Drs Madsen and Nordentoft Reply

To the Editor: Surely, we agree with Drs Large and Nielssen that all psychiatric inpatients must be considered to be at high risk of suicide, especially in comparison to the risk of suicide in the general population. Consequently, ensuring ward safety and high-quality treatment to prevent inpatient suicide is crucial. As requested, we have estimated a positive predictive value derived from our multivariate analyses; that is, we have measured the positive predictive value for "high-risk" patients who had at least 3 of the found adjusted risk factors for inpatient suicide in our Danish study.[1] This resulted in a positive predictive value of 1.41 suicides per 1,000 *admissions* in patients with at least 3 risk factors. The odds ratio was 2.7 with a sensitivity of 12% and specificity of 93%; thus, the low sensitivity indicates that we will miss a large proportion of patients at risk if we focus only on those who have several risk factors. Furthermore, we estimated the positive predictive value for those who attempted suicide in the week before psychiatric admission, which was 2.26 suicides per 1,000 admissions. The predictive values of those psychiatric patients regarded as high-risk are, in other words, low in the Danish sample too.

We are pleased that Large and Nielssen appreciate the design of our study of inpatient suicide; however, the data that our article is based on also have limitations, as they are derived only from register-based information. Using the national registered data in Denmark certainly is an advantage, as the register covers all psychiatric admissions in the nation. However, these data restricted us to merely measuring general risk factors; that is, we included no information on day-to-day symptoms during admission, such as information on psychopathology recorded in the doctors' case notes.

Evaluating suicidal risk in psychiatric inpatients must be considered a continuously ongoing part of daily work for the clinician, but, at present, the tools for doing so are very nonspecific. Nevertheless, the clinician still needs to evaluate patients' suicidal risk in many situations (at admission, every time a patient asks for leave, at discharge, when transferring patients between wards, etc), and even if the current risk factors have low predictability, clinicians must base their assessment of patients' suicidality on what is

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known so far. This means that, even though we must do our best to make the ward safer, we believe that continuing research to improve knowledge of risk factors for inpatient suicide is very important. As noted by Large and Nielssen, the established risk factors of inpatient suicide have low positive predictive values, which leads to restrictions being applied to many patients who are not at true suicidal risk. Until research yields more precise estimates of predictors of inpatient suicide, though, we will have to accept being cautious on behalf of many patients.

Reference

1. Madsen T, Agerbo E, Mortensen PB, et al. Predictors of psychiatric inpatient suicide: a national prospective register-based study. *J Clin Psychiatry*. 2012;73(2):144–151.

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