Diagnostic Issues in Depression of the Elderly

Joel Sadavoy, M.D., F.R.C.P.

Despite advances in treatment and diagnostic understanding, depression in the elderly remains underdiagnosed. DSM-IV diagnostic criteria fail to capture the full range and complexity of depression in old age; thus, modifications to these criteria that would aid diagnosis are discussed. In particular, recognition that late-life depression commonly has an anxiety component is required. Factors that confound the diagnosis of depression in the elderly include the physical problems endemic to old age, many of which mimic the physical items used for the diagnosis of depression. Therefore, the key to an accurate diagnosis appears to lie in the sensitivity of diagnostic criteria. Late-life depression may also have a different etiology, clinical presentation, and course than early-onset depression. Diagnosis has focused on typology subtypes, especially major depression, but has generally neglected a specific focus on severity subtypes. The implications of this are discussed. The usefulness and limitations of depression rating scales are also considered. The biggest practical problem, however, is the failure of health care providers to recognize depression or act effectively once a diagnosis has been made. Therefore, recommendations are given to improve the overall diagnostic approach in the elderly population. *(Primary Care Companion J Clin Psychiatry 2000;2[suppl 5]:17–22)*

Why do clinicians need to make diagnoses? The answer to this question has both clinical and research components. From the clinical perspective, diagnosis is shorthand that enables clinicians to define a disorder precisely, choose a treatment, and predict the outcome. For research, diagnosis should help to define clearly demarcated disorders that can be investigated in pure form.

Specialists in geriatric psychiatry have been trying to establish clear diagnoses of depression in old age since the early pioneering work of Felix Post in the 1960s.[1] A sharp dichotomy still exists, however, between the ability of such specialists to create diagnostic criteria for syndromes of depression and the impact these diagnostic concepts have on actual diagnosis, treatment, management, and outcome in the real world of patient care in nonspecialist settings.

Depression in late life is underdiagnosed for several reasons, including greater concern for medical conditions rather than mental health status by clinicians and the focus of patients on physical symptoms of depression, such as changes in appetite, sleep, and fatigue, rather than depressed mood. These factors can mask depression and lead to misdiagnoses such as hypochondriasis, dementia, or somatization. Other factors, such as lower functional expectations of elderly individuals, the notion that depression, especially in its milder forms, is a normal part of aging (ageism), and the fact that elderly patients fail to endorse depression or seek out care, add to the likelihood of misdiagnosis.[2,3]

This article addresses some of the issues that can interfere with our ability to effectively recognize and treat depression in our elderly patients, despite considerable advances in understanding of the disorder.

IS GERIATRIC DEPRESSION DIFFERENT IN FORM AND KIND FROM DEPRESSION IN YOUNGER POPULATIONS?

The criteria sets of DSM-IV are generally appropriate (i.e., valid and reliable) for defining discrete, uncomplicated geriatric syndromes of major depression[4]; however, they fail to capture the full range and complexity of depression in old age. Data suggest that some modification of criteria would aid accuracy of diagnosis.[5]

The criteria would be more accurate if they included an acknowledgment of the fact that the elderly are less likely to openly endorse depression as a symptom.[3,6] Hence, other descriptors added for this age group may be more effective, emphasizing the somatic, agitation, and anxiety components that have been found to be common modes used by the elderly to convey depressed feelings.[6] The criterion of expressed guilt could be de-emphasized for the elderly since it is not a common expression of depression.

From the Mount Sinai Hospital and Centre for Addiction and Mental Health, University of Toronto, Toronto, Ontario, Canada.

Presented at the symposium "Depression in the Elderly: Clinical Considerations and Therapeutic Approaches," which was held April 7, 1999, in Florence, Italy, and supported by an unrestricted educational grant from SmithKline Beecham Pharmaceuticals.

Reprint requests to: Joel Sadavoy, M.D., F.R.C.P., Mount Sinai Hospital, 600 University Ave., Suite 925B, Toronto, Ontario, Canada M5G1X5.

Agitated complaints of poor cognition in the context of depression are more prevalent in the elderly and should be included in the diagnostic inquiry.[6] In the frail elderly especially, energy depletion syndromes and apathy are often prominent presentations of depression.[7]

Some suggest that somatization and hypochondriasis represent a prominent form of the expression of distress in depression in the elderly,[8] and it is probably true that new-onset somatic anxiety in old age should be considered depression until proven otherwise. However, there are convincing data to indicate that the elderly are not more hypochondriacal or somatizing than younger patients in the absence of depression.[9]

Agitation and anxiety are also prominent forms of expression of depression in old age. In the elderly, anxiety probably occurs comorbid with depression as often as either syndrome alone and appears to be a marker of the severity of depression.[10] Anxiety is also comorbid with other disorders that are closely associated with depression, such as stroke.[11] As with somatization, new-onset anxiety in old age is most often a form of depression.

Pseudodementia also needs to be considered. Depression and dementia frequently coexist,[12] and when cognitive deficits appear with depression, both conditions are commonly present and should be diagnosed separately. More recently, magnetic resonance imaging (MRI) has been used to try to discriminate between Alzheimer's disease and depression. O'Brien and colleagues,[13] for example, claim to be able to separate the 2 diagnoses on the basis of temporal lobe atrophy. Similar discrimination has been reported using rapid eye movement (REM) sleep parameters such as REM density.[14] Clinically, since most clinicians do not have these sophisticated investigative tools available, the most crucial step in diagnosis still appears to be to maintain a high index of suspicion for depression and to employ those diagnostic items known to discriminate between dementia and depression. This takes time and effort and cannot be done reliably using short screening measures. When the time is taken, however, there is evidence that the 2 disorders can be disentangled.[15]

Symptom Presentation of Geriatric Depression

The search for simplicity in diagnosis of geriatric depression is defeated repeatedly by the complexity of factors that confound the diagnosis of depression in old age. Chief among these factors are the physical problems endemic to old age. Many of these mimic the physical items used for the diagnosis of depression, e.g., sleep disorder, weight loss, energy depletion. Not surprisingly, these play an important role in disguising geriatric depression and may easily confuse the less experienced diagnostician.

Despite the problems that physiologic criteria pose for diagnosing depression in the medically ill elderly, these criteria remain clinically valid as long as they are applied carefully. The clinician must therefore inquire about changes in these parameters and carefully trace the course and correlation of physiologic findings with psychological features associated with depression. A simple answer is to eliminate questions that relate to physiologically based items and use only psychic symptoms, similar to the way in which the Geriatric Depression Scale is constructed. However, the elderly tend to convey depressive distress in physical terms and display all the physiologic disturbances associated with depression. Hence, clinical criteria will be most sensitive if they include physical symptoms. Importantly, the key to making an accurate diagnosis, especially for medically ill, frail, elderly patients in medical or long-term care settings, is in the depth of inquiry that is used.

Similar confounds exist regarding social and daily living functioning. DSM-IV criteria require depressive symptoms to cause "clinically significant distress or impairment in social occupational or other important areas of functioning."[4] In some elderly patients, it is difficult to find deficits over and above those already produced by physical or cognitive changes.[16] Here, the issue is not so much whether the criteria for depression are valid for the elderly, but that their sensitivity is often lower in this population.

In evaluating the impact of depression on functioning, it is important to differentiate between activities of daily living, e.g., essential self-maintenance such as dressing, hygiene, eating, and instrumental activities of daily living, e.g., travel, banking, shopping, meal preparation, housekeeping. Activities of daily living in depressed patients are impaired more by concurrent physical illness factors than by the depression itself. In contrast, instrumental activities of daily living are most affected by depression-related factors, such as hopelessness, decreased motivation, and withdrawal.[17] This implies a need for care in applying the DSM-IV criteria for the effect of depression on social, occupational, and other functioning, emphasizing function in instrumental activities of daily living over that in activities of daily living.

The method of gathering information may also confound diagnosis. There is a substantial gap in the symptoms of depression reported by patients with comorbid dementia and their collateral informants.[18] When patients with dementia endorse a depression-related symptom, it is usually accurate; however, they routinely omit or deny the presence of symptoms that are actually present. These sins of omission are the result of poor insight and memory. Interestingly, care is also needed in accepting the reports of caregivers, especially those who are particularly burdened, because they tend to overreport depressive symptoms.[19]

Overall, it appears best to accept the self-report of elderly patients, even those who show signs of dementia, as they retain insight into their emotional state, as well as to accept the positive symptom reports of patients with impaired insight. Collateral reports are most useful to capture omitted symptoms for patients whose reports are limited

by restricted insight or memory. Notably, the complexities of using collateral information and its reliability are often not specifically considered in research design.

Another confounder of diagnosis is the comorbid presence of personality disorder. This factor may not only obscure diagnosis, but its presence can have a strong negative effect on prognosis of depression.[20] Owing to the frequent comorbidity of personality disorder with depression, its presence should be emphasized in our diagnostic schema for the elderly.[21]

Diagnostic Subtypes of Geriatric Depression

Depression in late life is closely linked to specific brain change, and there is some clinical utility in subtyping geriatric depression on the basis of these associations. For example, a growing body of evidence suggests a relationship between forms of brain pathology and depression arising in late life (as distinct from depression that began earlier in life and graduated into old age).[22–24] Many of these changes have a vascular origin or association, such as leukoariosis (deep white matter changes),[25,26] or general vascular pathology associated with brain pathology and depression, such as carotid artery stenosis or cardiovascular disease.[27] Silent infarcts of the basal ganglia, especially the caudate,[28] periventricular pathology,[29] and frontal (especially left frontal) infarcts, are also associated with depressive disorder.[30]

These data suggest that late-onset depression may have a different etiology, clinical presentation, and course than early-onset depression. This tantalizing line of diagnostic research may have importance in defining preventative treatment strategies and outcome. Even at this stage, we may productively consider adding the diagnostic subgroups of vascular depression and late-onset depression to the nomenclature (or at least to clinical diagnostic practice) since the data support some specific differences between current DSM-IV criteria and the symptoms and signs associated with late-onset forms of depression. These include increased cerebrovascular disease burden,[31] pathologic findings already noted,[25,26,28–30] increased psychosis in some samples,[32] more impaired cognition, and possibly a less favorable therapeutic response.[33]

All of these factors still need careful evaluation, but the bulk of evidence supports the notion of significant differences between late-onset and early-onset depression. Clinicians may be aided, even now, by subtyping depression in this way to expect different symptoms, treatment outcome, and prognosis.

In the future, other categories may well emerge. For example, geriatric depression may be associated with the E3/E4 APOE allele (to be distinguished from the 4/4 allele of Alzheimer's disease).[34] A potentially important issue in the conceptualization and diagnosis of depression is the differentiation between typology or categorical subtypes and severity subtypes. Diagnosis has focused on typology subtypes, especially major depression, but has generally neglected a specific focus on severity subtypes.

DSM-IV criteria exist for intensity and extensity (i.e., number, variety, and duration of events), but by mixing these 2 perspectives of disease (diagnostic entity vs. the distress it causes), it is more difficult to formulate treatment plans. There is a strong tendency to treat diagnostic entities rather than distress. Sometimes the 2 go hand-in-hand, but this is far from invariably the case. The issue is especially relevant if we accept that, in an era of restricted resources, the costs of treatment must be weighed against their effects in relieving impairment and improving quality of life.

A severity or quality-of-life diagnostic perspective leads us to develop treatments that have as their outcome not the treatment of disease, but the relief of distress and suffering. Additionally, if severity and distress are the specific focus, their consequences become the focus of research. For example, we begin to ask, what are the origins of severity and what are the best treatments to reduce severity? This approach could lead us to an enhanced 2-pronged model of diagnosis in which we still identify diagnostic disorders while adding affective degree-of-distress and quality-of-life constructs.

Gurland et al.[35] suggest that major depression and degree of suffering be investigated separately and have constructed the Index of Affective Suffering scale (IAS) to create a typology of distress caused by depression. They emphasize that the degree of suffering or distress cannot be inferred directly from depression scores on a rating scale. While symptom scores may improve, we are left somewhat ignorant of the degree of distress we leave behind after purportedly successful treatment. The Gurland IAS specifically measures intensity and extensity of symptoms from the positive to the intolerable. As an example of how this approach can affect our thinking, they propose that elderly patients in the "intolerable" and so-called "desperate" levels be given preference for scarce treatment resources. This approach may also be more effective in predicting suicide risk; in their study, about 7% of the depressed population fell into the "intolerable/desperate" groups.

Severely suffering patients may have major depression, but it is also possible for other diagnostic groups to have equal or greater degrees of severity. For example, patients with minor depression who also have severe personality disorders may be in greater distress than some patients with major depression. For the elderly, the IAS is appropriate since it is free of somatic items.

The Categorical Continuity Debate

A fundamental issue in diagnostic conceptualization, which may have special relevance for the elderly, is the question of whether the diagnostic categories of depression are truly distinct from one another, or whether they are all rooted in a common etiologic base, differing only in degrees of severity.

The continuity theory of depression is supported by data that include the fact that minor depression and even adjustment disorders are a strong risk factor for major depression,[36–39] and subsyndromal residual symptoms are a strong predictor of relapse.[40] In a review of this subject, Flett et al.[41] suggest that the bulk of evidence favors a continuity approach. If true, we must begin to think about a common diathesis for all depressions upon which other factors will act, such as stress, physical disability, personality factors, or loss. Moreover, if all depressive symptoms arise from a common root, the difference between minor and major forms of depression is simply a matter of degree, not kind.

This perspective, if valid, could help us develop better markers for prevention strategies. We would need to become highly attuned to the stressors (e.g., grief) that predict depression and intervene early. For example, in one study,[42] minor depression was associated with rates of work disability and comorbid anxiety that approximated those for the group with major depression. Because minor depression was more common, it actually accounted for a greater proportion of the work disability.

The diagnostic schema would look quite different. In adopting a continuous (versus a categorical) approach, a single category of "depression" would be divided into severity subtypes of extensity and intensity. Treatment strategies would have to address components of both the severity and core depressive symptoms and lead to a greater degree of integration of treatments. Such an approach may help the clinician heal the somewhat fragmented and narrow treatment approaches that stem from a too categorical and dichotomous approach to diagnosis.

Utility of the Current Diagnostic System

The majority of elderly patients with various forms of depression are seen in settings where specialty treatment is scarce or nonexistent (family doctor's offices, long-term care facilities, and medical institutions). Despite substantial advances in treatment and diagnostic understanding, most depressions are missed. Of those that are identified, most remain ineffectively treated.

For a variety of reasons, family practitioners appear not to make the diagnosis of depression in the majority of cases where speciality criteria would indicate it is appropriate.[43,44] Instead, they often seem to respond to individual symptom components, such as anxiety, sleep, energy depletion, and cognitive decline. This suggests that the criteria somehow lack relevance for this group of practitioners.

The majority of depressions in the elderly are seen in the family doctor's office,[45] few are diagnosed[43,44] (probably less than half), and, of those that are, few are appropriately treated.[46–49] The situation is no better in the long-term care setting and in general hospitals, where up to two thirds of depressions are missed.[50–52]

Of those patients with depression who are diagnosed, the vast majority appear to stop treatment within a month.[53,54] This finding suggests that the implications of a diagnosis of depression (such as its relapsing nature, need for maintenance follow-up, and the importance of a prolonged therapeutic relationship) are not routinely understood or dealt with in family practice.

Even when screening instruments for depression are used, identification of depression surprisingly does not always translate into therapy. So, while some diagnostic confusion unavoidably surrounds depression in the elderly, the biggest practical problem with diagnosis by far remains the failure of most health care providers to recognize depression and act effectively on this knowledge. Even after depression was diagnosed in a Geriatric Depression Scale (GDS) screening study in a general practice setting, general practitioners still did not record positive diagnoses of depression in their records, and treatment was hardly ever initiated.[55] Hence, it appears that depression screening of this sort does not have much impact on treatment practices.[55] In another study of completed suicide, 51 of 97 patients visited their practitioner in the month before suicide, but only 2 patients received what was judged to be adequate treatment for depression.[47,48]

Depression Rating Scales and Their Use

Diagnostic scales reflect the same problems as diagnosis in general. They are categorical in their construction and do not take into account the various complex components of depression in the elderly already mentioned. The scales also reflect the particular diagnostic perspective of the developer and are tailored to the particular use for which they were designed. These issues may not be considered in depth by researchers, and this confounds our ability to compare studies. Self-report scales are notorious for overestimating the incidence of depression. Other scales such as the Beck Depression Inventory reflect a particular theoretical stance; in this case, the cognitive perspective. The Center for Epidemiologic Studies Depression Scale has no suicide questions and no anxiety items, while the long version of the Hamilton Rating Scale for Depression includes items on obsessive-compulsive disorder and paranoia, plus a heavy weighting on items related to activities.

These observations are not meant to be critical, but rather to demonstrate that the scales we use, if taken as a group, are trying in individual ways to cope with the complex issue by looking at different parts of the elephant.

A particular problem in evaluating depression in the elderly is physical comorbidity and its impact on diagnostic criteria, such as energy, involvement, social interaction, sleep, appetite, and weight. Geriatric-focused scales, like the GDS, which is now in common use, have tried to respond to these confounds by omitting them from the question list and focusing on the psychiatric elements of depression. Despite this, the scale seems sensitive to depression and is an effective tool.

In evaluating scales for diagnostic value in the elderly, it is interesting to compare the rates of depression diagnosed by general depression scales with those diagnosed by scales designed for the elderly. It has been shown that geriatric-specific scales (such as the AGECAT) can lead to much higher prevalence rates of diagnosed depression in the elderly.[49]

At this stage, scales and screening procedures, even effective, valid, and easy-to-use scales such as the GDS, have not been very useful in promoting different attitudes and approaches to either the diagnosis or treatment of depression in the elderly.[56] Katona and colleagues[44] have indicated that screening is not enough, no matter how accurate it is. One task is to educate practitioners effectively, not only in how to make the diagnosis, but also in what to do with the diagnosis once it has been made.

Several scales are useful and have been designed for the elderly to determine categorical diagnoses. However, most scales are neither designed for nor helpful in evaluating or diagnosing the complex array of comorbid features associated with depression in the elderly, which must be clearly defined to institute fully effective and comprehensive treatment. However, this is costly and time consuming, as illustrated by Sharma and colleagues[33] in a recent ambitious study that incorporated scales for evaluation of depression, health and social state, social contacts and support, living conditions, stress, bereavement, and so on.

SUMMARY AND CONCLUSIONS

Diagnosis is a complex process in the elderly: it is the sum of many interacting elements and is much more than just adherence to a set of categorical criteria. It includes the following list of elements:

1. Typology criteria sets, Diagnostic and Statistical Manual of Mental Disorders (DSM) or International Classification of Diseases (ICD)
2. Knowledge of the criteria and of the factors that may mask or alter them in particular populations
3. Acceptance of the validity and utility of the criteria for the elderly
4. Assigning importance and priority to the disorders and resisting prejudicial rather than evidence-based approaches to diagnosis
5. Diagnosis that is complex and takes time and an index of suspicion so that the criteria can be looked for and responded to
6. Knowing the impact of the setting in which the diagnosis is being made and taking appropriate steps to improve both the diagnostic sensitivity and the utility of the diagnosis once it is made

To be effective diagnosticians, we need to develop a complexity overlay to our diagnostic approach that allows us to place the core symptoms of depression into an age-appropriate context. These modifiers include:

1. Severity and suffering
2. Comorbidities especially relevant to old age, e.g., physical illness, cognitive decline, setting of diagnosis (the prognosis in family practice is much worse than in specialty settings)
3. Categorical additions including late-onset depression, especially vascular depression, and a subsyndromal category targeted at the elderly with greater emphasis on issues of suffering instead of typology

There is a continuing need for naturalistic studies of treatment based on refined diagnostic criteria applied in nonspeciality settings. In this latter regard, we need better understanding of why depression is so poorly dealt with in these settings.

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Discussion

Diagnostic Issues in Depression of the Elderly

Dr. Beekman: From your presentation, you are very dissatisfied with the classification of late-life depression. What you have come up with is a more dynamic, subtle way of diagnosing affective disturbances, including your suggestion of "early versus late onset."

Are you suggesting that we extend our diagnostic formulations in line with the etiology, whether depression is vascular or related to recent life events? This is a general topic, but it is probably most appropriate for the elderly because of the complexity of depression in later life.

Dr. Zisook: Late-life depression is heterogeneous. Some is vascular and tends to be chronic with a poor prognosis, and some is like early-onset depression. It responds well to treatment when recognized and may be related to life pressures. So the dichotomy of late-life versus early-onset depression is probably less helpful than thinking about vascular depression versus other forms of depression.

Dr. Salzman: It is true that the way you talk to the older person determines whether or not you are able to elicit depression, and I agree that in research studies where cross-sectional rapid diagnoses are used, depression is probably underdiagnosed or inaccurately diagnosed. Best results are achieved when an experienced, sensitive clinician talks to the older person over a period of time. In the nursing home environment, well-trained geriatric nurses are probably more sensitive than experienced geriatric doctors in detecting depression, although they are often unable to supply specific criteria about how they know a person is depressed. We have published data showing the differences between doctors' and nurses' rating of late-life depression *[Burrows A, et al. J Am Geriatr Soc 1995;43:1118–1122]*. We used the Cornell Scale for Depression in Dementia, the Hamilton Rating Scale for Depression, the Geriatric Depression Scale, and the general question of whether or not the person was depressed. We used a term, *persistently miserable syndrome*, and found that this rating was as good as anything else in detecting depression.

Dr. Sadavoy: As far as I can see, up to two thirds of cases of depression are missed in studies conducted in nursing homes, including our study *[Sadavoy J, et al. Int J Geriatr Psychiatry 1990;5:187–192]*, which was performed in what is purported to be one of the best nursing homes in Canada.

Dr. Salzman: I don't agree that depression is missed. In our study, we eliminated all those with dementia, so we surveyed a nondemented sample, and we asked the nurses to tell us who they thought was depressed. In fact, most of the patients who had a diagnosis of depression and were identified by the nurses were already receiving treatment. We were interested in the sample identified by nurses as depressed but who were not receiving treatment. They did not meet criteria, had fluctuating affective states, and complained about many things, but not depression. We went on to study them and found they responded to paroxetine treatment but also to placebo.

Another point is that when you're studying depression in the elderly, especially in the over-75 age group, there is a tendency to overdiagnose to get people into the study. The advantage of asking nurses is that we obtained information on everyone. We did not say that we were looking for study patients; we simply asked them, "In your opinion, who is depressed on this unit?" Usually, the response related to withdrawal of interest by the elderly person.

Dr. Zisook: I think it is important that not only are psychological symptoms not being endorsed, but also many of the somatic symptoms that are classically associated with depression, such as difficulty sleeping.

Dr. Salzman: Another important issue is the differences in the way different ethnic groups feel, experience, and express their affective states. How generalizable are the data in our study to a worldwide population of people over 80 years old?

Dr. Montgomery: On the question of defining depression in the elderly, we might say that diagnosis is an issue in old age or very old age and that the essential criterion of DSM, depressed mood, may not be needed and we may need fewer symptoms. There should be no implication that late-life depression is a separate disorder.

Dr. Salzman: It is the same disorder. There are people who get depressed for the first time during old age, but there are many who have suffered from depression earlier in their lives. It may be hard to determine because either they don't remember or they deny it or it is not expressed. There are many reasons for that confounding variable. But the state of depression is a state of being alive and being human, and it's not very different when you're old, although it may be there in a slightly different form.

Dr. Zisook: What we are saying is that it is more similar than different, although it exists in the context of general illness and cognitive decline. Could we not modify the diagnosis of depression in the elderly to highlight "worrier ability" rather than simply dysphoria?

Dr. Montgomery: My own view is that the prime criterion for depression in DSM is inappropriate even in younger adults in Japanese or Far Eastern cultures; it is not

an acceptable concept and is hard to justify. I would favor abolishing depressed mood as a prime criterion and introducing irritability instead.

Dr. Thompson: I can see the attraction, but I would like to see more epidemiologic data on the distribution of the individual symptoms and how this affects hierarchy and prevalence rates and the determination of response to treatment. Major depressive disorder, as it stands, very robustly picks out treatment responders to antidepressants in efficacy studies. It's not the only category to do this, but it is a very useful tool.

Dr. Montgomery: I agree that severity is a much better measure than the direct categorization. The Montgomery-Asberg Depression Rating Scale (MADRS) is more specific as a cutoff scale in defining depression than the diagnostic criteria, because subsyndromal depression associated with quite high MADRS scores can respond to treatment.

Dr. Salzman: However we define it, these people are underrecognized and undertreated, and we have to raise the level of awareness that late-life depression is a treatable disorder. It is quite striking in our nursing home study and our outpatient work just how many people respond to treatment and how much better their quality of life and their comorbid illness can become. At the moment, we are not doing a good enough job with the elderly.

Dr. Zisook: Most of the effort has been in non–late-life depression. We need more awareness about depression in the elderly.

Dr. Sadavoy: The utility of the treatments is better than our struggle with the diagnosis. What is happening is that primary care physicians are using drugs more frequently because they are easy to use, they're safe, and they work. To that extent, things are better, but my guess is that the primary care physicians are not actually better educated about depression in the elderly.