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Original article

Referral and Follow-Up After Mental Health Screening in Commercially Insured Adolescents

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A B S T R A C T

Purpose: Although mental health screening is recommended for adolescents, little is known about the predictors of referral to mental health services or engagement in treatment. We examined predictors of mental health referral from primary care and service use for commercially insured youth who had been screened using the Pediatric Symptom Checklist or Youth-Pediatric Symptom Checklist.

Methods: A retrospective chart review was conducted of commercially insured patients 14–17 years of age who were newly identified by the Pediatric Symptom Checklist or Youth-Pediatric Symptom Checklist at a well-child visit. Comparisons were made with propensity-matched negative adolescents meeting the same criteria. Bivariate analyses were conducted to examine differences between positives and negatives and between referred and nonreferred positives. Logistic regression analyses were performed to assess predictors of mental health referral for positive youth.

Results: Medical records of 117 positive and 110 negative youth were examined. Compared with negative youth, positive youth were significantly more likely to be referred for mental health treatment ($p < .0001$) and receive specialty mental health services ($p < .0001$). Of the positives, 54% were referred for mental health care and 67% of them accepted. However, only 18% completed a face-to-face mental health visit in the next 180 days. Pediatric Symptom Checklist score (odds ratio, 1.21; confidence interval, 1.03–1.42), parental or personal concern (odds ratio, 10.87; confidence interval, 2.70–43.76), and having depressive symptoms (odds ratio, 9.18; confidence interval, 1.49–56.60) were predictive of referral.

Conclusions: Despite identification after behavioral health screening, limited treatment engagement by referred patients persists. Primary care physicians and mental health specialists must enhance their efforts to engage and monitor identified patients.

IMPLICATIONS AND CONTRIBUTION

Few studies have examined factors related to primary care referral of adolescents to mental health services after screening. This study adds to the literature by identifying factors predicting referral (screen score, parental concern, and internalizing symptoms) and referral completion (primary care counseling and externalizing symptoms) for privately insured teens.

One in 10 children in the United States experiences a mental health or psychiatric disorder [1,2]. Adolescents are known to have a high incidence of mental health conditions. For example, an estimated 8% of 12- to 17-year-olds have experienced at least one major depressive episode during the past year, and roughly

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20% experience an episode of depression before the age of 18 [3]. Despite high prevalence, only a minority of youth with mental health problems actually receive treatment [3–6].

Given the high rates of mental health disorders and the low rates of treatment, pediatric providers often serve as default mental health providers. Their role in identification, referral for specialty mental health services, and treatment is critical. Among adolescents with mental disorders, approximately one fifth (20.7%) report receiving mental health services in the general medical setting [5]. Today, mental health screening is recommended as a standard component of well-child care [7,8]. However, although screening has been shown to increase identification and referral [6,9,10], less is known about whether it improves entry into treatment for identified teens [11]. Massachusetts offers a unique opportunity to study this question. In 2008, as part of the settlement of the *Rosie D. v Patrick* lawsuit [12], the Massachusetts Medicaid program mandated reimbursable behavioral health screening at well-child visits using validated tools. Simultaneously, all the major commercial payers (Harvard Pilgrim, Blue Cross Blue Shield, and Tufts) began reimbursement for screening. Although most providers did not begin screening until the court mandate became effective, Cambridge Health Alliance (CHA) primary care providers (PCPs) started screening all children regardless of insurance coverage in 2003.

For the purposes of this study, we chose to focus on commercially insured children in order to eliminate insurance as a cofounder of service utilization. Other studies by the authors on the impact of screening in a Medicaid population are forthcoming. To understand mental health utilization, we examined records of commercially insured youth (14–17 years of age) who received behavioral health screening with the Pediatric Symptom Checklist (PSC) or Youth-PSC (Y-PSC) [13] during well-child visits. Given that screening is meant to uncover occult distress, we limited the study to children who were not currently receiving mental health treatment within the past 90 days. The major aims of the study were to (1) compare the mental health utilization of youth who scored above the cut-point (positive) with those who scored below the cut-point (negative) on the screen; (2) compare characteristics and mental health utilization of positive youth who were referred to mental health care with those who were not; and (3) examine predictors of mental health referrals for positive youth. This information will increase understanding of the potential value of routine primary care mental health screening of adolescents.

Methods

Design

A retrospective chart review of commercially insured adolescents who were not currently in mental health treatment and who scored at or above the cut-point (positive youth) on the PSC/Y-PSC between 2005 and 2011 was conducted. They were compared with a propensity-matched group of adolescents who scored below the cut-point (negative youth). The PSC/Y-PSC is a validated 35-item questionnaire that can be self-administered by parents (PSC) or youth themselves (Y-PSC) [14–16]. Item scores are summed, and if they fall above the cut-point, the screen is considered to be positive ($\geq$28 for 6- to 16-year-olds and $\geq$30 for youth age $\geq$17 years on the PSC and on the Y-PSC) [15,17]. At CHA, two questions were added to the PSC/Y-PSC that were not included in the total score: "Is your child/are you currently seeing a mental health counselor?" and "Does your child/do you have any emotional or behavioral problems for which she/he/you needs help?" All records were examined before and up to 180 days after the screening visit to determine mental health history, referral, and follow-up.

Setting

CHA is an urban health system with a network of primary care and specialty ambulatory sites. Pediatrics and Family Medicine care for over 25,000 children in 10 primary care sites, and the Division of Child and Adolescent Psychiatry serves over 3,000 children. Over 30% of pediatric primary care patients have commercial insurance. They are racially and ethnically diverse (46% white, 24% black, 9% Hispanic, 7% Asian, and 21% other). CHA uses a shared electronic medical record that documents all utilization in the system including pediatric and psychiatric inpatient, outpatient, and emergency visits. For this study, reviewers had full access to all CHA documentation including psychiatric records. The study received approval from the CHA Institutional Review Board in December 2011.

Screening processes

In 2003, CHA began behavioral health screening at well-child visits using the PSC/Y-PSC. The screening procedures were implemented across practice sites from 2003 to 2007 [18,19]. Briefly, medical assistants provide teens with paper screens when they enter the exam room; 14- to 15-year-olds receive the Y-PSC unless the accompanying parent requests the PSC and 16- to 17-year-olds receive the Y-PSC. The provider scores the screen, discusses the results, and determines a disposition. Score, disposition, and a scan of the screen are entered into the electronic medical record. Mental health referrals to CHA Child and Adolescent Psychiatry were made by e-mail, fax, or telephone calls until 2008 when electronic referral became available. External referrals were generally handled by the family. Once an internal referral was made, Child Psychiatry would attempt to contact the patient or family to set up an appointment. Given the broad array of available mental health services at CHA, most referrals are to internal CHA mental health clinicians.

Sample

The sample included all patients meeting the following criteria: commercially insured, aged 14–17 years, screened positive on the PSC/Y-PSC, and were receiving no specialty mental health care (defined in discussion with two child psychiatrists as no specialty mental health care or active psychotropic prescriptions in the 90 days before the screening visit).

Comparison group

In our prior studies, over half the referrals made to mental health were for youth who scored below the cut-point on the PSC/Y-PSC and were driven largely by parental concern [18]. Thus, to understand differences in referral patterns for positive versus negative youth, we selected a subset of patients who screened negative during the same period but otherwise met all other eligibility criteria. To ensure the negative comparison group was demographically similar to the positive patients, the negative patients were selected using propensity matching.