

## Discussion

# Suicide Risk in Different Patient Populations

**Dr. Jamison:** Dr. Angst, how do you explain the parity in your figures between men and women who have completed suicide? These figures stand in contrast to those in studies done here.

**Dr. Angst:** I do not have a simple explanation. These are the findings of the long-term follow-up study [Angst J, Preisig M. *Schweizer Archiv für Neurologie und Psychiatrie* 1995;146;5-16] of hospitalized patients with mood disorders. The male group was compared to the female group: 4 of 42 (9.5%) men with unipolar depression committed suicide versus 14 of 144 (9.7%) women with unipolar depression. The more precise standardized mortality ratio (SMR) of 1.64 for men and 1.59 for women of course refers to the expectation in the Swiss general population.

**Dr. Goodwin:** Is there a gender difference in Switzerland?

**Dr. Angst:** The male suicide risk in Switzerland is twice as high as the female suicide rates. The cited SMR refers to these base rates. But this fact does not explain why we did not find more male than female suicides in the patient cohort.

**Dr. Goodwin:** Switzerland, when its general population is examined, seems to have no characteristics that set it apart in any other respect.

**Dr. Angst:** Short of patients who were severely depressed, 61% of the population studied had at least 1 psychotic episode over a lifetime.

**Dr. Baldessarini:** Could you comment further about the survival curves of patients who are treated compared with those who are not treated between episodes?

**Dr. Angst:** There are no differences by diagnostic type given. Patients with bipolar I versus bipolar II and schizobipolar versus bipolar patients showed about the same magnitude of treatment effects.

**Dr. Baldessarini:** Did treatment help everybody?

**Dr. Angst:** That is a very difficult question. We are updating our study with the newly collected mortality data. It looks as though the group treated with pure lithium did not show a clear reduction in suicide risk, but it had a lower mortality risk in general. Compliance is a major factor; compliant patients receive better medical care than those who are noncompliant. The other 2 groups investigated consisted of patients who received lithium plus neuroleptics or who received lithium plus antidepressants. A third group received only neuroleptics or neuroleptics plus antidepressants. In all 3 of these groups, the effect was the same and not limited to lithium: all treatments had some effect and it was most pronounced in groups treated by an-

ti-depressants with or without other drugs. We found that the more severely the sample population was suffering and the more residual symptoms that appeared between episodes, the more the patient's treatment was increased, which makes sense from a clinical point of view. The fully remitted patient would not yet have been receiving a long-term medication for 10 or 20 years. Our results are not the result of bias, then, but self-selection in a naturalistic study.

**Dr. Baldessarini:** These results are extremely interesting and important. I have seen few data sets that reflected a clear treatment effect on suicide.

**Dr. Müller-Oerlinghausen:** The distinction between treated and untreated groups is immaterial when we do not know whether the treatment was appropriate. A group receiving lithium monotherapy might be the most inappropriately treated group for a number of reasons.

**Dr. Angst:** Any treatment that can reduce mortality is useful.

**Dr. Lenox:** Dr. Angst, you pointed out that most of the data collected in regard to suicide rates has been from inpatient populations. You indicated that in outpatient populations, the rate was approximately 3%. Your study reported a 15% suicide risk for hospitalized patients. One might have thought that the risk for an outpatient population would be higher.

**Dr. Angst:** The risk is actually much lower; it collapses almost completely.

**Dr. Lenox:** Would it approximate the 3% to 5% risk cited earlier?

**Dr. Angst:** In the Martin et al. study [Martin RL, Cloninger CR, Guze SB. *Arch Gen Psychiatry* 1985;42:47-54], the patients with primary unipolar and primary bipolar affective disorders did not have elevated SMRs (0.84 and 0.63 respectively); only patients with secondary affective disorders showed an elevated risk (SMR 3.10). The limitation of the study is that it refers to a small number of deaths and covers only a 7-year follow-up period.

**Dr. Lenox:** These results seem counterintuitive. We are dealing with a medication effect that appears capable of preventing suicide. In an inpatient setting we are generally able to monitor compliance, yet we find that the suicide risk decreases dramatically when we look at data from an outpatient setting. How does one reconcile these data?

**Dr. Angst:** I was startled by these data myself. It could be a consequence of very successful treatment.

**Dr. Roy:** Patients who attempt suicide are admitted to a hospital. Patients who do not attempt suicide are not admitted to a hospital as often. This is relevant, as patients who

attempt suicide are at raised risk for suicide. Thus, inpatient samples have an overrepresentation of high-risk patients.

**Dr. Jamison:** Exactly. This is one of the major selection factors.

**Dr. DePaulo:** This is true in terms of a general population, but the long-term Lundby study is the only prospective follow-up after 25 years that I am aware of, and it suggests that people with depressive disorder of any sort are at a highly increased risk for suicide.

**Dr. Jamison:** Especially severely depressed individuals.

**Dr. DePaulo:** Yes, but even taken across the whole population, the risk for suicide is 650 per 100,000 or about 0.7 of 1% per year, which is compared with an 80-fold lesser risk for suicide in the general population without a psychiatric illness.

**Dr. Angst:** Was that rate of risk for patients with major depression?

**Dr. DePaulo:** The data hold for patients with either depressive disorders or bipolar disorders.

**Dr. Baldessarini:** Much of the data are responses to yes/no categorizations dealing with suicide. Suicide either happens or it doesn't. Dr. Tondo suggests that, when one looks at suicide in terms of yes/no questions and risk factors, one tends not to see strong relationships. If one observes the quantitative relationship of a continuous variable such as number of attempts per year or per lifetime, then one begins to see relationships. The standard yes/no checklist approach makes false positives highly likely. Would looking at a more continuous intensity variable, perhaps on a scale of 1 to 4, help sharpen the specificity of predictive value of risk assessment instruments?

**Dr. Jacobs:** You and Dr. Tondo were emphasizing the risk posed by substance abuse and the importance of the number of attempts. Although we acknowledge that substance abuse is a risk factor, we tend to generalize. Dr. Baldessarini, you suggest that we should take recent onset as a risk factor for suicide.

**Dr. Baldessarini:** Yes, but include the time, severity, number of episodes, and the age at onset.

**Dr. Jacobs:** Hospitalization, comorbidity, and anxiety should be included also. Dr. Fawcett, who uses the term *psychic anxiety*, certainly found these factors important in early suicides, and they may relate to the issue of anger and how to focus on it as well as the role of benzodiazepine as a specific intervention. It would be a good idea to assign some numeric value to the risk factors we now treat only in general terms.

**Dr. Jamison:** How would you approach the prediction of any other complex behavior, Dr. Goodwin?

**Dr. Goodwin:** The suicide attempt literature places, at one end of the spectrum, people making a first attempt, as if they were practicing for a real suicide. At the other end are people who make repeated attempts; this population has a totally different distribution and diagnosis. The Akiskal Collaborative Follow-Up Study [Akiskal HS, Maser JD, Zeller PJ, et al. *Arch Gen Psychiatry* 1995;52:114-123] revealed an inverse relationship between the number of attempts and the suicide rate. We are forced to study attempts, because suicide is a rare event that cannot be examined prospectively.

Collaborative studies have shown that suicide rates among patients with bipolar I disorder were significantly higher than those among patients with bipolar II disorder.

**Dr. Jamison:** Did you find a higher rate of association with substance abuse in your patients with bipolar II disorder?

**Dr. Tondo:** We [Tondo L, Baldessarini RJ, Hennen J, et al. *J Clin Psychiatry* 1999;60(suppl 2):63-69] found that a very significant difference among bipolar patients was determined by the presence of severe depression.

**Dr. Baldessarini:** Dr. Goodwin, you suggest that suicide attempts may be antisuicidal in an ironic way.

**Dr. Goodwin:** They are as they grow in number.

**Dr. Baldessarini:** What if the relationship between alcohol abuse and suicide rate intensity behaves in the same way? Would you argue that substance abuse is actually antisuicidal because it keeps you going longer before you actually die?

**Dr. Goodwin:** I was reporting an interesting trend in the collaborative data. I do not know of any data answering your question.

**Dr. Tondo:** Some papers report unconfirmed data that substance abuse could be a protective behavior against suicide.

**Dr. Jamison:** If you look at the distribution over time of suicides in the Sorenson and Shen [Sorensen SB, Shen H. *Suicide Life Threat Behav* 1996;26:143-154] study, suicide attempts in patients with substance use disorder occur over a longer period of time than those in people with primary mood disorders.

**Dr. Angst:** Categorization of suicide attempts should distinguish between more and less violent forms. We know that women have a higher prevalence of attempts, yet they complete suicide at a rate less than is found in the male general population, confounding one's expectations. Most women attempt suicide in a nonviolent way; men's attempts are different. We must accordingly do a better job of assessing suicide risk.