Suicide and Suicidal Tendency in Primary Care Setting; Review Article

Abstract

Suicide is a critical public health problematic that primary care physicians potentially can help address given that concerned patients frequently visit them in the weeks and months preceding the successful suicide. This article contemplates issues placing the patient at high risk for successful suicide and clinical valuation techniques available to the primary care physician. Patients identified as being at risk of attractive suicidal or those who have a equal of suicidal ideation or behavior judged apposite for management in the primary care setting should be monitored for risk at regular intervals. It is extremely significant to learn about and try to contextualize the patients' emotions that triggered the present crisis. Nurses can make sure that they have a thorough understanding of the present acuity, and all of the precipitating factors, and can exactly and collaboratively communicate with the caregivers and other involved medical teams.

Introduction

Suicide is a public health problem and a leading reason of death. The number of people thinking seriously about suicide, making plans, and attempting suicide is surprisingly high. In total, primary care clinicians write more prescriptions for antidepressants than mental health clinicians and see patients more often in the month before their death by suicide. Treatment of depression by primary care physicians is improving, but opportunities remain in addressing suicide-related treatment variables. Collaborative maintenance models for treating depression have the potential both to improve depression outcomes and decrease suicide risk. Alcohol use disorders and anxiety symptoms are important comorbid conditions to identify and treat. Management of suicide risk includes understanding the difference between risk factors and warning signs, developing a suicide risk assessment, and practically managing suicidal crises.(1)

Suicide is a critical public health problem that primary care physicians potentially can help address given that distressed patients frequently visit them in the weeks and months preceding the successful suicide. This article considers issues placing the patient at high risk for successful suicide and clinical assessment techniques available to the primary care physician. Patients who wish to harm themselves but still lack an articulated plan for doing so can be treated by the primary care physician with the monitoring assistance of a depression care manager and appropriate consultation by a mental health specialist.(2)

In their recent paper in *Psychological Medicine*, (8)aim to allay some of the concerns commonly held in psychology that enquiring about suicidality can increase suicidal tendencies. Given the potential vulnerability of subjects included in psychological research, it is only right that concerns around their involvement in research are addressed. However, this relationship is not absolute. As Omerov and colleagues demonstrate, asking recently suicide-bereaved parents about their child's death indicates that rather than being harmed by their participation in the study, the majority found the experience to be a valuable and positive experience.(3)

Apprehensions about conducting studies in this area create a Catch-22 situation. Ethics committees require evidence that the proposed study will not cause participant distress or

suicidal ideation (9) yet there is a lack of published research for investigators to use in addressing these concerns (10). Omerov and colleagues discuss this tension and highlight the fact that gaining ethical approval to conduct studies into suicide is a major hurdle in suicide-related research.(3)

Concerns about questions on suicidal thoughts are not limited to research. In psychiatric settings, performing a risk assessment is an important prerequisite for patient safety (11)Psychiatric interviews, which may include questions on suicidality, are often seen as appropriate for patients as they are accessing psychiatric support and treatment. However, there is a reluctance to enquire about suicidality in other healthcare settings. In a survey of 170 German primary-care physicians, 23% expressed that they would not assess risk of suicide of elderly depressed patients over worries that it might encourage thoughts of suicide (12). Similar results were seen among 103 general practitioners based in England (13).one-third believed that questions about suicidal behaviour could induce thoughts of self-harm.(3)

Suicide is a major health issue. The WHO estimates that 800,000 people worldwide die as a result of suicide every year, which comes down to 2,192 suicides every day (14). Suicide is a complex phenomenon in which social, cultural and biological factors interact (15). Therefore, multilevel suicide prevention approaches are preferred above single, standalone measures (7)

The European Alliance Against Depression (EAAD) is an example of a multilevel approach. It was founded in 2004 with the purpose of creating a network of countries that have implemented action-focused, community-based interventions to treat depression and prevent suicides(16). This approach was first tested in 2000 in a region in Germany (Nuremberg), where the total number of suicidal acts decreased by 24% compared to a control region (17). The model has since been implemented in over 115 regions worldwide (18). The rationale of the EAAD is that the various levels, including primary care, general public, community facilitators and high-risk groups, interact to create a synergistic and catalytic effect (19)In the Netherlands, the model focuses on suicide prevention alone and is therefore named Suicide Prevention Action NETwork (SUPRANET). SUPRANET was initiated by 113 Suicide Prevention, the national

suicide prevention centre, as part of the national agenda for suicide prevention commissioned by the Ministry of Health (20)

Although all levels of EAAD are relevant for suicide prevention, specific attention is given to primary care. Primary Care Professionals (PCPs) include both General Practitioners (GPs) and their Mental Health Support Staff (MHSS); the latter is a relatively new profession and refers to professionals who offer therapy sessions to primary care patients with mental health, psychosocial or psychosomatic complaints (20). GPs are often in contact with patients shortly before they engage in suicidal behaviour(21-22). Additionally, in many health care systems, among which the Netherlands', GPs function as gatekeepers to identify and refer suicidal patients (23).Within SUPRANET, a program was developed to support PCPs carrying out evidence-based suicide prevention practices. It comprises among others a training to increase their ability to explore and detect suicidal feelings and they are encouraged to improve continuity of care by enhancing collaboration with specialised Mental Health Care (MHC) and other health or community care organisations.(7)

Supporting primary care is among the most effective suicide prevention strategies .However, implementation of interventions in primary care is challenging. An often-used framework to address implementation challenges is the Consolidated Framework for Implementation Research (CFIR). This comprehensive framework describes factors that are important in implementing and evaluating complex interventions. It consists of five domains (characteristics of the intervention, outer setting, inner setting, characteristics of individuals, and process of implementation) which interact and determine effectiveness of implementation together (24).Using a qualitative design, we conducted this implementation study to evaluate to what extent SUPRANET was helpful in supporting PCPs to apply suicide prevention practices. These insights will be used to engage PCPs more effectively in suicide prevention by improving the use of SUPRANET.(7)

Identification of patient suspected to suicide

Patients identified as being at risk of attractive suicidal or those who have a level of suicidal ideation or behavior judged suitable for management in the primary care setting should be monitored for risk at regular intervals. It is important to recollect that suicide risk should not be assumed to be stable over time. (76)Its reported on a clinical trial in which patients with uncomplicated depression, counting some with suicidal ideation, were monitored and managed within a primary care location over a 6- or 12-month time frame. At a simple level, the trial demonstrated that PCPs could successfully monitor depressed patients through suicidal ideation over a continual period, but it was also found that suicidal ideation largely declined or remained stable throughout the experimental. The impact of monitoring suicidality was demonstrated recently in a tutoring of subjects with borderline personality disorder Participants received nursing of their suicidal symptoms for 1 year and made 80% fewer attempts compared with the prior year.

There is often reluctance on the part of physicians to request about mental health issues, particularly suicidality. In showing a risk assessment, physicians should not hesitate to ask the patient about together suicidal ideation and behavior. Gould and colleagues30 dispelled the clinical myth that asking about suicidality has iatrogenic properties, clearly demonstrating that asking does not cause suffering or suicidal thinking. A risk assessment needs to include questions about suicidal ideation (eg, wishes to die, thoughts about committing suicide, some plans for suicide, and "intent" to act on such thoughts) and performance (eg, preparations for a suicide attempt, past suicidal behavior) as well as risk factors formerly described. If a patient reports a suicidal plan, any suicidal intent, and/or admission to suicidal method (eg, gun), risk is likely elevated. An assessment of suicide risk is a clinical view valid for that point in time which the practitioner is required to reasonably act upon giving to the level of risk that is present to ensure the safety of the enduring (eg, schedule a further selection for treatment or refer to a mental health professional)(77).

Epidemiology

In 2017, 15% of a national sample of college students reported seriously thinking about suicide in the last 12 months, compared with 10% ten years before. The most recent *Youth Risk Behavior Surveillance Survey* (estimates that 17.2% of high school students "seriously considered" suicide, 13.6% made a suicide plan, 7.4% attempted suicide(4), and 2.4% made an attempt that required medical attention; all reflecting a steady rise from 2009(25). Identified females considered suicide at almost double the rates of male counterparts (22% vs. 12%), attempted at higher rates (9% vs. 5%) and required more medical attention for attempts (3.1% vs. 1.5%;)(4)

However, males die by suicide at much higher rates than females. Suicide rates in 2017 were 3.3/100,000 for males (compared with 1.7/100,000 for females) in the 10–14-year-old age group; in contrast, rates among 15–24-year-olds were 22.7/100,000 for males and 5.8/100,000 for females (26)

Although rates of death by suicide for males are much higher than for females in adolescence, it is important to also view these estimates in the context of greater trends for the communities we serve. For example, a review of deaths by suicide in African American adolescents from 2001 to 2017 found that rates for females increased by 182%, while rates for males increased 60% (27). These data highlight subpopulation differences within overall suicide prevalence and trends. Unfortunately, many current analyses of specific characteristics associated with individuals who die by suicide aggregate all ages together.(4)

Recently, 37 states participated in the National Violent Death Reporting System (28). An analysis of all individuals in this database who died by suicide in 2015, and for whom toxicology tests were performed, found that 78% of those with and 70.9% of those without known mental health conditions tested positive for at least one illicit substance, most commonly alcohol (28).adolescents and young adults aged 20–24 comprised 13.7% of the total database. Recent or upcoming crises and physical health problems were noted for those with and without prior mental health diagnoses. School problems were noted among youth 10–18 (17.18% of those with a mental health condition, and 21.9% of those without.

In the same study, 75.2% of individuals with a mental health condition had been diagnosed with depression, followed in frequency by anxiety (16.8%), bipolar disorder (15.2%), schizophrenia (5.4%), and posttraumatic stress disorder (4.5%;)(28). Rates of depressive symptoms in U.S. adolescents, which have been tracked most consistently among mental health problems, have been increasing steadily from 2012 to 2018, with 37.5% of girls and 19.8% of boys in 2018 Monitoring the Future sample ranking in the top 75th percentile of scores on questions about depressive symptoms(29).

According to self-report figures from the YRBSS ,as many as 31.5% of high school students reported persistent feelings of sadness or hopelessness in the last year. Yet, approximately half of those with behavioral health problems or psychiatric concerns did *not* see a behavioral health professional (30), which often leaves nurses and other PCPs to cover this gap in care (31). In fact, individuals of all ages who died by suicide were more likely to have seen their PCP in the 30 days before death by suicide (32), reinforcing the need for more experiential training of PCPs and more effective use of nurses at all levels of training (33-34). Sadly, these estimates rarely take into consideration the sheer number of adolescents and families that do not see a PCP at all.

Other factors contributing to increased risk in adolescent populations include social media consumption; increase in bullying and cyberbullying bullying and family rejection of lesbian, gay, bisexual, and transgender (LGBT) youths; a history of physical or sexual abuse; history of adoptionthe potential glamorization of suicide in media, such as the 2017 Netflix web-series "13 Reasons Why"(4); and, the persistent and bidirectional impact of stigmatization about suicide (35). There is no one cause for the spike in suicide rates among this population (36). it is an amalgamation of factors that play out differently in each individual. The most important elements for PCP focus are (1) assessment of the adolescent's cognitive and socioemotional capacity *and* current context and (2) how a treatment plan will most safely and effectively serve their unique needs.(4)

Treatment

All cases are dynamically different; it is not a "one size fits all" clinical algorithm. Thus, taking into account context and risk factors is critical to tailoring the suicide prevention and treatment plans. Psychotherapeutic intervention is a cornerstone of treatment for youth presenting with suicidal behavior and thinking. Exact therapies aimed at reducing STB as an area of focus include dialectical behavior therapy (DBT), cognitive behavioral therapy (CBT), and interpersonal therapy (IPT); for a brief description of each and related links. Regardless of the chosen outpatient therapy, it is critical to gain an understanding of the entire ecosystem for each patient that may drive risk or protection for the patients experiencing STBs. With a better understanding of the emotional and behavioral drivers, a therapy modality can matched more effectively to the needs of the youth and family. There is sign that such therapeutic intervention may prevent self-harm as well (37). Other helpful modalities to consider include family therapy, psychodynamic therapies, and psychopharmacological interventions, as indicated.

AACAP guidelines (38). suggest that mild symptoms can respond well to therapy, such as CBT, but that moderate or severe symptoms likely require psychotherapies with the additional of an antidepressant. Treatment of all symptoms should continue for 6–12 months after baseline is achieved to avoid relapse .Tracking the efficacy of such therapies, however, has been problematic in this population, given the higher rate of treatment refusal and lower rates of retention in longitudinal studies (39). Thus, many of these treatments that show clinical promise lack a strong evidence-base. An in-depth discussion of medications is outside the scope of this current article. However, it is critical for prescribers to acknowledge the potential for medication lethality (i.e., number of pills dispensed, etc.) before refills are allowed.(4)

Regardless of approach, there are five key pillars for care, which include: wellness planning (exercise, diet, sleep); coping skill development; psychoeducation about suicide ideation and depression; safety planning and means reduction; and, increasing family and caregiving engagement(31).

It is extremely important to learn about and try to contextualize the patients' emotions that triggered the current crisis. Nurses can make sure that they have a thorough understanding of the current acuity, and all of the precipitating factors, and can accurately and collaboratively communicate with the caregivers and other involved medical teams. Within the visit, it is important to give the patient advice and offer explanations to decrease the suicidal thinking or behavior, always prioritizing safety. Some strategies recommended by the American Psychological Association (2019) include talking to adolescents about STBs by clearly expressing concerns about their situation and letting the adolescent talk freely about the experience, all the while authentically listening and actively showing compassion. Finally, it is useful to have handouts or websites that the patient can reference. The Suicide Stoppage Resource Center (SPRC) offers an overview of suicide resources for adolescents, as do some mobile applications, such as My3app. Org(4)

In recent years, treatment programs for depression with suicidal ideation specific to the general practice setting have been developed and demonstrated to be superior to usual care. Treatments typically involve a physician training component, antidepressant treatment, as well as an adjunctive counseling component provided by another practice staff member. Bruce and colleagues(53) demonstrated that a depression and suicidal ideation management program comprising treatment guidelines (psychopharmacology, interpersonal psychotherapy), physician education, and care managers who monitored treatment and in some cases provided therapy, was superior to usual care in reducing suicidal ideation and depression in older patients with depression. Unützer and colleagues(54) compared a collaborative care treatment comprising antidepressant medication plus a course of problem-solving treatment provided by a psychologist or registered nurse to treatment as usual in a sample of elderly depressed patients with or without suicidality. Significantly greater declines in suicidal ideation were evident in the collaborative care group compared to the treatment as usual group. Non-mental health professionals, including PCPs, trained in the STORM project showed significant improvement in their overall ability to manage suicidality, with specific gains in managing suicidal intent, removal of lethal means, and K. Posner, G.A. Melvin, B. Stanley Primary Psychiatry 66 December 2007 arrangement of appropriate support.

(55) Comparison of suicide rates in the district in which training was conducted in the years pre- and post-training did not differ.(56) This is not surprising given only 39% of the district's practitioners were trained, the rarity of suicide, and the tendency for suicide rates to be influenced by multiple factors. In addition to the specifically developed treatments for suicidal depression, treatment of depression may also reduce risk of suicidality. In a review of effective primary care treatment strategies, Gilbody and colleagues(57) found that collaborative care between a PCP and psychiatrist or psychologist was associated with improved treatment outcome and lower treatment cost for those with MDD. Models have been developed to enable best practice care of depression in primary care. Oxman and colleagues(58) describe a three-component model that comprises of education for clinicians and office staff about skills and procedures; care management, the focus of which is the use of telephone calls to educate and monitor progress and treatment compliance; and mental health interface, which includes involvement of a consulting psychiatrist who supervises clinicians and is available for consultation and referral. Antidepressants are an effective treatment for depressive disorders in primary care settings.

(59) Ensuring that patients treated with antidepressants are receiving an adequate dose is an important treatment consideration as evidence points to the widespread practice of inadequate dosing.50 Evidence of inadequate dosing has been found in patients who completed suicide while in treatment in primary care11 as well as in depressed patients in community care.(60) The Agency for Health Care Policy and Research Practice Guidelines provides guidelines for treatment of adult depression in primary care.(61) Increasing selective serotonin reuptake inhibitor (SSRI) prescription rates have been associated with a significant decrease in suicide rates in many countries,(62-63) and across the lifespan, and represent a reversal of the increasing suicide trend that preceded the introduction of SSRIs. In a large sample of treatment-seeking US veterans with MDD, Gibbons and colleagues58 demonstrated that risk of suicide attempt was reduced with antidepressant treatment. For example, risk of suicide attempt almost halved (221/100,000 to 123/100,000 participants) following the SSRI commencement, adding further support to the robustness of this relationship. In contrast, completed suicide has been clearly associated with a lack of treatment or treatment non-

compliance. Toxicology studies typically demonstrate that antidepressants are very rarely present in suicide victims at time of death.(64-65)

ASSESSMENT AND MONITORING

Previous studies of suicide completers have demonstrated the need for routine suicide risk assessment in primary care. For example, in a retrospective review of the final primary care appointment prior to suicide, only two of 61 cases had a comment noted about suicide risk,(66)potentially suggesting the need for more systematic practice in the assessment of suicide risk. In a retrospective review of completed suicide cases, Isometsa and colleagues(67) found that 19% of PCPs knew about the suicidal intentions of their patients compared with 59% of psychiatric practitioners, perhaps highlighting that suicidality is not typically inquired about in general practice. However, assessment of psychiatric issues, including suicidality in primary care, is complicated by physician time pressure and competing needs to assess presenting medical issues.(68) As previously mentioned, approximately 50% of suicide completers visit their PCP in the month prior to completing suicide. However, some demographic groups are less likely to be seen, such as males <35 years of age .

Management of suicidality in primary care

A great deal of work has been done to develop and evaluate the impact of primary care-based interventions to identify and manage late life depression, a major risk factor for suicide risk (69)Both the PROSPECT and IMPACT studies have focused on older adult primary care patients and are based on the collaborative model of care in which guideline-based care is provided by physicians with the support of a nurse, social worker, or psychologist depression care manager. The care manager serves as a liaison between patients and physicians and monitors symptoms, side effects, and treatment adherence and communicates this information to the physician, in addition to the need for more intensive psychiatric services. In PROSPECT and IMPACT, the care manager also offered brief evidence-based psychotherapy for those patients preferring this approach. Both interventions have shown promising results in reducing not only depressive symptoms but the presence of suicidal ideation (70-71). For example, the

PROSPECT study examined a sample of 599 adults aged 60 and above with major or minor depression from 20 diverse primary care practices and found that rates of overall suicidal ideation declined more in intervention (12.8% decrease) than in usual care patients (3.0% decrease) by 4 months (70) And by 24 months, there was a 2.2 times greater decline in rates of suicidal ideation in intervention (18.3% decrease) compared to usual care patients (8.3% decrease).

Longer-term follow up of patients in the PROSPECT study over the course of 5 years has demonstrated an association of suicidal ideation with all-cause mortality(72). Among patients in practices assigned to Usual Care, expressing a wish to die was associated with an increased risk of mortality across depressive status (i.e., major, minor, or no depression). In Intervention practices, this association was greater among the no depression compared to major depression group. These findings suggest that expressing a wish to die may be clinically significant and important to assess even in patients without depressive or other psychiatric disorder. The association of a wish to die and mortality was not observed among depressed patients in practices that implemented the PROSPECT intervention, highlighting the further downstream benefits of such an intervention.

The IMPACT intervention also included suicidal ideation as an outcome and demonstrated significant reductions in such ideation in comparison to Usual Care. Using a sample of 1,801 adults aged 60 and above from 18 diverse primary care clinics, intervention subjects had significantly lower rates of suicidal ideation than controls at 6 months (7.5% vs. 12.1%) and 12 months post-enrollment (9.8% vs. 15.5%). Differences persisted after the intervention ended at 12 months, with lower rates of suicidal ideation at 18 months (8.0% vs. 13.3%) and 24 months (10.1% vs. 13.9%) (73)

In another vein, Van Orden et al (74)have designed and are currently testing a peer companionship intervention called The Senior Connection that aims to *prevent* the development of suicidal ideation among at-risk older adults. Primary care patients who report a low sense of belongingness or feeling like a burden on others are linked to community-based aging service settings in which the peer-led intervention is provided. The Senior Connection is

grounded in the Interpersonal Theory of suicide which proposes that social disconnectedness brings about the desire for suicide. The intervention involves companionship and supportive interpersonal interactions provided by an older adult peer volunteer; the authors posit that this intervention will lead to increased social connectedness and thereby reduced suicidal ideation and other risk factors for suicide. An innovative element of this program is the linkage of primary care patients to community-based social service settings, in which volunteer-based services are often embedded. The intervention's focus on bolstering social connectedness is also consistent with approaches recommended by the National Strategy for Suicide Prevention, and represents a promising attempt to intervene early in path toward preventing the development of suicidal ideation and suicidal behavior(75)

Fundamentals of screening

Initiating screening of any disease or condition is appropriate and recommended if the condition causes significant morbidity or mortality, can be effectively treated, prevalence is not too rare and earlier detection is critical (40). Suicide risk meets these conditions, assuming effective treatments exist for depression, which is thought to be present in 50–79% of youth suicide attempts (5). Effective screening instruments are brief, easy to administer and must have proven and acceptable sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV). Ultimately, the goal of screening is to identify those who have the condition of interest (true positives) from those who do not have the condition (true negatives). Sensitivity is a measure of the instrument's ability to correctly identify the true positives (e.g. at risk for suicidality). Specificity is the tool's ability to identify the people who do not have the condition (e.g. not currently at risk for suicidality). PPV is the probability that the person who screened positive truly had the condition. NPV is the probability that the person who screened negative did not have the condition. These are critical measures that should inform screening tool selection (40-41).

False positives

Inevitably, screening for a condition or disorder results in false positives (people who screen positive but do not actually have the condition) and false negatives (people who are thought to be without the condition, but actually have it). When executing a screening program, these outcomes must be considered. In the case of suicide risk, it is prudent to 'cast a wider net'; meaning that the instrument will result in some false positives, in the service of detecting all true cases. Sensitivity in suicide broadcast is, therefore, more important than specificity. If an error is to be made, falsely labeling someone as positive is of less consequence than falsely labeling someone as 'negative'. Although the effects of false positive screens can and should be minimized for patients, the properties on the system-of-care can be great and costly and should not be underestimated. For example, valuable mental health resources can be overtaxed by false positives, sendoff patients at true risk without available care. This is precisely why screening is only the initial step in a longer process of evaluation(40-41). A screening test alone is not diagnostic of the disorder; it is a quick snapshot that requires a more indepth examination. Just as a positive mammogram must be trailed by a biopsy, a positive screening test for suicide risk must be followed by a more careful and thoughtful examination(40)

Suicide and depression

The focus of this review is screening for suicide risk; nevertheless, the discussion would be remiss without the mention of depression. Although these terms are not interchangeable, and more than 20% of suicidal behavior occurs in people without a diagnosable depression the two conditions are, most often, inextricably related. However, although a screening tool for depression or other mood disorders would be lax without screening for suicidality, the opposite does not apply. One can have a brief screen for suicide that does not assess for depression, depending on the goal of the screening. In addition, 'mental health screening' is also not synonymous with suicide screening. Studies that focus on mental health screening will be discussed only if they had a significant suicide-screening component.(5)

Screening in schools

With so many children and adolescents at risk for suicidality, the school system is a logical venue to detect youth at risk. School suicide prevention efforts have focused on service trainings, suicide awareness curricula and suicide-screening efforts (42-43); yet, less than 10% of American schools offer mental health services (44). The following research highlights the differences and challenges between universal screening of all students and screening selected at-risk populations.

Suicide Risk Screen

(45)further highlight the burden of universal screening in settings not equipped to manage positive screens. Using the Suicide Risk Screen (SRS), a 20-item tool validated on 'at-risk' students (46). (87–100% sensitivity and 54–60% specificity), in a 'real-world' high school setting, 29% of the screened students were deemed at risk for suicide(45). The staff responsible for following up on the positive results became overwhelmed with the numbers of referrals; 31% of positive screens did not receive follow-up interviews and follow-up was never conducted within the proposed 1-week timeframe. These results point to the paramount importance of having resources available for appropriate follow-up of positive screens. In addition, staff considerations, such as training, level of enthusiasm, turnover and budgeting need to be considered prior to screening efforts. As for consistency of findings, similar rates of suicide risk were detected utilizing the SRS in South African schools (47).

Follow-up and intervention

Identifying youth at risk for suicide in primary care is not without limitations. Sixty percent of children identified by a pediatrician as needing mental health follow-up did not receive it (48).Although the majority of PCCs think it is within their purview to screen for mental health problems, in one survey, less than one-third consider it their responsibility to treat, with the exception of ADHD (49).Even when psychosocial problems are identified by PCCs, choosing effective treatments remains unclear (50). Often children are given psychopharmacologic treatment, inadequate counseling and referrals to mental health specialists that are not completed. Interestingly, a recent study by Hacker *et al.* (51). found that a pediatrician's mental

health referral was associated with a significant improvement on follow-up scores of the Pediatric Symptom Checklist (52).even when more than three-quarters of the patients did not utilize the mental health services, which may have been due to pediatrician counseling between primary care visits. Continued collaborative efforts between primary and mental health teams are needed to provide comprehensive follow-up to positive screens.

PCCs are well situated to universally screen for suicide, given their longer term relationships with patients. PCCs will need to probe further with patients who screen positive; preferably without their parents in the examination room to better ensure frank discussions. PCCs will need to have intervention plans to follow-up with true positive cases. Although such screening makes intuitive sense, there are no outcome studies proving the effectiveness of screening in this venue. The impact of screening in primary care settings needs further assessment.(5)

Conclusion

Disseminating a new care perfect is challenging, especially when it requires cultural as well as clinical change. Recent actions to promote suicide safety care by the Joint Commission and federal agencies will begin to start suicide prevention as a priority in health care. Adequate reimbursement for the clinical actions of suicide prevention care is retreating as an obstacle. Enactment of the Affordable Care Act coupled with the Mental Health Parity and Habit Equity Act of 2007 expanded coverage and also providing benefits for mental illness and addiction treatment; these benefits will generally pay for the basics of suicide care.(6)

There are many challenges to refining screening, assessment, and basic management of suicidality in general medical settings, including primary care. This is where most patients who then die by suicide are seen, so improving detection in these settings, as the Joint Commission has urged, is important. However, behavioral health care within primary care and other general medical settings is in its infancy.

Improving payment for joined behavioral health services, expansion of the patient-centered medical home model, and patients' favorites for integrated care are likely to increase the integration of care, creating an better environment for suicide prevention in primary care(6).

Much work is needed to improve assessment and treatment of suicidality in the behavioral health sector. This is essential because suicidal patients are generally referred to behavioral health breadwinners, who, as discussed earlier, often lack professional training in this area. Additionally, essential aspects of managing and treating suicidality (safety planning, lethal profits reduction, direct treatment of suicidality, and persistent supportive contacts) are not standard in most behavioral health settings. As more states evaluate data on losses and amend their suicide prevention plans, their consideration will turn to improving suicide prevention care in their behavioral health systems; adoption of Zero Suicide is likely to accelerate(6).

The experience at the Henry Ford Health System and among early adopters demonstrates that applying improved suicide prevention, along the lines of Zero Suicide, is feasible. Some elements to improve care such as staff exercise can move quickly. Legislation requiring exercise in the assessment and treatment of suicidality has been enacted in several statuses and is under consideration in others.(6)

Other actions such as building a suicide maintenance pathway into electronic health records can be challenging. Measure growth is also needed; there are no widely accepted measures for suicidality at this time. Change does not happen overnight. There is still much to do to turn the current of suicide deaths but also much to be optimistic about. We hope that this conversation provides options for

health care systems that are seeking to alter suicide prevention care and stimulates debate and action to decrease this preventable and tragic form of death.(6)

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