

# The Suicide Prevention and Depression Awareness Program at the University of California, San Diego School of Medicine

Christine Moutier, MD, William Norcross, MD, Pam Jong, MD, Marc Norman, PhD, Brittany Kirby, MSW, Tara McGuire, MS, and Sidney Zisook, MD

## Abstract

To address physician depression and suicide at one U.S. medical school, a faculty committee launched a Suicide Prevention and Depression Awareness Program in 2009 whose focus is medical students', residents', and faculty physicians' mental health. The program consists of a two-pronged approach: (1) screening, assessment, and referral and (2) education. The screening process is anonymous, confidential, and Web based, using customized software created by the American Foundation for Suicide Prevention. The educational component consists of a medical-school-wide campaign including Grand Rounds

on physician burnout, depression, and suicide as well as similar sessions geared toward trainees. The authors document the process of developing and implementing the program, including the program's origins and goals, their critical decision-making processes, and successes and challenges of the program's first year.

Of the 2,860 medical students, housestaff, and faculty who received the e-mail invitation in the first year, 374 individuals (13%) completed screens, 101/374 (27%) met criteria for significant risk for depression or suicide, and 48/374 (13%) received referrals for

mental health evaluation and treatment. The program provided 29 Grand Rounds and other presentations during the first year.

This may be the first program that aims to increase awareness of depression and to destigmatize help-seeking in order to prevent suicide and whose target population includes the full panoply of medical school constituents: students, residents, and faculty physicians. The program was well received in its first year, and while demonstrating the prevention of suicides is difficult, the authors are encouraged by the program's results thus far.

And whoever saves a life, it is considered as if he saved an entire world.

—Mishnah Sanhedrin 4:5; Babylonian Talmud Tractate Sanhedrin 37a

**S**uicide, the 10th overall cause of death in the United States, is a major public health challenge. Women attempt suicide two to three times as often as men, but men successfully complete suicide at four times the rate of women and account for 79.0% of all U.S. suicides.<sup>1</sup>

Rates of suicide among physicians are even higher.<sup>2-4</sup> A 2004 meta-analysis of physician suicide revealed that male physicians have a mildly increased risk of suicide (relative risk ratio of 1.41) compared with U.S. men in general and that women physicians have a markedly elevated risk (relative risk ratio of 2.27)

compared with U.S. women in general.<sup>3</sup> Further, approximately 300 to 400 medical students and physicians take their own lives each year in the United States,<sup>5</sup> about the equivalent of two average-sized medical school classes.

Although major depression seems to be the most significant antecedent risk factor for suicide, a host of other factors including other mood disorders, substance abuse, anxiety, eating disorders, hopelessness and despair, adverse life events, personal history of physical or sexual abuse, and family history of suicide often play a role.<sup>6</sup> Increased prevalence of distress including burnout, depression, and suicidal ideation among medical students and physicians has been well documented.<sup>2-11</sup> Barriers to seeking mental health care among medical students and residents include concerns about time, confidentiality, stigma, and the potential negative effect on career.<sup>12,13</sup> Moreover, medical students who report moderate to severe depression are much more likely to endorse the opinion that stigma is associated with depression compared with their nondepressed colleagues.<sup>14</sup> Depression itself may therefore contribute to the problem of

stigmatization, both setting the stage for an individual's downward spiral of suffering in silence and perpetuating the hidden curriculum that has historically promoted "toughing it out" and foregoing help. Whereas a growing body of research reports the prevalence of mental health distress and associated factors among medical students and physicians, few have reported on or evaluated programs designed to prevent depression and suicide in medical student and physician populations. Two medical school wellness programs have recently shown promising results, one dramatically reducing suicidal ideation in third-year medical students<sup>15</sup> and another receiving positive feedback from medical students.<sup>16</sup> Neither of these programs, however, focuses on preventing suicide through education and referrals or attends to the full panoply of medical school constituents: students, residents, and faculty physicians.

## Problem Identification and Needs Assessment

After the 2002 death by suicide of a faculty physician at the University of California, San Diego (UCSD), the

Please see the end of this article for information about the authors.

Correspondence should be addressed to Dr. Moutier, University of California, San Diego School of Medicine, Office of Student Affairs, 9500 Gilman Dr, La Jolla, CA 92093-0606; telephone: (858) 534-3700; fax: (858) 534-8556; e-mail: cmoutier@ucsd.edu.

Acad Med. 2012;87:000-000.

First published online

doi: 10.1097/ACM.0b013e31824451ad

Medical Staff Executive Committee charged the Physician Well-Being Committee (including W.N. and P.J.) to conduct an anonymous survey of housestaff and faculty physicians in an effort to evaluate the following: reported symptoms of mood disorders, suicidal ideation and attempts, drug and alcohol use, satisfaction with personal and professional life, self-prescribing behaviors, and use and access to primary care and mental health services. The findings included a 29% prevalence of likely depression and 6% prevalence of alcohol intake at levels thought to be harmful.<sup>7</sup> Concern about these problems continued over the next few years, and in 2007 the Physician Well-Being Committee began to investigate options for creating a suicide prevention program. This article details the development and first year of experience with the UCSD Suicide Prevention and Depression Awareness Program.

### **Program Development: Evolution of Scope and Goals**

In the summer of 2008, a task force led by two psychiatry faculty members formed at UCSD. The task force included two members of the Physician Well-Being Committee (including W.N. and P.J.) and several faculty members from other departments throughout the medical school (C.M., M.N., and S.Z.). We attempted to include a broad range of clinical departments, leading to the recruitment of faculty from medicine, family medicine, pediatrics, surgery, and psychiatry. Subsequently, a member of the housestaff and a medical student joined the committee.

The vision and scope of the program evolved over an 18-month period, during which time the task force met on a monthly basis, sought information from the literature,<sup>2–12,17,18</sup> consulted with colleagues at other schools, and communicated with key community members including students, residents, and leaders from both the school of medicine and the medical center. Students provided feedback throughout the program's development, mostly through contact with one author (C.M.) who has a role with the Student Peer Mentor Group. (This group's membership consists primarily of students who view their role as attending to peers in distress by providing one-

on-one support, directing students to campus resources, and hosting panels and other outreach events related to wellness and mental health problems.) Throughout the program's development, students and residents confirmed our sense that a high priority should be placed on the guarantee of complete safety and privacy for participants. They also explicitly expressed appreciation that all members of the school of medicine community would be included in the program, rather than only trainees.

Through this process, we defined the goals of the program as follows: (1) to characterize the problem of depression and suicide risk among our students, residents, fellows, and faculty, (2) to provide education on depression and available help-seeking resources and to destigmatize diagnosis and mental health treatment, (3) to confidentially identify those suffering from depression and experiencing suicidal thoughts, (4) to provide prompt, confidential referrals for primary care and mental health services for those who request them, and (5) ultimately to treat depression and to prevent suicide on our campus. The committee decided on a two-pronged approach to suicide prevention that includes (1) a Web-based screening, assessment, and referral program based on one developed by American Foundation for Suicide Prevention (AFSP)<sup>17,18</sup> and (2) face-to-face education to our target groups about physician burnout, depression, and suicide.

### **Prioritizing Privacy**

One challenging decision we faced while developing the program was whether to promise 100% anonymity for those who complete the online survey by forbidding de-encryption under any circumstance. If a participant were to report significant suicidality (any suicide-related thoughts, plans, intentions, and/or attempts) but did not subsequently communicate with the counselor, our clinical impulse would be to de-encrypt the source and attempt to track down the person's identity via his/her e-mail address in order to lead him/her to help. The downside to doing this would be loss of guaranteed privacy for some of those who participate in the program. To address this problem, we consulted with our medical ethics committee, with legal counsel, with the director of the National Suicide

Prevention Lifeline (M. Gould, PhD, MPH, Columbia University, written communication, September 2008), and with appropriate faculty at the other schools that use Web-based screening programs (L. Wolfson, MEd, University of Pittsburgh Medical School, oral communication, September 2008; S. Lejeune, MD, Massachusetts Institute of Technology, oral communication, September 2008; T. Marchell, PhD, MPH, Cornell University, oral communication, November 2008). We also sought input from other UCSD School of Medicine leaders, medical students, and residents. The collective input of these experts and community members confirmed our sense that fear and stigma could compromise optimal engagement of participants. After careful deliberation by our committee and its numerous consultants, we arrived at a strong consensus that maintaining strict anonymity would serve the greater good.

### **Cost and Fiscal Support**

Another early priority was to apply for funding to enable us to hire a full-time counselor and administrator. After a series of meetings, the dean of the school of medicine and the chief executive officer of the medical center jointly provided the necessary funds. In February 2009, we recruited one FTE clinical social worker (B.K./T.M.) to serve as the program counselor/coordinator; this staff member dedicates 100% of her time to this program. By design, she does not teach or interact with students or residents in any other capacity. The salary of the program coordinator/counselor and the cost of the AFSP software constitute the total cost for the program because the faculty and trainees on the committee provide their time and effort on a voluntary basis.

### **Web-Based Screening, Assessment, and Referral**

#### **Development and promotion**

In addition to reviewing the literature broadly, the task force charged with developing the program learned specifically about the Physician Depression and Suicide Prevention Project developed by the AFSP in 2002.<sup>17</sup> Two undergraduate institutions had used the AFSP's screening program, and their published results indicated that 8%

had participated in the screening program.<sup>17,18</sup> At one of the universities, 11.1% of the undergraduate students who completed the screening had experienced suicidal thoughts in the past four weeks; 16.5% had, within their lifetime, attempted suicide or inflicted self-injury; and 85% of those experiencing depression or suicidal ideation had not received treatment.<sup>18</sup> Additionally, at that time, one medical school was actively using the AFSP online screening program to assess medical students (not housestaff or faculty physicians) for depression and to help prevent suicides among students at the school (L. Wolfson, MD, University of Pittsburgh Medical School, oral communication, September 2008). We became interested in using this type of Web-based program to reach a large group in a way that would preserve confidentiality and privacy. Because the amount of work to develop such a screening program de novo would be significant, and because other educational institutions had used AFSP's program with positive results, the task force approached AFSP about developing a screening tool for the UCSD medical community. The foundation agreed to provide the necessary software at a low cost and to serve as a consultant for the program.

We created a Web site<sup>19</sup> that describes the screening program and provides emergency contact information. The Web site contains links to resources that address physician depression and suicide as well as those that focus on medical student and physician wellness. It also contains information about the UCSD Physician Well-Being Committee and includes a list of carefully selected faculty and community physicians and therapists who have agreed to provide care to UCSD residents, fellows, and faculty. A similar list provides information on mental health resources for medical students. Finally, the Web site provides a link enabling participants to confidentially and anonymously register and complete the online screening tool.

Once the Web site with the link to the screening program became available, the dean of the school of medicine sent an initial series of e-mail invitations to school of medicine and medical center physicians and trainees in which he described the anonymous, online screening program, assured the

community of its confidentiality, and encouraged recipients to participate. Department chairs, division chiefs, residency directors, and other campus leaders sent subsequent invitations.

### Description

Our screening tool contains the nine-item Patient Health Questionnaire (PHQ-9), a validated depression assessment for community populations.<sup>20</sup> Scores on this measure range from 0 to 27; a higher score indicates a greater likelihood of depression. Our screening tool also includes items on past suicide attempts, affective states (i.e., anxiety, panic, rage, desperation, and loss of control) that have been linked to suicidal depression, alcohol and drug use, eating behaviors, and current psychiatric treatment. The tool also asks respondents to provide basic demographic information (i.e., gender, race or ethnicity, and year of training or academic rank in the medical school) and provides them with an opportunity either to describe any other stressful factors that may be contributing to their current emotional state or to pose questions to the counselor. A final optional item asks the participant to provide an e-mail address, which is encrypted to preserve anonymity. We purchased the encryption software for the Web site at a modest cost from AFSP. The screening program software was developed through a partnership of AFSP (New York, New York) and Entech Consulting, LLC (Malvern, Pennsylvania). It currently is not commercially available and is owned and distributed solely by AFSP (A. Haas, PhD, AFSP, written communication, July 2011).

Once a respondent submits a completed screening tool, the software program automatically generates a depression score and then uses this score, along with responses to other items, to classify respondents into one of three tiers, previously developed by AFSP.<sup>17</sup> The categories of risk are based on various combinations of distress, symptom severity, and day-to-day life functioning. A person in Tier 1 is at the highest risk and usually garners a score of 15 or higher on the PHQ-9. Notably, however, a person can meet Tier 1 criteria with a PHQ-9 score of 10 to 14, but only if one or more of the following additional criteria are present: prior suicide attempt; intense feelings of anxiety, panic, rage,

desperation, or loss of control; or an indication that current problems are making day-to-day functioning very or extremely difficult. Criteria for Tier 2 (moderate risk) include a PHQ-9 score of 10 to 14 with no prior suicide attempt or current suicidal ideation, but with problems related to alcohol or drug use, disordered eating, or difficulty with daily functioning. Respondents who score below a 9 and indicate no signs of suicidality, problematic drug or alcohol use, disordered eating, or trouble with functioning are designated as Tier 3 (low risk).

When a participant completes the screening, the computer system generates an e-mail to the counselor, indicating the respondent's tier and providing a link to the questionnaire. After reviewing the completed screening tool, the counselor provides a detailed, personalized assessment, following a standardized prototype for each tier. In the assessment, the counselor introduces herself by name and provides complete contact information including the location of her office, her e-mail address, and her phone number. The counselor addresses all of the respondents' questions and comments, and she invites them, if they desire, to communicate with her online, using a Web site dialogue page that requires no identification other than a user ID.

The counselor uploads completed responses to the password-protected, secure project Web site. Respondents who provide an e-mail address receive a message regarding the counselor's assessment, which includes a link to the site; respondents can also return independently to the Web site. Once respondents are on the site, they can view the counselor's assessment by logging in with their user ID and password. In general, the counselor informs Tier 3 (low risk) respondents that their screening tool answers indicate no significant problems. In the case of Tier 1 and 2 participants, the counselor's assessment specifically addresses the issues of greatest concern, and it includes a message urging the respondents to schedule an in-person evaluation. The counselor also offers another way to communicate, via the aforementioned online anonymous dialogue page. Over the next six weeks, Tier 1 and 2 respondents who provide an e-mail

address receive multiple reminders to view the counselor's assessment and to follow the recommendations therein. The counselor evaluates the respondents who meet in person more fully and discusses treatment options. When appropriate, she refers medical and pharmacy students to the campus counseling center. She provides residents, fellows, and faculty with a list of faculty and community mental health professionals and primary care physicians who have committed to providing prompt care and who have been specifically recruited to care for those seeking help through our program.

### Development and Description of Education and Outreach

The task force charged with developing the suicide prevention and depression awareness program also created an educational outreach component. The goal of the outreach is to maximize contact with students, residents, fellows, and faculty in an effort to help destigmatize depression and address roadblocks to treatment. We developed a learning module that is both interactive and didactic. It consists of a brief PowerPoint (Microsoft Corp., Redmond, Washington) presentation (30 minutes), a 15-minute video (*Struggling in Silence*, which was developed by AFSP specifically to educate physicians and medical students about depression and suicide in the profession<sup>5</sup>), and time for discussion (ideally 10–15 minutes). The module explains the continuum of distress including burnout, depression, and suicide risk and the potentially devastating consequences these states have on physicians, their loved ones, their medical practice, and the community. It also addresses perceived barriers to help-seeking such as concerns about licensure and hospital privileging.<sup>21</sup>

We urged department chairs to include this learning module in the 2009–2010 Grand Rounds schedule and/or to invite a member of the program task force to present it at a less formal meeting of faculty and trainees. We purposefully designed the module to be flexible enough to be appropriate for departmental Grand Rounds, at a variety of other regularly scheduled conferences on campus or in clinical departments, and at faculty meetings. At the end of each presentation, we provided information about the Web site,

including the screening tool, and we encouraged attendees to complete the online screening. We made every effort to coordinate the timing of the e-mail screening invitations and the presentations for each particular group or audience. Participation in the online screening program could result, therefore, from several different sources: (1) the e-mail invitations from school of medicine leaders, (2) a Grand Rounds or other presentation, (3) ad hoc visits to the well-being Web site or word-of-mouth, and/or (4) encouragement from a concerned colleague who knows of the screening program.

### Outcomes from the Program's First Year

We obtained UCSD IRB approval to evaluate the program's effectiveness and outcomes.

From the program's inception on May 6, 2009, through August 30, 2010, the program invited a total of 2,860 students, residents, fellows, and faculty physicians to complete the online screening. Of these, 498 were medical students, 240 were pharmacy students, 822 were resident physicians and fellows, and 1,300 were nonvoluntary medical school faculty. Overall, 374 people (13%) completed screenings. Figure 1 shows how many and what percentage of students, housestaff, and faculty dialogued with the counselor, came in for in-person evaluations, and received referrals. Eight people who completed screenings did not reveal whether they were students, housestaff, or faculty, so some of the data on Figure 1, Table 1, and in the paragraphs below are based on 366 (rather than 374).

Among the 374 respondents (medical students, pharmacy students, residents, fellows, faculty physicians) who completed the screening tool, very few (22 [6%]) met the criteria for Tier 3 (low risk), the majority (251 [67%]) met the criteria for Tier 2 (moderate risk), and about a quarter (101 [27%]) met the criteria for Tier 1 (high risk). Respondents at high or moderate risk for suicide had mean PHQ-9 scores of, respectively, 11 (standard deviation [SD] 4.68) and 4 (2.77). Ten (3%) of the 352 respondents in the Tier 1 and Tier 2 groups had attempted suicide in the past, and although all of the Tier 1 and 2 respondents reported meaningful levels of psychological distress, less than 20% of them were currently

receiving psychotherapy or taking medication for depression, anxiety, or stress (Table 1).

### Tier 1 (high risk) respondents

An identical percentage (30%) of medical students and residents were at a high risk for depression and/or suicide; a lower, but still disturbingly high, proportion of faculty (21%) were in the high-risk category (Table 1). Among the 101 Tier 1 participants who completed the screening questionnaire, 91% viewed the counselor's personalized assessment, 39% engaged in online dialogue with the counselor, 11% came for an in-person evaluation, and 17% accepted a referral for further evaluation or treatment. All Tier 1 participants who came in to see the counselor accepted referral.

### Referred respondents

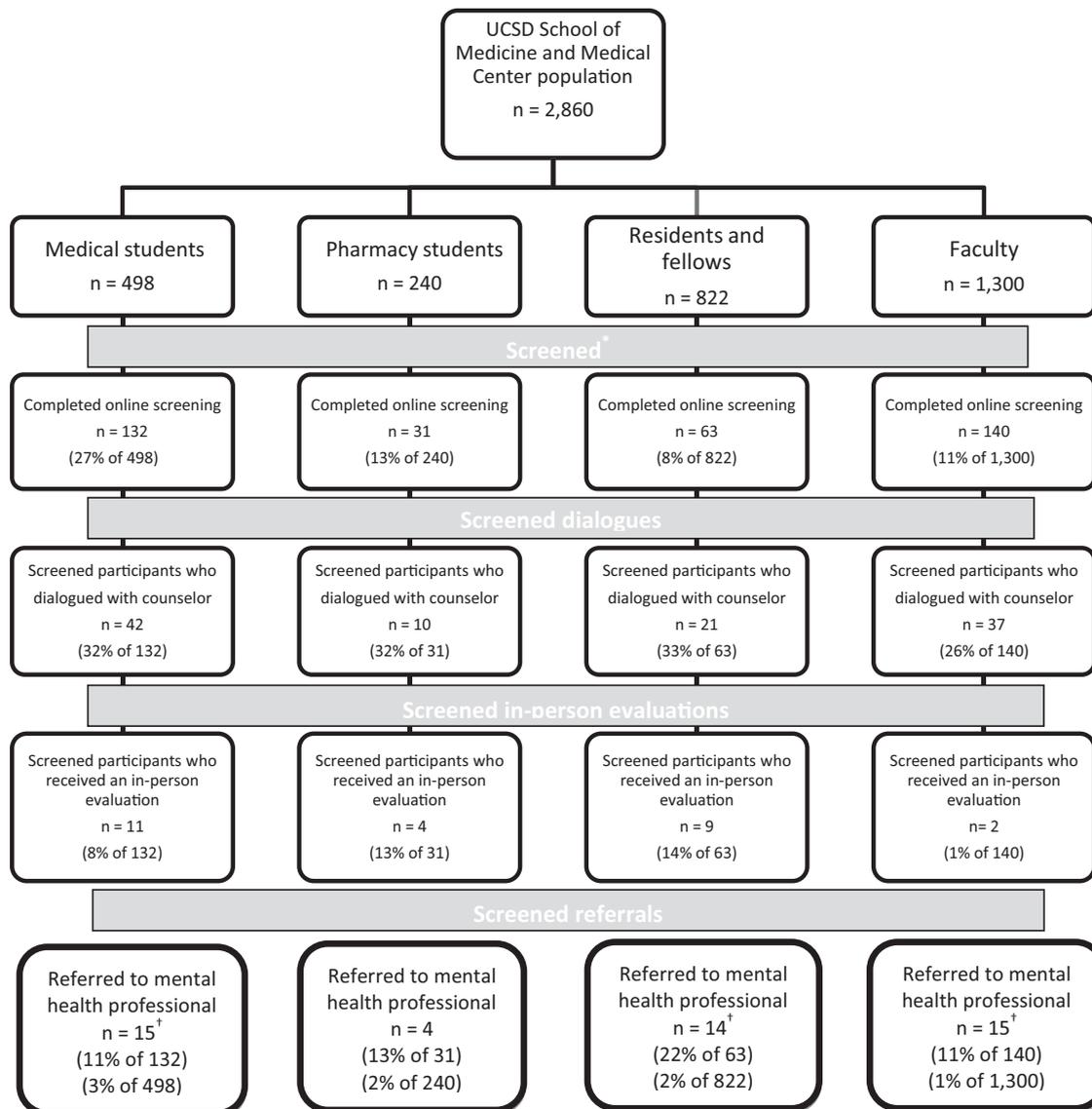
In total, 48 individuals accepted a referral into mental health treatment. Twenty-six of those referrals (54%) occurred via face-to-face meetings, and the others accepted referral by phone or electronic communication. All 26 participants who met with the counselor met criteria for moderate or high suicide risk. All 11 of the Tier 1, high-risk respondents who came in for an in-person evaluation accepted referral for further mental health evaluation and treatment, and 11 of the 15 (73%) of the moderate-risk Tier 2 participants who came in for an in-person evaluation accepted referral. Of 17 respondents who completed an initial evaluation report after the first face-to-face meeting with the counselor, 12 (71%) stated that they would not have made an appointment to meet with a mental health professional without the online screening program.

### Educational component

The program provided 29 Grand Rounds and other presentations during the first year. Most departments (15/18 [83%] of all school of medicine departments) invited us to provide educational outreach, and five have invited us back for a second presentation.

### Comments

During two years, we developed and implemented a program with a two-pronged approach that aims to provide information about depression and, ultimately, to prevent suicide among



**Figure 1** Participants who were invited, screened, evaluated, and referred through the University of California, San Diego's (UCSD's) Suicide Prevention and Depression Awareness Program, May 2009 to August 2010. Participants are from the UCSD School of Medicine and the UCSD Medical Center.

\* Eight people who completed screenings did not reveal whether they were students, housestaff, or faculty, so the total number of people who completed screenings is 374.

<sup>†</sup> This number includes one medical student, one resident, and two faculty members who called the program directly for resources and may not have completed the screening.

students, residents, and faculty. Early in the process, we observed certain similarities between the medical and military professions and learned from the successful suicide prevention program of the United States Air Force (USAF).<sup>22</sup> Both military and medical personnel are driven to excellence and hold high expectations for group as well as individual performance. Historically, “good airmen,” “good airwomen,” “good medical students,” “good residents,” and “good doctors” do not complain, do not show pain, do not shirk work, and, above all, do not ever show signs or symptoms of mental illness, especially depression. The leaders of the USAF recognized that

they could not have an effect on the suicide rate without destigmatizing depression, so their approach included a strong message from senior ranking USAF members. Similarly, the dean of the UCSD School of Medicine and the chief executive officer of the UCSD Medical Center enthusiastically supported and funded this program. The dean himself sent a strong, consistent message to medical students, residents, fellows, and faculty emphasizing that no stigma should be attached to mental illness and encouraging everyone, sick or well, to participate in the program. Anecdotally, one of the highlights of the first year was the public declaration

during the educational sessions by clinical department chairs and leaders that physician well-being is a high priority and that they personally endorse help-seeking.

The results of our program thus far have been a source of immense satisfaction and pride. The majority of departments invited us to provide educational outreach, and nearly a third have invited us back for a second presentation. A second module focusing on practical means to prevent and address suicidality is now available. We hope that both this outreach component and the mere existence of the online screening program

Table 1

**Results From the Completed Screening Tool\* and Referrals by Risk Tier, University of California, San Diego (UCSD) School of Medicine and Medical Center, May 2009 to August 2010**

Measure	Tier 1 (high risk) <sup>†</sup> No. (%)	Tier 2 (moderate risk) <sup>‡</sup> No. (%)	Tier 3 (low risk) <sup>§</sup> No. (%)
Medical students	40 (30% of 132)	90 (68% of 132)	2 (2% of 132)
Pharmacy students	10 (32% of 31)	20 (65% of 31)	1 (3% of 31)
Residents and fellows	19 (30% of 63)	42 (67% of 63)	2 (3% of 63)
Faculty	29 (21% of 140)	95 (68% of 140)	16 (11% of 140)
Total completed online screening tools	101 <sup>¶</sup> (27% of 374)	251 <sup>¶</sup> (67% of 374)	22 <sup>¶</sup> (6% of 374)
Past suicide attempt	7 (7% of 101)	3 (1% of 251)	0
Currently in treatment (psychotherapy)	14 (14% of 101)	19 (8% of 251)	2 (9% of 22)
Currently in treatment (psychotropic medications)	19 (19% of 101)	22 (9% of 251)	0
In-person evaluation by counselor, (%)	11 (11% of 101)	15 (6% of 251)	0
Referred for further evaluation or treatment to mental health professional**	17 (17% of 101)	27 (11% of 251)	0

\* The screening tool is an online, anonymous instrument, developed by the American Foundation for Suicide Prevention, available to medical students, pharmacy students, residents, fellows, and faculty at UCSD, that tests for risk of depression and suicidality.

<sup>†</sup> Criteria for Tier 1 included a Patient Health Questionnaire (PHQ-9)<sup>20</sup> score of 15 or higher; current suicidal ideation; a PHQ-9 score of 10 to 14 with prior suicide attempt; intense feelings of anxiety, panic, rage, desperation, or loss of control, or an indication that current problems were making it very or extremely difficult to function. For Tier 1 respondents, the mean score was 11 (standard deviation [SD] 4.68).

<sup>‡</sup> Criteria for Tier 2 included a PHQ-9 score of 10 to 14 *without* a history of suicide attempt or current suicidal ideation, but *with* problems related to alcohol or drug use, disordered eating, and/or an indication that current problems make day-to-day functioning somewhat difficult. For Tier 2 respondents, the mean score was 4 (SD 2.77).

<sup>§</sup> Respondents who did not meet any of the criteria for a Tier 1 or Tier 2 designation were designated as Tier 3 (low risk). For Tier 3 respondents, the mean score was 1 (SD 0.81).

<sup>¶</sup> The sum of the number of medical students, pharmacy students, residents and fellows, and faculty is less than the total for each tier because eight of the people who completed screenings did not reveal whether they were students, housestaff, or faculty.

\*\* Committee members made four additional referrals to one medical student, one resident, and two faculty members. We do not know whether these individuals took the online screen, and therefore their level of risk is unknown.

send a powerful message and influence the culture of the work and learning environment. From the top down, for faculty and trainees alike, the importance of a proactive approach to our own mental health is being highlighted and incorporated into the community's value system. Of the 48 individuals who were referred to treatment, most (71%) stated that they would not have come forward without the encouragement and knowledge the school provided through the educational component and screening program. Although we feel compelled to continue searching for a way to increase the number of participants from our medical school community who avail themselves of this program, we remain gratified that a number of new, high-risk individuals sought assistance through this relatively low-cost screening initiative.

### Challenges

The biggest challenge we have faced is the variable, somewhat low response rates to

the screening invitation. We continue to work toward greater participation by preceding the e-mail with a message from a unit leader and by timing the e-mail invitation strategically (e.g., immediately after a Grand Rounds or, in the case of the medical students, during a seminar on the topic). Additionally, clinical departments' inclusion of our educational programs has been very good but short of the goal of uniform participation.

Another major concern is the finding that, among Tier 1 respondents, the majority (91%) view the counselor's reply, but only 39% engage in dialogue, and, even more concerning, only 17% accept referral for mental health evaluation and treatment. We regularly discuss ways to diminish potential barriers to help-seeking; for example, we have reviewed the wording of the assessments the counselor sends to at-risk respondents, so that it expresses serious concern while normalizing help-seeking.

We hope that over time, as the message permeates the community and more individuals seek help, barriers including social stigma may be overcome.

Challenges to the implementation of similar programs at other institutions may include overcoming denial, especially among the leadership, that depression and suicide risk are significant problems at the institution, and obtaining the funding to hire a counselor/coordinator for the program.

### Going forward

In addition to both continually revising our counselor's letter of response for at-risk respondents and improving our means of disseminating the educational outreach module and the invitations to take the online screening, we have also begun a longitudinal study that tracks referrals and treatment outcomes. After a participant meets with a counselor and receives a referral, the participant may volunteer (1) to provide general,

deidentified feedback about UCSD's program of suicide prevention and (2) to be evaluated on a monthly basis for one year so that we can study outcomes (also deidentified) such as treatment course, symptom severity, and functioning.

In summary, we have described the development and implementation of a campus-wide medical school program that aims both to increase awareness of depression and to destigmatize help-seeking in order to prevent suicide. One of its major strengths is its potential sustainability for the foreseeable future at UCSD and its feasibility for implementation at other hospitals and medical schools. Other strengths include its systematic, serial screening of community members and the inclusion of residents and faculty in addition to medical students. Our program constitutes a vital step in the critically important task of increasing well-being, treating depression, and preventing suicide in the medical profession. Our program has merit, is a feasible and cost-effective way to educate the community, and has the potential to help improve and save lives.

*Acknowledgments:* The authors would like to thank the leadership of the American Foundation for Suicide Prevention, Dr. Paula Clayton and Dr. Ann Haas, for their collegiality and expertise. They would also like to acknowledge the dean of the University of California, San Diego (UCSD) School of Medicine, Dr. David Brenner, as well as the past chief executive officers of the UCSD Medical Center, Richard Liekweg and Tom Jackiewicz, for their leadership and unflinching support of the program.

*Funding/Support:* This project is funded by the University of California, San Diego (UCSD) School of Medicine and the UCSD Medical Center.

*Other disclosures:* None.

*Ethical approval:* The University of California, San Diego institutional review board approved this project.

**Dr. Moutier** is assistant dean for student affairs and associate professor, Department of Psychiatry, University of California, San Diego School of Medicine, La Jolla, California.

**Dr. Norcross** is clinical professor of family medicine and director, University of California, San Diego (UCSD) Physician Assessment and Clinical Education Program, Department of Family and Preventive Medicine, UCSD School of Medicine, La Jolla, California.

**Dr. Jong** is associate clinical professor, Department of General Internal Medicine, University of California, San Diego School of Medicine, La Jolla, California.

**Dr. Norman** is associate clinical professor and director, Neuropsychiatry/Epilepsy Clinical Evaluation Program, Department of Psychiatry, University of California, San Diego School of Medicine, La Jolla, California.

**Ms. Kirby** is clinical social worker and co-coordinator, Suicide Prevention and Depression Awareness Program, University of California, San Diego School of Medicine, La Jolla, California.

**Ms. McGuire** is counselor and co-coordinator, Suicide Prevention and Depression Awareness Program, University of California, San Diego School of Medicine, La Jolla, California.

**Dr. Zisook** is professor and residency training director, Department of Psychiatry, University of California, San Diego, and San Diego Veterans' Affairs Healthcare System, La Jolla, California.

## References

- Centers for Disease Control and Prevention. Web-Based Injury Statistics Query and Reporting System (WISQARS). <http://www.cdc.gov/injury/wisqars/index.html>. Accessed November 4, 2011.
- Center C, Davis M, Detre T, et al. Confronting depression and suicide in physicians: A consensus statement. *JAMA*. 2003;289:1361–1366.
- Schernhammer ES, Colditz GA. Suicide rates among physicians: A quantitative and gender assessment (meta-analysis). *Am J Psychiatry*. 2004;161:2295–2302.
- Sen S, Kranzler HR, Krystal JH, et al. A prospective cohort study investigating factors associated with depression during medical internship. *Arch Gen Psychiatry*. 2010;67:557–565.
- American Foundation for Suicide Prevention. Struggling in Silence: Physician Depression and Suicide. [http://www.afsp.org/index.cfm?fuseaction=home.viewPage&page\\_ID=9859BF59-CF1C-2465-128DAE02D3C9B309](http://www.afsp.org/index.cfm?fuseaction=home.viewPage&page_ID=9859BF59-CF1C-2465-128DAE02D3C9B309). Accessed November 4, 2011.
- Mann JJ, Apter A, Bertolote J, et al. Suicide prevention strategies: A systematic review. *JAMA*. 2005;294:2064–2074.
- Reinhardt T, Chavez E, Jackson M, Mathews WC. Survey of physician well-being and health behaviors at an academic medical center. *Med Educ Online*. 2005;10:1–17.
- Gross CP, Mead LA, Ford DE, Klag MJ. Physician, heal thyself? Regular source of care and use of preventive health services among physicians. *Arch Intern Med*. 2000;160:3209–3214.
- Thomas NK. Resident burnout. *JAMA*. 2004;292:2880–2889.
- Dyrbye LN, Thomas MR, Shanafelt TD. Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. *Acad Med*. 2006;81:354–373.
- Dyrbye LN, Thomas MR, Massie FS, et al. Burnout and suicidal ideation among US medical students. *Ann Intern Med*. 2008;149:334–341.
- Givens JL, Tjia J. Depressed medical students' use of mental health services and barriers to use. *Acad Med*. 2002;77:918–921.
- Moutier C, Cornette M, Lehrmann J, et al. When residents need health care: Stigma of the patient role. *Acad Psychiatry*. 2009;33:431–441.
- Schwenk TL, Davis L, Wimsatt LA. Depression, stigma, and suicidal ideation in medical students. *JAMA*. 2010;304:1181–1190.
- Thompson D, Goebert D, Takeshita J. A program for reducing depressive symptoms and suicidal ideation in medical students. *Acad Med*. 2010;85:1635–1639.
- Drolet BC, Rodgers S. A comprehensive medical student wellness program—Design and implementation at Vanderbilt School of Medicine. *Acad Med*. 2010;85:103–110.
- Haas A, Koestner B, Rosenberg J, et al. An interactive Web-based method of outreach to college students at risk for suicide. *J Am Coll Health*. 2008;57:15–22.
- Garlow SJ, Rosenberg J, Moore JD, et al. Depression, desperation and suicidal ideation among college students: Results from the American Foundation for Suicide Prevention college screening project at Emory University. *Depress Anxiety*. 2008;25:482–488.
- University of California, San Diego Health System. Suicide Prevention Program Web site. <http://wellbeing.ucsd.edu>. Accessed November 4, 2011.
- Spitzer RL, Kroenke K, Williams JB. Validation and utility of a self-report version of PRIME-MD: The PHQ primary care study. *JAMA*. 1999;282:1737–1744.
- Schroeder R, Brazeau CM, Zackin F, et al. Do state medical board applications violate the Americans with Disabilities Act? *Acad Med*. 2009;84:776–781.
- Knox KL, Litts DA, Talcott GW, Feig JC, Caine JC. Risk of suicide and related adverse outcomes after exposure to a suicide prevention programme in the US Air Force: Cohort study. *BMJ*. 2003;327:1376.