)

Amidst such changes, little is known of how religion affects clinical decisions for patients with psychiatric needs. In an earlier study, we found some indication that religion is a factor. In that 2003 national physician survey (n=1044), we used a vignette of a patient experiencing ongoing “deep grieving” two months after his wife's death. We found that physicians who were more religious were more likely to refer the patient to clergy or to a religious counselor, and less likely to refer to a psychiatrist or psychologist. (Curlin, Odell et al., 2007)

That survey had limitations that constrained our ability to interpret the findings and which raised additional questions about the role of religion for patients who need mental health care. That survey used one brief vignette (of a grieving patient) raising the question of whether religious characteristics influence treatment choices for other mental health concerns. That vignette did not specify the patient's religious characteristics, which would be highly relevant if physicians are considering referrals to religious resources. That survey also did not parse out physicians' willingness to refer to clergy, religious counselors, psychiatrists, and psychologists.

The present study was designed as a follow-up study to examine these questions and to characterize the relationship between religion, psychiatry, and patient care in more detail. The full survey included vignettes on anxiety, depression, (Lawrence et al., 2012b) substance abuse, (Lawrence et al., 2012a) and medically unexplained symptoms. This article focuses on treating anxiety; a common complaint with considerable morbidity, for which treatment rates can vary dramatically. (Andrews, Henderson, & Hall, 2001; Buszewicz & Chew-Graham, 2011; Fifer et al., 1994; Harman, Rollman, Hanusa, Lenze, & Shear, 2002; Issakidis, Sanderson, Corry, Andrews, & Lapsley, 2004; Kroenke, Spitzer, Williams, Monahan, & Lowe, 2007; Linden et al., 1999; Olfson et al., 2000; Stein et al., 2004; Wang, Demier, & Kessler, 2002; Weisberg, Dyck, Culpepper, & Keller, 2007; Young, Klap, Sherbourne, & Wells, 2001)

We surveyed primary care physicians and psychiatrists; two groups likely to treat anxious patients. The survey employed a vignette-experiment, where we varied the patient's symptom severity and religious characteristics. We also measured physicians' religious characteristics so that we could test several hypotheses.

We hypothesized that physicians would be more likely to recommend each treatment when patients had more severe symptoms, because patients with more symptoms are likely to need interventions at more levels. We hypothesized that physicians would be more likely to recommend religious resources when the patient is more religious, because prior evidence has shown that many religious patients prefer to seek help from within their religious community. (Belaire, Young, & Elder, 2005; Mitchel & Baker, 2000; Privette, Quackenbos, & Bundrick, 1994; Walker, Worthington, Gartner, Gorsuch, & Hanshew, 2011) We hypothesized that religious physicians would be more likely to promote religious resources regardless of the patient's religiosity, because religious physicians are likely to view

religious resources favorably, and because previous research has shown religious physicians to be more directive in their approach with patients. (Lawrence & Curlin, 2009) We hypothesized that religious physicians would be less likely to refer to a psychologist or a psychiatrist, because our previous survey found that physicians were more likely to refer a grieving patient to clergy or to a religious counselor, and less likely to refer to a psychologist or psychiatrist. (Curlin, Odell et al., 2007)

This study focused on religiosity, which is sometimes distinguished from spirituality as being oriented toward formal organized religion rather than subjective spiritual experience. (Cohen & Koenig, 2003) As such, we wrote vignettes where the patient was either Christian or Jewish, and we focused our analysis on the patient's and the physicians' attendance at religious services as a marker for religiosity. While many scales of religiosity have been developed, (Hoge, 1972; Koenig & Bussing, 2010) we used religious service attendance because it is a marker of religiosity that crosses many religious traditions.

Methods

Between September 2009 and June 2010, we mailed a confidential self-administered questionnaire to a stratified random sample consisting of 1504 US primary care physicians and 512 US psychiatrists 65 years old or younger. The sample was generated from the American Medical Association Physician Masterfile, a database intended to include all practicing US physicians. To increase minority religious group representation in the primary care sample, we used validated surname lists to create four strata and oversampled from these strata. (Lauderdale, 2006; Lauderdale & Kestenbaum, 2000; Sheskin, 1998) We sampled 121 primary care physicians with typical south Asian surnames, 171 primary care physicians with typical Arabic surnames, 86 primary care physicians with typical Jewish surnames, and 1126 additional primary care physicians (from all those whose surnames were not on one of these ethnic lists). The psychiatrist sample was not sufficiently large to warrant oversampling by ethnic surname. Physicians received up to three separate mailings of the questionnaire. The first mailing included a \$20 bill and the third offered an additional \$30 for participation. Data were double keyed, cross-compared, and corrected against the original. The University of Chicago institutional review board approved the study. The survey can be downloaded from the following website: <https://pmr.uchicago.edu/studies/mental-behavioral-health>.

The questionnaire included a vignette experiment about a woman returning to her primary care physician seeking help for anxiety. We experimentally varied three patient characteristics in a factorial between-subjects design. The patient either reported problems with her school and work, or no problems. She was either Christian or Jewish, and she either regularly or rarely attended church (or synagogue). Thus one vignette version was: "A 23-year-old woman presents for the third time in five months. She complains of difficulty with ruminative thoughts, restlessness, tension, and worry. She reports problems with her school and work. She exercises regularly. She says she is Jewish and regularly attends synagogue. Physical exam is unremarkable except for an anxious affect, and routine labs are normal. She is open to 'anything you think will help.'" The eight possible vignettes were randomly distributed among the study sample.

We used physicians' self-reported attendance at religious services (dichotomized at twice a month or more, versus less frequent attendance) to compare responses by physician religiosity.

The criterion variables were physicians' responses to the question that followed the vignette. Primary care physicians were asked, "Given this limited information, how likely would you

be to do each of the following for this patient? (Assume all strategies are available and financially feasible for the patient.) Prescribe an anti-anxiety medication; See the patient regularly for counseling yourself; Refer to a psychiatrist; Refer to a psychologist or other licensed counselor; Encourage the patient to get more involved in meaningful relationships and activities; Encourage the patient to get more involved in her religious community.” Psychiatrists were asked the same question, but in the form, “if the primary care physician asked your opinion, how likely would you be to recommend that the primary care physician do each of the following for this patient?” Response options were categorized as Not very/Not at all likely, Somewhat likely, or Very likely. For multivariable analyses we dichotomized responses at whether physicians were “very likely” to recommend or to provide a specific intervention.

When testing our hypotheses, we adjusted for demographic covariates: physician sex (male or female), age (in quartiles), geographic region, and self-reported race (White, Black, Asian, Hispanic/Latino, Other).

Statistical analysis

Stratum weights for the primary care sample were calculated to account for oversampling from the ethnic surname strata (the design weight). We also created a post-stratification adjustment weight to correct for a slightly higher response rate among US medical school graduates (65% response) versus international medical school graduates (56% response, $p=0.002$), and among physicians whose roles are primarily teaching or “other” (75% response, 103/138) versus office-based, hospital-based, research, administrative, or unclassified (62% response, 793/1288, $p=0.004$). Weights were the inverse probability of a person with the relevant characteristic being in the final dataset. The final weight for each case/respondent was the product of the design weight and the post-stratification adjustment weight. This enabled us to adjust for sample stratification and variable response rates in order to generate estimates for the population of US primary care physicians. Weights were not calculated for the psychiatrist sample because no disproportionate sampling by name strata was performed, and because response rates for background variables from the Masterfile did not differ significantly.

We first generated estimates of physicians' overall treatment preferences, without regard to the experimental design. We then constructed logistic regression models to test each of our hypotheses. Models included only those variables necessary to test the hypothesis, and are also adjusted for physician sex, age, region, and race. Models are summarized in Table 1. All analyses were conducted using the survey-design-adjusted feature of Stata SE statistical software (version 11.0; Stata Corp., College Station, Tex.).

Results

The response rate was 63% (896/1427) for primary care physicians and 64% (312/487) for psychiatrists, after excluding 77 primary care physicians and 25 psychiatrists who had invalid addresses or were no longer practicing. The response rate for primary care physicians varied by stratum: it was 53% (85/162) among those with Arabic surnames, 56% (63/112) among those with South Asian surnames, 70% (59/84) among those with Jewish surnames, and 64% (689/1069) among the remaining physicians. Response rates did not differ significantly by age, gender, region, or board certification. (See Table 2 for demographic characteristics.)

Overall treatment preferences

Physicians' self-reported likelihood of recommending each intervention is shown in Table 3. All interventions had some support. Physicians were most interested in referring to a psychologist or other licensed counselor, with 40% of primary care physicians and 52% of psychiatrists being “very likely” to recommend this. Seeing the patient regularly for counseling had the least support, with 11% of primary care physicians and 15% of psychiatrists being “very likely” to endorse this intervention.

Primary care physicians' treatment preferences were generally in line with what the psychiatrists would recommend, with two exceptions. While 13% of primary care physicians were “very likely” to refer to a psychiatrist, 48% of psychiatrists were very likely to advise this (OR 6.3, 95% CI 4.6–8.6, $p < 0.001$). And while 40% of primary care physicians were “very likely” to refer to a psychologist or licensed mental health counselor, 52% of psychiatrists were “very likely” to advise this (OR 1.7, 95% CI 1.3–2.2, $p < 0.001$).

Hypothesis 1: Physicians will be more likely to recommend each treatment when patients have more severe symptoms—The data did not support hypothesis 1. In logistic regression models (see Table 1) using symptom severity (whether the patient reported work/school problems) and adjusting for physician demographics (sex, age, region, race), symptom severity had no main effect on physicians being “very likely” to recommend any of the six treatment options.

Hypothesis 2: Physicians will tend to recommend religious resources when the patient is more religious—The data did not support hypothesis 2. In a logistic regression model (see Table 1), there was no main effect of patient church/synagogue attendance on physicians being “very likely” to recommend more involvement in religious community.

Hypothesis 3: Religious physicians will be more likely to promote religious resources, regardless of the patient's religiosity—The data supported hypothesis 3 for primary care physicians. We used a logistic regression model that included physician attendance at religious services, patient attendance at church/synagogue, the two-way interaction, and physician demographics as predictors for physicians being “very likely” to recommend more involvement in religious community (see Table 1). The interaction term was not significant so we removed it from the model and re-estimated the coefficients. These results are shown in Table 4. Physicians' recommendations were not significantly different when the patient regularly attended church or synagogue, but physician attendance at religious services was related to recommendations ($p < 0.001$). Among primary care physicians who attend services twice a month or more, 33% were very likely to recommend involvement in religious community, whereas 13% of less frequent attenders would advise this (OR 3.4, 95% CI 2.3–4.9). (Table 4)

Psychiatrists showed a trend in the same direction; 24% of psychiatrists who attend services twice a month or more would advise more involvement in religious community, while 13% of less frequent attenders would advise this. This difference was not significant in the full model ($p = 0.06$). However when we removed the (non-significant) interaction term, the difference was significant ($p = 0.04$, OR 2.2, 95% CI 1.1–4.5). (Table 4) It was also significant when we retained the interaction term but did not include demographic characteristics ($p = 0.03$, OR 2.1, 95% CI 1.1–4.0).

Hypothesis 4: Religious physicians will be less likely to refer to a psychologist or a psychiatrist—The data did not support hypothesis 4. In a logistic

regression model (see Table 1), physician attendance at services was not associated with being “very likely” to recommend referral to a psychologist or licensed counselor. There also was no association with referrals to a psychiatrist.

Discussion

In this vignette-survey of an anxious patient in a primary care setting, we found that primary care physicians and psychiatrists would consider a range of treatment interventions, with no single option standing out as the obvious first choice.

Primary care physicians and psychiatrists were often in agreement about the various treatments for the vignette-patient. This should increase primary care physicians' confidence in their ability to make appropriate treatment decisions for anxious patients. The largest discrepancy involved referring the patient to a psychiatrist: 13% of primary care physicians would refer, while 48% of psychiatrists would advise referral. This pattern was seen in other vignettes on our survey (Lawrence et al., 2012b), though the study cannot tell us why. Perhaps psychiatrists' desire to see the patient might be motivated by concern about whether the patient has the right diagnosis, by an overall lower threshold for wanting to assess patients who are not improving, or by a bias in favor of their own specialty. Primary care physicians' reluctance to refer to psychiatrists might reflect confidence in their own ability to treat the patient's anxiety, unfamiliarity with the added expertise that psychiatrists might provide, or concern about the stigma sometimes associated with seeing a mental health professional.

Religion appears to play a complex role in physicians' responses to anxiety. Giving advice with a religious component may seem taboo to many clinicians, but a 2007 survey (n=100 psychiatrists plus 1,044 other physicians) found that 83% of psychiatrists and 73% of other physicians agreed with the statement, “When religious/spiritual issues come up in discussions with patients, I encourage patients in their own religious/spiritual beliefs and practices. (Curlin, Lawrence et al., 2007)

A minority of physicians would advise the patient to get more involved in her religious community. While the patient's religiosity was not associated with this, physician religiosity was. Perhaps physicians who are religious themselves are more likely to think of religious involvement in positive terms. However, relationships between patient religiosity and anxiety disorders are complex. In a 1993 report, Koenig and colleagues found that generalized anxiety disorder was more common among young adults (ages 18–39 years) who frequently watched religious television or listened to religious radio; and obsessive compulsive disorder and simple phobia were more common among young adults who said religion was “very important” to them. Yet young adults who frequently attended church had lower rates of anxiety disorder. (Koenig, Ford, George, Blazer, & Meador, 1993) Although the relationship between religiosity and anxiety disorders is complex, our data are consistent with the idea that religious physicians believe patients with anxiety will experience positive effects from being more involved in their religious communities.

We expected that religious physicians would be less likely to refer to a psychiatrist, psychologist, or other mental health counselor. This was because religious physicians in our previous survey were more likely to refer a grieving patient to a clergy member or religious counselor, and less likely to refer to a psychiatrist or psychologist (the survey asked where they would refer the patient first). (Curlin, Odell et al., 2007) Moreover, in some religious circles there is opposition to psychiatrists and other mental health professionals. For instance, in his book “Unholy madness: the church's surrender to psychiatry” the author challenges readers “...to recognize the mental health system as a rival religion, a crude form

of idolatry inimical to the dissemination of the Christian faith and to the realization of the Christian vision of the kingdom of God on earth.” (Farber, 1999, p.12) However, our survey did not find a significant difference between religious and non-religious physicians' tendencies to refer to a psychologist or a psychiatrist. It is possible that religious opposition to psychiatry is uncommon in general, or may be uncommon among physicians because of their training, clinical experiences, and professional interactions. Perhaps the findings from our previous survey should be interpreted as religious physicians showing relative enthusiasm for religious interventions, rather than aversion to psychiatry.

Much of the literature on anxiety disorders in primary care has argued that anxiety disorders are under-diagnosed and under-treated. Research from three decades and multiple countries has consistently shown that only half of patients who meet conventional diagnostic criteria for an anxiety disorder are treated. (Fifer et al., 1994; Harman et al., 2002; Issakidis et al., 2004; Kroenke et al., 2007; Linden et al., 1999; Olfson et al., 2000; Stein et al., 2004; Wang et al., 2002; Weisberg et al., 2007; Young et al., 2001) Specifically, three studies in the past decade reported medication rates of 45.5%, (Weisberg, Dyck, Culpepper, & Keller, 2007) 55%, (Kroenke, Spitzer, Williams, Monahan, & Lowe, 2007) and 58.7%; (Stein et al., 2004) and psychotherapy / mental health referral rates of 31.7%, (Weisberg et al., 2007) 37.4%, (Stein et al., 2004) and 17%. (Kroenke et al., 2007) Primary care physicians are often blamed for this treatment gap, with some writers saying they are “ignoring psychiatric problems,” (Eisenberg, 1992) they “may not be well educated concerning treatment strategies for anxiety disorders...” (Harman et al., 2002) or they “are not confident in their ability to treat anxiety disorders.” (Harman et al., 2002) However, our data are notable in that psychiatrists and primary care physicians had similar propensities to starting a medication and referring to a psychologist or licensed mental health counselor. While these findings do not explain the treatment gap, it does suggest the explanation is not as simple as physician ignorance or lack of confidence.

This survey has limitations. Clinical encounters provide far more information than brief vignettes. Treatment decisions are usually made in dialogue with patients. This survey does not address treatment quality (e.g. medication dose and duration). (Stein et al., 2004) The vignette design did not allow us to measure how often physicians miss anxiety diagnoses. Non-responders may differ in ways that bias the results.

Conclusion

In this survey, using a vignette of a primary care patient with anxiety symptoms, we found some evidence that religion is associated with some treatment recommendations. Physicians who were more religious were more likely to advise the patient to participate in her religious community. However we did not find evidence that physicians try to match more religious patients to religious resources, or that religious physicians were reluctant to refer the patient to a psychologist or a psychiatrist. This suggests that religious physicians have a more positive view of religious communities and pastoral care providers as resources for mental health, but also encourage patients with anxiety to take advantage of medications and psychotherapy.

Acknowledgments

Funding: This study was supported by grants from the John Templeton Foundation and the National Center for Complementary and Alternative Medicine (1 K23 AT002749, to Farr Curlin).

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Table 1

Summary of logistic regression models

Model Category	Outcome variable(s):*	Predictor variables and covariates [†]	alpha
Comparison of Primary Care Physicians and Psychiatrists for each outcome variable	Prescribe medication Counsel patient yourself Refer to psychiatrist Refer to psychologist Encourage relationships Encourage religion	Physician Specialty	0.008 [§]
Hypothesis 1	Prescribe medication Counsel patient yourself Refer to psychiatrist Refer to psychologist Encourage relationships Encourage religion	Patient problems [‡] Physician sex Physician race Physician region Physician age	0.008 [§]
Hypothesis 2	Encourage religion	Patient attendance [‡] Physician sex Physician race Physician region Physician age	0.05
Hypothesis 3	Encourage religion	Patient attendance [‡] Physician attendance Patient attendance × Physician attendance Physician sex Physician race Physician region Physician age	0.05
Hypothesis 4	Refer to psychiatrist Refer to psychologist	Physician attendance Physician sex Physician race Physician region Physician age	0.025 [§]

* See Table 3 for the full wording of each outcome variable. A separate model was generated for each outcome variable. Primary care physicians and Psychiatrists were analyzed separately, except when directly comparing them. Outcome variables were coded 0 and 1.

[†] Physician characteristics were coded 0 and 1.

[‡] Experimentally varied patient characteristics were coded –1 and 1.

[§] We used Bonferroni-adjusted alpha as the criterion for rejecting the null hypothesis.

Table 2

Respondent demographics

	Primary Care Physicians		Psychiatrists	
	N	%	N	%
Sex				
Female	324	36	133	43
Male	572	64	179	57
Race				
White	625	71	198	64
Black	53	6	23	7
Asian	142	16	64	21
Hispanic/Latino	41	5	17	5
Other	22	2	8	3
Age				
25–36	226	25	80	26
37–44	224	25	42	13
45–53	225	25	92	29
54–65	221	25	98	31
Region				
South	295	33	89	29
Northeast	198	22	102	33
Midwest	216	24	61	20
West	187	21	60	19
Immigration History				
US born	637	72	214	69
Immigrated to U.S.	249	28	96	31
Education				
US medical school graduate	678	76	220	71
Foreign medical school graduate	218	24	92	29
Board certified				
Yes	639	71	187	60
No	257	29	125	40
Religious Affiliation				
Non-evangelical Protestant	227	26	71	23
Evangelical Protestant	95	11	20	7
Catholic/Orthodox	212	24	68	22
Muslim	60	7	8	3
Jewish	97	11	41	13
Hindu	42	5	24	8
Other religion	39	4	27	9
No affiliation	96	11	48	16
Attendance at religious services				

	Primary Care Physicians		Psychiatrists	
	N	%	N	%
Never	118	14	53	17
Once a month or less	413	48	162	52
Twice a month or more	338	39	94	30

Mean age 45, st dev 10.4, range 25–65

Results not adjusted for survey design.

Primary Care Physicians' and Psychiatrists' overall treatment preferences, across all experimental manipulations*, for a patient with anxiety symptoms.

Table 3

(Primary Care Physicians) Given this limited information, how likely would you be to do each of the following for this patient? (Assume all strategies are available and financially feasible for the patient.)	Not very likely/not at all likely		Somewhat likely		Very likely	
	N	%	N	%	N	%
Prescribe an anti-anxiety medication	201	22	388	44	300	33
See the patient regularly for counseling yourself	545	62	249	27	90	11
Refer to a psychiatrist	487	54	277	33	117	13
Refer to a psychologist or other licensed counselor	124	14	407	47	355	40
Encourage the patient to get more involved in meaningful relationships and activities	178	19	373	42	336	38
Encourage the patient to get more involved in her religious community	382	41	324	38	183	21
(Psychiatrists) Given this limited information, if the primary care physician asked your opinion, how likely would you be to recommend that the primary care physician do each of the following for this patient? (Assume all strategies are available and financially feasible for the patient.)						
Prescribe an anti-anxiety medication	89	29	120	39	99	32
See the patient regularly for counseling	185	61	73	24	45	15
Refer to a psychiatrist	53	18	102	34	145	48
Refer to a psychologist or other licensed counselor	29	9	117	38	161	52
Encourage the patient to get more involved in meaningful relationships and activities	79	26	130	42	98	32
Encourage the patient to get more involved in her religious community	157	51	99	32	50	16

Percentages are adjusted for survey design and estimate the percent of all US primary care physicians and psychiatrists.

* Vignettes included a 2x2x2 experiment, where the vignette-patient characteristics were manipulated in a factorial between-subjects design.

Table 4

Table models results for hypothesis 3; whether religious physicians are more likely to promote religious resources, regardless of the patient's religiosity. Results are reported separately for primary care physicians and psychiatrists.

	Primary care physician is “very likely” to encourage the patient to get more involved in her religious community		Psychiatrist is “very likely” to advise the primary care physician to encourage the patient to get more involved in her religious community	
	N(%)	*OR(95%CI)	N(%)	*OR(95%CI)
Patient attendance at religious services				
rarely attends	95(22)	1.0 referent	29(18)	1.0 referent
regularly attends	88(20)	0.9(0.7–1.1)	21(15)	0.9(0.6–1.3)
Physician attendance at religious services				
1/month or less	69(13)	1.0 referent	27(13)	1.0 referent
2/month or more	111(33)	3.4(2.3–4.9)	22(24)	2.2(1.1–4.5)

* Multivariable odds ratios are adjusted for physician sex, race, region, and age. The full model included an interaction term (Patient attendance × Physician attendance) but the term was not statistically significant, so it was dropped from the model shown here.