Documentation of Indicators for Antidepressant Treatment and Response in an HMO Primary Care Population

Dale E. Theobald, Michael Kasper, Carol A. Nick-Kresl, Michael Rader, and Steven D. Passik

Objective: To describe how primary care physicians document antidepressant prescriptions.

Design: Retrospective chart review performed as part of a quality-improvement program.

Setting: A Midwestern health maintenance organization (HMO).

Patients: Records of 3,037 patients who were prescribed an antidepressant in primary care during an 18-month interval were randomly requested and reviewed until a sample of 100 was reached.

Methods: Demographic variables, indications for antidepressant treatment, comorbid conditions, use of screening instruments, educational processes, and indicators of outcomes were recorded.

Results: Seventy percent of charts documented one or no symptoms of major depression. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), while 90% contained documentation of three or fewer symptoms. Use of screening tools was documented in 4% of charts. Only 57% of the charts indicated a scheduled depression-focused follow-up visit, while 5% of charts reflected an educational intervention. Documentation regarding outcome indicated symptomatic improvement in 37% of the records. Sixteen percent of the patients were referred for specialty care. There were two recorded suicide attempts.

Conclusions: Primary care physicians prescribed antidepressants with documentation of very few indications. To the extent that documentation reflects their thought processes, this poor documentation suggests lack of precision in the diagnosis of depression, which could be related to a poor response rate to antidepressants (37% in this sample) and poor compliance.

Key Words: Primary care, antidepressant therapy, documentation of depressive symptoms

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Depression is a common illness and, as a result, antidepressants are among the most frequently prescribed classes of medication on health maintenance organization (HMO) formularies. A Midwestern health plan (Healthsource of Indiana) examined the use of this commonly prescribed class of drugs as part of a quality-improvement initiative (1997, unpublished data). A formal study was begun after an initial review of claims data revealed that antidepressants consistently ranked among the top three classes of drugs prescribed for a 24-month period and constituted the most costly drug class for the plan. Further investigation revealed that almost 50% of patients given a prescription for antidepressants remained on antidepressants fewer than 30 days, suggesting inappropriate usage of the drugs.

It has been suggested that the majority of patients with depression can be treated effectively by primary care physicians (PCPs), and that only a small percentage should require referral to psychiatric care. However, previous studies suggest that PCPs misdiagnose depression in as many as two out of three cases. Furthermore, when the correct diagnosis of depression is made, patients are often treated with subtherapeutic doses of antidepressants prescribed over periods of time too short to produce pharmacologic benefit.

The problem of identifying and treating patients with depression is important to health plans for several reasons. Studies show that patients with depression use health care services more frequently than nondepressed patients. Depressed patients cost almost twice as much to treat as nondepressed patients. Failure to diagnose and correctly treat depressed patients results in a higher cost of health care for these patients. Depressed patients who are improperly diagnosed and treated suffer loss of productivity and a diminished quality of life.

Healthsource of Indiana set out to identify the indications documented by PCPs for prescribing antidepressants and to examine the documentation regarding follow-up after the medications were prescribed. Antidepressants have their greatest effects when used to treat carefully diagnosed depression. A diagnosis of major depression is based on the occurrence of at least five of nine primary symptoms, with a duration of two weeks or longer. The nine symptoms of major depression list-
ed in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), of the American Psychiatric Association, are listed in Table 1 (right). We examined whether patient charts reflected use of the drugs for sufficient symptoms constituting a major depressive syndrome.

The goal of this survey was not to assess outcomes, but we did examine documentation of outcome to assess how that information was used in treatment planning.

### Methods

**Study Subjects**

A random sample of 250 patients, gathered from pharmacy claims, was chosen from a population of 3,037 Midwestern HMO members who were seen in a primary care setting between January 1, 1995, and June 30, 1996, and who received a prescription for antidepressant medication. Of the 250 names selected, 179 patients filled prescriptions for antidepressant medication during the study period; had not filled a prescription for six months prior to the start of the study period; and maintained enrollment in the plan for the 18-month study period. These 179 patients were treated by 115 different physicians. Patients who were prescribed an antidepressant drug for diseases other than depression (e.g., neuropathy and insomnia) were excluded from the study population. Charts were solicited and collected until 100 charts met the criteria.

A primary care physician was defined as a plan physician who practices in family practice, internal medicine, or pediatrics. The criteria used for major depressive episode were taken from DSM-IV9 (see Table 1). Documentation requirements regarding appropriate practice (i.e., patient screening, patient education, and follow-up) were derived from the Agency for Health Care Policy and Research (AHCPR) publication Clinical Practice Guidelines #5, Volume 2: Treatment of Major Depression.10

**Data Collection and Instrumentation**

To ensure confidentiality, all identifying information was removed from the charts. Physician identity was also kept from the chart reviewers. Two teams of two chart reviewers each (two pharmacists, one physician, and one master's-level health care administrator) were trained to review the medical records. The teams were designed to increase the accuracy of the observations made on each medical record. Medical charts were divided between the two teams; team members reviewed charts and recorded the data on a specially designed form. A 95% interrater reliability was achieved between chart reviewers on each of the teams following training.

Chart data were recorded using a form focusing on demographics, medical information, indications for pharmacotherapy, and variables related to prescribing. Additionally, where possible, data related to the outcome of the medication intervention were recorded. The data from the forms were coded and entered into a database for analysis. Descriptive statistics and frequency distributions were generated for the demographic and medical variables.

### Results

**Demographic Variables**

The charts reviewed reflected the medical history of 64 women and 36 men. The ages of the patients ranged from 5 to 87 years with a mean of 38.3 years. Twenty-five patients' charts contained information regarding additional mental health conditions and

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Symptoms of Depression</th>
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<tbody>
<tr>
<td>1. Depressed mood most of the day, nearly every day, as indicated by either subjective report or observation made by others.</td>
<td></td>
</tr>
<tr>
<td>2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day.</td>
<td></td>
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<tr>
<td>3. Significant weight loss when not dieting, weight gain, or decrease or increase in appetite nearly every day.</td>
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<td>4. Insomnia or hypersomnia nearly every day.</td>
<td></td>
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<td>5. Psychomotor agitation or retardation nearly every day.</td>
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<td>6. Fatigue or loss of energy nearly every day.</td>
<td></td>
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<tr>
<td>7. Feelings of worthlessness or excessive or inappropriate guilt nearly every day.</td>
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<tr>
<td>8. Diminished ability to think or concentrate, or indecisiveness, nearly every day.</td>
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<tr>
<td>9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or specific plan for committing suicide.</td>
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Source: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.

<table>
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<th>TABLE 2</th>
<th>Number of Charts Documenting DSM-IV Criteria</th>
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<tbody>
<tr>
<td>Zero symptoms</td>
<td>40</td>
</tr>
<tr>
<td>One symptom</td>
<td>30</td>
</tr>
<tr>
<td>Two symptoms</td>
<td>12</td>
</tr>
<tr>
<td>Three symptoms</td>
<td>8</td>
</tr>
<tr>
<td>Four symptoms</td>
<td>3</td>
</tr>
<tr>
<td>Five symptoms</td>
<td>7</td>
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</table>
18 patients had been previously treated for depression. Ninety-one patients had a diagnosis of a comorbid medical (axis III) condition. Many patients had several medical diagnoses; 216 diagnoses were recorded. Five records had documentation reflecting chemical dependency. Of the chemical dependency diagnoses, three patients had documented alcohol abuse and one each had cocaine and hallucinogen abuse.

**Documentation of Indications for Antidepressant Treatment**

Charts were carefully reviewed for the presence of DSM-IV criteria of a major depressive episode. As shown in Table 2, page 495, 40 charts (40%) revealed no documentation of any criteria for a major depressive episode. Sixty charts (60%) revealed one or more criteria. Ninety charts (90%) revealed three or fewer symptoms of a major depressive episode. The three most common symptoms documented were symptom 1 (depressed mood, most of the day), symptom 4 (insomnia or hypersomnia), and symptom 6 (fatigue or loss of energy), accounting for 75% of the documentation. Symptoms 5 (psychomotor agitation or retardation) and 9 (recurrent thoughts of death or suicidal thoughts or plans) were recorded in fewer than five records.

**Documentation Regarding Prescribing Patterns**

The antidepressants prescribed during the study are listed in Table 3 (above). Fluoxetine, sertraline, and paroxetine were the most frequently prescribed drugs. Combined, they accounted for 79 (60.3%) of the 131 total antidepressant prescriptions written (25 patients were prescribed more than one drug for depression).

The use of screening devices (the Zung Self-Rating Depression Scale or Beck Depression Inventory) was recorded in only four records. Documented patient education (discussion of the disease, discussion of the appropriate use of antidepressants, or handout materials) appeared in only five charts. The scheduling of a depression-focused follow-up visit was documented in 57 charts. When follow-up was noted, 86% of patients returned to the physician’s office for that visit.

**Documentation Regarding the Impact of Pharmacotherapy**

Extremely limited documentation of outcomes made detailed description of treatment response difficult. Reasons for discontinuation of antidepressant medication were documented in 13 charts. (see Table 4, page 497.) Symptomatic improvement, as defined by a written statement indicating improvement in the chart, was documented in only 37 of the records examined. Sixteen records documented referral to a mental health specialist; there were no documented referrals for electroconvulsive therapy. Two suicide attempts were recorded during the study period.

**Discussion**

This retrospective chart review examined documentation of antidepressant drug therapy for 100 patients treated in primary care. The findings describe the documentation, and therefore, to some extent, the thinking and practices surrounding the diagnosis and treatment of depression in primary care. The most important and striking finding in this study is the poor documentation regarding the indications for prescribing antidepressants, possibly reflecting imprecision in the diagnosis of depression and in the monitoring of outcomes.

The demographic results are generally consistent with expectations surrounding the prevalence of depression. The sample was predominately female with a mean age in the fourth decade of life. Depression is most common in this age and gender group. The distribution of axis-III diagnoses is fairly typical of most primary care practice. The documented incidence of coexistent chemical dependency was lower than that in the general population, although the under-recognition of such problems in nonpsychiatric practice has been well documented elsewhere. Anxiety disorders were the most frequently documented comorbid psychiatric disorders, with panic disorder being the most frequent.

In this sample, patients were given antidepressant medication with one or no documented criterion for depression in 70% of charts. In 90% of the charts reviewed, three or fewer criteria were documented when drug therapy was initiated. The required five or more symptoms were documented in only seven charts.

The single most frequent indication for initiating drug ther-
apy was the patient’s report that he or she felt depressed (43% of charts). The next most common indications were a change in sleep habits (30% of the charts) and fatigue (23% of the charts). These results suggest that antidepressant drugs may be prescribed for depressed mood rather than clearly diagnosed major depression. Primary care physicians may be similar to oncologists in that they tend to respond first to depressed mood and second to physical symptoms rather than make a longitudinal diagnosis focused on the more reliable cognitive symptoms of depression (especially anhedonia, which was infrequently documented). The use of these latter symptoms can lead to more reliable diagnoses in medically ill individuals, and the reliance on insomnia and fatigue in patients with comorbid medical illness is problematic.

The absence of a clinically significant affective syndrome might explain the high discontinuation rates in this study population. Side effects, if any, may not be worth tolerating given the low likelihood of benefit in imprecisely diagnosed patients. Such findings suggest that antidepressants are used indiscriminately by physicians may have some validity.

Relative frequencies of the antidepressants prescribed were as expected. The selective serotonin reuptake inhibitors (SSRIs) were the most frequently used agents (60.3% of prescriptions). The low frequency of the use of patient screening devices (4%) and the low frequency of the use of patient-education materials or process (5%) are two problems that could contribute to premature discontinuation of medication, poor compliance, and poor outcomes. Screening might have helped exclude patients who had only a few symptoms and who may not have needed antidepressant medication.

A patient’s awareness of side effects and the delay of onset of therapeutic result are both correlated with compliance. There was little documentation reflecting discussion of these two key points. Prescribing patterns also revealed few instances in which a follow-up visit specifically focused on antidepressant therapy was scheduled (57% scheduled and 49% completed). It was interesting to note that if a visit was scheduled, 86% of patients complied. Practice guidelines from AHCPR suggest that a more frequent, focused follow-up process is required to improve outcomes.

The goal of this survey was not to assess outcomes. We examined documentation of outcomes to assess how that information was used in treatment planning. The fact that documentation of outcome appeared in only 37% of charts suggests a significant lack of follow-up. This information seems critical to the decision whether to continue therapy.

### Caveats

The conclusions presented here are based on a sample of 100 charts from a requested sample of 179. PCP cooperation with release of charts to the quality-improvement team was at times suboptimal. Physicians who declined to release records expressed concerns about confidentiality. Others, despite repeated assurances to the contrary, felt that they as individual physicians were being evaluated. Thus, it is questionable whether this sample represents a valid picture of primary care management of depression. Interestingly, the bias in the sample could lean toward a better picture of practice than is actually the case, in that the first 100 charts received may have come from the PCP offices with a higher level of attention to detail, which would have less concern about this type of scrutiny.

### Conclusion

Inadequate documentation of indicators of depression (if it reflects actual practice) is quite problematic. It is particularly disconcerting that in 40% of the records there were no symptoms documented, and no documented reason for starting antidepressant drugs. The potential side effects and hazards of antidepressant medications are well known and could present serious medical and legal concerns if no tangible indicators for their use and potential benefit can be shown. This class of medication is the most costly for this health plan. Clinical reports have demonstrated that the prescribing of antidepressant agents to an person may directly affect that person’s ability to obtain health insurance. Thus, there are medical liability issues involved when diagnoses are implied but documented evidence is not present to substantiate those diagnoses.

Our review of this sample of patients who received pharmacotherapy reveals that many patients may not have met the criteria for major depression. While more mild affective symptoms of depression are often appropriately treated with antidepressant medication, the lack of documentation of those symptoms is a problematic aspect of primary care treatment of depression, requiring improvement. These survey results may add credibility to concerns reported in the professional and lay press that antidepressants are being used too frequently and without proper consideration and justification.

As a result of this study, we identified four immediate targets for quality improvement initiatives: (1) improving documentation (especially about indicators for treatment); (2) enhanced use of screening tools such as the Zung Self-Rating Depression Scale, the Beck Depression Inventory, or the Hamilton Depression Scale; (3) increased use of patient education materials detailing the side effects and the delay of onset of clinical benefits inherent in the use of antidepressants; and (4) required scheduling of

### Table 4

<table>
<thead>
<tr>
<th>Side effects</th>
<th>3 cases</th>
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<tbody>
<tr>
<td>Not effective</td>
<td>9 cases</td>
</tr>
<tr>
<td>No follow-up</td>
<td>1 case</td>
</tr>
</tbody>
</table>
follow-up. Frequency of visits depends upon the severity of the depression and whether medication is used alone or is paired with psychotherapy. Depression is a costly illness in terms of both human suffering and health care economics. Perhaps the identification and treatment of depression can be made more effective through increased physician education.

References