

Suicide Contagion in Adolescents: The Role of the Emergency Department *An Information Paper*

The Suicide and Contagion Subcommittee of the Public Health and Injury Prevention Committee, at the request of the American College of Emergency Physicians (ACEP) Board of Directors, completed a review of the role of the emergency department in the screening and treatment of adolescents at risk for suicide contagion. Although there is a significant body of literature about this topic, to our knowledge there is no review of this literature specifically aimed at providers in the emergency department (ED), other than brief snapshots that summarize screening for adolescent suicide.¹

The intent of the paper is to educate emergency physicians about this emerging public health issue. The paper provides information about the definition of suicide contagion, types of contagion, screening, risk reduction, and resources available to the practicing physician.

Concerns for suicide contagion were raised in 2017 when Netflix released the fictional show *13 Reasons Why*, which tells the story of a teenage girl who kills herself. The show graphically depicts her suicide, and her 13 reasons are explained in a series of cassette tapes that are left as a suicide note. Dr. Paul Kivela, MD, past president of the American College of Emergency Physicians, along with other medical experts, have criticized the show as a “glorification of suicide”² with the concern that this fictional portrayal of suicide may lead to an increase in the number of teenagers killing themselves.³ Netflix released a second season of the show in the spring of 2018 that included input from partner organizations, such as the American Foundation for Suicide Prevention and the American School Counselors Association. In this paper, we explore the issue of suicide contagion and how emergency physicians can work with other health care providers and the community to prevent suicide clusters.

Adolescent and Youth Suicide and Suicide Contagion

Introduction

Suicide is the second leading cause of death among youth and young adults aged 10-24 in the United States.⁴ In 2016, the rate of suicide among persons aged 15-24 was 13.15 per 100,000 individuals.⁵ According to the national 2015 Youth Risk Behaviors Survey, 17.7 percent of youth in grades 9-12 reported seriously considering suicide in the past 12 months, 8.6 percent of youth reported making at least one suicide attempt in the past 12 months, and 2.8 percent reported a suicide attempt that required medical treatment.⁶ The relative risk of suicide following exposure to another individual’s suicide is two to four times higher among 15-19- year-olds than among other age groups.⁷

An analysis of 16 years of data from the National Hospital Ambulatory Medical Care Survey found that attempted suicide and self-inflicted injury accounted for a total of 6.72 million ED visits, with the highest visit rates (per 1000 US population) among the 15-19-year-old age group, females, and blacks.⁸ The incidence of suicide and self-inflicted injury is a public health threat that is accelerating. Additionally, the

study found that the average number of annual ED visits more than doubled over the 16-year period from 244,000 to 538,000.⁹

Suicide contagion is the process by which one suicide facilitates the occurrence of another, through direct or indirect awareness of the prior suicide. Although consensus on the definition of contagion is still coalescing, a suicide cluster refers to a group of suicides or suicide attempts, or both, that occur closer together in time and space than would normally be expected due to chance. These are similar to incidence patterns seen in infectious outbreaks. The number of suicides/ suicide attempts and duration of events that define a cluster varies in the literature.^{10,11}

Two main types of suicide clusters have been discussed in the literature: mass clusters, which are media-related (suicides are grouped in time, but not space), and point clusters, which are local (suicides are contiguous in time and space).^{8,12} Point clusters occur in settings such as psychiatric hospitals, schools, community/peer groups, indigenous communities, work communities, prison populations, and military populations.⁷ The evidence for mass clusters is equivocal, but point clusters do appear to occur.⁹

There are numerous reports of suicide clusters documented in the literature, especially among youth.^{8,9} Possible psychological mechanisms for the clustering of suicides include contagion, imitation and suggestion, projective identification, pathological identification, learning, priming, complicated bereavement, assortative relating or homophily, and assortative susceptibility (see Table 1).¹³

Although understanding the potential mechanisms by which suicide clusters are mediated is salient to informing prevention strategies clinically, identifying mediation mechanisms must follow effective screening strategies. Early identification of individuals susceptible to suicide contagion can interrupt suicidality and ensure referral and follow-up with appropriate mental health services.¹³

Emergency clinicians are often primary points of contact for persons at elevated risk for suicide with the ability to alter a patient’s clinical course. It is imperative that frontline providers learn to recognize the risk factors, provide proper screening, and refer to treatment; and there is strong evidence that EDs and emergency physicians are critical to such injury prevention and intervention efforts.¹⁴

Table 1. Potential Mechanisms for Suicide Clusters⁸

| Mechanism | Description |
|-----------------------------|---|
| Behavioral contagion | Suicides serve as an impetus for suicide by overcoming existing internal constraints in persons contemplating suicide |
| Imitation and suggestion | Highly publicized suicides serve as an impetus for ‘copycat’ suicides (<i>Werther effect</i>) |
| Projective identification | Suicides serve as an impetus for suicide in persons who empathize by projecting their own troubles, feelings, and reasons for suicide onto the index suicide |
| Pathological identification | Suicides in inpatient psychiatric units serve as an impetus for suicide in fellow inpatients who share similar personal and clinical features with the index suicide |
| Social learning | Suicides serve as an impetus for suicide through the transmission of modeling cues from which exposed persons learn suicidal behavior |
| Priming | Suicides serve as an impetus for suicide by activating a set of pre-programmed thoughts and behaviors in persons already at risk for suicide (ie, in high state of vulnerability) |

| | |
|-----------------------------------|---|
| Complicated bereavement | Suicides serve as an impetus for suicide by causing or exacerbating depression in persons struggling to deal with the loss and grief |
| Assortative relating or homophily | Suicide point clusters occur due to a tendency for persons at high risk for suicide to preferentially relate to one another in peer groups (and not because one suicide serves as an impetus for another) |
| Assortative susceptibility | Suicide point clusters occur due to a tendency for persons of similar sociodemographics to cluster geographically (and not because one suicide serves as an impetus for another) |

Types of Contagion

In adolescents, many studies have demonstrated a strong association between major depression and suicide. However, there is conflicting evidence regarding the role of exposure to a peer's or family member's suicide attempt or completion. Two recent large studies based on longitudinal data have supported the notion of exposure leading to increased risk.

Using data obtained from the National Longitudinal Study of Adolescent Health in the United States, Nanayakkara¹⁵ looked at the relative risk of being exposed to an attempted suicide by a friend or family member. In adolescents without depression, they found a relative risk increase for exposure to a failed attempt by a friend (3.53), completed attempt by a friend (3.69), failed attempt by a family member (2.96), and completed attempt by a family member (7.67). In adolescents with depression, the relative risk was higher in all groups but not statistically significant. They concluded that exposure to a friend's or family member's suicide attempt or completed suicide added significantly to the risk of suicide for adolescents, regardless of depression levels. Zimmerman,¹⁶ looking at the same database, noted that adolescents who attempted suicide were more likely to overestimate the rate of friends attempting suicide.

Utilizing the Canadian National Longitudinal Survey of Children and Youth, Swanson¹⁷ examined the association between a schoolmate's suicide, or personally knowing someone who died by suicide, and an individual's suicidal ideation and suicide attempts. In the 16-17-year-old age group, 24.1% of respondents reported a schoolmate's suicide, and 20.1% reported personally knowing someone who died by suicide. Both types of suicide exposure predicted suicidal ideation and attempts with the effect lasting for at least two years. This was true among all age groups studied (12-13, 14-15, and 16-17). The odds ratios ranged from 1.83 to 6.46. The death of a schoolmate was a stronger predictor of suicidality than the death of someone personally known. The authors hypothesize that the death of a peer may resonate more with an adolescent.

Bullying has been identified as increasing the risk of suicidal behaviors, particularly in youth with underlying suicide risk factors, including mental health problems, substance use, early childhood adversity such as abuse, and other psychosocial stressors. Bullying is defined by Olweus¹⁸ as deliberately harmful behavior between peers, repeated over time, which involves an imbalance of power. Bullying can be physical, verbal, or relational (rumors, social exclusion). Smith¹⁹ has defined cyberbullying as "an aggressive intentional act carried out by a group or individual, using electronic forms of contact, repeatedly over time against a victim who cannot easily defend him or herself." The Youth Risk Behavior Survey (CDC)²⁰ reported that in 2013, 23.7% of boys and 15.6% of girls were bullied at school, while cyberbullying was experienced by 21% of girls and 8.5% of boys.

Klomek,²¹ in a review article, looked at both cross-sectional and longitudinal research studies. This review noted an increased risk of suicidal ideation and or suicide attempts in both bullies and victims. This has been demonstrated in both cross-sectional (OR 1.4 – 10) and longitudinal studies (OR 1.7-11.8). Those

most at risk are individuals who are both bullies and victims. Klomek²¹ also demonstrated that this association varies by sex. In females, frequent victimization was associated with suicidality independent of other risk factors. In males, bullying that led to suicidality only occurred when associated with psychopathology. One explanation offered is that boys experience more physical victimization, while girls are more likely to experience relational victimization, and relational victimization has been found to have the greater impact.

Media exposure has been investigated as a source of suicide contagion. Traditionally this has been divided into fictional and non-fictional exposure to suicide with books, newspapers, television and radio being the major sources of content. Recently, the internet, with multiple social platforms and news outlets, has greatly increased the opportunity for individuals to be exposed to fictional and non-fictional suicides

Prior to the increased influence of the internet, both Gould²² and Prikis²³ reviewed the literature to determine the role of the media in suicide through the indirect transmission of suicide contagion. The concept that a fictional story could lead to an increased suicide rate first gained acceptance after the publication in 1774 of Goethe's novel The Sorrow of Young Werther. That publication was believed to have triggered an increase in suicides, which led to the novel being banned in many European states. Despite the described "Werther Effect," the studies regarding the influence of non-fiction influencing suicidal behavior have produced varying results.

The association between non-fiction reporting and suicidal behavior is stronger. This is particularly true of teenage observers, especially when the subject of the report is similar to the observer in terms of age, sex, and nationality. When reporting suicides, the news media often oversimplifies the causes, attributing the act to single factors, such as financial disasters, broken relationships, or failure in examinations. What is often overlooked is the most common factor leading to suicide - mental illness.²⁴ This style of reporting can increase the risk of suicide contagion. It has also been noted that the suicide of a celebrity and the amount, duration and prominence of coverage proportionally increases the suicide rate.²⁵ Notably, a few studies document a decrease in suicide rates during newspaper strikes.

The risk for suicide contagion as a result of media reporting can be minimized by factual and concise media reports of suicide.²⁵ Pirkus recommends reporting suicides in a responsible manner following the Centers for Disease Control and Prevention (CDC) recommendations.²³ These recommendations focus on not sensationalizing the suicide, recognizing suicide as a public health concern, providing hotline information, and seeking advice from a suicide expert.

The internet offers adolescents social contact through access to websites, social media, forums, video imaging/sharing, and blogs. The internet has the potential to offer support for adolescents' mental health by reducing social isolation, increasing self-esteem, offering crisis support, as well as outreach and therapy. Luxton suggests using social media platforms to increase public awareness on suicide (mental health) recognition and prevention, as it is a component of a modern public health approach that can save lives.²⁶

Unfortunately, information on the internet cuts both ways, as there is also a potential for harm with access to pro-suicidal sites, support communities encouraging suicide, as well as increased contact with suicidal individuals, which can result in contagion through normalization of suicide, cyber suicide pacts, and descriptions of how to die by suicide.²⁷

In 2017, Marchant²⁸ completed a systemic review of 51 studies evaluating the relationship between internet use, self-harm, and suicidal behavior in young people. A comparable number of studies in this review demonstrated positive (15), negative (19) and mixed (17) influences on self-harm behavior. These conflicting results were the case in studies that looked at all modalities of internet use. To date, it has been difficult to objectively quantify the positive and negative effects of internet use. An exception is the posting of distressed messages by an individual, which have been found to be related to suicidal ideation and behavior.

The review notes that high levels of internet use have been associated with higher levels of depression and suicidality (ideation and attempts). Unfortunately, there is no currently agreed upon definition of internet addiction. It also cites six high quality studies that utilized school-based surveys to document more than two or five hours a day of internet use that found a significant relationship between internet addiction and suicidal behavior.

Screening for Suicide Risk in Emergency Departments

The Joint Commission has recommended all medical patients in hospitals be screened for suicide risk starting in 2010 and re-affirmed in 2016. They issued a national goal requiring suicide risk screening for all patients being treated for mental health concerns. Speaking with pediatric patients (up to 21 years old) can be fraught with overtones of suggestion, although the myth of “putting ideas into their heads” has been refuted by several studies.²⁹ Nevertheless, non-psychiatric clinicians benefit from brief validated instruments to help detect medical patients at risk for suicide. Screening positive may additionally be a proxy for other serious mental health concerns.

Although ‘at-risk’ patients may be seen in primary care and inpatient settings, for more than 1.5 million youth the emergency department is their only point of contact with a healthcare provider. Screening in the ED is also more acceptable to patients and their families and, in most cases, is non-disruptive to workflow.

In 2012, three pediatric EDs developed a brief instrument for the emergency department. The “Ask Suicide Questions” screening tool recommends asking four less-specific questions before moving to the all-important “Are you having thoughts of killing yourself right now?” If a patient answers “no” to the four questions, screening is complete, although clinical judgment can always override a negative screen. These questions are:

1. In the past few weeks, have you wished you were dead?
2. In the past few weeks, have you felt that you or your family would be better off if you were dead?
3. In the past week, have you been having thoughts about killing yourself?
4. Have you ever tried to kill yourself?

If the patient answers yes to any of the above, then this follow up question should be asked:

5. Are you having thoughts of killing yourself right now?

At that point, if the last question is positive or the patient refuses to answer, this is considered an acute positive screen where imminent risk has now been identified. The patient will now require a full mental health evaluation and cannot leave until evaluated for safety. All dangerous objects must be removed from the room, and the patient must be kept in sight.

If the patient answers “no” to the 5th question, it is a non-acute ‘positive’ screen with potential risk. A brief suicide safety assessment is required, and a full mental health evaluation may still be required.

More information about the “Ask Suicide Questions” screening process may be found on the National Institute of Mental Health website at <https://www.nimh.nih.gov/labs-at-nimh/asq-toolkit-materials/index.shtml>

Risk Reduction

Suicide prevention can be primary, secondary or tertiary. Primary prevention addresses an entire population, while secondary prevention targets those with risk factors. Tertiary prevention or so-called

“postvention” efforts focus on at-risk individuals in communities where a suicide or suicide cluster has occurred.³⁰ Suicide contagion efforts can happen using primary prevention utilizing universal standards or through tertiary prevention efforts.

Postvention efforts may focus on a broad group of survivors, including family members, friends, classmates, the local community, and others affected by media internet coverage of the suicide. Community response plans, psychological debriefings, screenings, education, and grief counseling are typical of such efforts.

The CDC has developed a conceptual framework for the prevention and local containment of suicide clusters.³¹ The recommendations advocate a coordinated interdisciplinary approach led by a community coordinating committee composed of representatives from the school district, municipal government, mental health services, medical facilities, emergency medical services, academia, clergy, parent organizations, survivor support groups, and the media.

Whenever possible, interventions aimed at mitigating suicide contagion should be assessed for their effectiveness. Szumilas³⁰ conducted a systematic review of 16 school-based, family-focused or community-based postvention efforts. Unfortunately, none showed a protective effect, though this may be an artifact of the low prevalence of suicide in the studied communities. However, some studies demonstrated positive secondary results, such as increased attendance at a crisis center or support group for suicide survivors. Young people participating in such support groups had significantly lower scores on depression and anxiety scales than controls, although no reduction in post-traumatic stress reactions or social adjustment was observed. Professionals attending "gatekeeper training" designed to improve their ability to identify at-risk individuals reported a positive effect on their knowledge, skills, and attitudes.

Emergency department staff routinely screen patients for suicidality, but these brief screens are typically not very sensitive if using an abbreviated triage scale.³² Such efforts should incorporate mechanisms for increasing sensitivity in times of crisis, with particular attention paid to identifying significant others of the decedent, as well as close friends, classmates, and those inordinately influenced by media coverage. Emergency departments should coordinate with the community coordinating committee to assure timely referral for appropriate counseling.

When death by suicide occurs in an emergency department, the attending emergency physician may have an opportunity to shape media coverage. Whenever possible, emergency physicians communicating with reporters should sensitize them to the problem of suicide contagion and remind or familiarize them with CDC recommended reporting best practices designed to prevent additional deaths.

The CDC summarized media best practices in *Suicide Contagion and the Reporting of Suicide: Recommendations from a National Workshop*.³³ Reporters are advised to avoid: 1) presenting simplistic explanations for suicide; 2) engaging in repetitive, ongoing, or excessive reporting; 3) providing sensational coverage of suicide (eg, avoiding morbid details and photographs); 4) reporting “how-to” details; 5) presenting suicide as a tool for accomplishing specific ends; 6) romanticizing the act or persons who commit suicide; 7) focusing on the suicide completer's positive characteristics without acknowledging their problems.

Teen Suicide Resources

Listed below are national resources available to assist communities in providing support to those affected by adolescent suicide. Non-profit organizations have focused resources on the increasing incidence of cyberbullying and on disadvantaged youth (immigrants, LGBTQ, and native American). States also have on-line resources available that contain a wealth of information. For example, the New Jersey Suicide Resource Center is an easily accessible site, that contains information about epidemiology, prevention, hotlines, resources and programs, as well as training.

1. National Suicide Prevention Lifeline - <https://suicidepreventionlifeline.org> (1-800-273-TALK)
2. National Association of School Psychologists - Preventing Youth Suicide: Tips for Parents & Educators. www.nasponline.org/resources-and-publications/resources/school-safety-and-crisis/preventing-youth-suicide/preventing-youth-suicide-tips-for-parents-and-educators
3. National Association of School Psychologists - Save a Friend: Tips for Teens to Prevent Suicide. www.nasponline.org/resources-and-publications/resources/school-safety-and-crisis/preventing-youth-suicide/save-a-friend-tips-for-teens-to-prevent-suicide
4. The Trevor Project - provides crisis intervention and suicide prevention for lesbian, gay, bisexual, transgender and questioning (LGBTQ) youth. <https://thetrevorproject.org>. (1-866-488-7386)
5. The Jed Foundation - goal is to protect emotional health and prevent suicide for our nation's teens and young adults. <https://www.jedfoundation.org/>
6. Centers for Disease Control and Prevention - www.cdc.gov/violenceprevention/suicide/
7. American Association of Suicidology - Directory of Accredited Crisis Centers by State. www.suicidology.org/Resources/Crisis-Centers
8. National Crisis Text Line (24/7) - text HELLO to 741741 any time to connect with a trained crisis counselor
9. Veterans Crisis Line – 1-800-273-8255, Press 1. Text to 838255. www.veteranscrisisline.net/gethelp/ Also available to active duty personnel.
10. us.ditchthelabel.org/ - non-governmental anti-bullying resource (online and phone mentors) covers USA, UK and Mexico
11. www.stopbullying.gov - Anti-bullying and cyberbullying resource, factsheets at www.stopbullying.gov/research-resources/index.html
12. SuicidePreventionLifeline en español - 1-888-628-9454
13. Indian Health Service Provide Resources - www.ihs.gov/suicideprevention/resources/providers/
14. Substance Abuse and Mental Health Services Administration (SAMSHA) - free downloadable publications: www.store.samhsa.gov/facet/Treatment-Prevention-Recovery/term/Suicide-Prevention
15. Kognito - state-by-state resources: kognito.com/articles/statewide-suicide-prevention-resources-is-your-state-on-the-list

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