



OFFICE OF NATIONAL DRUG CONTROL POLICY

**Third National Leadership Conference
on
Medical Education in Substance Abuse**

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EXECUTIVE SUMMARY

More than 70 leaders of public and private sector organizations met in Washington, DC, on January 16, 2008, for the third National Leadership Conference on Medical Education in Substance Abuse. The invitational gathering brought together key officials of Federal agencies, organized medicine, medical training institutions, licensure and certification bodies, and insurance experts to discuss ways to enhance the training of physicians in the prevention, diagnosis and management of substance use disorders, including prescription drug abuse. It was co-sponsored by the Center for Substance Abuse Treatment of the Substance Abuse and Mental Health Services Administration, as well as the National Institute on Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse of the National Institutes of Health.

The event followed similar meetings hosted by ONDCP in 2004 and 2006. In December 2004, the Office of National Drug Control Policy (ONDCP) in the Executive Office of the President hosted an important Leadership Conference on Medical Education in Substance Abuse.

Considerable progress has been made since the 2004 conference, but the goals for enhanced physician training – particularly training in the use of Screening and Brief Intervention (SBI) – have not yet been fully achieved. Therefore, ONDCP hosted a third conference to assess progress, refine strategies, and reaffirm commitment to mutual goals.

Goals of the Conference

In her opening remarks, Conference Chair Bertha K. Madras, Ph.D., who is ONDCP's Deputy Director for Demand Reduction, made the mission clear: "We enlist your expertise in developing strategies to promote medical education curricula on drug- and alcohol-related disorders, improving medical education after graduation, implementing screening and brief intervention in mainstream medical care, obtaining appropriate physician reimbursement for these services, and preventing the non-medical use of prescription medications. . . . We ask you, as leaders in health care, to collaborate with us in forging these strategies and implementing practical solutions within your spheres of influence."

In his charge to the conferees, ONDCP Director John P. Walters pointed out the growing body of evidence indicating that medical students, residents, and practicing physicians need more and better training about the disease of addiction and the impact it can have on many other disorders, including cancer, cardiovascular disease, stroke, infectious diseases, mental illnesses, and even obesity. Accordingly, he asked the participants to develop action plans to improve physician knowledge and skills through enhanced training in undergraduate, graduate, and continuing medical education.

Strategies

Meeting in a series of Work groups, conferees developed targeted strategies and action plans in multiple areas of medical education and practice, which can be summarized as follows:

The conferees' findings can be summarized in a few key concepts, which appear consistently throughout the published literature:

1. xxxx
2. xxxx

Participants pointed to nutrition and geriatrics as good examples of how cross-cutting ideas have been incorporated into medical education and practice, and suggested that they be used as models.

Next Steps

In acknowledging the reports from the Work Groups, Dr. Madras said: “These are wonderful recommendations from very thoughtful, very enlightened groups. A number of these suggestions will be carved into a working document that we can work together to implement. Like you, we are cognizant of the challenges that we face in implementation. But above all, we are determined – absolutely determined – and dedicated to making the most positive changes in this preventable and profoundly important public health problem.

Dr. Madras called on the conferees “to do your best to disseminate what you've heard, to implement what you can through your organization or agency, and to help us at ONDCP with the implementation of these recommendations.” She added, “I am profoundly optimistic that this conference will result in fundamental public health improvements in our nation.”

ACKNOWLEDGEMENTS

Many individuals and organizations contributed to the success of the 2008 Leadership Conference. In particular, the contributions of the organizers acknowledge the generous support of the following organizations:

Office of National Drug Control Policy

Center for Substance Abuse Treatment

National Institute on Alcohol Abuse and Alcoholism

National Institute on Drug Abuse

**Ensuring Solutions to Alcohol Problems
at the George Washington University Medical Center**

CONFERENCE HISTORY AND ACCOMPLISHMENTS

Conference History

In planning the Leadership Conference, ONDCP drew on several past efforts to identify essential physician competencies related to substance use disorders. These competencies have been defined with growing specificity over the past 25 years. For example, the “AMA Guidelines for Physician Involvement in the Care of Substance-Abusing Patients,” adopted as the policy of the American Medical Association (AMA) in 1979, articulates the principle that every physician must assume clinical responsibility for the diagnosis and referral of patients with SUDs, and broadly defines the competencies required to meet that responsibility.

The Macy Conference on Training About Alcohol and Substance Abuse for All Primary Care Physicians, held in 1994, moved the conversation forward by elaborating on the competencies articulated in the AMA policy statement. The report of the conference also contained a number of thoughtful essays on the subject by conference chair David Lewis, M.D., and other leaders in medical education (Lewis, 1994).

Project Mainstream, conducted by the Association for Medical Education and Research in Substance Abuse (AMERSA), with assistance from the Health Resources and Services Administration and the Center for Substance Abuse Treatment, represents a multi-year effort to describe in detail the areas of knowledge and skills required by practitioners of many health professions (AMERSA, 2002). The competencies and recommendations offered in the Project Mainstream report have been endorsed by many health professions organizations, including AMA, the American Osteopathic Academy of Addiction Medicine, and the Society of Teachers of Family Medicine.

Taken together, these efforts and the broad areas of consensus they achieved provided a solid foundation for the work of the Leadership Conference.

Accomplishments to Date

Important progress has been achieved in the four years since the first Leadership Conference:

- Training of medical school faculty to teach about substance use disorders was identified as a major objective. The Association of American Medical Colleges (AAMC) is created a Listserv to reach out to such faculty with needs assessments and to provide information, peer group support, and mentoring.
- Conferees agreed that organizations of medical professionals need to take the lead in improving their members’ knowledge about substance use disorders. Both the American Medical Association (AMA) and the American

Osteopathic Association have issued calls for more attention to SUDs in undergraduate and graduate medical education. The Accreditation Council on Continuing Medical Education (ACCME) used presentations on SBI to train CME providers on their new guidelines.

- They agreed that federal agencies can make a major positive contribution to the effort by channeling their resources to draw attention to the issue. NIAAA produced the Clinician's Guide for primary care and mental health practitioners treating patients with SUDs. Working with the AMA, NIDA established four Centers of Excellence for Physician Information to raise awareness among primary care physicians about addiction as a health issue.
- Prescribing practices and their contribution to prescription drug abuse were identified as key issues. CSAT responded by assisting medical groups and others in offering CME courses on prescribing opioids for chronic pain. NIDA announced a new grant program to fund research on the treatment of prescription drug addiction and, with SAMHSA, funded studies on the use of SBIRT in general medical settings.
- Conferees pointed to the need to reimburse essential services such as Screening and Brief Intervention. ONDCP supported adoption of new reimbursement codes for this essential component of care. The agency also worked to educate health care professionals and the organizations that represent them about the new HCPCS codes.
- Lack of adequate insurance coverage for preventive services such as Screening and Brief Intervention was identified as an impediment to widespread adoption of SBI. The George Washington University School of Public Health developed a cost calculator to assist employers in determining the prevalence of alcohol and drug problems in their employee populations and calculating the cost savings to be achieved by offering a benefit for SBI.
- Conferees determined that medical schools should be encouraged to include questions about SBI in clinical examinations.

Determined to continue this action process, ONDCP brought the group together again in January 2008 to share information about evidence-based practices such as Screening and Brief Intervention, and to continue to focus on ways to improve physicians' prescribing practices so as to prevent the nonmedical use and abuse of prescription drugs. The goals set for the 2008 Leadership Conference build on the accomplishments to date and focus on the development of specific plans to achieve adoption of SBI in clinical practice.

This report summarizes the information shared at the 2008 meeting, as well as the findings, priorities and strategies agreed on by the participants.

WELCOME AND CHARGE TO THE CONFEREES

Welcome and Overview

Bertha K. Madras, Ph.D., Conference Chair

Deputy Director for Demand Reduction,

Office of National Drug Control Policy (ONDCP)

[insert photo of Dr. Madras from Welcome Letter]

On behalf of the White House Office of National Drug Control Policy, I welcome you, our guests from the nation's medical and health care organizations, to the Third National Leadership Conference on Medical Education in Substance Abuse.

Those of us present need no introduction to the ravages of this problem. Substance abuse can compromise brain, body, and behavior. It eclipses hope, planning, and executive function, and inverts fundamental human priorities. It creates a measurable strain on our health care and criminal justice systems, and compromises educational institutions and the workplace.

How can the medical community engage in alleviating this onerous burden? The full range of risk factors for substance use disorders, including specific genetic markers, are yet to be elucidated. The determinants of what drives progression from use to misuse to abuse to addiction are still being evaluated. Nevertheless, it is clear that early recognition and intervention by physicians can be an effective approach to attenuating this problem.

Accordingly, this conference will focus on implementation of screening and brief intervention, because SBI offers us an immediate medical response to a major public health problem. It does not require waiting for the results of studies of genomics and proteomics and microarrays and RNAs silencing, and all the other approaches involved in creating new therapeutic approaches. In contrast, SBI can be adopted immediately, with results that can be measured within months rather than years or decades.

Our rationale is clear, and this is why we engage medical professionals. Medical professionals need to be involved in addressing substance use disorders, because they cannot be marginalized in promoting health and the well-being of patients. Evidence is mounting that even risky or problematic use of alcohol or other drugs can exacerbate or precipitate significant medical consequences. Ignore patients' substance abuse at their peril. Evidence is mounting that alcohol and illicit drugs can compromise prescription drug safety and efficacy. Ignore patients' substance abuse at their peril!

What services can be provided in response to this public health burden? Decades of research indicate the screening and brief intervention in health care settings can reduce substance use and associated morbidity and mortality. Federal data suggest that this effect holds for both alcohol and illicit drugs, and may even be useful in interrupting prescription

drug abuse. SBI thus promises to empower health care professionals to alleviate the behavioral and medical burdens of substance abuse.

We praise those individuals and organizations that have worked closely with us to achieve a number of goals, some of which seemed unattainable even a year ago. For example, today we can report the approval of four new procedural codes, CPT and G codes, which – along with the Medicaid H codes – form an economic base for reimbursement of SBI services.

We gratefully acknowledge the help of our federal partners – the Substance Abuse and Mental Health Services Administration, the National Institute on Drug Abuse, the National Institute on Alcohol Abuse and Alcoholism, the National Highway Traffic Safety Administration, the National Transportation Association, the Veterans Administration, and the Indian Health Service – which have actively engaged in the challenge of implementing SBI.

We deeply appreciate our collaborators in the private sector, particularly the American Medical Association, which is using reimbursement codes to drive policy change. We acknowledge the contributions of the ACCME, which has highlighted screening and brief intervention in CME courses offered to providers throughout the country. We also salute the Federation of State Medical Boards, which has adopted policies supportive of SBI.

Despite these accomplishments, we continue to face challenges in promoting the widespread adoption of SBI in mainstream medical practice. We're all familiar with the concept of translational research, which takes insights from biotechnology and converts them to drug therapies. We need another form of translational research to convert concepts from social marketing to implementation of SBI.

We are confronting resistance to change, and we need dedicated people to find ways to surmount the resistance. We also need dedicated people to move states to adopt the reimbursement codes, to convince insurance companies to reimburse SBI services, to convince businesses that it is in their best interests to negotiate with insurance companies to reimburse practitioners who conduct SBI, to convince health care professionals that training in SBI will promote a sea change in substance use disorders in their patients, and to convince health care institutions that SBI should be incorporated into every sector of patient care.

We ask you – the leaders in health care – to help us devise strategies to surmount these challenges. We ask you to develop integrated, practical programs within your spheres of influence. Based on your presence here, I know that this year's conference, like those in 2004 and 2006, will result in policies and positions that fundamentally shape public health improvements in our Nation. But this time we need more – we need action. We need progress in implementing SBI.

Because you are here, I am profoundly optimistic that this conference will result in fundamental public health improvements in our Nation.

Charge to the Conferees

John P. Walters

Director, Office of National Drug Control Policy (ONDCP)

[insert photo of Director Walters]

I want to thank the many people in this audience, as well as our Federal partners, for their tireless efforts that have brought us to where we are today. What we do does make a difference. But I learned long ago that what we help *other people do* also makes a difference. Through the combined work of many people – leaders in this room, as well as individuals in communities throughout the country – we have made great progress on drug issues.

I really do think this is a revolutionary time in the area of substance abuse, and we have real opportunities for progress. In this, we truly stand on the shoulders of many of you, who are giants in this field in terms of research, clinical care, and public service. It is your willingness, your expertise, and your energies that make progress possible. We could not do it without you.

Overall, the results are encouraging:

- Drug use by adolescents has declined 24 percent since 2001. We hope that the new *Monitoring the Future Survey*, to be released soon, will show that we have met the President's goal of a 25 percent reduction in drug use by adolescents by the end of this year.
- We have seen even greater declines in the use of certain abused and dangerous drugs. This includes a 30 percent decline in the use of methamphetamine by young people, which represents only a small part of their drug use but is a devastating drug.
- We also can report a 20 percent decline in marijuana use – a critical finding. There have been significant declines in the use of Ecstasy (3, 4 methylenedioxymethamphetamine) and LSD (lysergic acid diethylamide) – drugs, the use of which, had been increasing during the late 1990s and the beginning of this decade. The latter reductions probably result from a combination of efforts in both demand and supply reduction.

In two areas, however, more attention is urgently needed. We are concerned about the countervailing trend with regard to prescription drug abuse, not only by youth, but by adults. The diversion of prescription pharmaceuticals by both adults and young people is a serious problem that has not declined.

The second involves the proactive use of Screening and Brief Intervention by professionals in the mainstream medical community.

Prescription Drug Abuse

The decline of teenage substance use by 24 percent since 2001 is a very positive trend, but there is more to do. There is particular concern about the countervailing trend regarding prescription drug abuse by youth and adults. The 2006 National Survey on Drug Abuse and Health showed that initiation rates for prescription drugs now exceed the rate for marijuana. This is a large warning. We have a potential problem of widespread victimization from these substances that we need for legitimate medical care, but we need to figure out how to contain such abuse. As a result, we are expanding our prevention efforts, working to reduce drug impaired driving, and increasing drug screening in more schools and work places. We're also going to try to do some public service advertising in this regard very shortly.

Young people report that if they abuse prescription pharmaceuticals, they can obtain them for free from family or friends, by going into the family medicine cabinet, or that their friends do so and share them. So part of this is an effort to try to educate the public about this hazard, but the other involves a supply control mechanism,. Get control of these substances when they're in your home and you're using them for legitimate medical purposes, and throw them away when you're done with them. (A lot of diversion happens because patients don't discard medications when they're done taking them.)

That suggests we can do something fairly dramatic to address the vector of adolescent abuse of prescription drugs obtain from family medicine cabinets, if we educate in an effective and widespread way, and follow through. We believe that the goal in combating this problem should be education to make the general public, and young people in particular, more aware that prescription medications can be addictive and thus require caution in their use. In addition, we need to make people more aware of the need to dispose of leftover medications safely rather than storing them in the family medicine cabinet. We at ONDCP have been exploring various methods for disposing of unused medications in ways that will not harm the environment, and we look forward to raising public awareness of this key strategy. To do so, we need the cooperation of the medical community, the pharmacy community, and other health care professionals.

Screening and Brief Intervention

The second area I want to talk to you about is screening and brief intervention. As screening for substance use increases within the health care system, the data will help us determine and confront the nature and extent of the problems that exist.

We are going to find a lot of people who have a problem, challenging us to respond. The NSDUH report estimates that, of 22 million Americans who have a substance use disorder, the vast majority does not recognize a problem, nor seeks treatment. Of those who report they need treatment, roughly 75 percent make no effort to get it.

We need to treat the disease of addiction; yet the reality is that most people who suffer from it do not come forward on their own. So what do we do? Based on our experience and

knowledge to date, the solution we see is to expand screening for the disorder at every point of contact with the health care system. Today, screening tools are available that are very effective in identifying those who are having problems with alcohol or other drugs. Pediatricians, general practitioners, and other physicians all should be using these screening tools. In addition, we have brief intervention techniques to address patients with early and emerging problems to prevent them from reaching the stage of abuse or addiction.

[insert Figure 1]

At present, the Federal government supports SBIRT demonstration projects through cooperative agreements with six States (California, Illinois, New Mexico, Pennsylvania, Texas and Washington State) and one Tribal Council (Cook Inlet) to establish demonstrations of SBIRT services. Four additional States (Colorado, Florida, Massachusetts, and Wisconsin) were added in 2006. The awards are renewable for up to five years, depending on performance and availability of funding. Goals of the project are to:

- Increase access to clinically appropriate care for nondependent as well as dependent persons;
- Link the generalist and specialist treatment systems;
- Combine prevention, intervention, and treatment into an integrated continuum of care; and
- Build a coalition between health care services and alcohol and drug treatment services.^{6,9}

While the State projects vary with regard to setting, population, and operational model, each involves implementing an SBIRT system within a community and/or medical setting. Grantees have implemented SBIRT in trauma centers, emergency rooms, community clinics, federally qualified health centers, and school clinics. Each system provides for brief intervention or brief treatment within the community setting and/or motivates and refers those identified as needing more extensive services to a specialized setting for assessment, diagnosis, and appropriate treatment.⁹

As of August 2007, the SAMHSA-funded grantees had screened more than 536,000 persons. In the process, participating health care professionals learned how to conduct screening, brief intervention, and referral to treatment; became familiar with validated screening tools for identifying patients at elevated risk for harmful drinking or drug use; learned the essential goals of a brief intervention (namely, to help patients understand their screening results, explored the idea of reducing or quitting, and choose an appropriate plan); and learned to identify relevant operational issues for an SBI program and how to make decisions about such issues.^{6,9}

Preliminary data suggest that the initiative has been successful in modifying the consumption patterns of those who consume five or more alcoholic beverages in one sitting and those who use illicit drugs. In an October 2007 assessment, investigators found that, among SBIRT participants, the rate of drinking to intoxication (5+ drinks at a

sitting) dropped by 51 percent immediately following brief intervention, while the use of any illicit drug had declined by 36 percent. At follow-up, the gains were sustained: 31 percent of the SBIRT participants had maintained the reduction in their alcohol intake, while the reduction in illicit drug use persisted in 18 percent.⁹

Using data like these, and with the help of some of the people in this room, we were able to persuade the Centers for Medicare and Medicaid Services (CMS) to adopt codes in Medicaid that will allow physicians and other providers to be reimbursed for performing screening and brief intervention. Our next goal is to persuade private payers to adopt these codes as well. I want to thank those who worked with us – including several who are here today – to develop and submit the Current Procedural Terminology (CPT) code application. With this application, we are working to expand payment for screening and brief intervention into the larger area of private medical practice.

Goals for the Conference

Our conference today and those that preceded it are aimed at finding ways to help health care professionals become knowledgeable about substance use disorders and about achieving institutional change so as to increase access to screening and treatment. We have created opportunities with insurers and public health care systems to implement SBI – now we need to determine how to mobilize health care professionals.

I understand that this progress has not been easy. We arrived at this point because of the work of many people who spent their lives making this opportunity possible. Because of their work, the opportunity is before us now. The real question is, “How rapidly can we convince U.S. institutions to undertake this kind of change – a change that will save the lives and futures of so many drug-affected people in the U.S. today?”

What do we need to do? First, we need to educate physicians about the tools that are being put into place, such as the new CMS and CPT codes. Practitioners need to learn how to use these tools to screen their patients. Many of you have that knowledge, and we ask you to share it.

We want screening and brief intervention to become part of mainstream medical care. For this to occur, primary care providers must become capable of dealing with substance use disorders. One of the most significant obstacles to rapid implementation of SBI is that so many practitioners feel inadequate to deal with substance use disorders. Such caution represents a responsible professional stance. But the health of patients requires that practitioners learn what they need to do, and can do, to prevent and intervene. Routine screening and follow-up needs to be done.

We are talking here about relatively simple institutional changes that need to occur at some level within the health care system – changes that will provide for screening and brief interventions for those at risk for substance problems or addiction. We want to make sure that this message is clear at all levels of the health care system. We want to make sure that we spread this message, as well as the knowledge required to perform screening and brief

intervention, in multiple directions and to the multitude of stakeholders in the medical education and health care communities. Actions we can take include the following:

- We need to work with medical schools to implement effective curricula.
- We need to develop continuing medical education courses on SBI.
- We need to encourage policy makers to support SBI initiatives.
- We need to push for implementation of the CMS and CPT codes in both the public and private sectors.
- We need to work with State and local governments to incorporate SBI in their medical programs and institutions.
- We need to press all health and social institutions for change as rapidly as possible.

As we move ahead to “mainstream” the use of screening and brief intervention, we must also address issues of prescription drug diversion and abuse. We are going to need the same kinds of help to promote responsible prescribing practices. We need to curb the non-medical use of prescription drugs while maintaining their availability for legitimate medical purposes.

Finally, let me say “thank you” again for being here. I’ve never been in a room with more people who are responsible for leading public- and private-sector institutions. Some of you have been in both places. But I know you – you are not people who rest on your laurels. We must get this task done. We are on the verge of taking all the things you worked for out of the narrow category of “substance abuse” and placing them into mainstream medicine. Let us help this disease be seen, properly, like any other, where the family rallies around the member who is ill and helps that person reach recovery by providing support and obtaining the needed care. The faster we can build on that model, the better.

UNDERSTANDING AND IMPLEMENTING SBI

Background Information on Screening and Brief Intervention

Current evidence on SBI was summarized for the conferees in a briefing paper, with the goal of providing a common point of reference for the discussions to follow.

What Are Screening and Brief Intervention? Screening, Brief Intervention, and Referral to Treatment (known as SBIRT) is a comprehensive, integrated, public health approach to the delivery of early intervention and treatment services for persons with substance use disorders, as well as those who are at risk for developing such disorders. SBIRT provides the tools needed to identify, intervene with, and treat such individuals, and thus to reduce the associated adverse effects on health, family, and society.

- *Screening* quickly assesses the severity of substance use and identifies the appropriate level of treatment.
- *Brief intervention* focuses on increasing insight and awareness regarding substance use and motivation toward behavioral change.
- *Referral to treatment* provides those identified as needing more extensive treatment with access to speciality care.¹⁻⁸

A key aspect of SBIRT is the integration and coordination of screening and treatment components into an integrated system of services. This system links a community's specialized treatment programs with a network of early intervention and referral activities that are conducted in medical and social service settings.⁹⁻¹¹

Research studies consistently show that SBIRT can change the course of patients' harmful drinking,^{12,13} encourage them to stop smoking, and reduce the number of hospital admissions for traumatic injuries,^{14,15} drinking and driving, traffic violations, and alcohol-related injuries and health problems.¹⁶⁻¹⁸ This "mainstreaming" of screening and brief intervention in health care settings helps to destigmatize substance use disorders by treating them in the same way as other chronic illnesses.

In response to the promise of SBIRT, the past several decades have witnessed the development of evidence-based screening instruments, manualized brief interventions, and research into effective implementation strategies.⁴

The components of SBIRT are shown at [Appendix X](#) and described in more detail below:

Screening. The goal of SBIRT is to make screening for substance abuse a routine part of medical care. Screening for diseases is warranted (1) if the disease has a significant prevalence and consequences, (2) effective and acceptable treatments are available, (3) early identification and treatment lead to favorable outcomes, and (4) effective screening instruments are available and easy to administer. Strong research evidence supports the

fact that screening for alcohol, tobacco and other drug problems meets all of these criteria.¹

Screening in a medical setting involves at least two components: biomarkers and patient reports.⁵

- *Biomarkers* are objective evidence that an individual may have a substance use disorder. These can be a simple positive drug screen or physical indications of potential abuse (such as liver disease).
- *Patient reports* are based on questionnaires designed to get a "big picture" of the individual's substance use and to identify potential red flags. This information may be elicited by direct questioning by a physician or other health care professional, using evidence-based screening instruments or a self-administered questionnaire, completed by the patient with pencil and paper or on a computer.

Studies show that many verbal (oral, written and electronic) screening methods have reliability and validity comparable to accepted medical procedures such as a single measurement of blood pressure to screen for hypertension, a fasting blood glucose test to detect diabetes, a mammogram to identify early breast cancer, or a prostate-specific antigen test to detect prostate cancer (see Appendix X).^{1,5}

Brief Intervention. Brief intervention is a time-limited, patient-centered counseling strategy that focuses on reducing unhealthy behaviors and increasing healthy behaviors.⁴ It is not unique to alcohol and other drug problems, but is widely used by physicians to encourage patients to change their dietary habits, lose weight, lower cholesterol or blood pressure, and take medications as prescribed.^{4,5}

At its simplest, brief intervention involves a short conversation between a health care professional and a patient, in which concerns about the patient's alcohol, tobacco and/or other drug use are expressed, and advice to cut down or moderate consumption is given (see Appendix X). Such an intervention usually occurs immediately after an individual receives a positive screen indicating that an alcohol and/or drug use problem is present or that there is measurable risk of developing such a problem.^{1,4}

As part of the brief intervention, the patient receives feedback on his or her alcohol, tobacco or other drug use pattern. The intervention focuses on increasing motivation for behavior change. Typical intervention strategies include education, simple advice, brief counseling, continued monitoring, or referral to a specialized addiction treatment service. Such interventions are designed to provide escalating levels of service, depending on the screening results.^{4,5}

Brief intervention often is a manualized, protocol-driven process. A number of clinical trials suggest that the minimum number of brief intervention contacts required to achieve a reduction in alcohol use is three to four. These may involve screening and assessment, a

10- to 15-minute counseling session, or a follow-up phone call. The length of the intervention appears to be less important than the number of contacts.⁶

Referral to Treatment. Referral to specialized treatment is provided to those individuals who are identified as needing more extensive treatment than can be offered in mainstream medical settings. The effectiveness of the referrals to specialty treatment depends on a proactive and collaborative effort between the mainstream medical professionals and those who provide specialty treatment, so as to ensure that patients have access to the appropriate level of care.^{1,4}

Why Is SBI Important? Research studies consistently show that alcohol, tobacco and other drug use by young people and adults constitute a major public health problem. On the basis of a recent survey, Federal experts estimate that almost 20 million Americans age 12 and older are current users of illicit drugs, while 126 million use alcohol and 72 million use tobacco products.^{7,8} Of these, 22 million – or 9 percent of the U.S. population – meet the diagnostic criteria for alcohol or drug abuse or dependence. In addition, virtually all regular smokers are considered nicotine dependent and or at great risk for becoming so.

Given these data, it is not surprising that substance abuse accounts for about one in four deaths in the United States each year, and results in more lives lost, illness, and disability than any other preventable health condition.^{9, 10}

Actions to prevent or mitigate the misuse and abuse of alcohol, tobacco and other drugs can reduce the impact of such disorders on the individual, on the family, and on society. For example, identifying an underlying alcohol problem can clarify the differential diagnosis in patients with hypertension, mental confusion, or liver disorders, while helping a pregnant woman reduce her alcohol consumption can reduce the risk that her offspring will suffer from fetal alcohol syndrome (FAS) or fetal alcohol effect (FAE).¹¹

Is SBI Effective? Research studies have shown that large numbers of individuals at risk of developing serious alcohol or other drug problems may be identified through primary care screening.^{1,4,12} Screening and Brief Intervention have been shown to:

- Reduce the frequency and severity of drug and alcohol use,
- Reduce the risk of traumatic injury, and
- Increase the percent of patients who enter specialized substance abuse treatment.⁵

In addition to reductions in use of alcohol, tobacco and other drugs, SBI also has been associated with fewer hospital days and fewer emergency department visits.¹³⁻¹⁸

Evidence supporting the effectiveness of brief interventions is found in studies of smoking cessation counseling¹⁹⁻²¹ and trauma departments,²²⁻²⁵ as well as in primary care settings in many different nations. For instance, a systematic review of 29 randomized trials of brief behavioral interventions using motivational interviewing found that 60 percent showed at least one significant behavior change effect, especially for substance

abuse interventions when used by clinicians who are not specialists in substance abuse.²⁶ Other research studies show that a physician's advice to quit smoking, accompanied by counseling and follow-up, is enough to convince many adult patients to undertake such an effort.²⁷⁻³¹

Brief interventions by emergency physicians have been shown to be effective when they are incorporated into trauma center procedures, and to reduce subsequent drug use, alcohol use and readmission for traumatic injuries,^{32,33} as well as drinking and driving, traffic violations, alcohol-related injuries, and alcohol-related problems among older teens and young adults.³⁴⁻³⁶

Brief intervention can have positive collateral effects as well, since interventions targeted to one health problem can and often do reduce the risk for other health problems and may provide patients with positive experiences in controlling a health outcome that can be used in other aspects of their lives.³⁷

For all of these reasons, there is a growing consensus in the health care community that screening, intervention, and – where appropriate – referral for specialized treatment of alcohol, tobacco and drug problems should be a routine part of primary medical care.³³ Mainstream health organizations such as the American Medical Association, the American Academy of Child and Adolescent Psychiatry, the American Academy of Family Physicians, the American Academy of Pediatrics, and the American College of Obstetricians and Gynecologists, and the American College of Surgeons have adopted policies calling on their members to be knowledgeable, trained, and involved in all phases of prevention, screening, and intervention for alcohol, tobacco and other drug problems.

Is SBI Cost-Effective? There is evidence that integrating screening and brief intervention with the general medical care system is not only effective, but can be cost-effective as well.³⁸⁻⁴⁰ A study of a sample of 1,419 patients from HMO primary care clinics found a prevalence of 7.5 percent for hazardous drinking and 3.2 percent for drug use (with 10 percent having at least one of the two problems) – rates similar to those for hypertension and diabetes. Compared to other patients, this population had higher rates of medical disorders (injury, hypertension), utilized more services (1.5 times more primary care visits), and generated higher costs per patient (psychiatry, emergency room, pharmacy).⁴¹

A study of screening and brief intervention in trauma centers³³ concluded that an estimated 27 percent of all injured adult patients are candidates for a brief alcohol intervention. In the study, the net cost savings of the intervention was \$89 per patient screened, or \$330 for each patient offered an intervention. The benefit in reduced health expenditures resulted in savings of \$3.81 for every \$1 spent on screening and intervention. This finding was robust to various assumptions regarding probability of accepting an intervention, cost of screening and intervention, and risk of injury recidivism. On the basis of these results, the investigators estimated that, if interventions

were routinely offered to eligible injured adult patients nationwide, the potential net savings could approach \$1.82 billion annually.

Accordingly, the U.S. Preventive Services Task Force recommends screening and brief intervention in primary care settings to reduce alcohol misuse and to assist in smoking cessation,⁴² and a report from the National Academies of Science⁴³ recommends that “all treatment professionals should have some knowledge of basic neuroscience and how alcohol, nicotine, and other drugs work on brain pathways, influence behavior, and interact with diverse conditions.” Similar positions have been adopted by the Macy Conference on Medical Education,⁴⁴ the Association for Medical Education and Research in Substance Abuse,⁴⁵ the Office of National Drug Control Policy,⁴⁶ the National Institute on Drug Abuse, and other Federal agencies.

How Widely Is SBI Used in Mainstream Medical Practice? Studies in the research literature show inconsistent and widely varying levels of substance abuse screening and brief intervention by primary care physicians,⁶⁵⁻⁶⁸ as well as under-use of smoking cessation aids and follow-up,^{69,70} and inconsistent use of practice guidelines.⁷¹⁻⁷⁵ In a national survey of 2,000 primary care physicians and psychiatrists, 88 percent of respondents said they usually or always ask about alcohol use, but only 47 percent said they regularly inquire about maximum amounts consumed and only 13 percent reported use of formal alcohol screening tools.⁷⁶

The most complete literature on primary care physicians’ screening and brief intervention practices address screening for alcohol-related problems and tobacco use cessation. A substantial number of research studies, conducted in a wide range of public health and clinical care settings, have demonstrated the feasibility and benefits of interventions to promote smoking cessation.⁷⁷⁻⁸⁰ Given decades of attention to the harms resulting from smoking on the part of the researchers, health care professionals, policymakers, and the media, one might expect a very positive picture of the state of physician interventions and, in fact, adult smoking cessation services do seem to have wider acceptance among physicians than other alcohol or drug interventions. However, they are not as consistently available as might be expected from the magnitude of effort to gain public and physician attention.

Even many physicians who screen for alcohol, tobacco or other drug problems do not know how to perform a brief intervention. For example, a survey by Friedman and colleagues asked 1,082 physicians about their screening and brief intervention practices. Among respondents who said they regularly asked new outpatients about drug use, only 55 percent said they routinely offered follow-up services or referral to treatment, and 15 percent reported that they did not intervene at all.⁸¹

How Can More Health Care Professionals be Encouraged to Adopt SBI? Multiple factors affect the ability and willingness of physicians and other caregivers to screen and intervene for alcohol and other drug problems. Evidence shows that these factors can be successfully addressed so as to promote wider use of screening and brief intervention.

Evidence for the Effectiveness and Implementation of SBI

Larry M. Gentilello, M.D., FACS

*James Carrico, M.D., Distinguished Chair and Professor and Chairman,
Burn/Trauma/Critical Care Division, University of Texas
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[insert photo of Dr. Gentilello]

I've been asked to talk about the evidence for effectiveness of SBI, and I'm going to do that from the perspective of a trauma surgeon. Trauma surgeons have become real national champions for this service, and the implementation of SBI in trauma centers is a story of great success.

First, I want to give you a little background on why SBI has become so vital to trauma center services. Trauma surgery is a relatively new profession. It's only been around for about 30 years. It started as a result of only a few studies, but they were very powerful ones. One study showed that traumatic injuries are the leading cause of death for Americans until they reach the age of 44 years. In fact, the average age of death for someone who dies from an injury is only 23 years. Because of the relatively young age of most trauma patients, more years of productive, potential life are lost to injuries than to the next three leading causes of death – heart disease, cancer, and stroke – combined.

A second study that really pushed the development of trauma centers compared mortality rate from injuries in two adjacent counties in California. In one county, if you were injured, you were taken to the nearest hospital emergency department. This was compared to mortality rates in hospitals that had established trauma centers. The results showed that 40 percent of the patient deaths from injuries in non-trauma centers were clearly preventable. For example, patients arrived with a reasonable blood pressure but had a ruptured spleen and no surgeon was available to remove it. Or the patient needed to be intubated, but the staff of the emergency department had not been trained in the procedure, so the patient died.

In trauma centers, the mortality rate from preventable causes is only one or two percent. As you might suspect, trauma surgeons are by nature people who are activists. Given the death data I've shown you, instead of simply publishing it and letting it languish in a library, trauma surgeons went forward and spoke to their hospital administrators and demanded resources for optimal care of injured patients.

They also were not shy about going to their legislatures and government agencies to demand the development of trauma networks. As a result, in just a few short years, trauma centers were established throughout the United States. Today, in all but the most rural areas of the country, if you're injured, chances are good that you will be taken to a trauma center and receive state-of-the-art medical care. As a result, trauma mortality has not decreased over the past 12 years, because trauma care is about as good as it's going to get. To change the mortality rates, we need to look for new ways of addressing trauma problems, and one obvious way would be to move from simply being experts in treating injuries to becoming experts in preventing them.

Whenever you try to prevent a disease, you always look for the cause. So if it's an infectious disease, you look for the bacteria or the virus. For as long as trauma centers have been in existence, we've always known that by far, the leading cause of traumatic injury in the U.S. is alcohol use.

Overall, about 50 percent of patients who come to trauma centers for treatment are intoxicated by alcohol. I showed this in a study 20 years ago, and the figures have not changed to this day. The national trauma surgeons' group looked at the figures and saw that 49 percent of motor vehicle injury patients were intoxicated at the time of the crash. I suggested that we needed to do some type of screening and provide counseling. The moderator, a very famous trauma surgeon, saw that 54 percent of the pedestrians struck by a car were intoxicated – a rate even higher than that for motor vehicle crashes – and said, "Well, the message of your data is really clear. Instead of telling people not to drink and drive, we ought to be telling them not to drink and walk." You see, that was really the attitude at the time. Alcohol-related traumatic injuries were not regarded as a serious issue. But if we're interested in injury prevention, there's no way to reduce trauma rates without addressing alcohol problems.

The lesson for those of you who are not trauma surgeons, but who are specialists in alcohol treatment, is that it's important to know that alcohol causes more deaths due to injuries than to all the associated medical complications such as liver disease, heart disease, pancreatitis and cirrhosis combined. In other words, we shouldn't be telling our patients, "If you keep drinking you'll damage your liver," when to say, "If you keep drinking, you'll wind up in a trauma center" actually is more accurate. And again, because of the relatively young age of many victims, more years of potential life are lost to injuries among those who use alcohol than to all other causes combined.

A traumatic injury clearly is an event that has an impact on an individual's life. So we began to think, "What if we actually had alcohol counseling as part of trauma care?" Imagine yourself being transported in a helicopter to a trauma center and undergoing surgery for your injuries. That might be something we'd call a "teachable moment."

It's not just the patient who is drinking who suffers problems related to alcohol. We often say that alcohol is involved in nearly half of all trauma center admissions. But in one case out of three, the patient admitted to the trauma center is not the person who was drinking, it's the person who was hit by the drinking driver. So if you reduce alcohol use by as little as 10 percent, everyone will be safer when they're on the roads.

Twenty years ago, I led a study in which we added an alcohol counselor to the trauma team, just as we did with physical or occupational therapists. The counselor conducted interventions for alcohol use. We didn't have what we now call SBI, but the counselor used the techniques available at the time and found that patients were ready for treatment. In fact, most agreed to go directly from the trauma center to a treatment facility. The experience taught me that the patients were not just smashing their femurs, ribs or spleens – they were smashing through their denial as well, and were willing to get the help they needed. This was a truly treatment-ready population.

I believed that if we made alcohol screening and brief intervention a routine component of trauma care, we would reduce this terrible burden of repeat traumatic injuries. To test the hypothesis, we conducted a prospective randomized trial, funded by NIAAA. In the trial, we screened one group of patients using the Michigan Alcohol Screening Test (MAST) and did not screen a control group. We were funded only to do Monday through Friday work and most trauma business occurs on Friday or Saturday nights, so we didn't screen everyone. But those that we did screen had an alcohol-positive rate of 46 percent – not much different than in 1988. Overall, 304 interventions were completed. Fifty-six patients were discharged before we could complete the intervention, but we kept them in the brief intervention for purposes of analysis. These were typical, urban, hardcore trauma patients, like the ones seen at the Boston Medical Center, Grady Memorial Hospital in Atlanta, Denver General, or San Francisco General. They're relatively young, most don't have much in the way of social support or education, most are unemployed, and about half use drugs other than alcohol.

Using both objective and self-reported measures, we were able to obtain follow-up data on almost all of our patients. When we looked at our own hospital's emergency department records one year later, we found that the SBI group had a 48 percent lower rate than the controls in return visits for treatment of another injury.

When we looked at the statewide trauma registry, which includes data from every hospital in Texas, we found a 47 percent reduction in injuries requiring another hospital admission at three-year follow up, so it's safe to say that the SBI effects were sustained over time.

We also looked at self-reported alcohol use and obtained corroborating information from family members, and found that even those in the control group reduced their drinking for the first six months after injury. But without an intervention, they weren't able to maintain the change and returned to the drinking levels they had at baseline, while the intervention group sustained the change.

[insert Figure 2]

Finally, because policymakers are interested in costs, we did a cost-benefit study and found that for every dollar spent on SBI in a trauma center, hospitals saved \$3.81.

Given all of this evidence, it's an unfortunate statistic that 39 percent of people who receive any type of counseling in the U.S. today do so through the criminal justice system, compared to only 4 percent who receive such counseling from a health care professional. That's not an acceptable situation, particularly in view of all the other documented benefits.

Fortunately, times have changed, and so have attitudes. As the benefits of SBI have been increasingly well documented, the American College of Surgeons' Committee on Trauma has decided to require all Level I and II trauma centers to screen patients for alcohol intoxication and to provide intervention for those who screen positive. To assist with implementation of this requirement, the CDC, NHTSA, NIAAA, and CSAT all have conducted trainings for trauma center staff on how to perform SBI, and NIAAA has provided copies of its excellent NIAAA Clinician's Guide. So far as I know, this is the first

time in the history of health care in the U.S. that there's been any type of mandated intervention for alcohol problems. In my mind, this marks the beginning of a new era.

I believe the effects of this policy breakthrough will spread. Nurses, medical students and residents, and attending staff will say: "If the trauma surgeons can do it, why is my patient going through DTs, or having bleeding ulcers because of alcohol use, and nothing is being done?" So this is really a success story that can be repeated, and I look forward to brainstorming in our Work Group session later today about how we can use this precedent to spread the message throughout the country that SBI works.

Costs and Cost-Effectiveness of SBI

Michael Fleming, M.D., M.P.H.

*Professor, Department of Family Medicine, University of Wisconsin – Madison
and Member of the National Academies of Science, Institute of Medicine*

[insert photo of Dr. Fleming]

I wanted to start by thanking Dr. Gentilello for all the work he's created for those of us who run addiction consult services in hospitals. As you may have noticed, he showed us that there are two parts to the process: first is to screen patients, and second to have a mechanism in place to deal with the patients who screen positive.

In my hospital at the University of Wisconsin, *I'm* the mechanism to deal with those patients. I direct an inpatient consult service, and half of our referrals come from the trauma center. It's been a challenge to teach the trauma surgeons to use SBI, but it definitely has made a difference in our hospital and in our patients' outcomes.

I've been in Madison for about 22 years, but before that, I practiced in a small town in the Upper Peninsula of Michigan. There were about 10 doctors in a county of about 20,000 people – a mining community. One day a young woman patient came into the office complaining of headache and fatigue. I diagnosed her with depression and put her on a tricyclic antidepressant. Over the next four or five visits, however, I saw that nothing I was doing seemed to help her.. We did lab tests, we tried other medications, and generally did everything I was taught in medical school. Finally, at the fifth visit, I asked about her drinking, because it dawned on me that her depression might be related to alcohol use. Low and behold, she said she was drinking a bottle of wine every afternoon.

I did what I considered brief counseling (I'd never heard of SBI). My patient got sober within a couple weeks, and I was amazed at the change in her. I was amazed – you see, in residency training, I was taught that patients with alcohol problems had to go into inpatient treatment, had to go to AA, had to go through a long process to get better. But it turned out that all this patient need from me was a little bit of my time and a short conversation about her drinking. She stayed sober for at least four years – all the rest of the time I was in practice and able to follow her.

This got my attention. What I've been doing since is trying to answer the simple question of what works, why it works, and how it works. This isn't proteomics. It isn't genetics. It isn't high-powered rocket science. I just wanted to know what happened when I talked to my patients about their drinking. Was it a good thing? Could I do it in the context of a busy practice? What I've been doing for the past 20 years is trying to answer that question.

When I had my primary care practice, I saw three or four patients every day who were like that woman in the Upper Peninsula. This is not a rare event. I saw patients with alcohol problems as often as I saw patients with hypertension. But unlike the patients with hypertension, I really didn't know what I was doing and whether it made a difference or not. So that's what got me into research on SBI. I'll talk about the results of those studies in

terms of costs, cost-effectiveness and cost-benefits. First, however, it's important to understand that these are not the same thing.

Cost-benefit analyses tends to be more useful to the alcohol field than cost-effectiveness analyses. Cost-benefit analyses (CBAs) assign a dollar value to an outcome, such as an emergency department visit, and allow direct comparison with the cost of the intervention. However, the utility of cost-benefit studies can be limited by the difficulty in expressing many outcomes or benefits in terms of dollar costs or the length of time it may take for outcomes to occur.

In contrast, cost-effectiveness analyses measure how much more it costs to achieve one unit of outcome with one treatment than with another. The usefulness of these studies depends on a common metric such as the quality adjusted life year (QALY). However, QALY's are difficult to measure, especially in the alcohol field. The choice of outcomes often is the key variable, since the clinical- or policy-relevant outcome may vary depending on the intervention. Another limitation is that there are few standard metrics to assess the cost of services in primary care, including the cost of alcohol screening and brief intervention. This affects how we establish a number for the new codes and what physicians should be paid for these services.

It's important to understand the limitations of cost-benefit studies. First, some outcomes can be considered either a cost or a benefit, depending on perspective. Is it the perspective of the group paying for care? Is it society? Is it an individual patient? Is it the treating physician? This question of perspective needs to be taken into account in interpreting the cost data.

Second, cost metrics can be difficult to calculate. It's a challenge to assign a cost to screening for health problems, whether the screening is for hypertension or diabetes or alcohol. Some of the benefits and outcomes you can measure. It's not too difficult to assign a cost to inpatient hospital days or emergency department visits. It's more difficult to measure the cost of readmissions for medical or surgical complications of alcohol use. So our cost metrics are not as reliable as we'd like.

Third, how do you collect the information? Do you rely on patients' self-reports? Do you use basic records of hospital stays, clinic visits, etc.? For the most part, our studies have relied on the latter data. In the past, medical record reviews generally have been worthless, although I think electronic medical records are going to make them more useful in the future.

Finally, some outcomes take a long time to develop – longer than most SBI studies have followed patients. Because of research budgets and other limitations, three or four years is the longest followup period we have. But if you're looking for outcomes more complex than simple alcohol use, some take longer to surface than a three- or four-month study can capture. For example, studies of cancer or lipid levels typically follow patients for 8 to 10 years, but we haven't been able to do that..

I'll describe two cost-benefit studies. One is Project TrEAT, which looked at data on individual patients. The other is Dr. Gentilello's study, which produced population estimates.

Project TrEAT was a randomized clinical trial that compared usual care to brief intervention. It was conducted in 17 clinics around the State of Wisconsin. Sixty-four physicians participated (physicians conducted the interventions rather than counselors). Physicians had both control and intervention subjects in their practices – usually five or six of each. It's interesting that physicians rarely identified the controlled subjects and rarely did anything with them, even though they were trained to do this. Because the way we did it, they didn't know who was in the trial.

We tried to blind the controls as best we could by using embedded questionnaires, intention to treat analyses, and very high followup rates. We could follow our patients for up to four years, because the population was in very stable communities.

We've used the same basic design in all the trials that we've done. In Phase I, patients come to the office for a variety of presenting complaints – diabetes, hypertension, a cold. The receptionist gives them a screening form called a health screening survey, which contains questions about smoking, exercise, weight control, and alcohol use. Patients who screen positive are asked to return for a second interview, at which time they are assessed and then entered into the trial. At that point, patients either are scheduled to see a physician, if they're in the intervention group, or given an educational booklet and sent on their way if they're in the control group.

For Project TrEAT, we followed patients at five points over 48 months. The intervention was consisted of four parts: two face-to-face interventions with the physician, and two follow-up phone calls.

[Insert Figure 3]

Patients who received interventions showed sustained reductions in alcohol consumption and fewer emergency department visits and days of hospitalization, fewer motor vehicle events (except DUIs), and fewer legal events than those in the control groups. It cost \$166 per patient to deliver each intervention, yielding a cost-benefit ratio of 4.3 to 1 – a result similar to the 3.8 to 1 ratio reported by Dr. Gentilello, whose study yielded an estimated cost savings of \$1.81 billion dollars in health care costs alone.

As in Dr. Gentilello's study, we saw a big effect in the first six months of the study. In the heaviest drinking group (those who were consuming more than three drinks a day), the percentage in the high-risk category declined significantly more in the intervention group than in the control group.

It cost \$166 per patient to deliver the intervention. Based on the difference in number of ED visits and inpatient hospital days, we calculated a benefit of \$712 per patient. The cost-benefit ratio thus is 4.3, with a range of 0.6 to 8 and a 95 percent confidence interval. The CBA is 39, which is a huge effect.

A third study reported recently by Solberg et al. estimated that intervention could save 176,000 lives in a cohort of 4 million individuals. All of these studies provide useful ways of looking at the cost data, which support the kinds of things we're talking about in this meeting.

Challenges to Implementation of SBI

Richard Saitz, M.D., M.P.H., FACP, FASAM

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[insert photo of Dr. Saitz]

Dr. Eileen Kaner published the following observation almost 10 years ago:

"Facilitating professional behavior change towards an innovation is a complex issue, with clearly defined stages. . . . An effective change strategy requires a strong and robust evidence base, identification of environmental, organizational and individual barriers to change, and appropriately targeted interventions that maximize facilitating factors for the innovation while minimizing any barriers."

I've organized my remarks based on her statement. I'll talk about three things: evidence, barriers to change, and implementation.

Evidence. As you've heard this morning, we clearly have enough evidence to move forward with widespread dissemination. Realistically, however, we should expect solutions for complex behaviors and disorders to present challenges. For this reason, it's important to try to learn from the areas where the evidence for SBI is robust, as well as from the areas where it is not as robust.

Where is the best evidence? It is for alcohol, for brief multi-contact interventions in primary care settings, involving non-dependent unhealthy alcohol use, and for 12-month outcomes. These are the studies yielding the most robust results – the studies that led the U.S. Preventive Services Task Force to recommend unequivocally the use of SBI for all patients in primary care settings.

Where do we need more evidence? We need studies of drugs other than alcohol, and clinical outcomes in addition to reductions in consumption. For example, we have much less data on the effects of SBI on mortality and other clinical consequences. We also need studies involving diverse populations, conducted in settings other than primary care.

For drugs, although there are commonalities, it may be necessary to devise screening tools and brief interventions tailored to each. Prescription drugs present particular screening challenges. Although I may be able to detect a problem if I ask if you use marijuana and you say "Yes," it's quite a different if you report that you are using an opioid analgesic. Depending on your diagnosis, that may be what you should be doing. So distinguishing appropriate from inappropriate use is more complicated.

There also are diagnostic and intervention challenges. In the world literature, there are only three randomized clinical trials of screening and brief intervention in general health care settings. One is the WHO study, the results of which have not been published. The second is a landmark study published in 2005 by Ed and Judith Bernstein, involving more than

1,000 adults screened in outpatient settings. In that study, abstinence from cocaine in the intervention group increased from 17 to 22 percent at six months followup, while abstinence from heroin increased from 31 to 40 percent. The last is a study conducted in Sao Paulo, Brazil, in 2004 by Denise De Micheli. It hasn't attracted much attention because it was published only in Portuguese. It involved 59 adolescents and showed decreased use of Ecstasy, marijuana, and some other drugs.

These studies are promising, but we need more. For instance, what about changes in rates of alcohol or drug dependence? There is none, but this should not be a surprise. No one ever said that brief intervention is the same as specialized treatment for dependence and addiction. But studies showing that individuals who screen positive are more likely to receive appropriate referrals would be helpful, as would evidence that they are more likely to complete the referrals and receive the treatment they need. In fact, there are a few studies that suggest improvements in referral and completion of referrals, but the evidence is mixed.

Again, in some populations, the results are not as strong as in others. For example, of the studies of adolescents and pregnant women, there are four randomized clinical trials that produced negative results, and one recent study showing positive outcomes.

Outcomes data also are mixed for SBI conducted in general hospitals. The least strong evidence is for reductions in consumption, where four of the eight randomized clinical trials showed that consumption could be reduced. There is some promising evidence that brief interventions in hospital settings can link patients with treatment. It appears that, unlike the studies in other settings where the majority of patients who screen positive are risky but not dependent drinkers, the majority of those who screen positive in hospital settings actually are alcohol-dependent. For this group, brief interventions are insufficient to induce change.

On the other hand, seven of 12 studies of SBI use in hospital emergency departments that were examined in a meta-analysis of SBI (published by Per Nilssen in 2007) found a positive outcome either in terms of consumption or consequences. We need to learn from the heterogeneous designs and outcomes what works best there.

Now, some may ask, "Why should we bother with more randomized clinical trials?" The answer is that, as in the rest of medicine, such studies produce the most compelling evidence for adoption of a new patient care strategy. Also as in the rest of medicine, where studies yield mixed results, we should carefully examine the differences. As with other issues in medicine, we may find that because of variations in study protocols, some studies may exclude many patients who screen positive, significantly affecting the robustness of the results.

Implementation. These problems become an issue in implementation, because in clinical practice, you have to take care of all the patients identified by screening – no one can be excluded. We need to pay attention to this issue in order to avoid an implementation backlash. For example, if we implement SBI widely – which I think is the right thing to do – but the expected results are based on incomplete or faulty data, we have to be prepared for the questions that will be raised.

Of course, randomized trials are necessary, particularly in developing practice guidelines and quality improvement targets. It's what drives practice change and widespread implementation, supported by reimbursement. SAMHSA and NIDA are taking the lead in this process by releasing a request for proposals to conduct randomized trials of SBI in real practice settings and involving drug abuse.

Today, we have a number of useful screening tools, but what we really need is widespread dissemination of tools that have been validated in general health care settings, and that are brief enough to use in real patient encounters.. For alcohol, the single-item (quantity/frequency) screening tool is well on its way to solid validation. It's been validated reasonably well in primary care settings, and I think it's about as good as we're going to get.

With drugs, there are many substances that need to be asked about, and that leads to many questions. And as I mentioned earlier, prescription drug abuse is difficult to identify with short questions. That's why programs that screen for drug abuse use much longer questionnaires, such as the DAST or ASSIST. These instruments contain many items and must be scored, so they are not simple to administer. A physician cannot memorize a test that has many questions and needs to be scored. The ASSIST has been tested in primary care settings, and its principal utility probably will be in computer-based screening, with a report generated for the physician.

To try to avoid the problem of length, my colleagues and I have validated a single-item screening question in a primary care setting: "How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?" This is a fairly simple question. If the patient answers one or more, the test is positive test, and the sensitivity and specificity of that single item are there. So could we do better with more items? Could we get assessment of severity with many more items? Yes. Could we get implementation with many more items? I'm not so sure. Is one question easier to implement? It certainly is.

[Insert Figure 4]

Next, we need to think about assessment, and this area has received much less attention than screening. When a patient screens positive, the physician wants to know what to do next. The answer could be, give some brief advice, or refer the patient to specialized treatment, or any number of permutations that lie along that spectrum. To make a good choice, the physician has to know the severity of the patient's problem.

Dr. Dan Vincent did an interesting study in which he validated two questions that can help determine whether a given patient needs more intensive, more urgent and more specialized care, rather than less urgent, less intensive services (perhaps just a repeat intervention in primary care). The two questions that he used are somewhat sensitive and specific for alcohol use disorder, and parallel the *DSM-IV* criteria. This is at least a start at being able to obtain rapid assessments that could be used in real time in general health care settings.

One promising approach involves electronic solutions. In Germany, for instance, a computerized screening and reporting system was used with injured patients, who showed a significant reduction in overall consumption and risky drinking. Finally, training is necessary but not yet fully adequate. Studies show that skills-oriented rather than didactic training is most effective.

Barriers to Change. Privacy and legal issues are significant barriers to implementation of SBI. As you know, the appearance in the medical record of drug and alcohol problems can cause difficulties because of stigma, legal issues, insurability, and employer access to the information. Many of us in primary care settings have struggled with this. One solution, which Dr. Paul Seale suggests on his educational websites, is to document the behavior rather than the diagnosis. (Many times when we screen, we don't arrive at a diagnosis. The behavior may be described as "risky use," but that's not an ICD-9 diagnosis.) So this strategy may be helpful. Another approach is to create a separate record, but that is not a practical solution. It's not so safe in terms of medical errors, either, so it's not ideal for good care. This leaves privacy as a barrier for which there are no easy solutions.

A second barrier with a clear solution but not an easy one is the UPPL laws, which still exist in 32 states. A survey of surgeons by Carol Shermer found that a substantial number perceived UPPL as a barrier to screening.

Another legal barrier to screening is exemplified by a law that came into force January 1, 2008, in Oregon. It requires health care providers to notify a law enforcement officer or agency within five calendar days if the provider reasonably believes that a person receiving treatment after a motor vehicle crash in which the person was the driver likely had a blood alcohol level of .08 or greater. I wish I had a solution for this one. This is really quite disappointing, and I'm sorry to have to include it, but you need to know about it so that you can be watchful for similar efforts in other states.

Lack of time and lack of reimbursement are two items often cited as barriers that I think probably are red herrings. They may be contributing factors, but they are not major impediments to screening and brief intervention. By way of example, I've never had a physician tell me that he or she didn't have enough time to conduct cardiovascular disease screening – it's just not an acceptable excuse.

In terms of reimbursement, we probably should be thinking about whether we're paying enough for good quality health care that includes screening and brief intervention, versus arguing for additional payments for screening and brief intervention. Probably we should be doing both, but it's not clear to me that extra money for SBI will become a tipping point for implementation.

On the other hand, if payment is tied to performance and we track what physicians are doing and pay them for improved performance, I believe that would enhance dissemination. There is the model of good diabetes care, where payment for performance helped foster dissemination and implementation.

[Insert Figure 5]

Let me conclude by discussing the VA health system, which is the largest managed care organization in the world. In the VA, they use an electronic medical record. In that record was placed in electronic clinical reminder, which is the self-scored AUDIT-C. The VA educated their quality managers through presentations during conference calls (you can see that this was no small task). They also educated their clinical staff and fielded questions. They enlisted a national opinion leader to provide the reminders. They conducted performance monitoring by surveying patients, as well as through review of the electronic medical record. The VA also has a substance use disorder quality enhancement initiative; an office of quality performance, and a Center of Excellence in substance abuse treatment.

In short, all of the pieces were in place, and it led to success. In 1996, two percent of VA patients were screened annually with a validated instrument. In 1997, the number rose to 40 percent after they implemented a performance measure. In 2000, it was 85 percent. With the CAGE, they were identifying alcohol use disorders, but only 12 percent of heavy drinkers received advice.

In 2003, the VA implemented the clinical reminder system with the AUDIT-C. And in 2004, those reminders to screen were used 1.5 million times. Ninety-three percent of patients were screened across 21 VA networks, and 22 percent of the screens were positive.

The bad news is that brief interventions were conducted with only 28 percent of the patients who screened positive. That's what they're going to work on next. The VA experience suggests the kinds of challenges we face in implementation.

Allow me to summarize by saying that there are some unmet needs in terms of evidence, although the existing evidence is quite robust for non-dependent alcohol use in primary care settings. There are some barriers, but we can address them. As for implementation, the resources to implement sustainable SBI should be approached in the context of building robust systems for improving practice performance. These are large challenges, but they can be addressed and overcome.

SBI and the Role of Continuing Medical Education

Murray Kopelow, M.D., M.S., FRCPC

*Chief Executive, Accreditation Council for Continuing Medical Education (ACCME)
Chicago, Illinois*

[insert photo of Dr. Kopelow]

I'm the chief executive officer of the Accreditation Council for Continuing Medical Education (ACCME), the organization that's responsible for the accreditation of about 2,500 institutions and organizations around the country that provide continuing medical education to physicians.

Each year, about 11 million persons – two-thirds of them physicians – register for continuing medical education programs. Over the past few years, the CME system has been transformed from a curricular planning model to a very learner-based approach, in which education experiences are designed to fill identified professional practice gaps.

ACCME has captured this new approach in our compliance criteria for educational providers. The criterion that is most relevant to this discussion is that providers must begin by identifying a specific need or knowledge gap. The speakers this morning have done that extraordinarily well, in terms of the prevalence of substance use disorders and how often those disorders are not identified or addressed in general medical settings.

It's also important to recognize that, while CME is well established as a valuable and effective method of changing physician behavior, such change requires a process rather than an event. No single intervention can change a physician's practice. Clinical practice involves a complex social network, and no single intervention is going to change practice. A call from Dr. Madras, a visit from me, the presentation of these data – no one of them is going to do it alone.

Instead, changing behavior through continuing education requires a strategy and generally employs a continuum of approaches, ranging from coercion (such as JCAHO requirements) at one end to facilitation (such as the creation of an intent to change) at the other. At ACCME, we have adopted a model, published by Dr. Katherine Regnier, that views knowledge, competence and performance as three distinct variables that are modified or modulated in different ways, with different approaches to continuing professional development.

Educational interventions need to be designed to change competence, performance or patient outcomes. Therefore, the measurable outcome of an educational intervention in the context of your material is that the learner knows the questions to use in screening for risk factors or unhealthy behaviors, is competent to ask them, and actually performs such screening in his or her clinical practice. This sequence is reflected in the ACCME CME model, below.

[Insert Figure 6]

Said another way, educational interventions need to predispose or prepare individuals for the desired change, enable them to change by linking new knowledge and skills to what they already do in their practices, and then reinforce the desired behavior with reminders or feedback. Educational approaches also need to validate the acceptability of the desired change to the learner's peer group. If the peer group as a whole hasn't accepted – or isn't likely to accept – a proposed change, it is unlikely that any one person in the group will do so.

Moreover, change strategies must address multiple factors, including system issues such as professional regulation, group norms, and environmental factors, as well as issues concerning the context in which physicians practice such as administrative rules, economic incentives, and public pressure. We also can create communities of practice that evolve into learning communities.

Dr. Saitz' discussion of the VA makes that point well. The VA system often is at the leading edge of change because each VA Medical Center forms a community of practice. The physicians are engaged in change strategies by their peers and their practice environment, which can be redesigned to support the desired behaviors. Such approaches both motivate and facilitate change, but they still are the exception rather than the rule.

In terms of structuring the CME experience, data consistently show that live media are more effective than print; multi-media more effective than a single media; interactive techniques more effective than didactic ones; and multiple exposures more effective than single exposures.

[Insert Figure 7]

One approach that has not been discussed here, but that experience shows can incentivize change, is performance measurement. You know the maxims: "What you measure, you change." "Exams drive the curriculum." Data on what physicians don't know about SBI could be drawn from the responses to the USMLE, if questions about SBI were to be added to that exam. Alternatively, if every specialty board exam contained questions about SBI, it might change knowledge and practice overnight.

Business Models and Systems Changes That Support SBI

Eric N. Goplerud, Ph.D.

Director, Ensuring Solutions to Alcohol Problems,

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[insert photo of Dr. Goplerud]

The Institute of Medicine's "Crossing the Quality Chasm" series quoted research by Balas, in which he suggested that widespread adoption of new techniques into medical practice requires about 17 years. I took this as a standard and did a bit of research. In the 1990 volume on "Broadening the Base for Alcohol Treatment," we find the following advice: "Suitable methods of identification and readily learned brief intervention techniques with good evidence of efficacy are now available. The committee recommends broad deployment of identification and brief intervention." So, as we meet here today, we're one year behind the average that Balas identified.

Let's begin by considering some numbers that can put into context the cost of our failure to address alcohol and other drug problems and, conversely, the cost savings when we do address them. Some of the numbers are from the National Survey on Drug Use and Health (NSDUH). As noted earlier by Director Walters, NSDUH shows that about 22 million persons in the U.S. have a substance use disorder, but only about 10 percent – or 2.3 million persons – receive any form of treatment.

A key question then is, "Who pays for treatment?" The answer is that, contrary to popular belief, most of the funds for treatment come from States and local government rather than from Federal government. It also is important to look at Medicaid and Medicare as important sources of funding for treatment. In contrast, less than \$3 billion comes from private insurers, even though 80 percent of those who have a substance use disorder are employed.

Costs to the Economy. When considering the costs of substance abuse to the economy, I particularly want to focus on the \$42 billion in associated health care costs. Forty-three percent of persons who have an alcohol use disorder received treatment in the past 12 months. However, only about one of every five dollars spent on treatment goes to pay for actual treatment. The remaining four dollars pay for the injuries and illnesses caused or complicated by alcohol abuse. With respect to drug abuse, 11 percent of persons with a drug use disorder received treatment in the last 12 months. About 60 percent of treatment expenditures go to the actual treatment of drug addiction, while the remaining 40 percent are spent on treating the illnesses and injuries associated with drug abuse.

Costs Associated With Substance Use	
Traffic crashes, property destruction	\$24 billion (alcohol) \$37 billion (drugs)
Health care	\$26 billion (alcohol) \$16 billion (drugs)
Productivity losses	\$134 billion (alcohol) \$129 billion (drugs)
TOTAL	\$184 billion (alcohol) \$182 billion (drugs)

Additional analyses of the NSDUH data help us understand how businesses are affected by workers who have untreated alcohol or drug problems. Such workers:

- Miss an excess of full and partial days of work.
- Produce lower quality work than expected some or most of the time.
- Are twice as likely to report not working as effectively as others or as previously worked.
- Have trouble getting along with others at work.
- Make mistakes at work that cause accidents or safety risks.

Given these data, it is striking that businesses still are not paying attention. One reason is that they do not have a large number of health care claims for alcohol or drug treatment. This lack of claims is due, in part, to discriminatory insurance coverage and physicians who do not make a diagnosis to protect patients from retaliation at work or by the insurance industry.

Screening and Brief Intervention. Nationwide, there is a report card for health plans called HEDIS, which was developed by the National Commission for Quality Assurance. One report card measure is the percentage of employees or beneficiaries who received even one addiction-related service in the preceding year. For adults, only about eight in 1,000 of those with an alcohol or drug problem received treatment. About five in 1,000 employees identified as having an alcohol or drug problem are being treated through employee assistance programs.

Screening and brief intervention techniques have been available for 18 years. Yet only 0.7 to 1.2 percent of the estimated 8 percent of youths and adults who have a substance use disorder have been identified by health care plans.

Balas and Boren have found that promoting widespread adoption of SBI in mainstream medical practice requires an average of 17 years, despite evidence that rapid change does take place and is actually the norm. Levers that can be used to accelerate the pace of system change with respect to SBI include science; financing; purchaser expectations; leadership; demonstrations of effectiveness; practice standards; “how to” guides; education and training; and system change processes.

[Insert Figure 9]

The science that supports SBI is relatively strong. The National Quality Forum recently released consensus standards for evidence-based practice in addiction treatment that include SBI. A number of new reimbursement codes for SBI are in place. The Medicaid HCPCS codes, CMS G codes, and AMA CPT® codes recently were adopted. There are a number of things, which have come online. First is the HCPCS codes, which were adopted as of January 2007 for screening and for brief intervention. Medicaid, one of the challenges that we found is that they had to be adopted state by state, and states were and have been reluctant to adopt these codes.

So the main engine or the main reimbursement system are the CPT codes, which were released by the American Medical Association on November 2, 2007. The new codes are 99408 and 99409, which are for 15 to 30 minutes, plus 30 minutes of screening and brief intervention.

The AMA announcement was followed on November 5th by publication in the Federal Register of CMS' new physician payment schedule for Medicare. However, CMS did caution that, by statute, Medicare is not allowed to reimburse for screening unless such screening is specifically required by law. At the same time, they created the new G codes for assessment and brief intervention, using exactly the same language, and they directed the fiscal intermediaries to pay for services billed on the G codes effective January 1, 2008.

Now let's get down to some real dollars by estimating what it could cost an insurance company to cover screening and brief intervention, and what the cost-benefit would be. The average Blue Cross/Blue Shield company has about 500,000 covered lives. Of those, about 400,000, or 80 percent, are likely to use a health care service during the course of any given year.

On the basis of estimated outpatient, inpatient and emergency department claimants and the likely number of individuals who engage in risky or harmful alcohol use, if physicians were to screen 40 percent of those individuals, such screening might 15,000 to 16,000 persons per year. Of course, not everyone who screens positive is going to agree to treatment or to participate in a brief intervention. A number of research studies have reported a 95 percent dropoff between the number of persons who screen positive and the number who go on to participate in a brief intervention.

When we further adjust the data to account for the number of persons who screen positive and who require 15 to 30 minutes of brief intervention, and the number who have more complicated conditions who require more intensive services, we arrive at an estimate that to provide interventions to the 40 percent of patients who screen are positive for an alcohol use disorder or risky use would cost an insurance company about \$330,000.

But if you take the estimates from the Fleming and French articles, and from the Gentilello studies, the one-year cost savings for screening and brief intervention for those individuals is likely to be about \$760,000. You subtract out the \$300,000 in direct costs, you see a return on investment of \$23 for each \$1 spent. This estimate is in line with multiple studies, as cited by other speakers today.

SAMHSA and CSAT have developed practice standards and how-to guides for implementing SBI in the health care system. The Institute for Healthcare Improvement has identified approaches to change systems rapidly in order to improve quality. While they have found it is difficult to spread change from demonstration sites, the following elements are the most helpful for systems change: identify leadership that is change oriented; inspire, organize, and provide simple "how to" materials; partner with national organizations and systems; bring leadership together to apply tested and proven changes; use a regional "node structure;" use early adopters as mentors; create "sticky" goals that

are simple, focused, and persuasive; use practical tools that can be adapted at the local level; and regularly share experiences. These elements for the effective implementation of SBI are in now place or well under development.

But what if you're a community health center and you're trying to decide if you can afford to assign a staff member to conduct routine screening and brief intervention? We calculated that in an average community health center that sees 25,000 patients a year, most of whom are Medicaid beneficiaries or indigent, you would be likely to recover about \$42,000 for SBI services each year, but the savings in health care utilization would be about \$1 million.

Even better data should be developed through a project of the National Business Coalition on Health that is looking at the quality of care delivered by health plans in the commercial sector. In 2007, this group examined the quality of care delivered to about 106 million subscribers.

This is the question they ask that I think is key to our discussion: “Describe how the plan reimburses or will reimburse for the alcohol and drug screening and brief intervention CPT codes, and what are you doing to train?” By June 2008, we should have information as to what the commercial insurers are doing for the employees of companies like General Motors, Marriott, American Express, and other large employers.

I think that the point we're at with SBI is that we have components that are ready to go. We've got the science. The leadership is in this room. We have successful demonstrations of the effectiveness of intervention. How-to guides have been developed. Financing is coming into place. Education and training systems have been developed, and we have system change processes. So what I encourage us all to do is to dream, and then get to work.

LEADERSHIP AND SUPPORT BY THE PARTNER AGENCIES

Center for Substance Abuse Treatment / SAMHSA

H. Westley Clark, M.D., J.D., M.P.H., CAS

*Director, Center for Substance Abuse Treatment (CSAT),
Substance Abuse and Mental Health Services Administration*

[insert photo of Dr. Clark]

SAMHSA's mission and vision is to build resilience to facilitate recovery and a life in the community for everyone. This is the same goal that SBI intends to achieve. At CSAT, we want to expand and enhance clinical substance abuse treatment and recovery support services and have shifted to recovery-oriented systems of care.

There are many pathways to recovery and a comprehensive menu of services and supports is needed and contribute to the recovery process. Data show that we face many challenges in ensuring that the thousands of individuals who need treatment receive it. SBI is part of our response.

[Insert Figure 10]

Marketing the utility of SBI and other strategies needs to include data that demonstrate they are making a difference. CSAT and SAMHSA are promoting outcomes measures such as abstinence, employment, decreased crime and homelessness, and cost effectiveness. Physicians can play a critical role by screening for problematic use of alcohol and other drugs (including prescription and over-the-counter medications), conducting brief interventions, and referring patients to appropriate treatment. Our commitment to SBIRT demonstrates the importance of providing care for non-dependent and dependent substance users and creating a seamless linkage between mainstream health care and specialty addiction treatment services.

CSAT has awarded SBIRT grants to States and colleges and universities. As a result, by January 2008, State grantees reported that almost 600,000 clients received intake services, 500,000 were screened, 100,000 received brief intervention, and 20,000 were referred to treatment. There was a 150 percent increase in the number of clients reporting abstinence 6 months after intake. Students reported a 49 percent increase in abstinence 6 months after intervention.

[Insert Figure 11]

We are looking ahead to new program grants to States and Medical Residency Programs and nationwide SBIRT training for health care professionals. Most important is the implementation of the SBI codes into medical practice. CSAT also maintains an ongoing partnership with NIDA and its SBI research.

Preventing Prescription Drug Abuse

The larger society is rightfully very concerned about the misuse of prescription drugs and we also are working with our Federal partners on this issue.

In fact, prescription drug abuse is a large and serious issue, which is being addressed at the highest levels of the Federal government. However, there are many significant issues around the prescribing of controlled drugs that can, and need to be, dealt with by organized medicine. The Federal government stands ready to assist organized medicine in addressing those issues. We must all work together – ONDCP, the Department of Justice, and organized medicine – to think through the best policy and strategy directions to take in 2008, 2009, and beyond.

A major source of data on prevalence of prescription drug abuse is SAMHSA's national household survey (NSDUH), which can be downloaded from the agency's website (www.samhsa.gov). Based on the data collected in this survey, epidemiologists estimate that roughly 2.6 percent of the American population aged 12 or older has used a prescription drug for a non-medical purpose in the past month.

Pain relievers are the medications most frequently misused (with 1.9 percent of persons reporting such misuse), while a smaller percentage report misusing tranquilizers, stimulants, and sedatives. The percentage of persons misusing any prescription medication has remained fairly stable over the four years from 2002-2005.

SAMHSA/CSAT is implementing a strategic plan that addresses both therapeutic and non-therapeutic use of prescription drugs – essentially, the entire spectrum of controlled drugs and at-risk populations. Our comprehensive approach is intended to engage practitioners, regulatory and law enforcement representatives, and patient advocacy organizations as partners. We are supporting analytic work, using multiple data sets, that identify emerging issues and trends quickly so we can channel this information back to the medical community. We are also evaluating the effectiveness of specific prevention and intervention approaches. Our aim is first, to encourage practitioners and regulatory communities to agree on “best practices” for managing difficult clinical problems; and second, to engage leaders in the addiction and mental health communities in promoting new tools and screening instruments.

As part of the strategic plan, we have undertaken multiple initiatives designed to define prescription drug abuse, to describe accurately the current situation and trends, and to sharpen and enhance the questions we are asking. We are trying to identify key contributors to the prescription drug abuse problem so we can focus on solutions. Our efforts include the following:

- ***The National Survey on Drug Use and Health (NSDUH)***. Conducted by SAMHSA's Office of Applied Studies, the NSDUH surveys roughly 68,000 people nationwide on a random basis, making it the largest household survey in the country.

- ***A prescription drug abuse working group within SAMHSA.*** This working group includes representatives of all three SAMHSA Centers. In seeking comprehensive solutions, this group is collaborating with other Federal agencies, State authorities, health professionals, and pharmaceutical manufacturers and distributors. The working group is addressing issues of patient compliance as well as professional training and practice standards.
- ***Meetings with the pharmaceutical industry.*** SAMHSA/CSAT has held two annual meetings with representatives of the pharmaceutical companies that manufacture controlled drugs. In these sessions, industry experts hear substance abuse experts review the latest epidemiological data on misuse of prescription drugs, explore issues of physician education, and discuss standards of care.
- ***Evaluating NASPER implementation.*** Congress enacted the National All Schedules Prescription Electronic Reporting Act of 2005 (NASPER) to promote the adoption of State-administered prescription monitoring programs (PMPs). SAMHSA/CSAT is working to establish a set of best practices that can guide the establishment of these new computerized programs, as well as improve existing programs. Who sets the benchmark in defining excessive prescribing of opioid medications is of critical importance for those in organized medicine. Congress is concerned that quality of care be considered in setting those benchmarks. SAMHSA/CSAT is working to be certain that such benchmarks take into account the needs of legitimate medical practice.
- ***Monitoring drug use patterns and emerging trends.*** SAMHSA's Office of Applied Studies collects and monitors data on drug-related emergency episodes, treatment admissions, drug use patterns in specific population groups, and national and regional trends. Currently, SAMHSA is working with representatives of the National Association of Medical Examiners to propose a new classification system to categorize more accurately drug-associated death. SAMHSA/CSAT also is sponsoring epidemiologic studies related to relevant patterns and trends, as well as efforts to facilitate screening for alcohol and drug problems. These include:
 - A study of methadone-associated deaths in the State of Maryland, conducted by SAMHSA/CSAT with the University of Maryland and the Office of the Chief Medical Examiner of Maryland.
 - A special data analysis commissioned to follow up on anecdotal reports of buprenorphine diversion and abuse.
 - Analysis of poison control center data to identify emerging patterns of, and geographic variations in, misuse and abuse of prescription drugs.

Physician Training. SAMHSA is focusing particularly on how to reach practitioners with education and information about prescribing opioid analgesics. As you have heard at this conference, training in the management of pain and the avoidance of addiction is not as well established in the medical curriculum as we would like. The operating premise of medical education—“see one, do one, and teach one” – appears to have limitations with regard to prescribing very powerful analgesics. For example, a SAMHSA/CSAT study found that a large number of deaths have been associated with the misprescribing of methadone for pain. Unlike addiction medicine specialists, who receive special training in the use of methadone to treat addiction, most primary care practitioners have not received special training in the appropriate and effective use of methadone for pain. The result has been a fairly sudden and dramatic increase in methadone-related deaths.

SAMHSA/CSAT is addressing this deficit in medical training. We have initiated a discussion with the Association of American Medical Colleges, which represents 125 accredited U.S. and 17 Canadian medical schools, concerning what medical students are learning about prescription drugs, particularly the controlled substances. Other initiatives directed at medical education include the following:

- ***Continuing medical education (CME) courses on prescribing opioids for chronic pain.*** Modeled after courses offered at the University of South Florida, Case-Western Reserve University, and Vanderbilt University, the course being developed by SAMHSA/CSAT will focus on general principles and specific cautions involved in prescribing all classes of controlled drugs – opioids, tranquilizers, stimulants, and sedatives. With the help of a distinguished group of medical educators with addiction expertise, we expect the course to be ready for launch in 2007.
- ***Continuing medical education (CME) courses on the use of methadone in the management of pain.*** SAMHSA/CSAT has empanelled a group of experts in pain and addiction to create a model CME program on the use of methadone to manage pain. Development of such a course was strongly recommended by the participants in CSAT’s National Assessment of Methadone-Associated Mortality. As with the prescribing course, we also expect this course to be ready for launch in 2007.
- ***Symposia for health care professionals.*** In 2005, SAMHSA/CSAT joined with NIDA in sponsoring a symposium entitled “Prescription Drug Abuse: Science to Practice.” In 2006, CSAT sponsored a symposium on methamphetamine, including epidemiology, effects on the brain and body, identification of psychological complications, psychosocial and behavioral treatment, and the treatment of special groups. In 2007, SAMHSA/CSAT sponsored a symposium on prescription drug abuse at the 38th annual meeting of the American Society of Addiction Medicine, which focused on practical tools to improve prescribing practices.

- ***Buprenorphine Guide for Pharmacists.*** SAMHSA/CSAT has developed a practical guide for pharmacists, who play a major role in providing buprenorphine for the office-based treatment of opioid addiction.

These are all worthwhile activities, but if they are to reach their intended audience of practicing physicians, we need the collaboration and participation of organized medicine. Our objective is to minimize the diversion of prescription medications, to reduce the incidence and prevalence of prescription drug abuse, and to help those individuals who are addicted to prescription agents achieve recovery.

CSAT continues to support professional education, to develop publications, and to sponsor conferences and workshops. Our website at www.SAMHSA.gov provides additional information on these and related activities and programs.

Center for Substance Abuse Prevention / SAMHSA

Anna Marsh, Ph.D.

*Acting Director, Center for Substance Abuse Prevention (CSAP),
Substance Abuse and Mental Health Services Administration*

[insert photo of Dr. Marsh]

David Musto, a historian of American drug policy, looked at the relationship of attitudes to drug use. He found that drug use prevalence rates go down when there is a strong societal attitude of intolerance toward such use. As we seek to implement SBIRT widely, we must also promote intolerance of drug and alcohol abuse while cultivating a sense of compassion towards the individuals who are suffering from these problems.

The Surgeon General's report has pointed out the important interrelationship of co-occurring mental health and substance abuse problems. Interventions should be designed to address this complexity. The report includes several recommendations for health care practitioners. Specifically, practitioners can be sensitive to adolescents at a time of risk for alcohol and other drug use as well as the individual differences in development and other personal characteristics in an adolescent that may heighten the risk. Practitioners can discuss alcohol and other drug use with their young patients, be familiar with and strengthen referral networks for adolescents, and make education about substance use and its consequences and motivational intervention widely available. CSAP works extensively with youth and has many materials on its website that will be particularly useful to patients coming into medical offices. Some of these materials are directed to adolescents while others address parents, older adults, and pregnant women.

Findings from the National Survey on Drug Use and Health provide additional information and guidance regarding youth substance use and prevention. It appears that age at first use is highly correlated with later substance dependence. A perception of the risk of alcohol and drug use is inversely correlated with rates of substance use. And, perceived parental disapproval is correlated with lower rates of substance use. The efforts to implement SBI in the powerful and influential clinical health care setting can go a long way toward conveying the attitude of intolerance toward substance use. At the same time, we can help to separate the person from their behavior, recognizing that impaired judgment and other acts do not reflect the real person but is the disease talking.

National Institute on Alcohol Abuse and Alcoholism / NIH

Mark Willenbring, M.D.

*Director, Division of Treatment & Recovery Research
National Institute on Alcohol Abuse and Alcoholism (NIAAA),
National Institutes of Health*

[insert photo of Dr. Willenbring]

Alcohol consumption is among the top 10 leading causes of death and disability. The use of SBIRT is intended to prevent harmful use of alcohol and reduce these numbers of deaths and disabilities.

The public health burden of excessive alcohol consumption is reflected in 12-month prevalence figures for 1991 and 1992, and 2001 and 2002. The data show that alcohol abuse has risen somewhat, while dependence has stayed relatively the same. Both alcohol abuse and dependence affect about 4 percent of the population. The estimated annual cost of alcohol abuse and dependence is \$185 billion. These data indicate that we have not made much progress in reducing the prevalence of excessive alcohol consumption.

As we have seen with regard to other substances, alcohol programs typically begin in youth, with a peak prevalence of 13 percent occurring between the ages of 18 and 20. Prevalence then decreases fairly rapidly with age, reaching a low of 1.0 to 1.5 percent in old age. Across all age groups, the average past-year prevalence for alcohol dependence is 3.8 percent.

Alcohol is the third leading cause of death in the U.S., behind tobacco and poor diet and physical inactivity. Alcohol use is a major external, non-genetic, modifiable factor that contributes to death. Its effects exceed those of microbial agents, toxic agents, and motor vehicle crashes. When you look at disease burden and disability-adjusted years, alcohol use disorders are the second leading cause of disability and disease burden in the U.S. today. Alcohol use also is associated with 41 percent of traffic deaths and 29 percent of suicides, which constitute the leading causes of death among persons aged 15 to 35.

These alcohol use data have real medical implications. For example, a recent study by Willcox looked at mid-life risk factors and predictors of living past age 85. The public health burden of high alcohol consumption (defined as three or more drinks a day) is considerable and in the same range as that for depression, hypertension, and diabetes. In the adult population, the consequences of exceeding three drinks per day eventually manifest in some individuals. About 5 percent of the population fall into the category of moderate or harmful alcohol use. About 3 percent of the population experience more severe dependence, marked by daily or near-daily heavy drinking. About 1 percent progress to chronic, severe, and persistent alcohol dependence.

The DSM-IV criteria that are used for clinical diagnosis refer to a continuum of alcohol use disorders, with alcohol abuse preceding alcohol dependence. This continuum leads us to look at the heterogeneity of treatment populations, which can be identified by the

severity of their alcohol consumption. As the Figure shows, our interventions must also reflect the severity of alcohol consumption.

[Insert Figure 12]

For instance, brief intervention can be used for those populations identified as being at risk and having harmful use patterns. Individuals who are diagnosed as dependent drinkers may receive behavior or medication therapy, while those with chronic relapse disease may receive disease management and treatment. One aspect of drinking behavior that is key to SBIRT is high risk drinking, including binge and heavy drinking behaviors. The highest prevalence of high risk drinking is among youth and young adults – our typical treatment seeking population.

Moreover, the quality of care for alcohol dependence ranks lowest among 30 acute and chronic conditions studied and reported by McGlynn in 2003. The standard of care for alcohol dependence was met only 11 percent of the time in primary care practices. Interestingly, care of depression ranked high on the list. This was not always the case, so there may be a lesson in how that change was effected.

But there are many barriers to overcome. For example, if we look at individuals who drink heavily once a month, they must have experienced a consequence of that drinking for a DSM-IV diagnosis of alcohol abuse or dependence. This is like diagnosing hypertension only after the patient has suffered a stroke or heart attack. We know that individuals, who exceed certain daily alcohol consumption levels on a regular basis but have not yet experienced consequences, are at elevated risk for dependence and later consequences. NIAAA's National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) study also demonstrates that 43 percent of daily heavy drinkers do not meet current criteria for any alcohol use disorder. This finding suggests that there is a problem with the diagnostic tools currently available.

Addressing the Public Health Burden of Alcohol Disorders

My colleagues at NIAAA and I have been working for some time on Screening and Brief Intervention and its integration into primary medical care. Today, I want to provide a framework that is grounded in the new research on alcohol use. It is good to address alcohol as well as illicit drugs because we know that these drugs go hand in hand.

NIAAA has developed a clinician's guide for SBIRT in the primary care setting that is available in various formats. Still needed are guidelines for screening in underage populations based on the current scientific evidence. We also need to develop ways to reach high risk adolescents. NIAAA is implementing a number of activities to address the burden of excessive alcohol use. They include:

- Model curricula for medical, social work, and nursing education.

- Collaboration with other agencies such as the National Institute on Drug Abuse, the Centers for Medicare and Medicaid Services, the Substance Abuse and Mental Health Services Administration, and the Agency for Health care Research and Quality.
- Educational research grants and career development awards to help us learn how to better educate clinicians.
- Recovery research as well as treatment research.
- Implementation research to determine how to incorporate new strategies into practice settings and identify which ones succeed or fail.
- Dissemination of an updated *Clinician's Guide* (in 2007) containing current information on new medications that give physicians tools to treat patients in office-based settings. The updated Guide also includes a medication management support tool to help nurses provide behavioral support for patients with alcohol use disorders. There is additional online support at www.niaaa.nih.gov/guide.

We are pleased that the Guide and some of the related tools developed by NIAAA are being used in many medical schools and behavioral health care agencies.

National Institute on Drug Abuse / NIH

Nora D. Volkow, M.D.

Director, National Institute on Drug Abuse (NIDA)

National Institutes of Health

[insert photo of Dr. Volkow]

The medical community has not yet accepted drug addiction as a disease and part of their responsibility. This is unacceptable and the initiative to bring SBIRT into the medical community is a first step to eventually changing this culture and facilitating the transition. The association between substance abuse and medical diseases highlights the urgency for the medical community to stop ignoring substance abuse. Those of us treating patients with substance use disorders recognize that such persons also are at high risk for other medical diseases and psychiatric disorders.

This meeting is extraordinarily important with respect to the prevention and treatment of substance use disorders. The medical community has a unique role in ensuring early intervention and treatment. Yet, despite this role, we are lagging behind. The education of medical students and residents regarding substance abuse is an initiative that will have great impact on the prevention and treatment of this disease.

Data from a 2005 study by Bernstein et al. show that brief intervention is beneficial in terms of both health outcomes and cost effectiveness.

[Insert Figure 13]

I know I am preaching to the converted and that I do not need to convince you. Instead, I want to give you some arguments you can use that may help all of us be more effective as we discuss with others the importance of integrating teaching about substance use disorders into medical education.

Addiction is a Disease

One of the concepts that is difficult to accept is the notion that drug addiction is a disease of the brain. This is not a trivial issue. It is a justification for insurance companies not to pay for drug abuse treatment. Drug addiction is considered a lifestyle choice as opposed to a disease.

Science provides unequivocal evidence that drug addiction is a disease. Objective research data show that you can actually look at images and document where in the brain or in the heart there is pathology. I illustrate this point with images of the heart of a patient who suffered a myocardial infarction. The imaging technology allows us to see how the tissue is consuming glucose. In the case of the heart, brain, and other organs, the rate of sugar consumption is a very good indication of the viability of the tissue. The tissue consumes sugar because it needs it to produce energy.

No one questions that a person with a myocardial infarction has a disease. One of the reasons you cannot question it is you can clearly document that the heart is not functioning properly. You can see the significant decrease in glucose consumption that is producing the patient's symptoms. The same technology looks into the brain of a person who is addicted to drugs to identify which areas have been affected. Instead of bringing the camera to image the heart, you image the brain.

The brain of a normal person has high activity in the area of the frontal cortex. Images of people who are addicted to drugs consistently show abnormality or less activity in the orbital frontal cortex. Just as we can delineate where the tissues are not functioning, we can delineate the areas of the brain that are not functioning properly in a person who is addicted. This identification of where the pathology is occurring helps us to identify the symptoms.

The brain is much more complex and difficult to understand than a muscle. The frontal cortex is an area of the brain that is extraordinarily relevant. It allows us to exert control over emotions and desires. When the activity of this area of the brain is disrupted, the ability to control desires is significantly impaired. When we dismiss drug addiction as "... that person who does not have free will to stop taking the drug," we do not recognize that free will is a product of the neurobiology of the brain. Imaging is now identifying areas of the brain involved with free will.

Unfortunately, drugs of abuse do not just affect the brain. The drugs go everywhere. Cigarette smoking, for instance, does not just affect the brain. Images show an enzyme in the body that allows us to detoxify a wide variety of compounds and it is localized in the brain, heart, lungs, liver, and kidneys. The chemical nicotine almost completely inhibits the enzyme in the brain of a cigarette smoker. The enzyme is no longer present in the lungs. There is a very low concentration of the enzyme in the heart and significant reductions in the kidney and liver. The smoker's body is not just getting the nicotine; it is less able to detoxify itself, contributing to the high morbidity associated with cigarette smoking.

When the medical community recognized that more than the brain is affected by drugs, it became very relevant for physicians to evaluate whether a person is taking drugs. If physicians do not conduct such an evaluation, they are unable to properly manage their patients.

We now recognize that drugs are involved in a wide variety of diseases. The first instance occurred with lung cancer and nicotine. Yet smoking cigarettes and nicotine are also associated with pulmonary disease, premature births, and respiratory syndrome. We recognize that mental illness is frequently associated with substance abuse. In certain instances, the use of drugs may facilitate a recurring mental disorder. It is essential for physicians to understand the importance

Drug Abuse and Addiction Contribute to Other Medical Disorders

- Mental illness
- Cancer
- Infectious diseases (HIV, HCV)
- Cardiac
- Pulmonary
- Learning disorders
- Obesity
- Cerebrovascular (strokes)
- Traumatic injuries (accidents)

of drugs in the wide variety of diseases experienced by their patients.

Addiction is a Developmental Disorder

A second important concept is that drug addiction is a developmental disorder. Most of the problems of drug abuse, experimentation, and addiction occur during adolescence or in the early twenties. The consequences of such drug use are going to have an impact throughout a person's entire life.

Studies show that the changes in the brain associated with drug use occur much faster during adolescence. The brain of the adolescent has not formed the proper connections that inhibit emotions and desires. The result is that adolescent drug users are more prone to engage in risky behavior. Further, this is the age when individuals are supposed to acquire skills and learning. Drug use directly disrupts these mechanisms and places individuals at a disadvantage educationally and in their ability to succeed professionally.

Addiction is a Chronic but Treatable Disorder

The third important concept is that drug addiction can be treated and that there is a clear-cut evidence base that treatment works. With imaging technology, we can now show treatment working with respect to having people stop taking drugs, and with respect to helping recovery in the brain.

At the same time, we need to recognize that drug addiction is a chronic disease. Some say that drug addiction cannot be treated effectively because about 40-to-60 percent of patients relapse. McLellan's data for other diseases, such as Type 1 diabetes and asthma where we are not questioning treatments, show that relapses for these diseases occur at the same rate as drug addiction. The issue is we are holding drug addiction to a completely different standard than other chronic diseases.

Relapse Rates for Drug Addiction Are Similar to Those for Other Chronic Illnesses

- Drug Dependence: 40 to 60%
- Type I Diabetes: 30 to 50%
- Hypertension: 50 to 70%
- Asthma: 50 to 70%

We can provide better treatment for drug addiction by understanding that it is a chronic disease and that relapse occurs. A patient with hypertension, for example, is provided an antihypertensive medication and blood pressure goes down, an indication that the medication is working. If the patient stops taking the medication, blood pressure goes up. This is clear cut evidence that this medication is effective. We use a completely different logic for drug addiction. When patients addicted to drugs go to a rehabilitation program and stop taking drugs, they are often released with no aftercare and relapse. We then say that treatment does not work. In one scenario, we recognize the importance of continued care. In the other scenario, we use magical thinking and believe that the treatment should be sufficient to cure drug addiction.

Highlighting the importance of drug addiction as a disease of the brain, as a developmental disease, and as a disease that is chronic and requires continued care is extraordinarily relevant to our ability to document that drug addiction, like other diseases,

can be treated. In addition to sponsoring research that explores these issues, NIDA is helping to prepare primary care physicians to be partners in preventing and treating drug abuse and addiction through a physician work group and a physicians' page on the NIDA website. Further, NIDA plans to establish a number of Centers of Excellence for Physician Information in collaboration with the AMA that will improve physician education on drug abuse and addiction.

As a result of our collaboration with SAMHSA and CSAT, NIDA has funded several grants related to screening and brief interventions that concentrate on adolescents. We intend to support additional research with adults and on the economic benefits of SBIRT. At NIDA, we also recognize that we need a multi-prong approach to build a strong collaboration with and to change the culture of the medical system. The Institute launched the "NIDA Goes to the Doctor" initiative and funded four Centers of Excellence to better train doctors to recognize substance abuse and properly refer patients and their families for treatment.

TAKING ACTION: STRATEGIES FOR CHANGE

Goals and Issues for Consideration by the Work Groups

Bertha K. Madras, Ph.D., Conference Chair

*Deputy Director for Demand Reduction,
Office of National Drug Control Policy (ONDCP)*

[run with candid photo of Dr. Madras with attendees]

The priorities of my office are to prevent drug use, to intervene with drug users, and to treat addiction. Today we focus on the first two, although the third is clearly a critical component of the continuum of care once one identifies a substance use disorder. I'd like to quickly outline the public health challenges we confront as a federal agency, the relationship of those public health issues to medical consequences, and the reason we are so convinced that it is essential to recruit medical professionals to this point of view. These are embodied in seven public health challenges, as follows:

1. Drug use starts early and peaks during youth, when the adolescent brain is not fully developed.
2. Seven million Americans abuse or are addicted to illicit drugs. The number increases to well over 20 million Americans when the drug-using population is combined with the alcohol cohort.
3. Illicit drug use is escalating among baby boomers (adults aged 50-54).
4. If illicit drug use progresses to abuse and to dependence, the treatment services needed to be effective will be very labor intensive.
5. Initiates into prescription drug abuse exceed those of marijuana.
6. Substance abuse is associated with medical consequences that cross medical specialties.
7. The vast majority of people with a diagnosable illicit drug or alcohol disorder are unaware of the problem or do not seek help.

Medical professionals can reduce the public health burden of these seven challenges with new practice strategies. The public health solution is SBI. As today's presenters have affirmed, brief interventions are clinically effective and cost-efficient. SBI demonstration projects have screened almost 460,000 patients in primary care clinics, hospital emergency departments, and other sites. Almost 23 percent of patients screened positive for substance use and 70 percent of those individuals received an intervention or were referred to treatment. Follow-up data show a significant decline in illicit drug use and

heavy alcohol use, and improvements in health, emotional problems, and other areas of functioning. As a preventive measure, SBI is ranked by the National Commission on Prevention Priorities among the top four, along with use of aspirin for men and women, childhood immunizations, and smoking cessation.

I now invite all our participants to help us develop strategies to move from research to action. To facilitate this process, each participant has been assigned to one of six work groups, which will devise strategies for coordinating public systems (Group 1); engaging purchasers and payers of care (Group 2); engaging support for research (Group 3); engaging health care professionals (Group 4); engaging training and dissemination systems (Group 5); and engaging policymakers and the public (Group 6).

Each of these groups will be led by co-chairs who are experts in the relevant systems and subject areas. In addition, each group will be assisted by a facilitator who is knowledgeable about SBI and other content issues. We would like to ask each work group to:

- Review the recommendations developed by participants in the first and second National Leadership Conferences;
- Identify those recommendations that are most germane to the situation being addressed by your group today; and
- Develop priorities and specific strategies for achieving each of the selected recommendations.

Because the time available is relatively brief, we ask that each group focus its discussion on just one or two areas of paramount concern. Please explore the selected areas and develop strategies that could offer reasonable solutions to the challenges and problems our faculty has outlined this morning.

Each group will present its findings and suggested strategies to the conference this afternoon. We look forward to hearing from you.

Group 1: Strategies for Coordinating Public Systems

CO-CHAIRS:

John Allen, Ph.D.
Michael Cunningham

FACILITATOR:

Robert Lubran, M.S., M.P.A.

MEMBERS:

Michael

Members of the Work Group considered ways to use the systems that fund and regulate medical practice and health care delivery – such as licensure, accreditation, and certification – to create incentives for change in physicians’ ability to identify and treat substance use disorders and to prescribe medications with abuse potential so as to meet patients’ medical needs without contributing to prescription drug abuse.

The Work Group endorsed collaboration with the Federation of State Medical Boards (FSMB) to encourage state boards of medicine to place a renewed emphasis on physician competence in screening and brief intervention for SUDs and proper prescribing of controlled substances.

Similarly, the group proposed collaborative activities with the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) to enhance the effectiveness of the existing JCAHO standard on screening for substance use disorders (for example, by focusing on this requirement in surveyor training sessions). Group members also raised the possibility of incorporating a specific item on screening and referral as a “provision of care performance element” in accreditation surveys of hospitals, long-term care, and ambulatory care centers.

Recognizing that appropriately credentialed addiction experts play an essential role as resources for training, consultation and referral, members of the Work Group called for the development of a credentialing system that confers official recognition of such expertise by organizations such as the National Board of Medical Specialties.

The group also endorsed a proposal to incorporate language that reflects competence in prescribing controlled drugs into licensure standards and certification/recertification programs. Some group members proposed that, at the time of re-registration with the Drug Enforcement Administration, physicians should be required to provide evidence of CME credits and/or focused self-assessment in this area.

Group 2: Strategies for Engaging Purchasers and Payers of Care

CO-CHAIRS:

Lawrence S. Brown, Jr., M.D., M.P.H., FASAM
Eric N. Goplerud, Ph.D.

FACILITATOR:

Mark L. Kraus, M.D., FASAM

MEMBERS:

Peter

Substance use disorders are among the costliest of preventable health problems, exceeding even the costs associated with Alzheimer's disease, spinal cord injury, depression, developmental disorders, and other devastating maladies of the brain. But, unlike many of these diseases of the brain, this brain disease is preventable and treatable because we know the primary causative agent: the drug. This knowledge can lead to effective strategies to prevent, to intervene, and to treat.

Given the relationship between health plans' reimbursement policies and patients' access to care, this Work Group focused on ways to identify and overcome specific financing and reimbursement practices that are barriers to care. Their recommendations were designed to support reimbursement policies that encourage physicians' acquisition of knowledge and skills and their employment of clinical best practices with regard to screening and intervention for substance use disorders, as well as optimal prescribing of drugs with abuse potential.

For example, the group called for widespread efforts to activate the new Health Care Common Procedure Coding System (HCPCS) Level II codes, to be used by Medicaid for reimbursement of screening and brief intervention (SBI). Such codes became effective in January 2007, but they are not automatically activated in the State Medicaid programs, so a key strategy is to encourage State Medicaid Directors to activate these codes within their States so that providers can use them for reimbursement purposes. Participants suggested that ONDCP, national medical associations and their state affiliates, and the Center for Medicaid and Medicare Services (CMS) should work collaboratively with Medicaid Directors to accomplish this task in each State. The group also suggested strategies to educate physicians about the new HCPCS codes and how to use them to obtain reimbursement.

As a complement to the new HCPCS coding, the Work Group endorsed the American Medical Association's decision to add SBI to its Current Procedural Terminology (CPT) codes, which clears the way for reimbursement for these services by private insurers and Medicare. A parallel implementation strategy would involve bringing together the major commercial insurers to secure their agreement to pay for services based on the new CPT codes.

The group also addressed the problem of UPPL and the ways in which these archaic laws discourage staff in emergency departments and other health care settings from conducting screening and brief intervention. This 1947 model law was developed by the National Association of Insurance Commissioners to systematize health insurance policies across the States. Unfortunately, the model law contains language stating that an insurance carrier is not responsible for health care costs related to injuries sustained while an individual was under the influence of alcohol or narcotics and not under a physician's care. The UPPL's main effect has been to reduce the willingness of hospitals to screen for alcohol and drug problems.

Fortunately, the National Association of Insurance Commissioners, the American Medical Association, the American Bar Association, and many other prominent organizations now recognize that the UPPL is a poor law. Through their leadership and that of many other individuals and organizations, a growing number of States are repealing the law. A major benefit of repeal is that hospital emergency departments and trauma centers can start to conduct screening and brief intervention for substance use disorders without fear that their patients will be denied health care benefits as a result.

While praising the efforts by advocates to remove UPPL laws at the State level, members of the Work Group recommended that ONDCP work with the national medical organizations to support model Federal legislation that would eliminate UPPL laws nationwide, rather than continuing the current State-by-State effort.

Group 3: Strategies for Engaging Support for Research

CO-CHAIRS:

Thomas Babor, Ph.D., M.P.H.
Michael Fleming, M.D., M.P.H.

FACILITATOR:

Tom Stegbauer, Ph.D.

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Jeffrey Samet, M.D., M.A., M.P.H.

MEMBERS:

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Vivian B. Faden, Ph.D.
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SBI and the struggle to have it universally adopted in health care settings is not just a U.S. domestic issue. It's very international, and a lot of the advances have come through people in other countries thinking in different ways and the reciprocal influence with people in this country.

Another landmark was the "Broadening the Base" study conducted by the Institute of Medicine in the late 1980s, which was published in 1990. The title of that study emerged from the realization on the part of the IOM committee that the challenge is not just to think differently about alcohol addiction treatment; it's broadening the base of treatment to get people help earlier. The research base has grown in proportion to the expanded interest. Until recently, most of the focus has been on translational research with regard to biotechnology information being turned into pharmaceuticals, but relatively little attention has been given to translating behavioral interventions into clinical practice, no matter how strong the evidence for their effectiveness.

In fact, behavioral interventions have never ranked very high among the various kinds of interventions used in medicine. Pharmacotherapeutic interventions, surgical interventions and device interventions receive quite a lot of attention. But behavioral interventions always have taken something of a back seat, probably because there's not a lot of money there – no major commercial applications; no drug or device or something you can make a lot of money on. And in truth, behavioral interventions also have the aura of being a little "touchy-feely" – not a tangible service like writing a script. That's what's so encouraging about ONDCP, NIH and SAMHSA all getting behind SBI and supporting the idea of research to strengthen the evidence base – it's really one of the first good examples of translational efforts related to a behavioral intervention.

In terms of the kinds of research that would facilitate adoption of SBI, we need tools that can be used with specific audiences. For example, we know that alcohol use is normative behavior in some underage populations and that, by the time young people graduate high school, most are using alcohol regularly. So we need to think about how to provide tools not only to pediatricians and to general practitioners, but also to other professionals who interface with this population – something for school staff, the athletic coaches, the sports medicine consultant. The CRAFFT model developed at Harvard might be a good start, although the studies have found some problems in terms of adolescents “gaming” the system. We also need a better understanding of the second-order effects of the substance use disorders, particularly in pediatric populations, and the effects of SBI on those medical conditions and complications.

At a more fundamental level, we need to understand more about the heterogeneity of alcohol use disorders. Not every population or individual follows the same course with respect to alcohol use. Many young people have early onset alcohol dependence but recover by age 25. We don't understand much about that process. One case might involve an individual aged 30 to 40.. who's been ill for 15 to 20 years and manifests chronic and severe alcohol dependence. Another individual may have a chronic but moderate level of dependence and can remain at that level over decades and well into old age.

If we look at a group of individuals who were diagnosed as alcohol-dependent a year ago, we typically find that a third of the group is in full remission, either abstaining from alcohol consumption or engaging in low-risk use. Another 40 percent are in partial remission: that is, they are not symptomatic, but they are drinking at a level sufficient to produce some symptoms, although they do not meet the criteria for dependence. The other 25 percent of the group continue to be dependent on alcohol. Using this breakdown, it appears that many individuals who are dependent on alcohol get well, and most of them do so without specialized treatment. But we don't yet fully understand this phenomenon.

One of the things we've learned is that the prevalence of substance use disorders in the general population is much higher than anyone ever anticipated, and that high prevalence – in excess of 20 percent when you include both alcohol and drugs – gives us purchase to demand more attention, more resources, including research funding.

Some outcome studies may need to follow patients for many years, but if we look at breast cancer or heart disease research, a 20-year follow-up is not unusual. So this may be the time to start framing outcomes studies of SBI that have really long follow-ups. In fact, we'll have to do that at some point to resolve the questions.

We also need evidence to help us create a continuum of care for alcohol use disorders, beginning with those individual who simply exceed the daily limits on a regular basis, even without current consequences. In this way, an alcohol use disorder is treated the way we treat hypertension, where we don't wait for medical consequences before we intervene.

For example, with individuals who have low to mild risk, the treatment approach might involve facilitated self-change and brief motivational counseling. For an individual with moderate to severe risk, the intervention may involve primary medical care and general mental health care, pharmacotherapy, outpatient behavioral services, and remission-oriented rehabilitation programs. With more severe dependence, specialized treatment or abstinence-oriented, time-limited rehabilitation may be appropriate.

We also need to assess what makes brief intervention work and how to screen and refer individuals to treatment who are in the criminal justice and social services systems. Ultimately, longitudinal studies are needed to understand the emergence of alcohol use, expression of irregular behaviors, and the mechanisms of behavioral change. In addition, we need to look at patterns of drinking and risk factors to develop a model that might be a useful guide for practitioners.

If we're going to implement SBI, we need a workforce that's trained and knowledgeable about both SUDs and the utility of SBI in addressing them. Health professions training is incredibly productive in moving the field forward, but we don't know much about the efficacy of various training methods, particularly in training health professionals other than physicians. Faculty development is key, because nothing will be implemented if staff don't know how to do it and understand why they should do it, and that requires a carefully prepared faculty. Especially in medical education, if the case that's presented involves pancreatitis but no one mentions that alcohol use is the cause, all the trainees will be able to discuss pancreatitis but they won't know to ask about alcohol use.

Pharmacotherapies are going to be very important and need more research, especially in terms of how they should be combined with behavioral interventions and relapse prevention strategies. We also need to better understand the specialized addiction treatment sector and how it can serve patients with multiple and complex needs. Many patients have severe comorbidities and need fully integrated medical and psychiatric services, delivered by integrated mental health and addiction treatment systems.

Group 4: Strategies for Engaging Health Care Professionals

CO-CHAIRS:

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MEMBERS:

Lawrence

In discussing how to incentivize physicians to adopt new behaviors such as screening and brief intervention, it is important to acknowledge that building confidence is key.

Physicians enjoy doing what they believe they do well and they dislike activities they believe they are not skilled at. Put differently, physicians are unlikely to begin screening patients if they are uncertain of what to do once they identify an individual with an SUD.

Therefore, skills training rather than didactic lectures should be at the core of any CME course on screening and brief intervention. Unfortunately, most physicians do not yet view the impact of screening for SUDs in the same way they see the impact of a lowered LDL level. One way to register the effect of screening and brief intervention for SUDs is to include patient follow-up in the training experience. Such a longitudinal view often demonstrates that activities such as asking about drinking and contracting with a patient to reduce consumption can be an effective approach with distinct health benefits. If physicians became convinced that simply asking how much alcohol a patient consumes is a significant step, they might be more inclined to begin screening.

In fact, knowledge, skills, and *attitudes* that support SUD competencies all are essential to screening and brief intervention and probably should be part of such a curriculum. AMERSA's *Strategic Plan for Interdisciplinary Faculty Development* (2002a, p. 4) includes a one-page description of the core knowledge, skills, and attitudes about SUDs that health professionals need (see the Resources section, following). Linking each concept presented in that document to a specific amount of time that should be devoted to residency training would be a good start in helping physicians become knowledgeable about and comfortable in employing the skills required to conduct screening and brief intervention.

A Model Train-the-Trainer Approach. Since all physicians prescribe, and screening and brief intervention are part of responsible patient screening, the argument was put forth that prescriber education is the best place to intervene in residency training. For example, a plan was proposed that would focus on appropriate opioid prescribing. Hydrocodone-based drugs (e.g., Vicodin, Lortab) are among the most widely prescribed controlled drugs in the U.S. A group of interested organization (including ACGME, AMERSA, ASAM, AAAP, AOAAM, AMA, and the American Pain Society) could collaborate to develop and conduct a train-the-trainer program that would address over-

and under-prescribing of opioids. Such a program would involve residency program directors and co-directors in selected specialties (e.g., family medicine, internal medicine, emergency medicine, OB/GYN, pediatrics, and psychiatry) and involve related professions (e.g., dentistry, nursing, physician assistants). Interested individuals from these specialties would be trained centrally, then return to their home institutions, where they would conduct regional trainings and lead CME courses for local practitioners.

Engaging Health Professions Organizations. Health professions organizations and specialty boards can serve as the mechanism for achieving change at the RRCs. To do so, it will be necessary to create an initiative to advocate to each RRC for the adoption of new requirements for screening and brief intervention and prescriber education. Professional organizations, especially those representing practitioners in the relevant specialty and/or having the authority to appoint members to the RRCs (such as the AMA), could influence this process significantly. In addition, to advance the cause of screening and brief intervention and better prescriber education, it will be necessary to recruit respected, well-placed champions within each specialty. The staff members of specialty boards can be particularly helpful in this regard because they tend to stay in place for multiple years, while elected or appointed chairs come and go. (It would be important to recognize that advocacy for SUDs would in effect compete with those for coronary artery disease, diabetes, and other disorders for RRC and specialty board attention.) However, this may be a particularly propitious time to pursue the matter. AAFP and its members are increasingly interested in screening and brief intervention, as family physicians see many patients with mental health and substance use disorders.

Engaging Medical Students. Medical students can serve as catalysts for change. Students (especially those who are members of the Health Professional Students for Substance Abuse Training, or HPS-SAT) are energetic and enthusiastic participants in conferences on substance abuse training issues and bring the message back to their institutions. Michael Dekker (who represented HPS-SAT at the Conference) recommended that a faculty member at each medical school act as a liaison and mentor for those students who show an interest in SUDs and who want to become more active in the field. (In its membership roster, HPS-SAT has many faculty and students and could facilitate such a connection. Outside funding would help make this a reality.)

Another incentive for medical school students would be to offer online education modules that focus on screening, intervening, and referral for SUDs. Medical schools that have the highest rate of student participation in completing the learning modules could receive special recognition in some tangible way (e.g., scholarships to allow students to attend relevant conferences).

Another approach that would spark interest in substance abuse education among students and also create a depth of expertise within institutions is the Center of Excellence model. For example, the University of Pennsylvania sponsored a program through which minority medical school students were invited to attend a six-week program on SUDs. The students saw patients; heard lectures and participated in related activities. Participants received academic credit and funding. After the students returned to their

home institutions, the Center of Excellence program received numerous requests from these medical schools for more educational experiences. The Center of Excellence at the University of Pennsylvania existed as long as the funding lasted. The home institutions of the visiting students were positively affected because students who had gone through the program were enthusiastic about what they learned.

The Center of Excellence model is particularly helpful to students whose home institutions do not have sufficient depth in SUD education. Institutions that establish Centers for Excellence in Substance Abuse Education could “own” this specialty. Two or three centers could be established, with schools competing for funding.

Engaging Medical School Faculty. The AAMC online resource known as MedEdPortal is a new approach to online publication that offers peer review for teaching resources. MedEdPortal is a free publishing venue through which faculty can disseminate their educational works. MedEdPortal thus is designed to promote collaboration and educational scholarship by facilitating the exchange of peer reviewed teaching resources. Examples of MedEdPortal publications include referenced tutorials, cases, lab manuals, evaluation forms, faculty development materials, and virtual patients (these can be viewed at www.aamc.org/mededportal; from the brochure MedEdPortal™).

MedEdPortal could be used to disseminate SUD curricular materials that incorporate knowledge developed by AMERSA and Project Mainstream about the core competencies related to SUDs, which have been widely accepted by addiction specialists.

The proposed Listservs could be used to alert the medical school contacts for substance abuse about the resources to be accessed through MedEdPortal. In addition, MedEdPortal provides a vehicle through which medical educators can post their work, and other faculty members can be solicited to serve as reviewers. Substance abuse specialists could take the lead and add a new library to MedEdPortal. There already exists quite a lot of content about SUDs that would be appropriate for MedEdPortal.

The Power of Continuing Medical Education. The Work Group focused on ways to motivate physicians to seek, learn, and implement available evidence-based practices for screening and brief intervention. For example, the group recommended steps to enhance practicing physicians’ access to high-quality CME programs through an accessible Web portal where physicians could readily identify and/or link to high-quality CME courses relevant to their practices.

The group also endorsed the concept of collaborating with organizations that share a commitment to change and that have the ability to reach the target audiences. These include the Accreditation Council on Continuing Medical Education (ACCME), the Federation of State Medical Boards (FSMB), Physicians and Lawyers for National Drug Policy (PLNDP), and the Coalition on Physician Education in Substance Use Disorders (COPE).

Group 5: Strategies for Engaging Training and Dissemination Systems

CO-CHAIRS:

Murray Kopelow, M.D., M.A., FRCPC
Sheldon I. Miller, M.D.

FACILITATOR:

Theodore V. Parran, Jr., M.D.

MEMBERS:

Anton.

In both allopathic and osteopathic medical schools, the first two years of education historically have taken place in classrooms and laboratories, as students learn basic medical sciences. Students also learn basic communication skills and how to take a patient history and perform a physical examination in the first two years. Most schools require some clinical experience in the first two years, most of which is observational. Much of the third and fourth years of medical education take place in clinical settings, where students learn to apply their knowledge of basic science and clinical skills in caring for patients under the direct supervision of faculty and residents.

Dedicated training in SUDs is rarely offered. For example, a 1998–1999 survey by the Liaison Committee on Medical Education found that of 125 allopathic medical schools accredited in the U.S., training in substance abuse was provided as part of a larger required course in 119 (95 percent). Only ten (8 percent) had a separate required course, while 45 (36 percent) offered an elective course.

More positive results emerged from a survey by the American Association of Colleges of Osteopathic Medicine (AACOM), which evaluated curricular offerings at colleges of osteopathic medicine in the 1998–1999 academic year. All of the colleges reported offering substance abuse content in their curricula. On average, four percent of the curriculum time was reported as dedicated to substance abuse (Douglas Wood, personal communication). In a separate 1998 survey of 17 osteopathic medical schools by the American Osteopathic Academy of Addiction Medicine, only three of 11 schools that responded reported offering separate courses in addiction medicine during the first two years of medical school (Anthony Dekker, personal communication). None of the schools required a clinical clerkship rotation in substance abuse during years three and four; however, most offered elective rotations for interested students. Data are not available on the percentage of osteopathic students electing substance abuse rotations.

Needs Assessment. Available data indicate that medical students are receiving training, but how can we know they are ready to use the information they've received? How can we tap into the existing structures of medical school and make substance abuse education a central task? The group agreed that this is a propitious time to change the conversation from a general charge that "medical schools are not teaching enough about substance abuse" to more specific issues. For example, a needs assessment might uncover specific

problems that could be addressed (e.g., what is the confidence level of medical students in their ability to conduct screening and brief intervention, or to prescribe analgesics for chronic pain?). Moreover, the data we currently have does not address the *effectiveness* of current education about SUDs.

Such a needs assessment might include identifying “champions” within each medical school who have an interest or special training in addiction medicine. Identifying such an individual within each medical school and linking them into a larger network would provide a valuable infrastructure for communications and dissemination of knowledge which is lacking at present.

We also need to determine exactly what content we want to promote. Is it sufficient to focus on screening and brief intervention and prescribing education? We may need to add information on pharmacotherapies for SUDs and the neuroscience underlying the diagnosis and treatment. Identifying champions would help us to identify best practices – tested content on SUDs – and help us understand where the content is most effectively incorporated into the undergraduate curriculum (i.e., as part of pharmacology, neurology, or psychiatry? During the first two years and never mentioned again? Segmented in special forums, or integrated through the four years of training?).

To help establish this network of medical school champions, AAMC and AACOM could host Listservs, which would establish a communications network and a dissemination vehicle. The members of the Working Group on Undergraduate Medical Education agree that Listservs would provide a valuable infrastructure to contact identified individuals in osteopathic and allopathic medical schools.

Fostering Faculty Development. NIAAA, NIDA and other NIH institutes support physician research trainees through the K23 funding mechanism. A number of these trainees are housed in medical schools throughout the country. To date, there has not been a formal expectation that these physicians-researchers will take part in educating medical students, even though they know the content and it would be a logical extension of their duties to assume such a responsibility. The medical students they work with also could become the next generation of researchers. (This recommendation could be offered to the NIH representatives who attended the conference.)

Faculty development in SUDs needs to be pursued systematically and intentionally. Recommendation 7-3 from the Institute of Medicine’s recent report on Improving the Quality of Health Care for Mental and Substance-Use Conditions speaks directly to this issue, as follows:

“The federal government should support the development of M/SU faculty leaders in health professions schools, such as schools of nursing and medicine, and in schools and programs that educate M/SU professionals, such as psychologists and social workers. The aim should be to narrow the gap among what is known through research, what is taught, and what is done by those who provide M/SU services”

(p. 318).

This is an important recommendation and carries weight because it comes from the IOM, but is there a source of funding to support the recommended action? In the past, SAMHSA provided funding as part of its training mission. However, funding for faculty development was general in nature. A new faculty development model might be organized around specific themes (e.g., screening and brief intervention, prescriber education, et al.).

From past experience, we know that the key to faculty development funding support is an initial investment that continues for three to five years and is focused on relatively junior faculty with whole careers in front of them. Faculty development also needs to focus on clinical care in addition to research. In addition, the model would need to recognize guidelines developed by the Sullivan Commission Report on Workforce Diversity. The goal is to ignite an interest in SUDs that will continue over an entire career and rekindle the tradition of career teaching.

Achieving Vertical Integration within the Curriculum. Substance abuse education needs to be taught across disciplines or specialties. When SUD training is seated solely in psychiatry or in elective courses, it reaches only a minority of students. We need to find a dissemination model that is more broadly based.

In the first two years of undergraduate education, there are opportunities to talk about the basics of screening, intervention and communication skills. We need to create examples of what might be included in family practice, pediatrics, emergency medicine, internal medicine and gynecology. In this way, SUD-related teaching could become part of the various specialties without requiring a new rotation. The surveys presented by Dr. Maeshiro tell us that students are getting some information; we need to build on that foundation.

Articles from PRISM (Primary Care Research in Substance Abuse and Mental Health) would be useful in integrating substance abuse education into the various disciplines. Each of these articles addresses a particular substance (e.g., alcohol) and explains how it affects a variety of medical systems and disorders, such as diabetes, sleep, or depression. The PRISM articles are aimed at primary care physicians and have been published in peer-reviewed medical journals (they would be an excellent resource to post on MedEdPortal).

Another way to integrate SUD content into the undergraduate curriculum would be to establish behavioral expectations for each rotation. Students would be given training resources (such as online modules) and expected to demonstrate what they have learned. Again referring to the core competencies, the content is there. There could be specific web-based programs for each rotation (e.g., three hours in pediatrics, OB-Gyn, surgery, etc.).

The knowledge and skills required to prescribe controlled substances appropriately need to be integrated into the undergraduate medical curriculum. For example, only a few medical schools devote any time to teaching students how to write a prescription, or how to educate patients about the proper use of prescription medications. Appropriate prescribing needs to be addressed in the broadest possible way in medical schools.

Another way to integrate SUDs into the undergraduate curriculum is to link the subject to widely recognized epidemics such as HIV or hepatitis wherever they are taught.

Prompting Medical Schools to Act. The group members agreed that organizations like COPE can be useful in providing an “umbrella” whose members would represent AAAP, ASAM, AOAAM, AMA, AMSA, APA, NAADPC, HPS-SAT, SNMA and other organizations with an interest in training. Such coalitions have the strength that derives from being multidisciplinary. Moreover, their members could perform specific functions, such as serving as reviewers for MedEdPortal or providing mentoring through a Listserv of medical school faculty who have teaching responsibilities.

The group also agreed that if JCAHO were to require screening and brief intervention as a safety standard for hospital accreditation, the medical schools would have to take notice. (This strategy was very effective in enhancing training about pain management, which became virtually universal when JCAHO added assessment of pain as a hospital quality standard.)

Finally, USMLE could be encouraged to include questions about screening and intervention for substance use disorders in their clinical examinations. Other efforts include working with the Medical School Objective Project as they consider a possible report on behavioral change.

Work Group members were cognizant that none of these efforts, on its own, will change the world, but together they can create an environment in which change is possible.

Group 6: Strategies for Engaging the Public and Policymakers

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XXXXXXXXXXXXXXXXXXXXXXXXXXXX

NEXT STEPS AND CLOSING REMARKS

Bertha K. Madras, Ph.D., Conference Chair

*Deputy Director for Demand Reduction,
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I want to thank every one of the participants for the superb recommendations that have come out of the Work Groups. These are wonderful recommendations from a most thoughtful, enlightened group of people who are obviously leaders in the area of substance abuse and medical education. Creating new strategies in the short time available is a difficult challenge, but one that you have met superbly.

The input from the Work Groups will be compiled in a working document that can help guide our field. I hope we can all work together in the future to implement the recommendations and strategies articulated here.

We all are cognizant of the challenges we face in implementation. We will need to work together and separately to encourage implementation through multiple Federal agencies, through State agencies and local communities, the pharmaceutical companies, health insurers, State medical boards, and the numerous other groups with a stake in these issues.

We want to do everything in our power to interrupt, to arrest, and to attenuate the progress of substance use disorders confronting individuals and their families before their problems reach the level of emotional pain and physical damage that accompany addiction.

ONDCP hopes that the process begun in these conferences will persist. Every participant can facilitate and make sure that health care professionals will be educated about and find SBI useful in their practices.

Above all, we share an absolute determination to make the most positive changes possible in this preventable and profoundly important public health problem. I hope all of you are leaving with the same motivation that we have at the Federal level – to do your best to disseminate what you’ve heard, to implement what you can at your level, and to help us in this implementation.

References

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APPENDIX A: CONFERENCE AGENDA

Third National Leadership Conference on Medical Education in Substance Abuse

**Sponsored by the Office of National Drug Control Policy;
Co-sponsored by
the Center for Substance Abuse Prevention;
the Center for Substance Abuse Treatment,
the National Institute on Alcohol Abuse and Alcoholism, and
the National Institute on Drug Abuse,
with support from
Ensuring Solutions to Alcohol Problems at
The George Washington University Medical Center**

Tuesday, January 15, 2008, 6:00–8:00 pm

APPENDIX B: CONFERENCE PARTICIPANTS

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APPENDIX C: GLOSSARY & ACRONYMS

Glossary

Addiction. A primary, chronic, neurobiological disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations. Addiction is characterized by three or more of the following behaviors occurring at any time in the same 12-month period: tolerance; withdrawal; use in larger amounts or over a longer period of time than intended; persistent desire or unsuccessful efforts to cut down; spending a great deal of time in activities necessary to obtain alcohol or drugs (including prescription drugs); giving up or reducing important social, occupational, or recreational activities; continued use despite knowledge of having a persistent or recurrent physical or psychological problem.

Co-occurring/comorbid disorders. The simultaneous presence of two or more disorders, such as the co-existence of a substance use disorder with a psychiatric or medical disorder. Use of the term carries no implication as to which disorder is primary and which secondary, which disorder occurred first, or whether one disorder caused the other.

Dependence. Used in three different ways: (1) physical dependence, a physiological state of adaptation to a specific psychoactive substance characterized by the emergence of a withdrawal syndrome during abstinence, which may be relieved in total or in part by readministration of the substance; (2) psychological dependence, a subjective sense of need for a specific psychoactive substance, either for its positive effects or to avoid negative effects associated with its abstinence; and (3) one category of psychoactive substance use disorder.

Prevention. Social, economic, legal, medical, and/or psychological measures aimed at minimizing the use of potentially addictive substances, lowering the dependence risk in susceptible individuals, or minimizing other adverse consequences of psychoactive substance use. *Targeted preventive interventions* constitute a system that targets prevention activities to specific levels of risk. For example, *universal interventions* are targeted to the public or a whole population group that has not been identified on the basis of individual risk. The intervention is desirable for everyone in that group. Universal interventions have advantages in terms of cost and overall effectiveness for large populations. *Selective interventions* are targeted to individuals or a subgroup of the population whose risk of developing substance use disorders (SUDs) is significantly higher than average. The risk may be imminent, or it may be a lifetime risk. The basis may be biological, psychological, or environmental. *Indicated interventions* are targeted to reach high-risk individuals who are identified as having minimal but detectable signs or symptoms foreshadowing SUDs or biological or familial markers indicating a predisposition for SUDs, even though they do not meet *DSM-IV* diagnostic levels at the current time.

Substance abuse. The problematic consumption or illicit use of alcoholic beverages, tobacco products, or drugs, including misuse of prescription drugs. Abuse typically leads to clinically significant impairment or distress, as manifested by one or more of the following occurring within a 12-month period: recurrent use resulting in a failure to fulfill major role obligations at work, school, or home; recurrent use in physically hazardous situations; recurrent legal problems associated with use; continued use despite persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol or other drugs, including prescription drugs. In the literature on economic costs, substance abuse means any cost-generating aspect of alcohol or other drug consumption; this definition differs from the clinical use of the term, which involves specific diagnostic outcomes.

Substance use disorder. The spectrum of disorders encompassed in alcohol and/or drug abuse and dependence that is attributed to problematic consumption or illicit use of alcoholic beverages, tobacco products, and drugs, including misuse of prescription drugs.

Modified from the U.S. Department of Health and Human Services, National Center for Health Statistics (2000). Healthy People 2010. Hyattsville, MD: NCHS.

Acronyms

AAMC	Association of American Medical Colleges
AACOM	American Association of Colleges of Osteopathic Medicine
ABMS	American Board of Medical Specialties
ACCME	Accreditation Council for Continuing Medical Education
ACGME	Accreditation Council for Graduate Medical Education
CME	continuing medical education
FSMB	Federation of State Medical Boards of the United States
LCME	Liaison Committee for Medical Education
RRC	Residency Review Committee
SUD	substance use disorder

APPENDIX D: PROGRESS REPORT

ONDCP continues to be engaged with the individuals, organizations and agencies that participated in the 2004 and 2006 Leadership Conferences, and to encourage progress in implementing the strategies endorsed by the conferees. Through these collaborative efforts, significant steps forward have been achieved, although much remains to be done. Examples of these advances follow.

Undergraduate Medical Education: The *Association of American Medical Colleges* (AAMC) invited Dr. J. Harry Isaacson (a participant in the 2004 and 2006 Leadership Conferences) to organize a session at AAMC's annual meeting to discuss the findings and recommendations and how AAMC can participate in follow-up activities.

As a first step, AAMC has agreed to create a Listserv for use by medical school faculty who having teaching responsibilities for substance use disorders, SBI, etc., to facilitate sharing of information, dissemination of clinical models and best practices, surveys, etc.

Graduate Medical Education: At its 2007 annual meeting, the *American Medical Association's* governing body, the House of Delegates, adopted a report calling for more attention to substance use disorders in undergraduate and graduate medical education. Shirley Kellie, M.D., who wrote the AMA report, attended the 2006 Leadership Conference and incorporated some of the recommended strategies in the AMA policy statement.

In addition to reaffirming existing AMA policy on medical education in substance abuse, the report directed AMA staff and councils to:

1. Advocate for in-depth qualitative studies to facilitate the preparation of physicians to care for patients with substance use disorders.
1. Facilitate the identification, dissemination, and implementation of successful substance use disorder educational programs across the educational continuum.
2. Encourage the Accreditation Council for Graduate Medical Education (ACGME) to include education about substance use disorders in their program accreditation requirements.
3. Encourage the American Board of Medical Specialties (ABMS) to encourage its member boards to include substance use disorder questions in their certification process.
5. Through its Council on Medical Education, monitor and track implementation of the recommendations of the December 2006 White House Office of National Drug Control Policy Leadership Conference on Medical Education in Substance Abuse.

The full text of “The Status of Education in Substance Use Disorders in America’s Medical Schools and Residency Programs” (CME Report 11-A-07) and the supporting references are available on the AMA’s website at www.ama-assn.org.

Continuing Medical Education: The *Accreditation Council on Continuing Medical Education* (ACCME) has announced that it will feature courses on substance use disorders among its new model CME programs.

To help physicians prescribe controlled drugs appropriately and avoid prescription drug diversion and abuse, SAMHSA’s *Center for Substance Abuse Treatment* (CSAT) is assisting leading medical organizations, educators and other experts with the development and dissemination of a series of continuing medical education courses titled “Clinical Challenges in Prescribing Controlled Drugs.”

Modeled after CSAT’s successful Buprenorphine Training Courses, the prescribing courses are intended to raise the awareness of physicians about the abuse potential of controlled drugs and to give them the specific knowledge and skills they need to (1) assess their own prescribing practices and adjust them as required, (2) identify at-risk patients and respond appropriately, (3) avoid being defrauded by patients or victimized by thieves or other criminals, (4) adopt a collaborative approach in working with pharmacists, regulators and law enforcement authorities, and (5) help raise colleagues’ awareness of the issue.

The courses, which target primary care physicians, were launched in September and October 2007 in Ohio, New York, and Virginia. Eight more live courses will be offered in 2008.

In addition, CSAT is collaborating with *Medscape*® to develop an online version of the prescribing course for dissemination through Medscape’s MedGenMed website as a no-cost CME offering. George Lundberg, M.D., medical editor of MedGenMed, chaired the Leadership Conference work group on continuing medical education. Production work on the online course is under way.

The *National Institute on Drug Abuse* (NIDA) has announced the establishment of four Centers of Excellence for Physician Information, to be developed in collaboration with the American Medical Association’s Research Education Consortium. The Centers are to serve as national models to support the advancement of addiction awareness, prevention, and treatment in primary medical practice. They will specifically target physicians in training, including medical students and resident physicians in primary care specialties such as internal medicine, family practice, and pediatrics.

In its announcement, NIDA described the goals of the Centers of Excellence as “to raise awareness among primary care physicians of drug addiction as a health issue and to further facilitate the dissemination of knowledge as to how best to prevent, diagnose, and treat patients struggling with abuse of and addiction to prescription and illicit drugs.”

Activities to be conducted include identifying drug addiction knowledge gaps, developing educational materials and resources for physicians in training to address those gaps, and determining the most effective means of delivering the information.

The initial Center sites are at Creighton University School of Medicine, the University of Pennsylvania School of Medicine (in collaboration with Drexel University College of Medicine), the University of North Dakota School of Medicine and Health Sciences, and the Massachusetts Consortium of Medical Schools (including the University of Massachusetts Medical School, Tufts University School of Medicine, Boston University School of Medicine, and Harvard Medical School/Cambridge Health Alliance).

Through a partnership with Medscape®, the *National Institute on Alcohol Abuse and Alcoholism* (NIAAA), physicians and other health professionals are able to earn continuing education credits for an online activity based on NIAAA's *Helping Patients Who Drink Too Much: A Clinician's Guide*.

NIAAA produced the *Clinician's Guide* to help primary care and mental health care practitioners identify and care for patients with heavy drinking and alcohol use disorders. The *Guide* recently was revised with new materials, including an update on medications; a medications management program designed for easy use by health care professionals in nonspecialty settings; and a patient education handout with strategies for cutting down on drinking.

Research and Dissemination: The *National Institute on Drug Abuse* (NIDA) has announced a new grant program to fund research on the treatment of prescription drug addiction.

SAMHSA's *Center for Substance Abuse Treatment* has funded the *American Society of Addiction Medicine* to convene an expert panel to evaluate existing clinical guidelines on the use of methadone to treat pain and to identify those that constitute "best practices."

Nomenclature: The report of the 2006 Leadership Conference noted that "Words matter, so . . . medical organizations [should be encouraged] . . . to adopt a standard, clinically focused terminology." The *American Society of Addiction Medicine* has convened just such a panel, which is charged with devising a rigorous and inclusive process to refine the current nomenclature.

Payment for Services: ONDCP helped to negotiate an agreement with the *Centers for Medicare and Medicaid Services* under which state Medicaid programs are allowed to reimburse physicians for time spent delivering Screening and Brief Intervention (SBI) services.

ONDCP and other organizations also have persuaded the *American Medical Association* to adopt new CPT codes for Screening and Brief Intervention, thus enabling physicians to seek reimbursement for such services.

The group *Ensuring Solutions to Alcohol Problems* at The George Washington University School of Public Health has developed a cost calculator to help health plans determine the expected prevalence of alcohol and drug problems in the populations they cover and the cost savings to be achieved by offering a benefit for Screening and Brief Intervention (SBI). Ensuring Solutions estimates a \$2.80 return on each dollar invested in SBI, which is comparable to the cost benefits of covering diabetes, depression, and asthma disease management.

Medical Licensing Boards: At its annual meeting in May 2007, the *Federation of State Medical Boards* (FSMB) adopted a resolution calling for the development of methods and modules of information to use in educating medical students, residents and practicing physicians regarding the identification of substance use disorders, brief intervention, and the proper prescribing of controlled substances. The Federation is a national not-for-profit organization representing the 70 state medical licensing boards of the United States and its territories, including 14 state boards of osteopathic medicine. The Federation's mission is continual improvement in the quality, safety, and integrity of health care through the development and promotion of high standards for physician licensure and practice.

Development of the new policy was led by William L. Harp, M.D., head of the Virginia Board of Medicine, who represented FSMB at a December 2006 National Leadership Conference on Medical Education in Substance Abuse. The FSMB statement closely parallels the recommendations from the Leadership Conference work group on licensure, accreditation, and standards, which Dr. Harp chaired.

The final resolution places the Federation on record as encouraging the state medical boards:

1. To place a renewed emphasis on physician competence in Screening and Brief Intervention (SBI) for substance use disorders and appropriate prescribing of controlled substances.
2. To secure teaching time in the curricula of medical schools in their states to focus on substance use disorders and appropriate prescribing practices.
3. To interface with medical residents on relevant topics, including substance use disorders.
4. To consider strengthening the content of licensing and proficiency examinations regarding substance use disorders.

In addition, the resolution calls for inclusion of substance abuse education in the Federation's ongoing Work Group on Education of Medical Students and Residents on Professionalism and its Relationship to Licensure and Regulation.

APPENDIX E: SBI INSTRUMENTS

ONDCP

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