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Barriers to Universal Suicide Risk Screening for Youth in the Emergency Department

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Abstract

Objective: Given the increasing rates of youth suicide, it is important to understand the barriers to suicide screening in emergency departments (EDs). This review describes the current literature, identifies gaps in existing research, and suggests recommendations for future research.

Methods: A search of PubMed, MEDLINE, CINAHL, PsycInfo, and Web of Science was conducted. Data extraction included study/sample characteristics and barriers information categorized based on the EPIS Model.

Results: All studies focused on inner context barriers of implementation and usually examined individuals' attitudes towards screening. No study looked at administrative, policy, or financing issues.

Conclusions: The lack of prospective, systematic studies on barriers and the focus on individual adopter attitudes reveals a significant gap in understanding the challenges to implementation of universal youth suicide risk screening in EDs.

Keywords

universal suicide screening; emergency department; implementation barriers

Introduction

Suicide is the second leading cause of death for youth ages 10-19, resulting in over 2000 deaths in the US each year. Between 2007 and 2017, suicide rates increased 75% among

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15-19 year olds and nearly tripled in youth ages 10-14.[1] A significant contributor to premature death, suicide has emerged as a priority in youth service systems throughout the US.

Emergency departments (EDs) are well-positioned to identify youth at risk for suicide.[2,3] Although there was no change in the number of pediatric ED visits between 2007 and 2015, visits related to suicidal ideation and behavior increased by 61% and visits related to suicide attempts increased by 80%.[4] Furthermore, EDs are the primary healthcare access point for many youth.

However, there are no uniform recommendations regarding suicide screening in the ED. The Joint Commission recommends screening only patients with behavioral health complaints, though it previously suggested universal screening.[5,6] Recommendations in primary care settings are also ambiguous; the US Preventative Task Force reports insufficient evidence to recommend for or against suicide screening, while the American Academy of Pediatrics supports it.[7,8]

This lack of consensus coupled with low rates of screening[9] may indicate significant barriers to suicide screening. Understanding barriers is essential to any sustainable screening initiative, but there is a dearth of data on this topic. In a systematic review of youth suicide screening initiatives in EDs, Cervantes et al.[10] found sizable differences in rates of screening. Despite this variation, few of the studies admitted to the review identified specific barriers or facilitators that might explain the large variation in screening rates. Just three of the eleven studies reviewed looked at barriers through prospective, systematic data gathering and only four discussed potential barriers in the discussion section. The most common challenges identified related to patient acceptability, workflow integration, and screening tools.

Barriers to implementing evidence-based practices (EBPs), such as suicide screening, have been conceptualized by Aarons et al. in their EPIS model.[11] The EPIS model postulates that EBPs progress through four stages: exploration, innovation adoption/preparation, implementation, and sustainment. In each stage, a variety of external factors (e.g. funding and training, leadership practices, and local service systems and policy) and internal factors (e.g. organizational structure and priorities, individual adopter characteristics, and fidelity monitoring and support) must be addressed.

Given the importance of and current low rate of youth suicide screening in EDs, it is important to understand the obstacles to screening. Therefore, we conducted a review to describe the current literature examining barriers to screening youth in EDs using the EPIS model to identify gaps in existing research and develop recommendations for future research.

Method

Search Strategy

Searches were conducted in PubMed, MEDLINE, CINAHL, PsycInfo, and Web of Science on 01/24/2020 with the search terms: (child OR youth OR adolescent OR pediatric) AND ((emergency) AND (room OR department)) AND ((suicid*) AND (screening OR assessment)). Authors also crosschecked the reference lists of reviewed articles.

Study Selection

Two authors (XX, XX) conducted the electronic searches. Three authors (XX, XX, XX) independently screened titles/abstracts for eligibility and then conducted full-text reviews. Eligibility depended on the following exclusionary criteria: (1) not in English; (2) not a primary publication of original research; (3) not conducted in the US; (4) not focused in the ED; (5) not related to universal youth suicide screening; and (6) no description of barriers. Due to significant differences in service systems between countries, generalizability of findings is likely inappropriate, and thus, inclusion was restricted to research conducted in the US. The authors discussed any disagreements to reach consensus.

Data Extraction

Three authors (XX, XX, XX) abstracted data, including study and sample characteristics and barriers-related information, using a pre-piloted form. Data were reabstracted from 25% of articles with 93.8% agreement and analyzed descriptively using SPSS.

Results

Study Characteristics

Of the 855 studies initially identified, only 9 met review criteria. Study objectives included examinations of youth (88.9%; 8/9),[12–19] caregiver (44.4%; 4/9),[15,16,18,19] and provider (33.3%; 3/9)[18–20] attitudes toward screening. All but one instrument[17] used to evaluate attitudes were investigator-developed. Data were analyzed quantitatively (55.6%; N=5)[15–18,20] and qualitatively (44.4%; N=4).[12–14,19] Over 55% (5/9) of studies were conducted within a larger screening effort.[12–14,17,18]

Sample Characteristics

Two studies used the same sample;[13,14] therefore, characteristics were only counted once in descriptive statistics. Sampling efforts were rarely systematic (25.0%; 2/8)[15,20] and most studies used a convenience sample (75.0%; 6/8).[12–14,16–19] In studies evaluating youth (87.5%; 7/8), ages ranged from 4-21 years old.[12–19] In studies examining youth or youth and caregivers, samples were predominantly female (>50%) (4/5 studies reporting sex)[12–16,20] and more often predominantly White (3/5 reporting race);[12,15,18] two samples were predominantly Black.[13,14,16] Insurance coverage was described in three studies, with private insurance slightly overrepresented (M=52.1%; SD=0.7%).[12,14,18] In studies examining providers, clinicians (e.g., physicians, social service providers) and researchers/research staff were included; further characterization was rarely reported.[18–20] See Table 1.

Barriers Examined and Identified

All studies focused on inner context factors of the EPIS model and examined individuals' attitudes towards screening. Five of the studies presenting findings on attitudes during the implementation phase, while four studies reported findings on attitudes from the exploration phase. One study also presented findings on innovation-values fit during implementation.[13]

In studies examining youth and caregiver attitudes, participants were largely supportive of screening in the ED.[12–14] Ballard et al.[12,14] and Horowitz et al.[13] found that over 90% of patients supported the implementation of screening. Williams et al.[18] studied the implementation of a general mental health screen, which included suicide among several other domains; 82% of caregivers and 75% of youth rated the screen as acceptable whereas 61% of youth and caregivers rated the screen as helpful. O'Mara et al.[15] and Langerman et al.[16] asked youth and caregivers to rate the acceptability/importance of screening across a number of different topics (e.g., substance abuse, sexual activity, violence, depression, housing instability, human trafficking, firearm access). Youth and caregivers rated suicidality among the first and second most acceptable/important in both studies. Reasons for supporting suicide risk screening included identifying at-risk youth, wanting clinicians to know/understand their situation, obtaining helpful referrals and resources, preventing suicidal behaviors, and lacking others to speak with about these issues.[12,14]

Though much less frequent, reasons cited for refusing screening included lack of interest or relevance, medical severity, time constraints, objections to the parent leaving the room, concerns that the patient was too young, fear of iatrogenic risk (i.e, suicide questions might cause distress or worsen suicidal ideation), and psychiatric symptoms (e.g. acute distress).[12,13,17] In one study, most patients described the screening process as "neutral" (66%), 18% described it as positive, 8% as stressful, and 8% as "weird" or "awkward".[13]

Examining sociodemographics and attitudes, Langerman et al.[16] found screening was more acceptable among females, but O'Mara and colleagues[15] found no sex differences in patient or caregiver rating regarding the importance of screening. Non-Hispanic Black and Hispanic youth rated screening as more acceptable than non-Hispanic White youth in Langerman and colleague's study,[16] while Williams et al.[18] found that Black parents rated the screen more helpful. Parents of children with mental health (MH) symptoms were more likely to report concerns with screen length but were also more likely to rate the screen as helpful. Langerman et al.[16] found that caregivers who reported having a recent appointment with their child's primary care provider were more likely to find the ED screen less acceptable.

Vaughn et al.[19] compared youth, clinician, and researcher attitudes. Across stakeholder groups, a safe environment was rated the most important part of a screening program, and providing resources and information was most feasible; follow-up treatment was rated the most important but least feasible result of screening. Middleman et al.[20] examined screening for a number of high-risk behaviors, including depression/suicidal ideation. Medical residents reported low levels of comfort screening, that they were likely to address other high-risk behaviors more frequently than depression/suicidal ideation, and that they were less likely to screen in the ED compared to other settings. Residents with more years' experience were more likely to report screening for depression/suicidal ideation. In

Williams et al.,[18] most ED physicians and nurses reported no issues with workflow after implementation of the MH screen. Horowitz et al.[13] found no significant differences in length of ED visit between patients who screened negative for suicide risk and those who screened positive and required follow-up evaluation.

Discussion

Low suicide screening rates suggest that barriers to universal youth suicide screening in EDs hinder implementation and may have prompted subsequent limited recommendations for screening by agencies like The Joint Commission. Although such barriers are important to understand, this review found that very few studies (9) have actually examined potential barriers. Additionally, all nine studies focused on youth/caregiver attitudes during the exploration and implementation phases of screening, with little attention to provider attitudes, other stages of the implementation process, or other factors outlined in the EPIS model.[11]

Importantly, based on available data, it is unclear if common reasons for refusal, such as time constraints and fear of iatrogenic risk, represent real or perceived issues.[12,17] For example, Horowitz et al.[13] found that visit length was not impacted by a positive screen and further evaluation, suggesting that timing may be a perceived rather than real barrier to suicide screening in EDs.[11] Similarly, previous research has shown no evidence for iatrogenic risk in youth suicide screening[21] and most youth/caregivers are supportive of universal screening[12–14] ranking it both acceptable and important.[15,16] Further, these data suggest that Black and Hispanic participants found screening more acceptable and helpful than their non-Hispanic White peers[16,18] suggesting that screening in EDs could potentially improve access to care for racial and ethnic minority youth, who often encounter multiple barriers to accessing MH evaluation and treatment due to systemic racism.[22]

Studies examining providers also found positive attitudes towards screening for suicide. Williams et al.[18] found that most ED staff reported no issues with workflow after implementation of the MH screen. However, the finding that medical residents reported low levels of comfort in screening for high-risk behavior[20] is consistent with research on ED providers’ confidence and training in treating MH challenges.[9] This suggests that a key factor for successful implementation of universal suicide screening is increased provider education and support.

Importantly, none of the studies examined barriers in the preparation or sustainment stages of the EPIS model, and none looked at outer context factors, such as funding and partnerships. Barriers such as workflow disruptions, limitations of screening tools, and lack of training and procedures were mentioned in studies examined in a recent systematic review, but none of those studies actually examined these issues.[10] Further, that review revealed little data on screening of non-English speaking individuals, those with intellectual and developmental challenges and no data on the impact on screening of the gender identity or sexual orientation of participants. The lack of data on these factors severely hinders the effective implementation of universal screening initiatives.

These results are limited by the exclusion of articles not written in English and studies conducted outside of the US. Also, this review focused on barriers to universal screening and omitted studies that focused on targeted screening of youth based on presenting complaints.

The scarcity of data on barriers and the heavy focus on attitudes reveals a significant gap in our understanding of the implementation of universal youth suicide risk screening in EDs. Given the potential public health impact of such screening initiatives, implementation challenges must be systematically examined in order to improve procedures and recommendations. COVID-19 poses serious new risks to youth MH[23] and valid and reliable data collection will be essential to guiding access to services when the pandemic subsides.[24] It is more critical now, than ever, to examine and find solutions to common barriers to youth MH and suicide screening in EDs.

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Table 1.

Overview of Reviewed Studies

			Ballard 2012[a]	Ballard 2013	Grupp-Phelan 2012	Horowitz 2010[a]	Langerman 2019	Middleman 1995[b]	O'Mara 2012	Vaughn 2020	Williams 2011[c]
Study Objectives		**Secondary to screening effort**	✓	✓	✓	✓					✓
		Youth attitudes	✓	✓	✓	✓	✓		✓	✓	✓
		Caregiver attitudes					✓		✓	✓	✓
		Provider attitudes						✓		✓	✓
Sample Type		**Convenience**	✓	✓	✓	✓	✓			✓	✓
		Systematic						✓	✓		
Sample Sociodemographics	*Sex*	**% Male**	43.6	41.4	NR	43.6	31.4◆	44.0*	52.0	33.0•	~50
	Age	**Age range**	10-21	10-21	12-17	10-21	13-17	24-34*	13-17	14-18	4-18
	Race/Ethnicity	**White (%)**	14.7	72.1	NR	14.7	9.7◆	84.0*	72.0	NR	63.9
		Black (%)	66.7	15.2	NR	66.7	71.3◆	NR	16.0	NR	32.8
		Hispanic (%)	5.1	1.8	NR	5.1	16.9◆	NR	5.0	NR	NR
		Other (%)	13.5	20.9	NR	13.5	7.2◆	NR	12.0	NR	NR
	Insurance Type	**Public (%)**	44.2	35.2	NR	NR	NR	NR	NR	NR	35.3
		Private (%)	51.9	51.5	NR	NR	NR	NR	NR	NR	52.9
		None/Other (%)	3.8	13.3	NR	NR	NR	NR	NR	NR	11.8
	Caregiver sex	**% Female**	NA	NA	NA	NA	NR	NA	73.0	NR	NR
	Caregiver age	**Mean age**	NA	NA	NA	NA	NR	NA	NR	NR	36.8
	Caregiver Relationship	**Biological mother (%)**	NA	NA	NA	NA	NR	NA	72.0	NR	NR
		Biological father (%)	NA	NA	NA	NA	NR	NA	21.0	NR	NR
		Other (%)	NA	NA	NA	NA	NR	NA	7.0	NR	NR
	Caregiver Race	**White (%)**	NA	NA	NA	NA	NR	NA	79.0	NR	NR
		Black (%)	NA	NA	NA	NA	NR	NA	15.0	NR	NR
		Hispanic (%)	NA	NA	NA	NA	NR	NA	4.0	NR	NR

			Ballard 2012[a]	Ballard 2013	Grupp-Phelan 2012	Horowitz 2010[a]	Langerman 2019	Middleman 1995[b]	O’Mara 2012	Vaughn 2020	Williams 2011[c]
		Other (%)	NA	NA	NA	NA	NR	NA	NR	NR	NR
	Caregiver Education	**High school (%)**	NA	NA	NA	NA	NR	NA	18.0	NR	26.0
		Some college (%)	NA	NA	NA	NA	NR	NA	26.0	NR	35.0
		College or more (%)	NA	NA	NA	NA	NR	NA	55.0	NR	NR
Assessment Method Used		**Interview**	✓	✓	✓	✓					
		Survey			✓		✓	✓	✓	✓	✓
Exploration Phase	*Outer Context*	**Sociopolitical**									
		Funding									
		Client Advocacy									
	Inner Context	**Interorganizational networks**									
		Organizational characteristics									
		Individual adopter characteristics					✓	✓	✓	✓	
Adoption Decision/ Preparation Phase	*Outer Context*	**Sociopolitical**									
		Funding									
		Client Advocacy									
		Interorganizational networks									
	Inner Context	**Organizational characteristics**									
		Leadership									
Implementation Phase	*Outer Context*	**Sociopolitical**									
		Funding									
		Interorganizational networks									
		Intervention developers									
		Leadership									
	Inner Context	**Organizational characteristics**									

			Ballard 2012[a]	Ballard 2013	Grupp-Phelan 2012	Horowitz 2010[a]	Langerman 2019	Middleman 1995[b]	O'Mara 2012	Vaughn 2020	Williams 2011[c]
		Innovation-values fit				✓					
		Individual adopter characteristics	✓	✓	✓	✓					✓
Sustainment Phase	*Outer Context*	**Sociopolitical**									
		Funding									
		Public-academic collaboration									
	Inner Context	**Organizational characteristics**									
		Fidelity monitoring/ support									
		Staffing									

[*] Provider sociodemographic data presented; all other data presented for youth samples

[◆] Represents pooled data across youth and caregiver participants

[•] Represents pooled data across youth, caregiver, and provider participants

[a] Sampled the same group of participants

[b] Examined high-risk behavior screening with a secondary focus on depression/suicide

[c] Used the Diagnostic Interview Schedule with Children (DISC) Predictive Scales (DPS), a mental health screen covering several domains including suicide