Candidate Performance Measures for Screening for, Assessing, and Treating Unhealthy Substance Use in Hospitals

TO THE EDITOR: Saitz’s recent article (1) lends an important perspective on a critically important topic. We agree completely that performance measures must be evidence-based to be credible for use in an accountability context (2). However, we believe it is important to note that the candidate performance measures Saitz discusses represent a subset of a very early iteration of a candidate performance measure set pertinent to alcohol and tobacco use that is currently being tested in the field by The Joint Commission. References to drug use have been eliminated from the draft measure set in response to feedback obtained during the stakeholder comment period to which Saitz refers. As noted in the article, the draft measure set comprises an equal number of performance measures addressing tobacco use and cessation counseling, in addition to alcohol use. The ultimate disposition or composition of the measure set will be determined at the close of the pilot testing period and review of findings by the Technical Advisory Panel, slated for this fall. The strength of the scientific evidence behind a performance measure is a crucial component of decisions made by The Joint Commission to include or exclude any measure from a final set.

The development of this performance measure set should not be construed as a veiled attempt to influence public policy, although we acknowledge that some critics might disagree. Instead, well-constructed, well-specified, and well-tested evidence-based performance measures enable health care organizations to identify gaps in evidence-based care and improve health care quality. We do not anticipate that the alcohol measures that are the subject of Saitz’s article will be mandated for use by all Joint Commission–accredited hospitals. Presumably, hospitals that have identified a need and desire to improve practice in the areas comprising the measures will adopt them for their own purposes.

Jerod M. Loeb, PhD
Ann E. Watt, MBA, RHIA
Nancy K. Lawler, BSN, RN
The Joint Commission
Oakbrook Terrace, IL 60181

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References

TO THE EDITOR: Evidence-based screening and brief interventions (SBIs) and referral to treatment services are designed to assist a spectrum of unidentified substance users. More than 80 million people currently engage in unhealthy use or have a diagnosis of abuse or addiction (per the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition) (1). Lagging implementation of SBI (2) has catalyzed The Joint Commission to field-test performance measures for delivering alcohol SBI and treatment of alcohol or drug addiction to hospital patients (3). Saitz’s perspective (4), that The Joint Commission advocacy is outpacing evidence-based practice, contains errors detrimental to this process. Claims that The Joint Commission “measures should be separate for alcohol and drug use because SBI tools and practices differ” are irrelevant because The Joint Commission SBI measures are restricted to unhealthy alcohol use and do not measure SBI for drugs. Core components of screening for smoking, alcohol use, illicit drug use (frequency, amount, and consequences), and brief interventions are common to all substances.

Saitz’s view that “the U.S. Preventive Services Task Force . . . has shown modest decreases in alcohol consumption at 1 year” diverges from the recommendation of alcohol SBI as an effective preventive measure, based on extensive analyses of statistically significant published clinical trials. His critique of published federal data (5) omits that results were based on outcome analyses of bundled alcohol or drug screening of 459 599 patients in 6 states, of whom 104 000 (22.7%) screened positive for unhealthy substance use. His claim that 4% to 75% of follow-ups were lost is inaccurate, because data from 4 states with follow-up rates of 72.3% to 95.5% were analyzed and reported (5). Without defining “low prevalence,” his statement that “[t]he relatively low prevalence of drug use” is a disincentive for screening is contradicted by current illicit drug use rates for various age groups: 21.5% for ages 18 to 20 years; 18.4% for ages 21 to 25 years; 9.6% for ages 30 to 34 years; and 8.6% for ages 35 to 39 years (1).

Among The Joint Commission’s targeted populations for these measures, 25.14% of hospitalized patients and 40.28% of all emergency department visits are patients 18 to 44 years of age. Saitz’s assertion that it is “plausible that persons identified by screening with occasional marijuana use will have a different response to brief intervention than persons who inject heroin many times daily” is irrelevant both to the Joint Commission SBI measures and to the SBI objective to identify and motivate dependent people to enter specialty treatment. His claim that “the proportion of persons identified by drug screening who have dependence is higher than that of those with unhealthy alcohol use” is contradicted by federal prevalence data on abuse or dependence for alcohol (15.2 million people; for illicit drugs alone or combined with alcohol, 7 million people) (1). His advocacy for “improving quality of care should be taking care of these patients” with addictions, a “don’t screen/don’t intervene” approach, is counterintuitive to an aggregated public health approach of prevention, intervention, and treatment. The Joint Commission is measuring delivery of evidence-based practices that demonstrate significant improvements in patient health.

Bertha K. Madras, PhD
Harvard Medical School/New England Primate Research Center
Southborough, MA 01772

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References
TO THE EDITOR: We read Saitz’s recent article (1) with great interest. Saitz concluded that evidence is insufficient to support screening and offering counseling to hospitalized patients with substance use problems. He recommends that clinicians treat the 70 acute and chronic illnesses that are linked to unhealthy substance use and ignore the underlying cause.

That would be the death of medical common sense. It would be like treating a patient with myocardial infarction without screening for hypercholesterolemia, treating a patient who had a stroke without measuring blood pressure, treating a patient with emphysema without screening for tobacco use, or treating a patient with diabetes without addressing blood glucose concentration.

Saitz has found flaws in almost every brief intervention trial ever published, and he insists that the evidence be perfected before implementation. He calls for randomized trials for every drug, in every combination, in patients with and without an alcohol problem, and in every medical setting, but then says it is impossible to do such studies. His perspective would guarantee that no hospitalized patient will ever be screened for unhealthy substance use, much less receive any help.

For example, he criticized screening and interventions in trauma centers, stating it was “based on 1 single-site study that had 54% follow-up for the self-report consumption outcome.” Actually, the primary outcome of that randomized trial was injury recurrence requiring an emergency department visit or rehospitalization, with these outcomes detected by a statewide, computerized trauma registry. Injury recurrence was reduced by 48% at 3 years, with close to 100% follow-up (P = 0.07) (2, 3). Do we want a health system where injured drunk drivers are counseled by health care workers in hospitals, or should we discharge them to have another crash?

Saitz criticized another randomized trauma center trial in which 1 driving while intoxicated (DWI) offense was prevented for every 9 inpatient hospital interventions because the authors used logistic regression to control for confounders (4). Is it better for trauma center staff to ignore drunk driving and just wait for the patient to have another crash?

Treatment works. It does not matter if it is on a surgery ward, on a medical ward, in a clinic, or in jail. There is little need to endlessly repeat studies while neglecting the needs of suffering patients and their families. Saitz even suggested that drug use is not a health risk in teenagers. This raises the question of who is paying heed to the evidence.

The Joint Commission measures provide a tool for hospitals to track screening, monitor adherence to national guidelines, improve communication with patients with unhealthy substance use, and monitor their use of interventions that will help millions of patients.

Larry M. Gentilello, MD
University of Texas Southwestern Medical Center at Dallas
Dallas, TX 75390

Eric Goplerud, PhD
Center for Integrated Behavioral Health Policy, George Washington University Medical Center
Washington, DC 20037

Potential Conflicts of Interest: The authors were technical advisors to The Joint Commission in drafting their substance use performance measures.

References

IN RESPONSE: My article says that the evidence for efficacy of hospital SBI is insufficient to support performance measures. The letters from readers confirm this.

It is reassuring that The Joint Commission agrees that measures must be evidence-based and that it deleted drug SBI from their measures (after my article was written) (1). Scientific peer reviewers for federal agencies that are funding ongoing trials also recognize the lack of evidence (2). But The Joint Commission measures still contain hospital alcohol SBI, for which evidence is inconclusive (3).

Dr. Madras cites population data, which are not relevant to the fact that drug use is less prevalent than unhealthy alcohol use in health care settings. She cites her retrospective, uncontrolled report, which does not inform questions about SBI efficacy. And she objects to characterizing SBI effects as modest. Alcohol SBI is associated with a 10% to 19% increase in lower-risk drinking (4). Readers can decide whether that is modest.

Dr. Madras recognizes that SBI is a preventive service, but then says its objective is to identify and motivate people with dependence. Evidence supports the former but suggests that SBI does not improve linkage to treatment for people with dependence.

Drs. Gentilello and Goplerud (Co-Chairs, Joint Commission Technical Advisory Panel) say that there is enough evidence but then that we do not need evidence because patients are suffering and “treatment works” (an inappropriate simplification). Their approach is inconsistent with that stated by The Joint Commission, the U.S. Preventive Services Task Force, and other respected groups that require evidence to support guidelines and performance measures.
Drs. Gentilello and Goplerud attribute statements to me that I have not written (for example, we should ignore cause, drug use is not risky, and it is impossible to do appropriate studies of SBI). I invite readers to read what I actually wrote. Their letter is rife with hyperbole, the language of advocacy: “death of medical common sense,” “guarantee that no . . . patient will . . . receive any help,” frequent use of “ever” and “every,” and “endlessly repeat studies.” They make an illogical conclusion—that because drunk drivers may have another crash, we should implement a procedure not known to have efficacy. They presume to know what I would do clinically (which is irrelevant). They confuse performance measurement and clinical practice, incorrectly concluding that a discussion about insufficient evidence for a measure would be the same as discussing clinical care for a patient with a substance use–related condition.

They neglect to mention that the primary outcome of Gentilello and colleagues’ study (5) was not statistically significant, a reporting practice known as “spin” (6). They also neglect to mention other negative SBI trauma center trials. An objective summary of the evidence (4 trials with no differences in primary analyses) is not that SBI “works” in trauma centers.

They suggest that such details as setting do not matter. But it matters to patients if we ignore high-quality clinical trials that are inconsistent and often negative in hospitals, emergency departments, and trauma centers (2). Rather than ignore them, we should learn from them and do studies to learn when, where, and for whom SBI works and about what we can do in circumstances in which SBI does not work.

Drs. Gentilello and Goplerud say that hospital SBI will help millions. But when efficacy is unknown, appropriate action is not a performance measure; it is to do appropriate research and implement what has proven efficacy. Landefeld and associates (7) wrote, “when implemented prematurely [before it is clear that benefits outweigh harms], wishful thinking can replace careful evaluation, and an unproved innovation can become an enduring but possibly harmful standard of care.” I am a wishful thinker. But I also know the difference between wishful thinking and evidence.

Richard Saitz, MD, MPH
Boston Medical Center, Boston University School of Medicine, and Boston University School of Public Health
Boston, MA 02118

Potential Conflicts of Interest: None disclosed.

References
2. Saitz R, Alford DP, Bernstein J, Cheng DM, Samet J, Palfai T. Behavioral counseling interventions in primary care to reduce risky/unsafe drinking: Ninth Revision, Clinical Modification (ICD-9-CM), and medications prescribed during these visits. The complex sampling frame allows extrapolation to national estimates for office visits and associated prescriptions. The NDTI has been used to examine patterns of medication prescribing (3, 4), with results that are consistent with the federally conducted National Ambulatory Medical Care Survey (5).

Using the NDTI, we estimated the number of monthly visits in which influenza was diagnosed from October 2006 to March 2010 by identifying all visits with an ICD-9-CM code for influenza (ICD-9-CM code 487). This period included 3 winter influenza seasons (2006 to 2007, 2007 to 2008, 2008 to 2009) and the 2009 H1N1 pandemic, beginning in April 2009. Our estimates rely on a sample of 4800 sampled physicians each calendar quarter who provide information about every clinical encounter during 2 consecutive workdays. Physicians are selected by random-stratified sampling by specialty and geographic region from the master lists of the American Medical Association and the American Osteopathic Association. Data for each visit include patient diagnoses based on codes from the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and medications prescribed during these visits. The complex sampling frame allows extrapolation to national estimates for office visits and associated prescriptions. The NDTI has been used to examine patterns of medication prescribing (3, 4), with results that are consistent with the federally conducted National Ambulatory Medical Care Survey (5).

During the past 4 years, influenza visits and antiviral use peaked during January through March (Figure). During 2009, in association with the 2009 H1N1 pandemic and unlike previous years, influenza visits increased in May and June and subsequently surged to a peak of 2.6 million (95% CI, 2.2 to 3.0 million) during October. Antiviral drug use was reported during 1.7 million of these visits (CI, 2.1 to 3.2 million).

Antiviral Prescribing by Office-Based Physicians During the 2009 H1N1 Pandemic

Background: Adherence to guidelines during public health emergencies is a national priority. Throughout the 2009 H1N1 influenza pandemic (1), the Centers for Disease Control and Prevention (CDC) issued guidelines recommending antiviral prescribing only to selected patients at high risk for complications, including patients younger than 2 years and patients 65 years or older, and not for prophylaxis (2). The extent to which antivirals were prescribed and how these practices differed from those in previous years is unknown.

Methods and Findings: We used data from the National Disease and Therapeutic Index (NDTI), a nationally representative survey of visits to ambulatory physicians produced by IMS Health, Plymouth Meeting, Pennsylvania. The survey includes approximately 4800 sampled physicians each calendar quarter who provide information about every clinical encounter during 2 consecutive workdays. Physicians are selected by random-stratified sampling by specialty and geographic region from the master lists of the American Medical Association and the American Osteopathic Association. Data for each visit include patient diagnoses based on codes from the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and medications prescribed during these visits. The complex sampling frame allows extrapolation to national estimates for office visits and associated prescriptions. The NDTI has been used to examine patterns of medication prescribing (3, 4), with results that are consistent with the federally conducted National Ambulatory Medical Care Survey (5).

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During the past 4 years, influenza visits and antiviral use peaked during January through March (Figure). During 2009, in association with the 2009 H1N1 pandemic and unlike previous years, influenza visits increased in May and June and subsequently surged to a peak of 2.6 million (95% CI, 2.2 to 3.0 million) during October. Antiviral drug use was reported during 1.7 million of these visits (CI, 2.1 to 3.2 million).
1.4 to 2.0 million), of which 99% noted oseltamivir and 94% included an influenza diagnosis. The percentage of influenza visits in which an antiviral was prescribed varied annually but did not differ during the H1N1 period (58%) compared with previous years (59%) (Figure). During the H1N1 period, antivirals were prescribed for 47% of patients younger than 2 years and 68% of patients 65 years or older.

**Discussion:** Using a nationally representative sample, we document a surge of influenza visits and antiviral prescribing attributable to the 2009 H1N1 influenza pandemic during October to December 2009. This pattern of ambulatory visits is similar to that from CDC surveillance (6), suggesting the validity of our findings, but adds previously undescribed information on antiviral prescribing. Although reported antiviral use increased because of the increase in influenza diagnoses, the percentage of ambulatory patients with diagnosed influenza who were prescribed antivirals did not change. Antivirals seem to have been underused in patients at high risk for complications on the basis of age (for example, <2 years and ≥65 years—populations for whom CDC guidelines recommended treatment). In contrast, only a very small percentage of visits in which antivirals were prescribed (6%) were not associated with an influenza diagnosis, suggesting that prescribing for prophylaxis was probably limited.

A previous study showed that CDC recommendations (via the Health Alert Network) are effective in rapidly influencing antiviral prescribing patterns for influenza (7). During 2009, the CDC used similar communication methods through the Health Alert Network. The message that only certain high-risk patients warrant therapy may have aided physicians in judiciously prescribing antivirals; however, we found evidence of underuse among young children and older adults, which may have led to preventable complications.

Our findings are subject to limitations. We could not evaluate the extent of antiviral prescribing for patients with diagnosed influenza and coexisting high-risk conditions, such as asthma. This data set has limited capture of emergency department visits, hospitalizations, and telephone encounters—settings where antiviral prescribing may have differed.

Despite a surge in influenza visits, we found no change in the overall propensity to prescribe antivirals in ambulatory settings during the H1N1 epidemic compared with previous years. Nonetheless, antivirals seem to be underused for patients in high-risk age groups, suggesting opportunities to improve the translation of public health guidelines into clinical practice.

Adam L. Hersh, MD, PhD
University of Utah
Salt Lake City, UT 84108

Randall S. Stafford, MD, PhD
Stanford Prevention Research Center, Stanford University School of Medicine
Stanford, CA 94305

**Disclaimer:** The statements, findings, conclusions, views, and opinions contained and expressed in this article are based in part on data obtained under license from the National Disease and Therapeutic Index (2006 to 2010), IMS Health. The statements, findings, conclusions, views, and opinions contained and expressed herein are not necessarily those of IMS Health or any of its affiliated or subsidiary entities.

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**Figure.** Estimated number of U.S. monthly visits in which a diagnosis of influenza was reported (influenza visits), an influenza antiviral was prescribed for any diagnosis (antiviral visits), and an antiviral was prescribed for influenza (influenza antiviral visits), October 2006 to March 2010.
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References

Correction

Correction: Proton-Pump Inhibitors and Cardiovascular Risk

In the recent article by Charlot and colleagues (1), the labels in Figure 2 for “PPI only” and “No clopidogrel or PPI” were switched. The corrected Figure 2 appears below.

This has been corrected in the online version.

Figure 2. Propensity score–matched Kaplan–Meier analysis of risk for cardiovascular death, myocardial infarction, or stroke.

<table>
<thead>
<tr>
<th>Risk, %</th>
<th>Time, d</th>
</tr>
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<tbody>
<tr>
<td>Clopidogrel only</td>
<td>---</td>
</tr>
<tr>
<td>Clopidogrel + PPI</td>
<td>---</td>
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<tr>
<td>No clopidogrel or PPI</td>
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PPI = proton-pump inhibitor.

Reference