hospitals relative to other hospitals. If true, then improvements in documentation and reporting may be needed to ensure that such reporting supports the goals of quality improvement and accountability for inpatient psychiatric facilities.

In regard to the other measures (restraint, seclusion, and receipt of and justification for multiple antipsychotics at discharge), an integrated system and use of EHRs cannot explain poor performance. Responses from VA employees suggest that differences in case mix might explain low performance, noting that veterans are a unique population with higher prevalence of distinct conditions such as traumatic brain injury. We know of no evidence, however, to suggest that such case-mix differences explain or justify worse performance in these clinical process measures.

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The Business Case for Expanded Clozapine Utilization

TO THE EDITOR: Gören and colleagues (1) concluded that the Veterans' Health Administration (VHA) could save upwards of $290 million per year by initiating clozapine treatment for all patients with treatment-refractory schizophrenia. This conclusion is crucially based on estimated cost savings of over $22,000 per veteran in the first year of clozapine therapy. These savings are attributed to decreased inpatient hospital days—estimated at 18.6 fewer days per patient. We appreciate the comprehensiveness of this decision analysis but doubt the validity of the projected inpatient savings on which the conclusion depends.

First, of the seven studies on which the inpatient estimate was based, all but one were pre-post mirror image studies. The decrease in inpatient days observed in these studies most likely reflects regression to the mean and in the absence of an equivalent control group cannot be attributed to causal effects of clozapine. The one randomized trial included in the analysis, conducted in the VHA two decades ago, included only patients who had been hospitalized for more than 30 days in the year preceding randomization (2). In our analysis of 2015 VHA data, only 3% of 86,000 patients diagnosed as having schizophrenia in the VHA spent more than 30 bed days in hospital psychiatric units. Further, using Gören and colleagues' estimate that 20% of patients with schizophrenia diagnoses are "treatment refractory," only 16% of the refractory patients could have spent more than 30 days in the hospital, and at least 35% of them would not have been hospitalized, and thus there would be no chance of any inpatient savings. The business case applies, at most, to only 16% of the treatment-refractory population which it is meant to address.

Second, the only other randomized trial of the impact of clozapine on hospital days, a study of long-term state hospital inpatients, reported no significant decrease in hospital utilization (3). In addition, a retrospective analysis of three-year VHA inpatient data reported *increased* inpatient days for patients started on clozapine compared with a carefully matched control group, given that these data also included patients started on clozapine who later dropped out from treatment (4).

Finally, a recent large observational study using Medicaid data reported a 5% attributable risk reduction (from 36.4% to 31.4%) in the likelihood of hospitalization among treatment-refractory patients started on clozapine compared with a propensity score–matched control group (5). If this 5% reduction is applied to the average annual psychiatric bed days of care among patients with schizophrenia in the VHA in 2015 (31 days), the reduction of inpatient days due to use of clozapine would be estimated at only 1.6 days.

We agree that an updated evaluation of the cost-effectiveness of clozapine is needed, one that is based on current generic drug and blood-monitoring costs, a generalizable current estimate of inpatient savings, and a meta-analysis of clozapine effectiveness and side effects. Based on our critical review of literature and recent VHA data, the business case for clozapine is far weaker than the one presented.

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The Business Case for Expanded Clozapine Utilization: In Reply

IN REPLY: We appreciate the comments and opportunity to explore the issues raised in Mr. Gupta and Dr. Rosenheck's letter. First, some data mentioned in the letter were not

available for our analysis. The article by Stroup and colleagues was published the month our paper was accepted and thus was not available for inclusion our analysis (1). The analysis presented by Gupta and Rosenheck is based on unpublished data, and therefore they were unavailable for inclusion in our model. We would certainly amend the model to include these data in future publications should they become available.

Second, Mr. Gupta and Dr. Rosenheck report somewhat contradictory results in describing their unpublished data. The authors initially state that only 3% of patients with schizophrenia were hospitalized for more than 30 days, then later state the annual psychiatric inpatient days was 31 days. These numbers seem incompatible or suggest a highly skewed distribution, which would affect the results of a cost-benefit analysis. Regardless, as one of our sensitivity analyses, we examined the impact of assuming that hospitalizations were seven days; this model also resulted in significant cost savings (2). This result suggests that our findings are robust to a range of assumptions about the average length of stay.

Third, several of the studies mentioned may not be valid comparisons to the ones on which we based our study. The primary outcome for the Stroup study was a decrease in the number of hospital admissions rather than number of annual inpatient days, making direct application of their results to our study problematic (2). The randomized controlled trial that Mr. Gupta and Dr. Rosenheck mention did not explicitly report utilization, but rather reported expenditures. However, for the patients discharged, Essock and colleagues reported a significant decrease in rehospitalizations (3). The Sernyak and colleagues study did not use the standard definition for treatment resistance (failed trials of at least two antipsychotic agents) to match controls and therefore may not reflect a true difference for treatment-resistant patients (4). This is an important difference, in that a previous study we conducted reported that almost 25% of Veterans Affairs (VA) patients receive non–evidence-based treatments prior to clozapine initiation. Thus, studies of patients who received clozapine in the VA most likely do not reflect the patient population who would derive the most benefit from clozapine (5). In addition, both the Stroup and Sernyak studies were based on administrative data, which lack some clinical information, such as response rate, upon which our model is predicated (1,4).

We agree that the model is not based entirely on randomized controlled data, and there may be some regression to the mean in pre-post studies. However, this does not completely negate the utility of the data, especially in the absence of randomized studies.

In short, our model is consistent with the vast majority of literature and represents a starting point for discussing the potential benefits of clozapine in a large health care system. Certainly, the model can be further updated to reflect new information as it becomes available.

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An Update on "Insurance Coverage and Treatment Use Under the Affordable Care Act Among Adults With Mental and Substance Use Disorders"

TO THE EDITOR: In our article posted online January 17, we analyzed changes in insurance coverage and treatment utilization for individuals with mental illness and substance use disorders, comparing 2011–2013 versus 2014 data from the National Survey of Drug Use and Health (NSDUH) (1). Key coverage provisions of the Affordable Care Act (ACA), especially Medicaid expansion and health insurance marketplaces, were implemented in 2014. However, the 2014 interviews may not fully capture changes occurring under the ACA, especially for measures with a 12-month recall period. Including more recent data, we have now compared the 2014–2015 period with 2011–2013, providing a longer time frame in which to evaluate evolving trends.

Previously, we found substantial decreases in the uninsured rate and increases in Medicaid enrollment in 2014 in the subgroups with mental illness and substance use disorders. Changes were largest among low-income individuals (≤200% of the federal poverty level). In our updated analysis, we find the uninsured rate further decreased and Medicaid enrollment increased for both groups. [These results are shown in the first table of the online supplement.] For example, including 2015, the uninsured rate decreased by 6.8 percentage points ($p<.01$) among individuals with mental illness, and Medicaid enrollment increased by 4.8 percentage points ($p<.01$)—larger than the previously reported changes of 5.4 percentage points and 3.6 percentage points, respectively.

We previously reported that mental health treatment utilization increased by 2.1 percentage points. Surprisingly, when including 2015 data, this difference is eliminated