

Adolescent, Parent and Provider Perceptions of a Predictive Algorithm to Identify Adolescent Suicide Risk in Primary Care

Date:

Jan 2024

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OBJECTIVE: To understand adolescent, parent, and provider perceptions of a machine learning algorithm for detecting adolescent suicide risk prior to its implementation primary care. **METHODS:** We conducted semi-structured, qualitative interviews with adolescents (n = 9), parents (n = 12), and providers (n = 10; mixture of behavioral health and primary care providers) across two major health systems. Interviews were audio recorded and transcribed with analyses supported by use of NVivo. A codebook was developed combining codes derived inductively from interview transcripts and deductively from implementation science frameworks for content analysis. **RESULTS:** Reactions to the algorithm were mixed. While many participants expressed privacy concerns, they believed the algorithm could be clinically useful for identifying adolescents at risk for suicide and facilitating follow-up. Parents' past experiences with their adolescents' suicidal thoughts and behaviors contributed to their openness to the algorithm. Results also aligned with several key Consolidated Framework for Implementation Research domains. For example, providers mentioned barriers inherent to the primary care setting such as time and resource constraints likely to impact algorithm implementation. Participants also cited a climate of mistrust of science and health care as potential barriers. **CONCLUSIONS:** Findings shed light on factors that warrant consideration to promote successful implementation of suicide predictive algorithms in pediatric primary care. By attending to perspectives of potential end users prior to the development and testing of the algorithm, we can ensure that the risk prediction methods will be well-suited to the providers who would be interacting with them and the families who could benefit.

Journal:

[Academic Pediatrics](#)

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