

prevented FEP hospitalizations than the number of patients treated by the PIER clinical team. That ignores the fact that the PIER program was established as a system to reduce the incidence of FEP across an entire midsized urban area—Greater Portland, Maine. It was assumed that young people at risk of FEP would benefit from treatment provided through many pathways to care, if treatment was provided prior to the onset of frank psychosis. This indicated prevention design was modeled after similar, successful approaches for cardiovascular disease and common cancers. The design of the PIER program put major emphasis and effort into educating as large a proportion of the population as resources allowed. A total of 7,270 professionals were educated, and a public education campaign in 2001–2007 disseminated information about early identification and the potential importance of early intervention across the general population.

As we described in a 2010 report in this journal (1), over the study period 780 referred individuals who were demographically eligible for the PIER program were received by the PIER intake staff. Most of these individuals were deemed by both the referring clinicians and the PIER clinicians to be at elevated risk of psychosis. [A figure showing the disposition of PIER contacts from 2001 to 2007 is included in an online supplement to this letter.] After rigorous assessment, 148 of those referrals were found to meet strict criteria for being at risk, of which 138 entered treatment with the PIER clinical team. Following PIER program policy and as required by the program's funders and by the Maine Medical Center Institutional Review Board, all youths referred received a direct referral for care, either to the PIER team itself or to other appropriate regional services. A total of 497 youths who did not meet criteria according to the Structured Interview for Prodromal Syndromes or who preferred treatment elsewhere were referred out. Of these referrals, 79 were found to be at an early stage of full psychosis. Very few of these 79 individuals were hospitalized, because they rarely met usual hospitalization criteria (risk of harm to self or others). In addition, PIER clinical staff often consulted with the clinicians who received referrals on methods for preventive intervention. Thus, given the regional awareness campaign and with almost 500 cases over 6.4 years originally referred to PIER for presumed early psychosis and systematically referred out for treatment, it is not difficult to account for the small number (51) discrepant between those actually treated by the PIER team (138) and the observed reduction in FEP hospitalizations (189).

The other objections are not relevant to the study's major conclusion: the PIER program effected a large and significant reduction in first hospitalizations for psychosis. Whereas we calculated that 189 cases were prevented during the study period, for instance, Dr. Cook calculates 234 cases prevented. This apparent discrepancy arises because our difference equation model, which involved a moving average, had 16 fewer effective observations than the actual number. The actual number of observations yielded 234 prevented hospitalizations. The smaller number of effective observations

yielded the more conservative estimate of 189 prevented cases, which is a maximum-likelihood estimate by definition. This apparent discrepancy is not relevant to the study's major conclusion.

The objections raised are also addressed by the growing literature on the multiple pathways to care in early intervention strategies (2,3). Other pathways include earlier treatment for mood and severe anxiety disorders and suicidality preceding the onset of prodromal psychosis, as well as day hospitalization and hospitalization for nonpsychotic disorders. For instance, manic psychosis is an end state, associated with the duration of untreated bipolar disorder, as is psychosis in schizophrenia (4). Earlier and effective intervention for nonpsychotic bipolar disorder would likely avert its psychotic end state. Over time, an early identification system substantially reduces the time between onset of prodromal symptoms and entry into care, thereby reducing severity and allowing prevention of onset with less intensive treatment (5).

The current recommendation for PIER model replication is that the full FACT model be reserved for those who are unable to use clinic-based services (owing to logistics, family disorganization, distrust of clinicians, and so forth). Over time, it has become clear that this group is a minority in most communities, thereby reducing the costs of PIER prevention programs.

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William R. McFarlane, M.D.
Richard McCleary, Ph.D.
Ezra Susser, M.D., Dr.P.H.

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Suicide Prevention in Patient and Nonpatient Populations

TO THE EDITOR: We commend Hoffmire and colleagues (1) on their detailed description of recent suicide rates among veterans that was published in *Psychiatric Services* in Advance in May and in the September issue. As the authors point out, their report contains the first assessment of suicide among the U.S. veteran population that includes veterans who did not access Veterans Health Administration (VHA) services.

The publication of their report arrives on the heels of our own description of suicide among all members of a large health maintenance organization (HMO)—a study that was the first to include nonpatient members, that is, members of the HMO who did not access any of the HMO services during the membership year of death (2). Together, these two studies provide a heretofore unavailable baseline for health care systems that are engaged in important efforts to prevent suicide.

Juxtaposition of these two studies highlights important findings. Both reports come from health care systems identified as global leaders in suicide prevention. The veteran sample was observed from 2000 to 2010, and our HMO sample was observed from 1999 to 2010. The veteran sample was large enough to allow for adjustment of suicide rates for age, gender, and suicide risk, whereas similar adjustments were not feasible in our smaller HMO population. Hoffmire and colleagues found that among veterans who used VHA services, suicide rates declined during the ten-year study period, whereas suicide rates among veterans who did not use VHA services actually increased. In our HMO network population, suicide rates of HMO members did not change over time, regardless of HMO service utilization.

It is important to note that in both studies a decrease in suicide rates was observed among active patients who accessed health care services during a time when suicide prevention efforts were under way within the health care system. (The HFHS' Perfect Depression Care Initiative was launched in 2001, and the VA's Mental Health Enhancement Initiative and Suicide Prevention Program were implemented in 2005.) In the HMO sample, however, the decrease in suicide was observed only among patients who accessed the HMO network's specialty mental health services, which is where the suicide prevention effort took place. In fact, suicide rates actually increased among HMO patients who accessed general medical services—but not specialty mental health services. Hoffmire and colleagues did not describe this type of subgroup analysis of their sample. Given the clinical, scientific, and strategic importance of the VA's Suicide Prevention Program, it is crucial to understand what impact this initiative may have had on veterans who actually accessed VHA mental health care services, especially because, as the authors point out, veterans with mental illness are one of the populations most vulnerable to suicide.

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**M. Justin Coffey, M.D.
C. Edward Coffey, M.D.
Brian K. Ahmedani, Ph.D.**

Dr. M. J. Coffey and Dr. C. E. Coffey are with the Menninger Clinic and the Baylor College of Medicine, Houston. Dr. Ahmedani is with the Center for Health Policy and Health Services Research, Henry Ford Health System, Detroit, Michigan.

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Suicide Prevention in Patient and Nonpatient Populations: In Reply

IN REPLY: We thank Dr. Coffey and colleagues for their commentary on our recent study comparing suicide risk for veterans who did and did not use VHA services. Comparing this study with their recent analysis of suicides among Henry Ford Health System members highlights the importance of continued evaluation of suicide prevention activities.

The main findings from our analysis were that veterans, particularly female veterans, were at higher and increasing risk of suicide, compared with their nonveteran peers and that use of VHA services mitigated some of this risk. By compiling death certificate records for all known suicide decedents, the Department of Veterans Affairs (VA) archive of state suicide data made direct comparisons between VHA and non-VHA veterans possible for the first time (1–3). Veteran status in this database is carefully validated by using VA and Department of Defense records (2). Validation of veteran status was shown to have an impact on effect estimates in a study evaluating the relationship between veteran status and firearm suicide (3). Death certificate indication of military history is particularly problematic for female and younger veterans (2)—two of the fastest-growing veteran subgroups for which there is an immediate need to better understand suicide risk and trends.

The VA has, however, been evaluating suicide risk among VHA-utilizing veterans since implementing the Suicide Prevention Program in 2007 (1). As summarized in our report, VA's Suicide Prevention Program is poised to reach the broad population of VHA users and provide access to an integrated network of services aimed at reducing risk. Initiatives include awareness and education campaigns such as “The Power of 1,” a 24-hour Veterans Crisis Line, universal training in risk recognition and management for VHA employees, and the placement of suicide prevention coordinators in each VA medical center to support high-risk patients. Recent efforts also include the development of predictive modeling strategies to identify VHA patients at high risk of suicide (4).

This strong, multifaceted, and continually evolving program makes the VA a clear leader in suicide prevention. As such, we are pleased that our recent publication shed light on the pressing need to increase awareness of risk among female veterans. Response efforts will include continued research and program evaluation activities conducted collaboratively across the VA Suicide Prevention Program and VA's Women Veterans Health Care. Comprehensive, high-quality women's health care is already a top priority within the VA. Every medical center has a women veterans program manager to serve as an administrative leader for women's health programs and an advocate for women veterans, and a Women Veterans Call Center has been established as a resource for women veterans seeking information on VA benefits and services.

Similarly, we recommend that efforts to evaluate gender and age differences in the HFHS population are undertaken.