

# Following Depression in Primary Care

## Do Family Practice Physicians Ask About Depression at Different Rates Than Internal Medicine Physicians?

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**Objective:** To determine whether the chronically or recurrently depressed patients of family practice and internal medicine physicians differed in the proportion reporting that their primary care physician asked them about depression symptoms.

**Design:** A cross-sectional observational study of chronically or recurrently depressed survey respondents who identified a family practice or internal medicine physician as their primary care provider.

**Setting:** A large not-for-profit group-model health maintenance organization in the northwestern United States, with a population representative of its service area.

**Patients:** Health maintenance organization members (n=1161) with ongoing or recurring depression or dysthymia who responded to a 1993 survey and who identified either a family practice or internal medicine physician as their primary care provider.

**Main Outcome Measure:** Patients' self-report of their primary care physician asking them: (1) whether they had been feeling sad, blue, or depressed; (2) to fill out a questionnaire about their mood or feelings; and (3) whether they had been thinking about death or suicide.

**Results:** Chronically or recurrently depressed patients of family practice physicians were more likely to report that their physician asked them about depressive symptoms than were patients of internal medicine physicians (34.0% vs 27.3%) ( $P = .02$ ). This finding persisted in a multivariate analysis.

**Conclusion:** Family practice physicians may be more attentive to depressive disorders than internal medicine physicians.

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**A**LTHOUGH depressive disorders are among the most common illnesses of primary care patients,<sup>1-3</sup> they often go undetected. Docherty<sup>4</sup> recently reported detection rates ranging from 7% to 70%, with most rates falling between 30% and 40%. However, initial detection of depression is only one part of a larger clinical responsibility. Depressive disorders tend to be chronic and recurring maladies: patients who have experienced 1 depressive episode have a 50% likelihood of experiencing another, and recurrence increases to 70% after 2 episodes and 90% after 3 episodes.<sup>5</sup> Since the publication of the Agency for Health Care Policy and Research Depression in Primary Care Guidelines, Schulberg and colleagues<sup>6-9</sup> have evaluated trends in the treatment of depression. One clear conclusion is that patients with a history of depressive disorders need to be continually reassessed throughout their lifetimes. De-

spite this need, the first study of rates of relapse of depression was only recently published.<sup>10</sup>

Several studies have identified potential barriers to depression detection.<sup>4,11-15</sup> Factors affecting recognition rates include physician training and skills, practice style, and delivery system constraints. Patient-physician communication is essential to the ongoing diagnosis of depression.<sup>5</sup> Because there is no established chemical test for depression, diagnosis requires that physicians query their patients regarding their mental and emotional states. This study examines the patients of family practice and internal medicine departments in a single health care delivery system to assess how frequently primary care physicians in each department query patients with chronic or recurrent depression about their depressive symptoms.

Lin et al<sup>16</sup> recently concluded that physician training, among other things, was essential in the treatment of depression. To

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## DESIGN AND METHODS

### RESEARCH SETTING

The study site was Kaiser Permanente Northwest (KPNW), a not-for-profit group-model health maintenance organization (HMO) with approximately 375 000 members during the study period. It has continuously operated in the Portland, Ore, metropolitan area since 1946 and holds a 17% market share. Its subscribers are similar to the area population as a whole.<sup>19</sup>

Members are encouraged to identify a "personal physician," a clinician who assumes overall responsibility for their care and health; approximately 85% do so. Although KPNW also employs nurse practitioners and physician assistants as primary care providers, more than 90% of members identifying a primary care clinician select a physician. Primary care physicians at KPNW practice in either the internal medicine or family practice departments, but most members are unaware of their selected clinician's specialty.

### STUDY POPULATION

The population for this study was originally selected for an experimental study of guideline implementation methods.<sup>20</sup> **Figure 1** illustrates how the population was selected. Subjects in the present study (n=1161) had screened positive for depression on 2 separate surveys. The first survey, the Current Member Survey administered to a random sample of KPNW's adult membership between 1991 and 1993, included the 5-item Mental Health Inventory<sup>21</sup> and the 8-item Brief Screening Instrument.<sup>22</sup> This survey also asked the respondents whether a doctor had ever told them they had depression. A positive screen on either instrument, or an affirmative self-report of depression, qualified the member to receive the second questionnaire, administered in September 1993. This second questionnaire included the 20-item depression-specific subscale of the Hopkins Symptom Checklist.<sup>23</sup> An average score of 1.1 on this screener, which has been shown to indicate major depression, qualified the respondent for the present study. Thus, study participants had scored positively on 2 different depression-screening questionnaires administered approximately 1 year apart. Additionally, on the second questionnaire, subjects were asked to name the physician who was their primary care provider. This report of physician was validated against KPNW's records, and only those respondents with matching records were included in the study.

The study was reviewed and approved by the Kaiser Permanente Committee for the Protection of Human Subjects.

### MEASUREMENTS AND CALCULATIONS

Data on clinician monitoring of depressive symptoms were obtained from patient self-reports. On the second questionnaire, subjects were asked if, in the past 6 months, their primary care physician had asked them whether they had been feeling sad, blue, or depressed, to fill out a questionnaire about their mood or feelings, and whether they had been thinking about death or suicide. Subjects were identified as having had their depression redetected if they responded yes to any one of these 3 items.

In addition to these items, the second questionnaire contained the Medical Outcomes Study 36-item Short-Form Health Survey (SF-36).<sup>24</sup> The SF-36 includes 1 multi-item scale that assesses 8 health concepts: limitations in physical activities because of health problems, limitations in social activities because of health problems, limitations in usual role activities because of physical health problems, bodily pain, general mental health, limitations in usual role activities because of emotional problems, vitality (energy and fatigue), and general health perceptions. The questionnaire also includes items about the subjects' education, employment, and marital status. The age and sex of subjects were extracted from KPNW's enrollment records. Physician data (age, sex, and years of employment) were obtained from medical group partnership records.

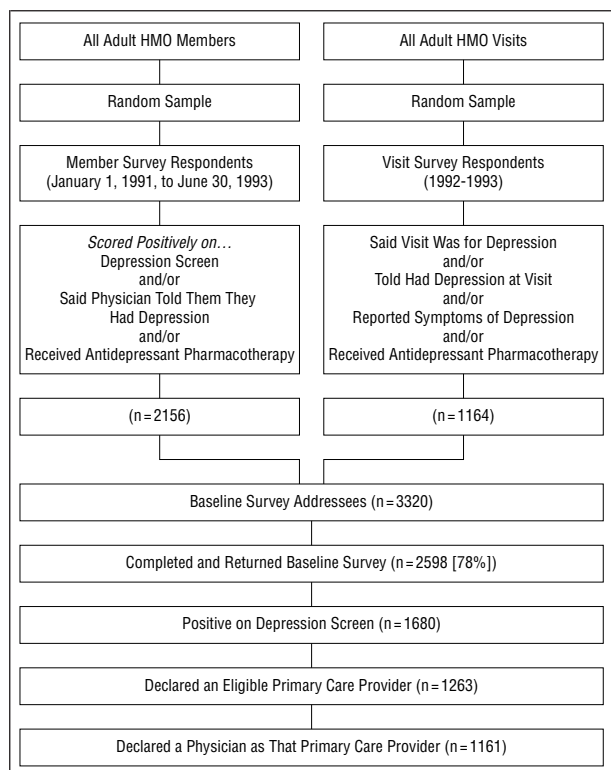
### STATISTICAL ANALYSES

Statistical analyses were conducted using SAS software, version 6.12. We compared patient and physician characteristics that might contribute to the primary outcome measure: redetection of depression. Variables examined in these comparisons included patient and clinician demographics and patient scores on the SF-36 subscales. Patients' scores on a 20-item depression-specific subscale of the Hopkins Symptoms Checklist<sup>23</sup> were included as a measure of depression severity; however, this variable was not significant and was dropped from the analysis.

We first tested bivariate differences in depression redetection by physician specialty with the  $\chi^2$  statistic. Then, to take account of significant underlying differences in the characteristics of patients and to control for physician characteristics other than specialty, we estimated a multivariate logistic regression model, in which the redetection of depression was the dependent variable. Prespecified control variables on which the 2 groups differed were included a priori. We used the stepwise option of the logistic procedure to include other predictor variables on which the specialties did not differ, but that improved model fit.

understand the potential effect that training had on the detection of depression in our study, we must consider the types of training received by family practice and internal medicine physicians in our study site. The differences in the training of family practice and internal medicine physicians at the approximate time our study physicians were in medical school suggest that family practice physicians may be more attentive to the mental health of their patients. The residency training programs of family practice physicians contained a more intensive psychiatric component than internal medicine programs.<sup>17,18</sup> The

psychiatric rotation in family practice residency programs was typically longer and was often conducted in an outpatient setting, where the kind of depression encountered in primary care is most often detected and treated. The shorter rotation in internal medicine programs was generally conducted in a hospital setting, where only the more severe cases present. Finally, family practice programs were generally focused on morbidity related to life-cycle issues, including depression, while internal medicine programs emphasized physiologic causes of disease. The purpose of this study is to determine whether family



**Figure 1.** Selection of study population. HMO indicates health maintenance organization.

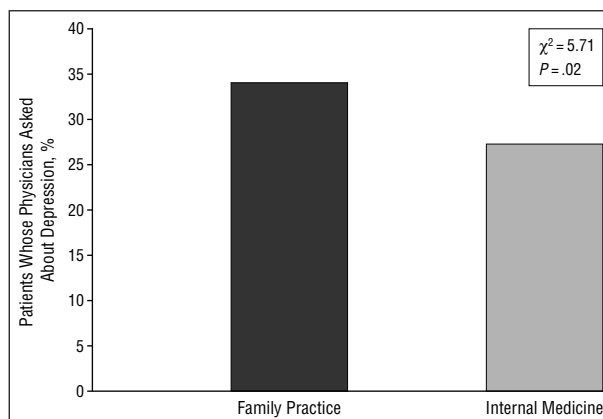
practice and internal medicine physicians, who were trained under these conditions, differ in their attention to depressive disorders.

## RESULTS

Thirty-four percent (n=143) of chronically or recurrently depressed patients of family practice physicians reported that their personal physician asked them about depression symptoms compared with 27.3% (n=202) of similar patients of internal medicine physicians (**Figure 2**) ( $\chi^2=5.72$ ;  $P=.02$ ).

However, patients of family practice physicians differed from patients of internal medicine physicians in potentially confounding ways. As shown in **Table 1**, family practice patients were significantly younger compared with internal medicine patients (52.1 vs 55.4 years) ( $P=.001$ ); reported better physical functioning (66.8 vs 62.4) ( $P=.02$ ); marginally better role-physical functioning (46.5 vs 41.8) ( $P=.06$ ); and more bodily pain (52.2 vs 49.6) ( $P=.09$ ). Family practice physicians were older (42.3 vs 41.4 years) ( $P=.02$ ); less likely to be men (76.2% vs 83.4%) ( $P=.004$ ); and had been employed by KPNW for fewer years (6.8 vs 7.7 years) ( $P=.002$ ) than their internal medicine colleagues. These variables were therefore included as control variables in the multivariate model.

Our result persisted after adjustment for these patient and physician characteristics in a multivariate model (**Table 2**). The probability of depression monitoring remained higher among patients of family practice physicians compared with patients of internal medicine physicians (odds ratio, 1.35;  $P=.03$ ). However, although the



**Figure 2.** Percentage of patients reporting that their personal physician asked about depressive symptoms, by clinician specialty.

multivariate model as a whole was significant ( $P=.04$ ), it explained only about 1% of the variance in monitoring rates; in addition, the adjusted percentages of patients reporting that their physicians asked about depression, by provider specialty, differed only slightly from the unadjusted percentages (**Figure 3**). None of the differences found between family practice and internal medicine physicians or their patients had significant coefficients, but 2 other variables—better role-emotional functioning and having some college education—reduced the probability of patients reporting that their clinicians asked about depression.

## COMMENT

Though common, depressive disorders require effort to detect. Considerable research has identified the primary barriers to detecting and treating depression.<sup>4,11-15</sup> According to this literature, the 3 main barriers to detection of depression are physician knowledge and skills, physician practice style, and constraints imposed by the delivery system. Williams et al<sup>25</sup> found large differences in barriers related to physicians' attitudes, skills, and knowledge when comparing family physicians, general internists, and obstetrician-gynecologists.

This report provides new evidence that physicians' knowledge and skills contribute to the detection and monitoring of chronic and recurring depression. Our study site and data resources allowed us to improve on prior studies in several respects. Because the present study was conducted within a single HMO, differences in the delivery system were controlled. In addition, because other research has demonstrated that the styles of physicians in group practices converge over time,<sup>26</sup> we believe that practice style variation not related to training was minimal. Physician age and sex, which may influence practice style and contribute to rates of depression detection, were available as additional control variables. Therefore, specialty differences observed in this study between family practice and internal medicine physicians may be attributed largely to differences in the physicians' knowledge and skills.

However, it is important to note that because family practice and internal residency training programs dif-

**Table 1. Study Population Demographics by Personal Physician Specialty\***

|                                 | Physician Specialty |                   |              |
|---------------------------------|---------------------|-------------------|--------------|
|                                 | Family Practice     | Internal Medicine | All Subjects |
| <b>Patient Data</b>             |                     |                   |              |
| Patients, No.                   | 421                 | 740               | 1 161        |
| Patient age, y†                 | 52.1                | 55.4              | 54.2         |
| Female, %                       | 75.3                | 71.9              | 73.1         |
| Some college education, %       | 57.7                | 61.2              | 59.9         |
| Working full-time, %            | 47.7                | 45.8              | 46.5         |
| Married, %                      | 63.4                | 60.7              | 61.7         |
| Hopkins Symptom Checklist SF-36 | 1.46                | 1.47              | 1.47         |
| Physical functioning‡           | 66.8                | 62.4              | 64.0         |
| Social functioning              | 59.5                | 57.5              | 58.2         |
| Role-physical functioning§      | 46.5                | 41.8              | 43.5         |
| Role-emotional functioning      | 45.0                | 44.7              | 44.8         |
| Mental health                   | 54.9                | 54.0              | 54.3         |
| Bodily pain§                    | 52.2                | 49.6              | 50.5         |
| Vitality                        | 36.0                | 35.5              | 35.7         |
| General health perceptions      | 52.4                | 50.2              | 51.0         |
| Change in health                | 49.0                | 48.4              | 48.7         |
| <b>Physician Data</b>           |                     |                   |              |
| Physicians, No.                 | 55                  | 78                | 133          |
| Physician age, y‡               | 42.3                | 41.4              | 41.7         |
| Male, %†                        | 76.2                | 83.4              | 78.8         |
| Years employed at HMO, No.†     | 6.8                 | 7.7               | 7.4          |

\*SF-36 indicates Medical Outcomes Study 36-item short form; HMO, health maintenance organization.

†P < .01.

‡P < .05.

§P < .10.

fer, they may attract different kinds of students. The more intensive psychiatric training found in family residency programs and those programs' greater emphasis on life-cycle issues may reinforce family medicine residents' pre-existing interest in, and sensitivity to, psychosocial issues. If so, internal medicine residents more interested in somatic disease might still benefit from increased psychiatric training.

The present study has important limitations. First, the study population (mean age, 54.2 years) was of sufficient age to have other somatic diseases and may gravitate to internal medicine physicians as a result. In KPNW, the longer tenure of internal medicine physicians also tends to give them somewhat older, sicker patients. As a result, internal medicine physicians may tend to concentrate their limited patient encounter time on these somatic disorders. On the other hand, the family practice physicians in this study were older than the internal medicine physicians, and older members in KPNW tend to link with older physicians. In any event, the inclusion of the SF-36 scales as control variables should have adjusted for much of this potential bias, if it had been significant. Moreover, the presence of comorbidities does not remove physicians of their responsibility to recognize and treat chronic or recurrent depression. In fact, the well-established link between chronic disease and depression should lead a physician treating a chronic

**Table 2. Multivariate Logistic Regression Results\***

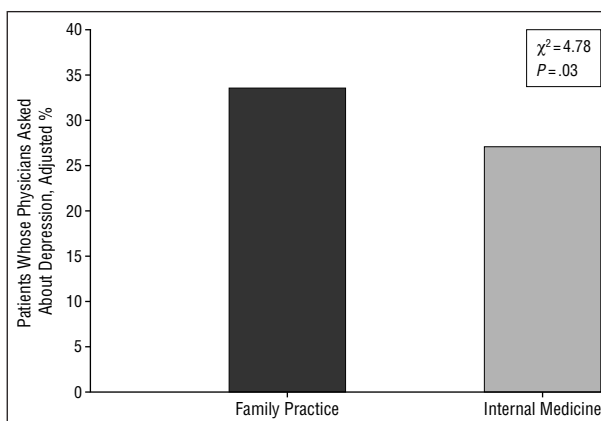
| Explanatory Variable            | Probability Using $\chi^2$ Test | Odds Ratio (95% CI) |
|---------------------------------|---------------------------------|---------------------|
| Physician specialty†            | 0.03                            | 1.35 (1.03-1.78)    |
| <b>Control Variables</b>        |                                 |                     |
| Patient age                     | 0.99                            | 1.00 (0.99-1.01)    |
| Physical functioning            | 0.52                            | 0.99 (0.99-1.00)    |
| Role-physical functioning       | 0.38                            | 0.99 (0.99-1.00)    |
| Bodily pain                     | 0.34                            | 1.00 (0.99-1.01)    |
| Physician age                   | 0.49                            | 0.99 (0.96-1.02)    |
| Physician sex‡                  | 0.31                            | 1.19 (0.85-1.66)    |
| Physician years employed at HMO | 0.47                            | 1.01 (0.98-1.05)    |
| <b>Covariates</b>               |                                 |                     |
| Role-emotional functioning      | 0.003                           | 0.99 (0.99-0.99)    |
| Patient education§              | 0.02                            | 0.73 (0.56-0.96)    |

\*CI indicates confidence interval; HMO, health maintenance organization.

†On a 2-point scale, 1 indicates family practice; 0, internal medicine.

‡On a 2-point scale, 1 indicates male; 0, female.

§On a 2-point scale, 1 indicates some college; 0, no college.



**Figure 3.** Adjusted percentage of patients who reported that their personal physician asked about depressive symptoms, by clinician specialty.

condition to pay special attention to the possible involvement of depressive disorder.

A more important limitation is the failure of the multivariate logistic regression model to explain a substantial portion of the variance in patients' recall of having been asked about depressive symptoms. While physician specialty was significant in this model, other unmeasured causes may be more important. Further research should focus on identifying these factors.

## CONCLUSIONS

Our research suggests that family practice patients are more likely to report that their physicians are attentive to chronic or recurrent depression than are patients of internal medicine physicians. Further study should focus on whether this can be attributed to the attraction of distinct physician personality types to the different residency programs or to the different emphases of the training programs themselves. It seems likely that increased psychiatric training in all primary care specialties would improve the detection and subsequent treatment of de-

pressive disorders. This, in turn, would lead to improved functioning of patients with depression and reduce the societal burden of this common, recurring, and highly debilitating disease.

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