MAYO CLINIC

ORIGINAL ARTICLE

Weren't Asked, Didn't Tell: Prevalence of Communication of Suicidal Ideation in Suicide Decedents During the Last Year of Life

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Abstract

Objective: To explore what percentage of suicide decedents (SDs) vs controls were assessed for suicidality at medical appointments in the year before death.

Patients and Methods: Using the Rochester Epidemiology Project, 66 SDs dying in Olmsted County, Minnesota, between January 1, 2000, and December 31, 2009, were identified and matched with 141 age- and sex-matched controls. Blinded chart review determined how often providers screened and subjects endorsed suicidal ideation (SI). Positive indicators included chart notes recording SI and/or Patient Health Questionnaire-9 scored more than 0 on question 9.

Results: We found that only 29 of 66 (43.9%) SDs and 14 of 141 (9.9%) controls had been screened at any point by any means ($P < .001$). Only 25.8% (17 of 66) of SDs expressed SI, whereas 58.6% of screened SDs (17 of 29) did so, though none at final appointments before death. No control ever expressed SI. While the majority of both cases and controls went unscreened, providers were more likely to screen SDs ($P < .001$; odds ratio [OR], 9.0; 95% CI, 3.6-22.0), even with controlling for mental health diagnoses ($P = .02$; OR, 3.6; 95% CI, 1.2-10.6).

Conclusions: With providers screening less than half of SDs at any point in the year before death, and less than 60% of SDs ever endorsing SI, including none at final appointments, the findings of this naturalistic study bring into question both current screening practices and screening effectiveness. Nonetheless, when SDs were screened, they were significantly more likely to endorse SI than were controls, not 1 of whom ever expressed SI. Taken together, these data suggest that patients expressing SI at any point are at elevated risk for eventual suicide.

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Recent studies show that most suicide decedents (SDs) see a health care provider in the year before death. A systematic review looking at the rate of health care use by SDs reported that 77% had visited a primary care physician in the year before death and 32% had received mental health services.[1] A study of 5894 SDs found that 83% and 50% of individuals used health care in the year and month before death, respectively.[2] As a result of high rates of health care use by SDs in the month and year before death, multiple studies have suggested that health care providers could have used these visits to detect and respond to suicidality.[1-5] In a recent publication using the same sample as this study, we challenged the implication that SDs could be distinguished by their greater use of health care. We compared the rate of health care use of SDs with that of age- and sex-matched controls and found that SDs and controls did not significantly differ in having had health care exposure in the 12 months, 6 months, and 4 weeks before death.[6]

Although these studies, including our own, help to quantify and establish patterns in health care use among SDs, they lack qualitative information on what occurs at these appointments. Only a few studies have examined how often SDs voiced suicidal ideation (SI) and how often providers inquired about suicidality at health care appointments in proximity to death. Isometsa et al[7] found that in SDs' final appointments within 28 days of death, suicidal intent was discussed

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in only 22% of cases. Busch et al[8] showed that 29% of SDs receiving inpatient care before their death had been admitted for SI and that 78% of these had denied SI at their inpatient discharge appointment. However, this study was limited to inpatient visits only, and neither the Isometsa et al[7] study nor the Busch et al[8] study compared rates of communication of suicidality among SDs with those in a control population. In other words, they did not ascertain whether SDs were any more likely to express suicidality than those not dying by suicide.

A limitation of our first study and the others cited thus far is that they did not evaluate how often providers asked about SI. This omission is important because recent studies have asserted the effectiveness of screening tools such as the Patient Health Questionnaire-9 (PHQ-9) in identifying individuals vulnerable to suicide. In studies from 2013 and 2016, Simon et al[9,10] found that a positive response to question 9 on the PHQ-9 was moderately to strongly correlated with eventual suicide. Of course, such a screening instrument can be effective only if it is consistently deployed.

To design more effective suicide prevention strategies, it is thus important to understand what percentage of SDs are screened for suicide and what percentage express SI, instead of focusing solely on the presence of health care use in the year before death as recent studies have done.[2,4,11-15] We set out to reexamine the cohort of SDs and controls from our initial study for rates of suicide screening.

We hypothesize that 2 key differences in our study design—(1) collecting information on the nature and frequency of provider screening and (2) comparing SDs to a control group—will provide a more accurate picture of what happens at health care appointments in the year before death. We hope that a better understanding of patterns of provider screening and patient endorsement of suicidality in the year before death can help to shape more effective suicide prevention strategies in health care settings.

METHODS

Study Design

This study was designed as a population-based case-control study using the Rochester Epidemiology Project (REP) database to compare the rate of communication of SI to health care providers in the year before death by SDs vs age- and sex-matched controls. The primary research questions were whether patients who killed themselves had been screened for suicide and whether they had endorsed SI when screened. In addition to provider documentation of screening in the chart notes, we looked specifically at question 9 of the PHQ-9 because it is the most commonly used screening tool for suicidality at Mayo Clinic and has been shown to be moderately to strongly correlated with eventual suicide.[9,10] A secondary question was whether there were significant differences in the rate of communication of SI between SDs and similar others within the population who did not die during the same time period, and whether providers were more likely to screen SDs than controls. The institutional review boards of Mayo Clinic and Olmsted Medical Center (OMC) approved the study.

Study Population and Setting

The REP database, established in 1966, contains the medical records of a population-based cohort in Olmsted County, Minnesota.[16] The 2 major health care providers in Olmsted County are Mayo Clinic and OMC, which through multiple branch offices and associated hospitals care for nearly every Olmsted County resident.[16] As of 2010, the REP database contained the records of 502,860 unique residents of Olmsted County who had had at least 1 contact with a health care provider at Mayo Clinic or OMC.[16]

Case and Control Selection

Cases. Case and control selection is outlined in Figure 1. A keyword search of the REP database listing "suicide" as the cause of death on Olmsted County death certificates identified 132 cases of suicide between January 1, 2000, and December 31, 2009. These records were then assessed by 2 authors (M.C. and T.B.) for residency status in the year before death. This review yielded 86 cases with Olmsted County residency in the year before death, the cohort reported in our previous article.[6] The electronic and paper medical records of these 86 cases were reviewed and 18 cases were excluded from this second study