Editorial

Should Adolescents be Screened for Depression?

Dr. Levin is to be commended for calling attention to the pitfalls of depression screening in his article, *Adolescent Depression Screening: Not So Fast*. There is no question that untreated depression poses significant risks at all phases of the lifecycle. The CDC has estimated the prevalence of major depressive disorder among adolescents as 8%. Suicide is the second leading cause of death worldwide for youth aged 15 to 24. Suicide rates among adolescents have been rising after falling quite significantly from a peak in the early 1990s. The suicide rate among young teen girls is now nearly triple what it was in 2000 (https://www.businessinsider.com/us-suicide-rate-increased-since-2000-2018-6). Major depressive disorder is the condition most commonly associated with suicide; 19% of adolescents aged 13 to 17.9 years with MDD attempt suicide (Kramer *et al*., 2012). Universal screening of school populations and patients in primary care settings has been advocated as a way to approach this problem.

Screening has a long history in medicine, particularly in the field of public health, where it has been used to gather epidemiological data. In general medicine, it has been used to identify individuals with conditions that might endanger the general public if untreated. For example, screening for tuberculosis is required of individuals working in healthcare facilities. Identifying and treating index cases benefits both individuals and those they might expose to illness. Valid and reliable tests with good sensitivity and specificity for tuberculosis, as well as curative treatments, exist. But is this really the case with depression?

The application of the diagnostic criteria specified in the DSM-III to research on children and adolescents led to the recognition that the same criteria could be applied to this age group (albeit with some modifications). This in turn led to the development of screening instruments such as the Patient Health Questionnaire-9 (PHQ-9), which was modified to develop the PHQ-A for use with adolescents (Johnson *et al*., 2002).

However, where adolescents are concerned there continues to be some debate about differentiating between normal sadness, transient mood states and depression (Frances, 2013; Miller, 2018). Concerns have been raised that universal screening will result in overdiagnosis, overuse of medication, and, if people who are being treated do not need it, a waste of already scarce resources (Frances, 2013).

**THE ARGUMENT FOR DEPRESSION SCREENING**

The US Preventive Services Task Force, as a result of extensive reviews of the extant literature on the topic, recommended screening for major depressive disorder in adolescents (age 12-18) seen in primary care settings (Siu & US Preventive Services Task Force, 2016). Factors they considered included the risks associated with untreated depression, what they called the “moderate benefit” of treatment, and the lack of harm associated with screening. Their recommendations included the caveat, “Screening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up” (p. 360).

Moderate benefit of treatment was defined in terms of improved depression severity, depression symptoms, and/or global functioning scores). Harm was assessed as “small” with drug treatment if appropriately monitored, and “small to none” with psychotherapy or psychosocial support. The following are noteworthy with respect to these recommendations.

The Task Force:

- Only considered major depressive disorder, not other kinds of depression.
• Specifically mentioned the Beck Depression Inventory (BDI) and the Patient Health Questionnaire-Adolescent Version (PHQ-A).

• Emphasized the importance of adequate systems being in place “to ensure accurate diagnosis, effective treatment, and appropriate follow-up,” noting “inadequate support and follow-up may result in treatment failures or harms” (p.363).

• Noted the need for more research on outcome of various types of treatment-pharmacologic as well as non-pharmacologic.

The American Academy of Pediatrics released guidelines in February 2018 recommending annual depression screening for adolescent patients ages 12 years and older with a formal self-report screening tool either on paper or electronically (Zuckerbrot, Cheung, Jensen, Stein, & Laraque, 2018).

The guidelines go on to state that systematic assessment with depression-specific questions seems to provide the best identification of depression, and to underscore that the current practice of reliance on adolescent or parental chief complaints and standard physician interview under-identifies adolescent depression. They cite evidence that an identification program in primary care when combined with high-quality depression treatment yields better outcomes than treatment as usual.

CONTROVERSIES OVER SCREENING

Pharmaceutical Company Links

As Levin points out, the advent of direct to consumer marketing in the US led to the involvement of the pharmaceutical industry in developing and promoting screening tools that could be used by primary care providers and indeed by individuals themselves to determine if they met criteria for a psychiatric disorder. The assumption was that people who met criteria would seek or be referred for treatment. Levin draws attention to the fact that the PHQ-A, a screening tool for depression in adolescents that was derived from the PHQ-9, was developed by Pfizer, the manufacturer of the antidepressant drug Zoloft.

Concerns About Misidentification

Screening commonly involves structured assessments that are completed either by respondents themselves or by evaluators who ask a standardized list of questions. The advantages of structured assessments are that they insure that key questions will be asked. There is evidence that routinely inquiring about certain aspects of patient’s history or mental states in clinical settings can improve detection of frequently overlooked conditions (Stockings et al., 2015). Adolescents seem to accept questionnaires quite well and some will reveal information on questionnaires more readily than they will in face to face interviews. However, responses can easily be falsified, and if uncorroborated, could lead to misdiagnosis, as in the case described by Levin.

Stockings and colleagues’ extensive review of studies of commonly used assessment instruments concluded, “positive predictive power was poor across most scales, suggesting that using cutoff scores on these scales to determine clinical levels of MDD may result in high misclassification rates, particularly when used in nonclinical settings” (2015, p. 460). Zuckerbrot and colleagues warned, “Reliance on adolescent self-report depression checklists alone will lead to substantial numbers of false-positive and false-negative cases” (2018, p. 8). That overtreatment is the likely result is suggested by a study of primary care providers that showed an increased rate of antidepressant prescriptions for adult patients who were seen in primary care offices that employed the PHQ-9, even when they had few or no symptoms of depression (Jerant et al., 2014).
Lack of Evidence for Improved Outcomes

The usual outcomes measured have been referrals to mental health treatment, and receiving either psychotherapeutic or psychopharmacological treatment. The Cochrane Database, for example, after a careful review of the published evidence, could find no studies that even attempted to measure outcomes in terms of reductions in illness or in suicide rates.

It is noteworthy that only in the US, where the pharmaceutical industry influence is high, has universal screening been recommended. Both Canada and the UK have taken positions against it, citing a lack of evidence that it improves outcomes (Thombs & Ziegelstein, 2013).

One of the major concerns about universal screening is that in the face of lack of services, screening is unlikely to lead to more or better care. Lyon and colleagues used a statistical procedure called system dynamics modeling to try to predict what the outcome of universal screening in a school system would be. While they found while screening was likely to facilitate more rapid entry into services, it was not clear that it would improve recovery rates (2016). They cautioned that improving service capacity was a crucial first step.

Others have expressed concerns about screening producing a drain on resources. For example, Horowitz and colleagues have stated, “Although the effects of false positive screens can and should be minimized for patients, the effects on the system-of-care can be great and costly and should not be underestimated. For example, valuable mental health resources can be overtaxed by false positives, leaving patients at true risk without available care. This is precisely why screening is only the initial step in a longer process of evaluation” (2009).

SO WHERE DO WE GO FROM HERE?

Screening is not necessarily undesirable. Comprehensive approaches that combine screening with more thorough evaluations and links to services in primary care settings have been shown to be superior to screening alone (Asarnow et al., 2005). It is the reliance on screening alone that is problematic.

“Screening and detection are only the first step to making a diagnosis. Instead, optimal diagnostic procedures should combine the use of depression-specific screening tools as diagnostic aids, buttressed by follow-up clinical interviews in which one obtains information from other informants (e.g., parents) as legally permissible and uses either other tools or interviews to assess for other psychiatric diagnoses as well, reconciling discrepant information to arrive at an accurate diagnosis and impairment assessment before treatment.” (Zuckerbrot et al., 2018, p. 8).

Indeed, the GLAD-PC recommendations begin with a call for empowerment of primary care providers through training and education, emphasizing that training must include more than lectures. They then emphasize what needs to be in place in primary care practices in terms of linkages to community resources, before recommending annual screening for all patients, ongoing monitoring of high risk patients, comprehensive assessment using interviews with patients and parents, and management.

In summary, the issues are complex. Screening, while potentially an important advance toward better detection and treatment, is limited in value by limitations of the instruments used and the ways in which the results are interpreted. There is a danger that a screening could become another component in a checklist approach to diagnosis, part of a general tendency to focus on symptoms and neglect psychosocial contexts. Depression in adolescents often occurs in contexts of psychosocial adversity and cannot be adequately addressed without attention to risk and protective factors, stress and vulnerability. Caution is certainly warranted. There is unquestionably a need for appropriate provider education and training so that depression is adequately detected and managed. We should not view screening as a shortcut to this end.
REFERENCES


