

Perspective

Performance measures for substance-abuse screening and brief intervention in hospitals: Advocacy or evidence-based practice?

Richard Saitz MD, MPH, FACP, FASAM
Professor of Medicine & Epidemiology
Boston University & Boston Medical Center

Ann Intern Med. July 6, 2010;153:40–43.

Introduction

- Excessive drug and alcohol use have a substantial negative impact on health and society and often go unrecognized in medical settings.
- The Joint Commission (JC), which accredits US hospitals, has proposed and begun pilot-testing draft performance measures^{1,2} to address these problems.

Available at www.jointcommission.org/NR/rdonlyres/DE94B4E3-492D-4674-AF36-D618F83F90CD/0/TAM_Tobacco_and_Alcohol_Measure_Set_List.pdf. Accessed 2 September 2010. 2) Available at www.jointcommission.org/PerformanceMeasurement/PerformanceMeasurement/Screening+and+Treating+Tobacco+and+Alcohol+Use.htm. Accessed 2 September 2010.

What is a performance measure?

- A quantitative tool (e.g. rate, ratio or percentage), that provides an indication of what is done or how well something is done (usually a process or outcome)*
 - Often used to describe or compare healthcare quality and to incentivize quality care

*Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
Glossary of Terms for Performance Measurement . Oakbrook Terrace, IL: Author; 2002.

Summary of Draft Performance Measures

- The draft JC measures¹ included the following:
 - alcohol and drug screening* of hospitalized patients.
 - brief intervention or treatment (or referral) for those who screen positive.
 - alcohol and drug dependence management at discharge (pharmacotherapy or referral or follow-up).
 - assessing alcohol and drug use status 30-days post-discharge.

*Note: The term Early Identification and Brief Intervention (EIBI) is not used in this presentation because it can imply there is no "late" identification. Screening identifies the full spectrum of unhealthy alcohol and drug use, from use (early) to dependence (late).

1) Available at www.jointcommission.org/NR/rdonlyres/05904E01-E5F7-49F1-8AD2-EC5058D91794/0/CandidateFinalMIFTADD8.doc accessed 29 September 2009.

Purpose of Performance Measures

- Performance measures can be used to help implement best-practices, and can be helpful for improving care (and sometimes, for improving outcomes)—when they are evidence-based, and targeted to the practice known to improve outcomes.
 - Evidence must be strong because resources are limited and the stakes are high.

Problems with Draft Performance Measures

- Alcohol and drug measures should be separated, since SBI tools and practices differ.
- Evidence for alcohol and drug SBI differs.
- Evidence is insufficient to justify the measures

Performance Measures

Example

- The US Department of Veterans Affairs implemented performance measures for alcohol SBI
 - increased screening in VA medical centers from 2% in 1996 to 91% in 2009, and...
 - increased rates of brief counseling from 10% in 2007 to 50% in 2008.¹
 - NB: Executives and key managers in the VA system have personal salary incentives contingent on adherence to performance measures.²

1) US Department of Veterans Affairs. Quality Enhancement Research Initiative. Available at www.queri.research.va.gov/qnews/jan09.cfm. 2) Bradley KA, Williams EC, Achtmeyer CE, et al. *Am J Manag Care*. 2006;12(10):597-606.

Objective

- The objective of this presentation is to point out how policy to implement SBI widely can go far beyond the evidence.

General Observations about Universal SBI

- Screening identifies a wide spectrum of people who are *not* the same as people seeking help, who are by definition at least somewhat ready to change.
- People identified by screening often report “high” readiness to change; BUT these measures often do not predict change or responsiveness to brief intervention.
- These issues have been under-recognized with regard to their impact on the effectiveness of SBI in practice.

Assumptions in the Proposed Measures

- Interventions that work in one setting (primary care) will work in another (hospital).
- Treatment will have the same benefits for people identified by screening as for those who seek help.
- Treatments that work for persons less severely affected will work for those with more severe illness.
- An approach that works for nondependent unhealthy alcohol use will work for drug use.

Assumptions in the Proposed Measures (cont'd)

- Does the evidence support these assumptions?
- Should we require evidence to support these assumptions?

Evidence Required to Implement Universal Standards of Care

- Evidence required to implement preventive services is much greater than that for implementing treatment because ...
 - time and resources in health care are limited.
 - the average primary-care patient is eligible for 25 preventive services equal to 7-1/2 hours of physician work per day.
 - observational studies overestimate effects.
 - it is difficult to make someone without symptoms "feel better," and there can be costs and harms.
- Randomized controlled trials and systematic reviews of the intervention among people identified by screening are needed before system-wide recommendations can be made.

Alcohol and Drug SBI: Current Evidence

■ Evidence for Alcohol SBI

- The US Preventive Services Task Force recommends SBI for nondependent unhealthy alcohol use in primary-care settings based on results of 12 randomized trials, which showed small to moderate decreases in alcohol consumption at 1 year.^{1,2}

1) US Preventive Services Task Force. Available at www.uspreventiveservices.org/taskforce.org/uspstf/uspdrin.htm. Accessed 2 September 2010. 2) Whitlock EP, Polen MR, Green CA, et al. U.S. Preventive Services Task Force. *Ann Intern Med.* 2004;140:557-68.

Will the Efficacy Shown for Alcohol SBI in Primary Care Translate to the Hospital Setting?

■ Causes for concern:

- The prevalence of dependence is much higher (57–79%) among persons identified by screening in the hospital than in primary care settings.^{1–4}
- Brief intervention in persons identified by screening, even in primary care, has proven efficacy only for those without dependence.⁵
- SBI may be effective for people with dependence if it leads them to enter addiction treatment, but few studies have assessed this outcome.⁶

1) Saitz R, Palfai TP, Cheng DM, et al. *Ann Intern Med.* 2007;146:167-76. 2) Freyer-Adam J, Coder B, Baumeister SE, et al. *Drug Alcohol Depend.* 2008;93:233–43. 3) Bischof G, Reinhardt S, Freyer-Adam J, et al. *Int J Public Health.* 2010 Feb 9. [Epub ahead of print] 4) Belen Martinez et al. INEBRIA 2007. 5) Saitz R. *Drug and Alcohol Review.* 2010 (in press). 6) McQueen J, Howe TE, Allan L, et al. *Cochrane Database Syst Rev.* 2009:CD005191. Available at www2.cochrane.org/reviews/en/ab005191.html.

Evidence for Alcohol SBI in Hospitals

■ Randomized Controlled Trials

- In 1 trial of hospitalized patients,¹ BI decreased alcohol-related consequences and increased treatment enrollment (14% of patients in the BI group enrolled in treatment vs. 4% of controls). However, most participants did not have dependence.
- In a second trial,² no differences in treatment enrollment were seen with BI. Subgroup analyses showed some promise for women and younger men with dependence.
- In a third trial,³ BI was not effective at reducing consumption or increasing well-being 12 months post-hospitalization; however, it did improve readiness to change and seek help (but not actual change or help seeking).

1) Elvy GA, Wells JE, Baird KA. *Br J Addict.* 1988;83:83-9. 2) Saitz R, Palfai TP, Cheng DM, et al. *Ann Intern Med.* 2007;146:167-76. 3) Freyer-Adam J, Coder B, Baumeister SE, et al. *Drug Alcohol Depend.* 2008;93:233-43.

Evidence for Alcohol SBI in Hospitals (cont'd)

■ Systematic Reviews

- McQueen et al.¹ identified 11 alcohol SBI studies of 2441 patients who received medical, surgical, orthopedic, and trauma inpatient services. Results were inconclusive. Brief intervention reduced weekly alcohol consumption at 6 months in 3 studies, but had no effect on weekly drinking, laboratory markers, self-report of heavy drinking, driving offenses, or death at 1 year.
- Emmen et al.² identified 8 alcohol SBI studies of 1597 patients in a hospital setting. Only 1 study using a relatively intensive intervention and with a short follow-up period showed a significant reduction in alcohol consumption in the BI group.

1) McQueen J, Howe TE, Allan L, et al. *Cochrane Database Syst Rev*. 2009:CD005191. Available at www2.cochrane.org/reviews/en/ab005191.html. 2) Emmen MJ, Schippers GM, Bleijenberg G, et al. *BMJ*. 2004 Feb 7;328(7435):318. Available at <http://www.bmj.com/content/328/7435/318.long>.

Evidence for Alcohol SBI in Trauma Centers (adults)

- Alcohol SBI is now a requirement for accreditation of trauma centers in the US,¹ based largely on a single-site study of consumption and reinjury outcomes in a trauma center.
 - That study² found a nonsignificant decrease in trauma-service visits (re-injury) based on trauma center data...
 - ...and a decrease in alcohol consumption in patients.
 - Only 53% of the BI group and 54% of controls completed the 1 year follow-up interviews.

1) Committee on Trauma, American College of Surgeons. Available at www.facs.org/trauma.

2) Gentilello LM, Rivara FP, Donovan DM, et al. *Ann Surg*. 1999;230:473-80.

Evidence for Alcohol SBI in Trauma Centers (adults) (cont'd)

- Results of 4 additional studies were not conclusive:
 - 1 showed positive results only in a secondary analysis¹;
 - 1 showed benefits of a disease-management intervention (drinking was not an outcome)²;
 - 2 others had negative results.^{3,4}
- These findings cannot be construed as sufficient evidence to support performance measurement for alcohol SBI in hospital trauma center.

1) Schermer CR, Moyers TB, Miller WR, et al. *J Trauma*. 2006 Jan;60(1):29-34. 2) Zatzick D, Roy-Byrne P, Russo J, et al. *Arch Gen Psychiatry*. 2004;61:498-506. 3) Sommers MS, Dyehouse JM, Howe SR, et al. *J Trauma*. 2006;61:523-31. 4) Soderstrom CA, DiClemente CC, Dischinger PC, et al. *J Trauma*. 2007 May;62(5):1102-11.

Evidence for Drug SBI: Screening

■ Causes for concern:

- Although new and promising screening tools have been developed, most have been minimally validated in general health settings, are cumbersome, or don't detect the spectrum of unhealthy use.*
 - Drug Abuse Screening Test* (DAST)¹
 - Alcohol Smoking and Substance Involvement Screening Test* (ASSIST)²
 - CAGE Adapted to Include Drugs (CAGE-AID)³
 - Single-item screening test⁴

*The DAST and ASSIST are not brief (10–80 or more items). Given the challenges to implementing SBI for alcohol with 1–3 item tests, neither is likely to be disseminated widely, even if their validation is replicated.

1) Skinner HA. *Addict Behav.* 1982;7(4):363-71. 2) Humeniuk R, Dennington V, Ali R. WHO, 2008. Available at www.who.int/substance_abuse/activities/assist_technical_report_phase3_final.pdf. Accessed 3 September 2010. 3) Brown RL, Rounds LA. *Wis Med J.* 1995;94:135-40. 4) Smith PC, Schmidt SM, Allensworth-Davies D, Saitz R. *Arch Intern Med.* 2010

Drug SBI: potential concerns

- Drug use is more complicated and varied than alcohol use
 - e.g., prescription drug abuse
- One treatment may not work for every condition and for all levels of severity
 - e.g., persons identified by screening with occasional marijuana use will likely have a different response to BI than persons who inject heroin daily
- Treatment efficacy may vary by setting or circumstance.
- The proportion of persons identified by drug screening who have dependence is higher than that of those with unhealthy alcohol use identified by screening.

Evidence for Drug SBI

Adult outpatients

■ Randomized controlled trials in adults:

- Bernstein et al.¹ randomized 1175 adult outpatients with risky heroin or cocaine use to brief negotiated interview (BNI) or referral list/written advice. Six-month abstinence was 9% higher for opioids and 5% higher for cocaine in the BNI group, and 38% of participants in both groups sought additional treatment.
- WHO researchers² conducted a multi-country randomized trial of BI among 731 adults who screened positive for risky drug use. Results were inconclusive: differences between the 2 groups were small, effects were seen for cannabis and stimulants but not for opioids, and no impact was noted at the US site.

1) Bernstein J, Bernstein E, Tassiopoulos K, et al. Drug Alcohol Depend. 2005;77:49-59. 2) Humeniuk R, Dennington V, Ali R. WHO, 2008. Available at www.who.int/substance_abuse/activities/assist_technical_report_phase3_final.pdf. Accessed 3 September 2010.

Evidence for Drug SBI Hospital

- 1 randomized controlled trial in hospital patients:
 - Zahradnik A et al.¹ studied BI among hospitalized adults with prescription drug (PD) use. The intervention decreased PD use by 25% compared with controls at 3 months (not the primary outcome); however, the distinction between use and inappropriate use was not clear.
 - No intervention effects remained at 12-month follow-up.²

1) Zahradnik A, Otto C, Crackau B, et al. *Addiction*. 2009;104(1):109–17. 2) Otto C, Crackau B, Löhrmann I, et al. *Drug Alcohol Depend*. 2009;105(3):221-6.

Evidence for Drug SBI

Observational study cited in support of proposed performance measures

- A pre–post uncontrolled evaluation of a national SBIRT program in the US in diverse settings¹ reported dramatic decreases in drug use after SBI in a random 10% sample of positive-screened patients at 6-months.
- Heavy alcohol use and illicit drug use had decreased by 39% and 68%, respectively.
 - However, 4–75% of the selected patients across included sites were lost to follow-up; results were similar when limiting analysis to the 4 sites with >70% follow-up rates.
- The effect sizes observed are not consistent with the modest effects seen in meta-analysis of controlled trials of SBI for alcohol use in primary care.²

1) Madras BK, Compton WM, Avula D, et al. *Drug Alcohol Depend.* 2009;99: 280–95. 2) Whitlock EP, Polen MR, Green CA, et al. US Preventive Services Task Force. *Ann Intern Med.* 2004;140:557-68.

Drug SBI Practice Guideline

- In 2008, the US Preventive Services Task Force (USPSTF) concluded there is insufficient evidence to assess the balance of benefits and harms of screening adolescents and adults for illicit drug use.¹

Available at www.uspreventiveservicestaskforce.org/uspstf08/druguse/drugsys.pdf.
Accessed 5 September 2010.

Substance Use SBI: Investment of Resources versus the Evidence

- The Substance Abuse and Mental Health Services Administration (SAMHSA) has invested >\$200 million US for SBI clinical service grants. These grants were required to include drug SBI and a variety of care settings.
- SAMHSA and NIDA (NIH) have, to date, invested \$30 million in effectiveness trials, after the clinical investments.

Advocacy vs. evidence-based practice

- The Joint Commission removed drug SBI from the draft measures citing feedback received during a public comment period.*
 - But hospital alcohol SBI and drug and alcohol treatment, referral and outcome assessment remain

*Available at www.jointcommission.org/NR/rdonlyres/DE94B4E3-492D-4674-AF36-D618F83F90CD/0/TAM_Tobacco_and_Alcohol_Measure_Set_List.pdf and www.jointcommission.org/PerformanceMeasurement/PerformanceMeasurement/Screening+and+Treating+Tobacco+and+Alcohol+Use.htm, Accessed 2 September 2010, and Loeb JM, Watt AE, Lawler NK. Joint Commission Rapid Response. *Ann Intern Med.* 26 July 2010.

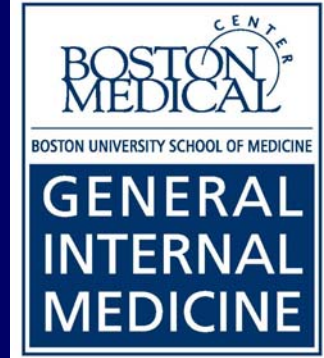
Conclusions and Implications

- Performance measures can be valuable tools for improving care and health, though they may not achieve those goals, particularly if they are not based on solid evidence
- The Joint Commission should be commended for attempting to address the poor quality of care that patients with unhealthy substance use receive in hospitals.

Conclusions and Implications (cont'd)

- Some practices could become performance measures based on current evidence; e.g., universal implementation of SBI in primary care and provision of specialty treatment for hospital patients who want it.
- Even one practice without evidence could be justified on other grounds: *asking* inpatients about drug and alcohol use *as part of diagnosis and treatment of other conditions*. However, this is NOT the same as SBI to address use.

Conclusions and Implications (cont'd)



- In developing measures and standards of practice, we should be clear about whether we are proponents of evidence-based practice or whether we are proposing practices based on common sense or strong belief.
- The latter may justify demonstration projects, and even some clinical practices, but not performance measures, particularly not for a universal practice.



Thank you.

- Questions? Discussion?