

DEPRESSION SCREENING PRACTICES IN ADOLESCENTS WITH TYPE 1 DIABETES MELLITUS: COMPARISON OF OUTCOMES RATES BETWEEN PATIENT HEALTH QUESTIONNAIRE (PHQ)-2 AND PHQ-9

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Background

Children and adolescents with type 1 diabetes mellitus (T1D) are at increased risk for depressive symptoms relative to youth without diabetes (Anderson et al, 2001; Hood et al, 2014). For youth with T1D, depressive symptoms are associated with poorer diabetes management (Gonzales et al 2008; Lustman et al 2000). As such, the American Diabetes Association recommends annual depression screening for youth with T1D (Young-Hyman et al, 2016). As part of ongoing Quality Improvement initiatives in the Texas Children's Hospital (TCH) Section of Diabetes and Endocrinology, we evaluated two validated depression screening measures: the PHQ-2 and PHQ-9: Modified for Teens.

Objectives

In the present study we sought to (1) review screening outcomes from youth with T1D who completed both the PHQ-2 and PHQ-9, and (2) determine which measure provided the greatest sensitivity to identifying depressive symptoms in this population.

Methods

A chart review of PHQ-2 and PHQ-9 scores was conducted for all patients with T1D age 12-17 who had an outpatient encounter at any of 5 TCH Endocrine clinic sites between January 1 –December 31, 2017. A positive screen was defined as PHQ-2 score ≥ 3 and PHQ-9 score ≥ 5 . Screens were completed either at our diabetes clinic or another Texas Children's Health Care Center.

Results

Of 961 eligible patients, 84% (N=807) were screened using the PHQ-2 and 15% (N=42) using both the PHQ-2 and PHQ-9. Of the patients who completed both measures, the positive screening rate was more than 6 times higher using the PHQ-9 than the PHQ-2 (20% v. 3%, respectively). 15% of patients with PHQ-9 screens met clinical cut-offs for "moderate" symptoms (score of 5-9) and 5% met clinical cut-offs for "severe" symptoms (≥ 10). None of the patients with moderate PHQ-9 scores screened positive on the PHQ-2, and only one patient with a severe PHQ-9 score screened positive on the PHQ-2. Of the 3 patients who endorsed suicidality on the PHQ-9, none had positive screens on the PHQ-2. 80% of patients who received both screens completed the measures within 2 months of each other.

Discussion

Rate of depression screening using the PHQ-2 is high, however it appears to be a less sensitive measure than the PHQ-9 for capturing depressive symptoms in youth with T1D. Our next steps will be to pilot the transition from using PHQ-2 to PHQ-9, assess feasibility of universal depression screening for adolescents with T1D, and optimize the mental health referral process for positive screens.