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## Suicide prevention in medical settings: The case for universal screening

Lisa M. Horowitz<sup>a</sup>, Kimberly Roaten<sup>b</sup>, Maryland Pao<sup>a</sup>, Jeffrey A. Bridge<sup>c</sup>

<sup>a</sup> Intramural Research Program, National Institute of Mental Health, National Institutes of Health, Bethesda, MD, United States of America

<sup>b</sup> Department of Psychiatry, University of Texas (UT) Southwestern Medical Center, Parkland Health & Hospital System, Dallas, TX, United States of America

<sup>c</sup> The Research Institute at Nationwide Children's Hospital and the Departments of Pediatrics, Psychiatry and Behavioral Health, The Ohio State University, Columbus, OH, United States of America

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Could we save lives if healthcare providers asked their patients a few questions about suicidal thoughts and behaviors at medical visits? As we debate the merits of suicide risk screening, the suicide rate in this country continues to rise. In 1999, the Surgeon General declared suicide a national public health threat; despite this “call to action,” the age-adjusted suicide rate increased 28%, from 10.5 to 13.4 per 100,000 population between 1999 and 2016 [1].

In February 2016, The Joint Commission (TJC) took an important step to advance suicide prevention by focusing on occult suicidal thoughts in medical patients and publishing Sentinel Event Alert (SEA) 56. Where TJC's National Patient Safety Goal 15.01.01 requires accredited hospitals to screen behavioral health patients for suicidal ideation, SEA 56 recommends that healthcare systems screen *all* patients. Studies of suicide decedents have found that a large majority (>80%) visited a healthcare provider for medical reasons in the year prior to death; upwards of 50% in their last 30 days[2–4]. Thus, universal screening could substantially reduce the frequency of individuals with undetected suicide risk[5].

Detection is an important first step in helping someone at risk for suicide. Screening is a public health technique designed to identify individuals within a population who are at elevated risk for having a condition of interest. Screening aims to distinguish individuals who warrant further attention to treat conditions of concern. Suicide risk screening can detect someone who is at imminent risk for suicidal behavior and those with suicidal thoughts who are not at imminent risk but are experiencing emotional distress that may lead to substantial morbidity if left undetected and untreated. We think universal suicide risk screening can be justified on clinical, ethical, and even economic grounds, based on current science.

Suicidal ideation increases the risk of suicide attempts and death. In a study of 84,850 adults interviewed across 17 countries, 33.6% of individuals with suicidal ideation developed a plan for suicide and 29.0% made a suicide attempt, the majority within the first year of having suicidal thoughts[6]. Similar findings have been reported in U.S. adolescents[7]. Recent studies have found that screening positive for suicidal ideation can accurately identify patients at increased risk of suicide attempts and death among patients in community practices[8, 9] as well as the Veterans Health Administration[10].

For efficiency, suicide risk screening is a three-tiered process including a rapid primary screener, followed by a brief suicide safety assessment/risk assessment, which determines whether or not a full mental health evaluation is needed. Suicide risk screeners and risk assessment tools are methodologically and logistically distinct. Primary screeners should be very brief with high sensitivity/specificity, to flag individuals requiring further evaluation who might otherwise not be identified via self-identification or clinical judgment. Evidence-based screeners specific for youth and adults are publicly available [11–14]. Suicide risk assessments, in turn, are more comprehensive evaluations to confirm risk and guide next steps [11]. Advantages of utilizing primary screeners is that they distinguish individuals who need immediate safety planning and further risk assessment during the current medical visit. Not all individuals who screen positive for suicide risk require safety precautions such as continuous monitoring; providing higher level precautions to everyone that screens positive is logistically burdensome, clinically unwarranted, and may result in a misallocation of resources, rendering a screening program untenable.

Following evidence-informed clinical pathways can spare clinical settings of these consequences.

Screening inevitably has challenges. The necessary brevity of primary screeners may result in false positives, which in this case will be individuals who reveal thoughts associated with suicidal thinking but who are not at current risk for suicide. This may result in an inappropriate clinical response; nevertheless, the relatively low cost of false positives outweighs the high cost of underdetection-suicidal behavior or death. The reality is that patients will have suicidal thoughts regardless of whether or not we implement universal screening. In all likelihood, these patients will pass through medical settings with undetected suicide risk – a missed opportunity to intervene or save a life.

That universal screening for suicide risk is feasible and effective is no longer a matter of conjecture. Health systems across the country are screening youth and adults in ED, inpatient, and outpatient settings, without disrupting budgets or workflows, and without adding to the ED boarding crisis or over-utilizing mental health resources and with generally favorable feedback from both staff and patients. A powerhouse example is Parkland Health & Hospital System (PHHS), which has screened for suicide risk in over 2 million patient encounters since starting hospital-wide universal screening in early-2015. The PHHS team created and integrated a clinical decision support system into the electronic health record - balancing clinical needs, optimizing safety, and respecting patient rights - in order to improve care and safety for patients who screen positive. Because of this careful planning, clinical resources are allocated appropriately, and workflow has not been disrupted[15]. The

PHHS program may serve as a model to guide other health care institutions as they improve patient safety and work toward reducing suicide.

Historically, a major barrier for hospitals toward implementing suicide risk screening was the lack of scientific evidence that screening and brief intervention can prevent suicidal behavior. That situation changed with the recent findings from the Emergency Department Safety Assessment and Follow-up Evaluation (ED-SAFE) study [16], the largest suicide intervention study ever conducted in the U.S. ED-SAFE demonstrated that universal suicide risk screening, in combination with a brief ED-initiated intervention consisting of standardized suicide risk assessment, safety planning, and periodic phone call support post-discharge led to 30% fewer suicide attempts during the 52-week follow-up compared with treatment-as-usual.

Screening for suicide risk is important across the lifespan, but perhaps even more crucial for youth given suicide is the second leading cause of death among 10- to 24-year-olds in the U.S. [17]. Young patients often present to medical settings with a parent/guardian, who may learn for the first time that their child is struggling with suicidal thoughts. In this way, screening may serve as an intervention because if risk is detected the parent/guardian is alerted, can actively engage in safety planning with the child and medical team, and be educated about lethal means restriction and safe storage practices[18].

How can suicide risk screening be further enhanced going forward? For those patients who conceal suicidal thoughts when asked directly, there are innovative approaches being developed that measure implicit associations about suicide, which has been shown to predict suicide attempts even after controlling for known risk factors [19]. Additionally, novel methods are being applied to identify individuals with high predicted suicide risk based on statistical analysis of electronic health record or administrative data; these patients could then be engaged proactively for suicide risk assessment[20–22]. These various methods for identifying suicide risk are likely to be complementary.

We strongly advocate for universal suicide risk screening in medical settings. Since the Surgeon General's call to action two decades ago, multiple expert panels, task forces, and committees have been convened to address suicide as a national public health problem; yet 649,843 more Americans have died by suicide and the rate continues to rise[1]. Given the evident public health crisis and evidence of the feasibility and effectiveness of proactive suicide risk detection and intervention programs like PHHS and ED-SAFE, we know there are real costs to not acting. It is time to build more effective systems of care to detect and manage suicide risk for all patients in the medical setting. These systems must include ongoing monitoring and quality improvement efforts to refine procedures and respond to any potential unintended consequences that might offset the benefits of screening. By combining universal screening for suicide risk with a responsive system of care we can leverage our medical settings to play a critical role in reducing the suicide rate. It is time to ask all patients directly about suicide.

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