Prevalence and Recognition of Depression Among Primary Care Outpatients

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Studies indicate that more individuals suffering from depressive symptoms will present to the primary care outpatient clinic than to any other medical care setting. Unfortunately, most of these patients complain of somatic problems, not mood disturbances. Consequently, less than one half of all depressed patients in the primary care clinic are initially identified and treated for their depression. As depression causes considerable morbidity and some mortality and is treatable, methods of improving recognition should be sought. Some of these include maintaining a high index of suspicion, conducting a brief but thorough screening interview for depression, and using a depression rating scale. Benefits derived from early recognition include saving time, effort, and money spent on unnecessary tests and inappropriate treatment, and avoiding substantial suffering. The threshold for many somatic complaints can be substantially raised with resolution of depression.

Although depression affects a significant proportion of the general population, only recently have prevalence rates been measured in this country. Community psychiatric epidemiological studies were not conducted in the United States until after World War II, and then only general impairment was measured, not specific psychiatric diagnoses.[1] Even now, community surveys vary over tenfold because of differing criteria, methods of assessment, and time (point, period, or lifetime prevalence) (Table 1). For example, the inclusion of mild depression using a self-rated depression scale with symptoms reported over subjects' entire lives yields a community prevalence rate as high as 27 percent.[5] Conversely, the rate decreases to 2.2 to 3.5 percent when a diagnostic interview is conducted using criteria from the *Diagnostic and Statistical Manual of Mental Disorders,* Third Edition (DSM-III).[2] Other studies reviewed found prevalence rates between these figures (Table 1).[2–8] Despite limitations in the data, authors agree that depression is very common in the community. Studies in Table 1 estimate that the prevalence of somatic depression may approximate 8 percent during a year. Based on a US population of 230 million, this represents approximately 18 million depressed Americans.

DEPRESSION IN THE PRIMARY CARE CLINIC

According to community surveys, as many as 80 percent of subjects with moderate depressive symptoms seek medical care within a year (only 37 to 58 percent specifically for emotional problems).[6] Using the 8 percent prevalence rate estimate for depression in the US population (18 million depressed people), this extrapolates to approximately 14 million office or hospital visits annually. Of these people with depressive symptons who seek medical care, 80 percent are evaluated by primary care physicians and only 20 percent are seen by mental health specialists of which one half are psychiatrists.[4] In fact, one community survey concluded that the more depressed a patient, the more likely he or she would seek a nonpsychiatric physician.[6] Thus, most depressed patients are not treated by mental health professionals.

Surveys of primary care clinical diagnoses support these data. Prevalence rates of depression among primary care outpatients range from about 12 percent to as high as 56 percent.[9–16] These varied estimates may be explained by the different methods employed. For example, prevalence rates based on physicians' diagnoses are lower than those

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TABLE 1. THE PREVALENCE OF DEPRESSION IN THE GENERAL US POPULATION AS CITED IN THE LITERATURE

Reference	Number	Assessment Criteria	Disorder Reported	Prevalence* (%)
Myers et al 1984[2] **	9,534	DIS	All affective	4.6–6.5 (6 mo)
			Major depression	2.2–3.5 (6 mo)
Robins et al 1984[3] **	9,534	DIS-lifetime	All affective	6.1–9.5 (life)
			Major depression	3.7–6.7 (life)
Weissman and Myers, 1978[4]	938	Depression index	Moderate depression symptoms	18 (1967)†
	720	Depression index	Moderate depression symptoms	16 (1969)†
Weissman and Myers, 1978[5]	511	SADS	Minor depression	2.5
			Major depression	4.3
			Major and/or minor depressive personality	26.7 (life) 4.7 (life)
			Bipolar	1.2 (life)
Comstock and Helsing, 1976[6]	3,854	CES-D Scale	Depression symptoms	17.2
Blumenthal and Dielman, 1975[7] ***	320	Zung SDS		
		46–56	Mild to moderate depression	27
		56+	Moderate to severe depression	13
Warheit et al 1973[8]	1,645	18-item index	Depression symptoms	19.2

** Expressed as point prevalence unless otherwise indicated*
*** Same study populations*
**** Married couples only*
† Represents longitudinal evaluation of the same population
DIS: Diagnostic Interview Schedule; SDS: Self-rating Depression Scale; SADS: Schedule for Affective Disorders and Schizophrenia; CES-D: Center for Epidemiologic Studies Depression Scale

using structured interviews or questionnaires, possibly indicating inadequate physician recognition of depression. Regardless, depression was the tenth most common diagnosis of all conditions and the second most frequent psychiatric problem encountered in a review of 60,000 diagnoses from a family practice population.[17]

MASKED DEPRESSION

Retrospective studies of primary care clinic charts do not reflect the real prevalence of depression in this population, as many depressed patients present with a chief complaint other than depression, often somatic problems, and no diagnosis of depression is made. In one review of 400 depressed primary care outpatients, only 49 percent presented with a psychological complaint, such as depression, irritability, or tension; the remainder had somatic problems.[18] Another study showed that only 11 percent of chief complaints from 143 depressed family practice patients involved emotional issues; less than 2 percent were of depression.[11] A retrospective study of 154 depressed family practice patients revealed a greater number of office visits, increased hospitalizations, and more physical complaints seven months before depression was recognized.[19] The presenting symptoms largely included pain of undetermined etiology in the head, chest, abdomen, and extremities (Table 2). Presumably unrecognized depression contributes to such increased medical contact.

One explanation for this high proportion of depressed patients presenting to primary care settings with somatic complaints is the stigma associated with having a psychiatric disorder. Guilt and embarrassment activate defense mechanisms such as denial, projection, and rationalization, which, operating subconsciously, can mask significant depression. Patients prefer to focus on "more acceptable" somatic complaints and usually wish to present themselves in a healthy psychological state. They believe that the physician can cure physical problems with little input; less personal responsibility and guilt are suffered with bodily ailments. These patients presenting with masked depression are not consistently recognized.

LACK OF RECOGNITION OF MASKED DEPRESSION

Several studies in the literature specifically address underrecognition of depression in nonpsychiatric outpatients (summarized in Table 3).[10–14] Recognition ranged between 10 and 50 percent. These studies usually employ self-rating and physician-administered scales given to patients before their appointments in the primary care clinic. Missed diagnoses are defined as those cases in which patients scored

TABLE 2. SOME PHYSICAL COMPLAINTS ASSOCIATED WITH DEPRESSION

- General
  - Dizziness
  - Fatigue
  - Weakness
  - Weight loss
  - Weight gain
  - Anorexia
  - Sleep disturbance
  - Drowsiness
- Autonomic
  - Excessive perspiration
  - Excessive salivation
  - Flushing
- Cardiovascular
  - Chest pain
  - Palpitations
  - Cold extremities
- Gastrointestinal
  - Indigestion
  - Diarrhea
  - Constipation
  - Nausea/vomiting
  - Abdominal cramping
- Head/ENT*
  - Headaches
  - Blurred vision
  - Tinnitus
  - Earaches
  - Temporary deafness
  - Sinus congestion
  - Epistaxis
- Genitourinary
  - Dysmenorrhea
  - Amenorrhea
  - Polymenorrhea
  - Impotence
  - Delayed or premature ejaculation
  - Dysuria
  - Polyuria
- Musculoskeletal
  - Back pain
  - Muscle aches
  - Joint pain
- Psychosexual
  - Loss of interest
  - Decreased pleasure

** ENT: Ears, nose and throat*

TABLE 3. RATES OF RECOGNITION OF DEPRESSED NONPSYCHIATRIC OUTPATIENTS CITED IN PROSPECTIVE STUDIES

Study	Number	Screening Instrument	Scoring Criteria	Depressed Patients Among All Patients (%)	Depressed Patients Recognized by Physician (%)
Kessler et al 1985[10]	1,072 primary care outpatients	SADS-L	—	~33	~10
Zung et al 1983[11]	1,086 family medicine outpatients	SDS	55+	13.2	15 (68)*
Nielsen et al 1980[12]	526 internal medicine outpatients	BDI	13+	12.2	50
Linn et al 1980[13]	150 internal medicine outpatients	SDS	50+	42	40
Moore et al 1978[14]	212 family medicine outpatients	SDS	50+	45	22 (56)*
		SDS	60+	19	37 (73)*

** Percentage recognized if the physician was given depression score in advance*
SDS: Zung Self-Rating Depression Scale; BDI: Beck Depression Inventory; SADS-L: Schedule for Affective Disorders and Schizophrenia-Lifetime

above the criterion for depression but their conditions were not diagnosed as depressed by the clinic physician. Recognition is greatly improved (to as high as 73 percent) when patients with scores indicating depression are identified to the clinic physician in advance of these patients' scheduled clinic visits.[11,14] However, some physicians who felt they had sufficient information to make an accurate prediction of their patients' psychosocial distress level were often wrong; a study of distress in 87 internal medicine clinic patients found that their internists' prediction correlated with the patients' self-reports in only 3 of 17 areas.[20] Low rates of recognition are not exclusive to outpatients; 35 percent of patients with emotional symptoms who are general medical inpatients are not recognized as depressed.[21]

These screening instruments do not have 100 percent specificity, and some patients found to have significant depressive symptoms by virtue of a depression scale score may not be pathologically depressed. Conversely, 82 percent (49/60) of patients scoring 55 or greater on the Zung Self-Rating Depression Scale have major depression by DSM-III criteria and warrant appropriate drug therapy.[22] A recent report indicates that recognition of mental disorders in primary care may be higher than the data cited above indicate. Of the patient visits where there was an indicator of recognition of mental distress (ie, psychotropic

drug or psychotherapy given), less than one half also received a mental disorder diagnosis.[23] Presumably, there was recognition as demonstrated by the treatment given, but no psychiatric diagnosis was given in the patients' charts in many cases.

A related area involves depression secondary to chronic, often fatal, medical illnesses such as cancer that not only cause physiologic changes but understandably also result in often overwhelming psychological stress as issues of death and dying are confronted. Recognition and diagnosis in such patients are important, but how aggressively one should treat this type of depression involves issues that cannot be adequately addressed in this review. As well, depression is a side effect of many medications such as antihypertensives and of many other physical disorders. A general knowledge of these medications and disorders, and a thorough history of patients' medication records are always warranted.

THE IMPORTANCE OF RECOGNITION

Physicians in primary care settings must appreciate the benefits of early recognition for several reasons. Depression affects a large proportion of primary care patients and is treatable once recognized. Most depression is responsive to pharmacological intervention, psychotherapy, electroconvulsive therapy (ECT), or a combination of these therapies. The morbidity and mortality associated with untreated depression are substantial.

When not initially diagnosed, various somatic complaints often are unnecessarily investigated by laboratory and radiologic studies and then treated. Morbidity is associated with invasive diagnostic procedures and inappropriate treatment; time and money are wasted. Appropriate treatment leading to resolution of depression frequently increases patients' thresholds to minor somatic complaints so that their concerns and need for medical attention are eliminated.

A consideration of the cost in time and money is increasingly emphasized by health maintenance organizations (HMOs) and the advent of standardized payment schedules for diagnostic related groups (DRGs). Patients with mental disorder diagnoses visit general medical departments almost twice as often as those without such diagnoses.[24] Two independent studies reveal that short-term outpatient psychiatric therapy in a nonpsychiatric HMO medical services setting dramatically reduces patient visits to nonpsychiatrists, use of laboratory and x-ray procedures, and hospitalizations.[25,26] Recognition and appropriate treatment of depression in the primary care setting produce similar results.[27] Long-term mental health treatment also has demonstrated financial benefits; patients with chronic physical diseases who made more than four mental health clinic outpatient visits had lower medical charges in the third year following diagnosis than a comparison group not receiving mental health treatment.[28]

The most severe outcome of depression is suicide. The lifetime rate of suicide is approximately 15 percent among patients suffering from a chronic major affective disorder, and these patients are at 30 times the risk of the general population.[29] In one review of 100 cases of suicide, 66 percent visited their family physician in the month before death and 40 percent the week before (compared with 25 percent and 7 percent for controls, respectively).[30] In another study of 60 suicide cases where a retrospective diagnosis of depressive illness could be made, only 65 percent of recently (within six months) consulted physicians (including psychiatrists) recognized the depressed mood and just one half of these actually made a clinical diagnosis of depression and offered treatment for it; therefore, 35 percent of the physicians consulted did not recognize depression in patients who subsequently committed suicide.[31] These data imply that the severity of some patients' depression is not recognized. Even when depression does not lead to suicide, a significant loss in life quality can be reversed with proper treatment. Patients identified as depressed by a simple screening instrument and then treated display significantly greater clinical improvement (66 percent) compared with the low rate of spontaneous improvement in nonidentified depressed patients (35 percent).[22]

IMPROVING RECOGNITION

The first step toward improved recognition is acknowledgment of the problem and dissemination of prevalence statistics for depression in the primary care setting. This step is accomplished by additional research and presentation of information orally and in the literature to both medical and lay audiences. Increased emphasis on the importance of inquiring about the symptoms of depression and suicidal potential is necessary both during and after medical school. Primary care physicians, in particular, need to screen consistently for depression, know the indications and dosages of antidepressant medications, be able to implement supportive listening, and, when appropriate, refer patients to a psychiatrist.

Depression must be recognized as a common and legitimate medical disorder that is treatable. Depression scores were significantly higher for a group of 50 patients referred to as crocks than for controls. Housestaff selected the crock group on the basis of their multiple, recurrent complaints without concurrent physical findings.[32] Such patients should not be dismissed quickly but should be carefully assessed for a depressive disorder. Examples of

TABLE 4. THE NEURONEGATIVE SYMPTOMS OF DEPRESSION AND MANIA

Category	Depression	Mania
Physical	Anhedonia (decreased interest in things previously enjoyed)	Increased activities and energy
	Fatigability, loss of energy	Increased gregariousness
	Social withdrawal	Increased talkativeness, pressure of speech
	Psychomotor retardation	Decreased need for sleep without fatigue
	Insomnia with fatigue	Increased alcohol intake
	Somatic complaints	Physically threatening, combative, dangerous behavior
	Loss of appetite, weight loss	
	Decreased hygiene	
	Crying spells without reason	
Cognitive	Decreased ability to concentrate	Distractability
	Indecisiveness	Flight of ideas, racing thoughts
		Poor judgments, impulsive actions
Emotional	Dysphoric mood, sad, "blue," "down in the dumps"	Elevated mood, increased self-confidence, elation, euphoria, grandiosity
	Hopelessness, helplessness	
	Worthlessness, guilt, shame	
	Thoughts of suicide; attempts	

some common physical complaints associated with depression are given in Table 2.

The most critical element to physician recognition of depression is maintaining a high index of suspicion. A number of studies referred to in this review have shown that depression recognition is greatly improved when one of several available screening instruments is used.[11,14] Some of these instruments include the Beck Depression Inventory,[33] the Hamilton Rating Scale,[34] and the Zung Self-Rating Depression Scale.[35] These scales are quick, are comprehensible, are simple to administer, and broadly assess manifestations of depression, some categories of which might be omitted in a brief history taken during an office visit (Table 4).

Possibly the most successful method of identifying depression and suicidal potential is through interviews by physicians who ask specific questions on the subject and are alert to responses that arouse their suspicions of suicide.[36,37] At least two thirds of persons who commit suicide give warning of their intent, and there is evidence that such people will usually tell their physicians of their intents if asked.[31] For this reason, a brief (two to four minutes) screening for depression is recommended for every patient in the primary care clinic. Patients should be reassured when revealing psychiatric symptoms, as many may believe the nonpsychiatrist is not interested or knowledgeable. Physicians can introduce the subject by saying that so many clinic patients have occasional episodes of low mood that everyone is asked the following questions. Most important are frank but sensitive queries on the patient's mood or spirits over the past weeks. The neurovegetative symptoms of depression, which are presented in Table 4, should be pursued in detail when there is suspicion. As moderately depressed patients rarely have symptoms from all three categories, ask questions from each. The aim is to document a change from when the patient was clearly euthymic. Ask an open-ended question initially. For example, "How has your mood (appetite, sleep, activity level) been lately?" With a positive response or some suspicion of denial, ask specifically, "Have you felt sad and blue, down and out? Have you felt hopeless and helpless to do anything about it? Have you had weeping spells that are out of the ordinary for you?"

At this point, one is obligated to assess suicidal potential. Do not ask patients initially whether they have considered killing themselves because those who have may deny such thoughts, thinking that a positive response may translate into weeks or months on a locked ward. Rather, ask whether they have thought of harming themselves or have considered life not worth living. If responses are positive, ask about specific plans for suicide and whether steps toward carrying out the plan have been taken.

Even if the suicide potential is minimal, severity of depression covers a wide spectrum, and many nonsuicidal patients are substantially depressed. Continue to ask about symptoms from the physical and cognitive groups (Table 4). Administering one of the self-rating depression indexes that require only five to ten minutes of the patient's time may help in questionable cases. These data should resolve the decision whether pharmacologic treatment or psychiatric referral is warranted. If depression is diagnosed, the type, unipolar or bipolar, must be determined, as treatments differ. Symptoms of a hypomanic or manic episode are described in Table 4.

CONCLUSIONS

If the majority of depressed patients are to be identified, the burden rests upon the primary care physician to (1)

recognize the high prevalence of depression and to maintain a high index of suspicion, (2) consider conducting a two- to four-minute screening interview for every patient for depression, with more detail as indicated, and (3) employ a screening instrument in at least questionable cases of depression.

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