VIEWPOINT

Increase in US Suicide Rates and the Critical Decline in Psychiatric Beds

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The closure of most US public mental hospital beds and the reduction in acute general psychiatric beds over recent decades have led to a crisis, as overall inpatient capacity has not kept pace with the needs of patients with psychiatric disorders.[1] Currently, state-funded psychiatric beds are almost entirely forensic (ie, allocated to people within the criminal justice system who have been charged or convicted). Very limited access to nonforensic psychiatric inpatient care is contributing to the risks of violence, incarceration, homelessness, premature mortality, and suicide among patients with psychiatric disorders. In particular, a safe minimum number of psychiatric beds is required to respond to suicide risk given the well-established and unchanging prevalence of mental illness, relapse rates, treatment resistance, nonadherence with treatment, and presentations after acute social crisis. Very limited access to inpatient care is likely a contributing factor for the increasing US suicide rate. In 2014, suicide was the second-leading cause of death for people aged between 10 and 34 years and the tenth-leading cause of death for all age groups, with firearm trauma being the leading method.[2,3]

Currently, the United States has a relatively low 22 psychiatric beds per 100 000 population compared with the Organisation for Economic Cooperation and Development (OECD) average of 71 beds per 100 000 population. Only 4 of the 35 OECD countries (Italy, Chile, Turkey, and Mexico) have fewer psychiatric beds per 100 000 population than the United States. Although European health systems are very different from the US health system, they provide a useful comparison. For instance, Germany, Switzerland, and France have 127, 91, and 87 psychiatric beds per 100 000 population, respectively.[4]

Furthermore, between 1998 and 2013, the total number of psychiatric beds in the United States decreased from 34 to 22 beds per 100 000 population, a 35% reduction from an already low base rate of psychiatric beds per population (**Figure**).[4] This reduction in the numbers of psychiatric beds led to higher bed occupancy rates, significantly lower average inpatient length of stay, and prolonged emergency department waiting times for patients with psychiatric illness who need to be hospitalized, all of which has contributed to an increased threshold for admission and decreased threshold for discharge for patients at risk of suicide.

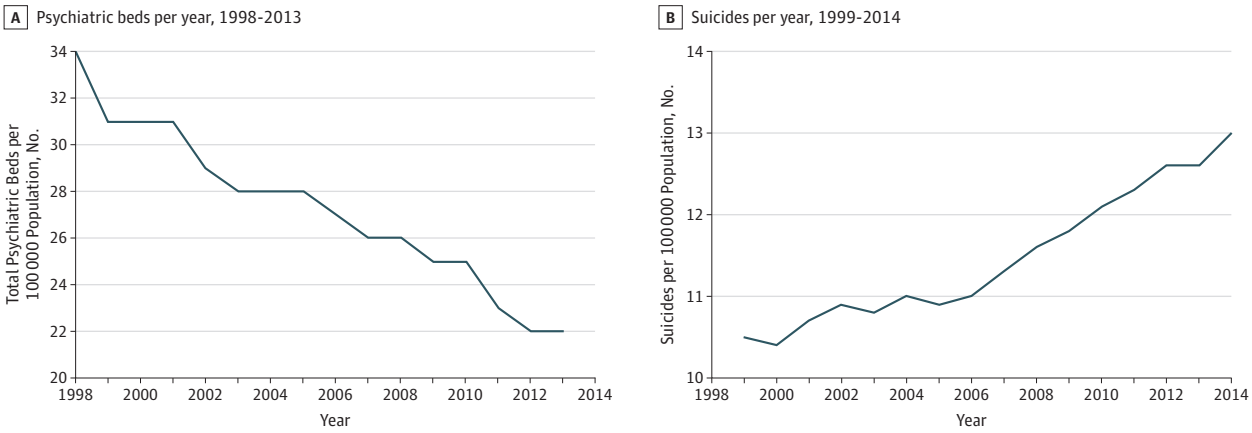
In parallel with the psychiatric bed reductions, the age-adjusted suicide rate in the United States has increased by 24% from 1999 to 2014, from 10.5 to 13.0 deaths per 100 000 population per year (Figure).[3] In 2014, 42 773 individuals committed suicide in the United States compared with 29 199 suicides in 1999. The 2014 US suicide rate is the highest recorded since 1986 and is higher than the global average, which is estimated at 11.4 suicides per 100 000 population per year.[5] The increasing suicide rate contrasts with the improving health outcomes and life expectancy that US residents have generally experienced.[3] Many explanations have been suggested for the US increase in suicides, mostly related to economic and social factors like unemployment. However, US unemployment rates have steadily decreased from a recent peak of 10% in October 2009 in the aftermath of the global financial crisis to 5.6% in December 2014. Yet suicide rates have continued to increase during this period of declining unemployment levels and gradually improving economic conditions.

A crucial aspect is missing in the analysis of the increasing suicide rate: the possible role of the reductions in psychiatric beds. Is it possible that a key explanation for the increase in suicide rates could be the corresponding decline in the number of psychiatric beds in the United States? It is complicated to determine whether the reduction in psychiatric beds is directly related to increased suicide rates given the multiple variables associated with suicide and the relative rarity of the event.

In a study examining suicide rates in relation to psychiatric bed availability and community mental health spending by US states, Yoon and Bruckner[6] found that reductions in publicly funded psychiatric beds were associated with increasing suicide rates between 1982 and 1998, which was only partially compensated for by increased community mental health spending. These authors specifically cautioned US policy makers that further reductions in publicly funded psychiatric beds could increase suicide rates in all states of the United States. However, this prescient warning was not heeded by leaders of the US health care system. It is particularly concerning that the number of psychiatric beds continued to decline during and immediately after the global financial crisis in 2008, when US unemployment levels increased rapidly from 5% to 10%, given the well-established association between increasing unemployment levels and suicide.

Rather than highlighting the relationship of psychiatric beds with suicide rates, the suicide prevention literature has focused on other components of the policy spectrum such as public awareness, media guidelines, school-based programs, identification and targeting of suicide hot spots, strategies for restricting the means of suicide (eg, gun control laws, use of blister packs for medications, and bridge barriers),[5] gatekeeper training (ie, training individuals to recognize someone at risk of suicide and refer the person to appropriate resources),[5] training for health care professionals, coordinated aftercare (following emergency department presentation or admission), psychological treatment of depression, pharmacological treatment of depression, antisuicidal effects of lithium for bipolar disorder, and

Figure. Numbers of Psychiatric Beds and Age-Adjusted Suicides per 100 000 Population in the United States From 1998 to 2014



Data are from Curtin et al[3] and the Organisation for Economic Cooperation and Development.[4]

antisuicidal effects of clozapine for schizophrenia.[5] In this context, the combination of high access to firearms[2] and low rates of lithium[7] and clozapine[8] prescription is likely to contribute to the higher suicide rates in the United States.

An important addition to the suicide prevention literature would be a comprehensive discussion of the role of psychiatric inpatient care in reducing suicide risk during acute social crises and the relapse of severe psychiatric illness. Clinical practice is predicated on the principle that inpatient care is a key intervention for addressing the immediate risk of suicide. Suicide risk is a frequent indication for admission, and patients should not be discharged until there is a significant reduction of suicide risk. Inpatient care can provide support, close supervision, respite, and monitoring of medication adherence. The well-known clustering of suicide shortly after being discharged following a hospitalization for psychiatric care highlights the risks involved and the importance of the chain of care as patients transition from inpatient care to the community.[9]

The national US suicide prevention strategy should include a necessary minimum number of psychiatric beds for patients at risk of suicide. There is a need for more acute psychiatric beds in general hospitals and in public mental health hospitals to provide immediate access to 24-hour care for both patient safety and stabilization. Follow-up care and community care after discharge are also critical for suicide prevention.[9] In future economic downturns, the number of acute psychiatric beds should be adjusted upward rather than reduced to provide care for patients with psychiatric disorders affected by financial adversity. A more controversial question is the need for long-term psychiatric beds,[1] but clearly there are individuals at high risk of suicide who do very poorly with the model of acute inpatient care and community follow-up because of their illness and the high thresholds for involuntary psychiatric treatment, due to a somewhat excessive concern about their civil liberties. Currently, the long-term capacity in the United States is mainly found in the jails and prisons.[1] The combination of high rates of incarceration, homelessness, and suicide argues for more long-term psychiatric beds. Funding should come from public and private third-party payments including "bundled" payments with both inpatient and outpatient care for an acute episode of suicidal depression and from state funds for the traditional support for long-term care in the United States. Without these much-needed measures, psychiatric services will continue to be unable to adequately respond to the tragedy of the increasing US suicide rate.

ARTICLE INFORMATION

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