



OFFICE OF NATIONAL DRUG CONTROL POLICY

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

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EXECUTIVE SUMMARY

More than 60 leaders of public and private sector organizations met November 30 - December 1, 2006, for the second 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.

The event followed a similar meeting hosted by the Office of National Drug Control Policy (ONDCP) in 2004. Considerable progress has been made in the ensuing two years, but the goals for enhanced physician training on substance abuse and addiction have not yet been fully achieved. Therefore, ONDCP hosted a second conference to assess progress, refine strategies, and reaffirm commitment to mutual goals.

In opening remarks, Conference Chair Bertha K. Madras, Ph.D., ONDCP 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, the improvement of medical education after graduation, implementation of 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.”

ONDCP Director John P. Walters pledged that his office and other Federal agencies would continue to support scientific research and clinical education that help to reduce the illness and deaths associated with substance use disorders. He also promised support for research that helps bring the medical community better tools to identify, prevent, and treat those who are at risk for or experiencing such disorders, including problems with prescription drugs.

Meeting in a series of Working Groups, conferees developed targeted strategies and action plans in multiple areas of medical education and practice:

Undergraduate Medical Education. One of the recommendations from the Working Group on Undergraduate Medical Education is to identify “champions” in each medical school to help identify specific curricular needs related to teaching about substance use disorders. To achieve this goal, the group suggested that the Association of American Medical Colleges and the American Association of Colleges of Osteopathic Medicine create a network of such faculty through a Listserv. The group saw such communication as affording an opportunity to foster faculty interest in teaching about substance use disorders (SUD) and mentoring students with interest in SUD.

This Working Group also developed strategies related to faculty development, best practices, and the creation of Centers of Excellence to compile information and disseminate program models and related knowledge.

Graduate Medical Education. The Working Group on Graduate Medical Education offered a variety of strategies, including a proposal to bring together representatives of the institutions of medicine to develop minimum standards for training all medical students and residents in the recognition of substance use disorders. Participants would include the Accreditation Council on Graduate Medical Education (ACGME), the relevant boards of the American Board of Medical Specialties, the chairs of the relevant Residency Review Committees, the National Board of Medical Examiners (NBME) and the National Board of Osteopathic Medical Examiners (NBOME), and others who create and maintain the requirements for core content in each of the targeted specialties.

Such a gathering would lay the groundwork to approach the American Board of Medical Specialties (ABMS) and the various specialty societies and boards with a request for stronger requirements for the content of specialty board examinations related to substance use disorders.

Continuing Medical Education. The Working Group on Continuing Medical Education focused on ways to motivate physicians to seek, learn, and implement evidence-based practices for screening and brief intervention. For example, the group recommended steps to enhance practicing physicians' access to high-quality CME programs, such as creating 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 can effectively reach the target audiences, such as the Accreditation Council on Continuing Medical Education (ACCME) and Physicians and Lawyers for National Drug Control Policy (PLNDP).

Licensure, Accreditation, Certification and Standards. This Working Group considered ways to use the systems that 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.

This Working Group also 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 SUD 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 Working Group called for the development of a credentialing system that recognizes such expertise – whether through subspecialties in psychiatry, family medicine, pediatrics, et al., or through recognition of Addiction Medicine as a primary medical specialty.

Funders and Payers of Services. Given the relationship between health plans’ reimbursement policies and patients’ access to care, this Working 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 get paid.

As a complement to the new HCPCS coding, the Working Group endorsed current efforts to add screening and brief intervention to the American Medical Association’s Current Procedural Terminology (CPT) codes, so as to clear the way for reimbursement for these services by private insurers and Medicare. A parallel strategy would involve bringing together the major commercial insurers to secure their agreement to pay for services based on the 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. While praising the efforts by advocates to remove UPPL laws at the State level, members of the Working 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.

Prescriber Education and the Prevention of Prescription Drug Abuse. Members of this Working Group addressed the fact that most practitioners are not aware that prescribing a controlled drug is a significant diagnostic event and that non-medical use is a substantial risk with all controlled substances. The group's recommendations for change focused on "mainstreaming" prescriber education, so that sound prescribing practices and steps to prevent prescription drug abuse are taught in the same way as other areas of clinical knowledge and skills. (For example, current research shows that multiple focused interventions are required to induce physicians to change their practice behaviors; in fact, this principal underlies pharmaceutical manufacturers' product detailing.)

Members of the Working Group agreed that providing "toolkits" and other practical resources would facilitate physicians' willingness to conduct screening and history-taking, support appropriate prescribing decisions, and foster careful follow-up monitoring.

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.

Next Steps. In acknowledging the reports from the Working 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 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."

PREFACE AND ACKNOWLEDGEMENTS

Preface

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. The conference brought together leaders of private sector organizations, Federal agencies, organized medicine, and licensure and certification bodies to discuss ways to enhance the training of physicians in the prevention, diagnosis, and management of alcohol and drug use disorders, including prescription drug abuse. Participants were charged with identifying strategies and action steps to improve physician knowledge and skills through enhanced undergraduate, graduate, and continuing medical education.

The conference 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

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 SUD, 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 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 first Leadership Conference.

Conference Activities. Conference participants were charged with identifying competencies, objectives, and action steps to help all physicians master core competencies in preventing, identifying, and managing substance use disorders (SUD).

As the Surgeon General of the United States, Richard H. Carmona, M.D., M.P.H., observed in his address to the conferees, the medical community – particularly primary care physicians – has a pivotal role to play in helping to identify patients who may have substance use disorders and guiding them to appropriate treatment. For this to occur, he said, 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 medical and psychiatric disorders.

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.

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

1. Most physicians receive limited training in the diagnosis, management and underlying science of addiction. A study of 1,831 residency program directors (Isaacson et al., 2000) found that only 56% of residency programs required a curriculum in SUD (ranging from 95% of psychiatric residencies to 32% of pediatric residencies). Information gathered through various surveys suggests that most CME courses about SUD bear little relationship to the perceived needs of primary care physicians.
2. Physicians' attitudes about SUD and the patients who have them also play a part in discouraging intervention, but negative attitudes about their own abilities (often based on an accurate perception of their actual lack of skills) seems to be an even greater problem. This finding implies that physicians need more help in developing competence in understanding and employing screening and intervention strategies, as well as their belief that such strategies can lead to positive outcomes.
3. Sufficient materials, policies and guidelines are available from medical associations and other organizations to affirm physicians' responsibility for identifying and addressing SUD. To be effective, such policies and guidelines should be supplemented by experiential, practice-based and practice-oriented educational materials, accompanied by strategies to obtain peer feedback,

development of clinical setting support systems for physician (or other health care staff) interventions, adequate reimbursement, and strategies to enhance competence and self-efficacy.

4. Physicians are overwhelmed with information, demands for their time and attention, and the need to be knowledgeable about a wide range of health problems and patient management issues. Therefore, it would be helpful to identify ways to adapt existing resources to better conform to the way physicians actually practice, the requirements of certification and licensing agencies, competency requirements established by the various specialties, opportunities afforded by new media such as the Internet, and evolving practice characteristics and reimbursement policies.

Evidence-based strategies for helping primary care physicians acquire and employ the requisite knowledge and skills include (1) educational programs conducted in the physicians' own clinical settings; (2) use of step-by-step, evidence-based clinical protocols and guidelines; (3) use of skills-based role-playing, feedback, and performance comparisons; (4) engagement of credible educators and opinion leaders in championing the desired change; and (5) modification of practice systems to facilitate and sustain the new behaviors.

Acting on these findings, participants in the 2004 conference agreed on a series of specific recommendations and action steps. They 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. They also recommended that ONDCP schedule a follow-up meeting to revisit the objectives, strategies, and action steps and to measure progress in implementing them.

The latter recommendation led to the second National Leadership Conference, held November 30 – December 1, 2006, which involved many of the participants in the 2004 conference and constituted just such a progress review. However, the 2006 conference also brought new organizations to the table and expanded the scope of issues under review.

As in 2004, participants in the second National conference heard reports on topics of special concern from leaders in the public and private sectors. They also revisited and reaffirmed the objectives articulated in the 2004 conference, adapted the recommendations of the 2004 conferees to reflect recent developments and current opportunities, and devised specific strategies for achieving those objectives. All of their actions are summarized in this report.

Acknowledgements

Many individuals and organizations contributed to the success of the 2006 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

National Institute of Mental Health

The Pew Charitable Trusts

The Hanley Family Foundation

Physicians and Lawyers for National Drug Policy

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)*

Welcome! I am delighted you are here. As I look across this room, I am heartened to see illustrious representatives from our Nation's finest medical and health care organizations. Your presence reflects our collective commitment to attenuate – indeed to alleviate – the onerous public health burden of substance abuse and addiction.

We share common goals. For decades, a number of us conscientiously sought solutions to this burden through basic research, medications development, counseling strategies, epidemiology and clinical research on treatment outcomes, and developing sound policies. Some labored in laboratories, in classrooms, others in clinics. Many taught medical students and residents the fundamentals of substance use disorders.

In reality, unless students progressed to specialist status, their training was frequently compromised by practical considerations. Chief among these was a belief that a non-specialist could accomplish very little during a brief encounter with a patient who presented with a host of other medical problems. Today, we know better. Today, this unique engagement of Government officials and the medical community can share and celebrate an exceptional convergence of progress and accomplishments that now can be translated into practical solutions and practices. We have evidence-based screening and brief intervention tools, effectiveness and cost-effectiveness outcomes, and the support of a wide range of medical associations for these procedures. We now report new CMS billing codes (Medicaid) to cover substance abuse screening and brief intervention procedures across a wide swath of health care settings. We also hope that CPT codes (private insurers and Medicare) will be approved in the future. We recognize surmountable obstacles to implementation: resistance to changing medical education and to changing medical practice.

In advocating for solutions, we must always bear in mind the potential devastation propagated by substance abuse disorders (SUD) in individuals, families, communities, society, our Nation and, indeed, all Nations. SUD can destroy lives, undermine families, and affect individuals from the earliest stages of development into old age. While SUD exceed the costs associated with other devastating maladies of the brain, unlike many diseases of the brain, *addiction* is preventable and treatable. We know the primary causative agent, the drug; we also know that full recovery is possible. Buttressed by this optimistic framework, medical professionals can engage patients in evidence-based intervention and treatment to fulfill a primary mission of medicine – improved patient outcomes.

Director Walters will brief you on the considerable progress we have made in the past few years... We rejoice in these positive statistics but we also need to recognize a number of challenges and concerns.

- **Vulnerability of the adolescent brain.** Findings from both human and animal studies support the view that exposure to drugs during the critical adolescent years could have an enduring effect on the brain and on behavior. For example, adolescents who use marijuana before the age of 17 are more likely to use other drugs such as heroin and cocaine and to become addicted to other drugs, including alcohol. Early drug exposure also may increase susceptibility to psychiatric disorders and other behavioral and health problems. A concerted focus on this vulnerable population is warranted.
- **Prenatal vulnerability.** Prenatal exposure to tobacco, alcohol, and other drugs has been linked to low birth weight, premature deliveries, and – under certain circumstances – to developmental disorders. We need to focus on and help pregnant women who use these substances.
- **Co-occurring medical and psychiatric disorders.** The convergence of substance use and medical or psychiatric disorders pose a series of significant challenges. Treatment providers and psychiatric service providers need to form partnerships and provide comprehensive care for addicted populations with neuropsychiatric disorders, including criminal justice populations.
- **Negative public health effects.** Substance use disorders are a leading cause of medical conditions and premature deaths in the United States. They are linked to traumatic injuries and violence. They can exacerbate medical conditions such as diabetes, hypertension, depression, and sleep disorders. They can adversely affect the efficacy of medications. They can induce medical problems such as stroke, dementia, hypertension, and cancers. They are linked to sexually transmitted and intravenously transmitted infections. Modern medicine consistently strives to improve patient outcomes: consider the significant declines in mortality in trauma centers as a consequence of improved treatment protocols. The expanding list of medical sequelae of substance abuse disorders is a powerful incentive for fervid, resolute engagement in this problem.

CLOSING THE GAP ON UNTREATED SUBSTANCE USE DISORDERS

How widespread are substance use disorders? The 2006 National Survey on Drug Use and Health (NSDUH) estimates that 22 million people – nine percent of the U.S. population – experienced a substance-related problem in 2005. Similarly, data on 1.5 million emergency department visits, collected through the federal Drug Abuse Warning Network, show a high rate of involvement of many drugs – including alcohol, cocaine, opioids, and drug combinations – in emergency episodes. This chronic relapsing disease potentially occurs in at least 10 percent of the population.

Moreover, of the estimated 22 million affected individuals, only 1.1 million received the needed treatment within the past year. Of those who did not receive treatment, the vast majority did not recognize that they needed help. Herein lies an opportunistic teaching moment in health care settings. Do all 22 million of these individuals need specialized treatment? No. Many could be assisted by a wide range of health care professionals. The key to success is early identification and appropriate intervention. Yet many physicians and other health care professionals who routinely screen for a range of preventable and treatable disorders do not screen for substance-related problems.

Our goal at this conference is to present compelling information showing that health care professionals *can* intervene prior to addiction, diminishing adverse health consequences. In fact, Dr. Eric Goplerud will present data demonstrating that screening and brief intervention are not only clinically effective, they are cost-effective as well. In this way, we hope to mobilize the medical community to help fill the gap between those who need help for their substance use disorders and those who actually receive such care.

We also have experts on specific issues: Of particular concern are trend data for young people. To clarify the trends and solutions, Stephen Pasierb of the Partnership for Drug Free Youth will review the data on youth drug use, Dr. Robert DuPont will discuss the heretofore overlooked problem of drug-impaired driving, and Dr. Richard Rawson will discuss the current status of methamphetamine abuse and its treatment.

FOCUS OF THE 2006 CONFERENCE

The conference will focus on three major areas of competence that should be addressed in undergraduate, graduate, and continuing medical education: screening and brief intervention, prescribing drugs with abuse potential, and managing co-occurring substance use and medical and psychiatric disorders.

Screening and Brief Intervention. Physicians should know how and when to screen patients for SUD and how to perform preventive counseling and brief interventions, as appropriate.

Screening for diseases is warranted if the following conditions are met: the disease has a significant prevalence and consequences; effective and acceptable treatments are available; early identification and treatment are preferable; and there are effective screening instruments available that are easy to administer. Strong research evidence supports the fact that SUD meet all of these criteria, yet screening for SUD is not often implemented. Brief intervention is not unique to the treatment of SUD; in fact, this strategy is widely used by physicians to address other behaviors. For example, brief interventions are used to help patients change dietary habits, reduce weight, stop smoking, reduce cholesterol or blood pressure, and take medications as prescribed.

Prescribing Drugs with Abuse Potential. Substances used by populations vary widely and change over time. The ingrained boundaries that forestall misuse of prescription drugs have been breached at various times during the 20th and 21st centuries. For the past two years,

new initiates into non-medical use of prescription drugs were similar to those using marijuana. An essential area of competence for physicians is the ability to understand and to address the clinical, legal, and ethical considerations involved in prescribing medications with abuse potential so as to minimize the risk of inducing or perpetuating prescription drug misuse or abuse and to prevent conversion into use of other illicit drugs.

To achieve this goal, training in the clinical, legal, and ethical issues involved in prescribing drugs with abuse potential should be integrated into undergraduate, graduate, and continuing education programs in all specialties. Physicians who complete such training should be able to demonstrate that they have the knowledge and skills required to prescribe in a therapeutic manner to their patients, including patients at risk for, presenting with, or with a history of SUD. Dr. Nathaniel Katz of Tufts University and Mr. Joseph Rannazzisi of the Drug Enforcement Administration will provide us with their perspectives on the challenges we confront here.

Managing Co-Occurring Medical and Psychiatric Disorders. Co-morbidity is a highly prevalent confound for managing substance abuse problems. Physicians should understand the medical and psychiatric co-morbidities and complications SUD. They should be able to evaluate patients with co-occurring disorders and refer them to specialized treatment services that match the patients' individual treatment needs. Physicians also should be prepared to provide ongoing medical monitoring and to address the needs of special populations, such as adolescents and older adults. Current strategies and thinking on co-occurring disorders will be discussed by two presenters – Dr. John Renner of the Boston University School of Medicine will discuss the issue from the viewpoint of a medical educator. Dr. Thomas Insel of the National Institute of Mental Health (NIMH) will inform us about his agency's efforts.

GOALS FOR THE 2006 CONFERENCE

Why have we gathered together today? Because we collectively recognize that the brain is the repository of our humanity, our wisdom, our ability to love, to learn, to compute, to compose, to contemplate, to feel compassion, and empathy for others. We in this room recognize how precious, unique, and fortunate we are to be the bearer of functional minds. We are united in a passionate desire to treat those whose brains, body, and behavior have been compromised by drugs.

We therefore hope to enlist your expertise in developing strategies to promote medical education curricula on drug- and alcohol-related disorders, improve medical education after graduation, implement screening and brief intervention in mainstream medical care, obtain appropriate physician reimbursement for these services, and prevent 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. 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)

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 – of leaders in this room, people in communities throughout the country – we have made great progress on drug issues.

In the past, we haven't had this constellation of research and practical experience. Our current state of knowledge is the product of your research, your clinical trials, and your willingness to be at the forefront of this fight to draw attention to substance use disorders within the health care and research communities.

Overall, the results are encouraging:

- Drug use by adolescents has declined 19 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 whose use 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. The first is prescription drug abuse. The diversion of prescription pharmaceuticals by both adults and young people is a serious problem that has not declined. The second involves screening and brief intervention by the mainstream medical community.

DIVERSION OF PRESCRIPTION MEDICATIONS

The 2005 National Survey on Drug Use and Health (NSDUH) provides the following estimates of non-medical use of prescription drugs:

- 6.4 million Americans reported using a prescription drug for non-medical purposes during the preceding month—a self-reported figure that may well be an undercount of the actual extent of the problem.
- Nearly 14 percent of young people aged 12 to 17 said they used pain relievers, sedatives, tranquilizers, or stimulants for non-medical purposes – a level of use that is clearly unacceptable. A trend being seen in some areas is for young people to use prescription pharmaceuticals as a recreational activity.

What is the source of these prescription pharmaceuticals used for non-medical purposes? When NSDUH asked young people how they obtained their drugs, the predominant sources mentioned are friends or family members. A small percentage replied that they took the drugs clandestinely from friends or family members, but a larger group said they were given the drugs.

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.

The Federal government is going to push this issue very hard in the year ahead. ONDCP will be working with our friends at the Partnership for a Drug-Free America, with medical boards and regulatory bodies, and with a number of other Federal agencies, including the National Institutes of Health (NIH) and the Substance Abuse and Mental Health Services Administration (SAMHSA).

SCREENING AND BRIEF INTERVENTION

The second area I want to talk to you about is screening and brief intervention. As Dr. Madras mentioned, the 2005 NSDUH estimates that of 22 million Americans who have a substance use disorder, the vast majority do not recognize they have a problem or seek treatment. Of those who report they need treatment, roughly 75 percent make no effort to get it.

I do not need to tell you that denial is a key feature of the disease of addiction.

We need to treat the disease of addiction, yet the reality is that most people who suffer from it do not come forward. 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.

At present, the Federal government supports screening projects in 16 States and one tribal council in Alaska. Preliminary data from these projects suggest that screening and brief intervention provide a powerful, effective, and cost-effective means of finding and intervening with persons who have substance use disorders. Not surprisingly, the data from these screening and intervention programs are similar to those for other chronic conditions, such as hypertension, diabetes, and heart disease:

- Washington State showed significant reductions in alcohol and drug use at 6-month follow-up, including a 55 percent decline in use among persons who received both brief intervention and treatment.
- Ben Taub Trauma Center in Houston also showed a considerable economic impact, with a preliminary estimate of savings in health care costs in the range of \$4 million.

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.

MOVING FORWARD

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, this opportunity is before us. The real question now is, “How rapidly can we convince U.S. institutions to undertake this kind of change – a change that will save lives and change the victimization 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: the new CMS and CPT codes. Practitioners need to learn how to use these tools and how 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, mainstream health care practitioners must become capable of dealing with substance abuse issues. One of the single biggest obstacles to the rapid implementation of screening and brief intervention 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 needs to be done.

We are talking here about relatively simple institutional change that needs to occur at some level within the health care system – change that will provide for brief 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 so as to discourage prescription drug diversion and abuse. We need to curb the non-medical use of prescription drugs while maintaining their availability for legitimate medical purposes. No one wants to be insensitive to the treatment of pain. I do not, you do not, the President does not, the Congress does not, the American people do not. When Americans are in pain, when their family members are in pain, they want to treat it effectively. We *do* want medical care that is safe and effective, and here we need to do a better job. Sometimes reasonable people will differ, but I think we can work out effective solutions that save lives and reduce pain.

Last, let me just say “thank you” 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.

Trends in Youth Drug Use: A Changing Landscape

Stephen Pasierb, M.Ed.

President and CEO, Partnership for a Drug-Free America

To begin, I want to remind everyone and underscore the progress that has been made in the substance abuse field over the last decade. Monitoring the Future data indicate that we are in a period in which adolescents' use of alcohol, tobacco, and illicit drugs are in decline. This is an opportunity to push forward, rather than rest on our laurels. With such progress as background, I want to look at some of the recent troubling trends, particularly a trend involving non-medical use of prescription and over-the-counter (OTC) drugs by youth, using data from the Monitoring the Future survey, studies undertaken by the Partnership, and the Community Epidemiology Work Group data compiled by the National Institute on Drug Abuse.

The intentional abuse of prescription and OTC drugs is not widely understood by the public. One way to put this into perspective is to think about a changing landscape that is moving from products with an agricultural base (marijuana, heroin, cocaine) to products with a chemical base (prescription medicines, pain relievers, stimulants, and cough medicines) – that is, from “Farming” to “Pharming.” The chemically-based products are being intentionally abused for specific outcomes – to get high, to deal with stress, or to perform better at work or at school. These otherwise safe and beneficial products are widely available in our family medicine cabinets, and they represent a new tier of substance abuse among teens and young adults.

The 2005 Attitude Tracking Study sponsored by the Partnership for a Drug-Free America surveyed 7,216 youth and clearly revealed the new landscape of substance abuse. The study found that the number of young people who used a prescription drug or pain reliever to get high was very close to

A New Tier of Substance Abuse			
Marijuana	37%	Ecstasy	8%
Inhalants	20%	Methamphetamine	8%
RX medicines	19%	LSD	6%
RX pain relievers	18%	Ketamine	4%
RX stimulants	10%	Heroin	5%
Cough medicine	10%	GHB	4%
Crack/Cocaine	10%		

the number engaged in inhalant use, and higher than that for crack cocaine, Ecstasy, methamphetamine, LSD, and other illicit drugs.

A separate Partnership study found that youth are well aware that prescription and OTC products can be abused for various purposes. Youth know these drugs can help them stay awake to study, deal with stress, and cope with depression. A significant number of youth say they have been offered such drugs without a prescription. In fact, this ease of access is a major reason we believe that abuse of prescription drugs by youth will increase. The drugs are easily obtained from parents or friends or purchased via the Internet.

Other factors contributing to the rise in prescription drug abuse are that parents see this as a lower risk activity and that youth and parents alike perceive fewer dangers in the abuse of medicines than in the abuse of illicit drugs. About one-third of youth believe that prescription pain relievers are not addictive.

ATTITUDES TOWARD PRESCRIPTION AND OTC DRUG ABUSE

We know that attitudes drive behavior, and learned that about a third of the young people interviewed in the Partnership survey felt prescription drug abuse is an accepted behavior and does not constitute substance abuse. The belief that others are abusing prescription drugs can be a potent motivator for youth to experiment with this behavior. Such “normalization” of drug use plays a significant role in attracting future abusers. About half of the young people surveyed believed that abuse of prescription pain relievers by other youth is increasing, and about half believed that the current level of drug use is staying the same. Few felt that current rates of drug use are declining.

Our Partnership data show that about 14 percent of youth had abused a prescription drug in the past year. Further analysis of the data found that another group of youth had the same attitudes and beliefs around prescription and OTC abuse as past-year users, but had not yet begun to abuse the drugs. These findings are very similar to those we saw with Ecstasy in 2001. At that time, only a small number of youth had used Ecstasy. However, an equal sized group had the same weak risk attitudes as the users, but had not yet tried the drug. As a result, in 2002 and 2003, we saw a 71 percent increase in Ecstasy use.

To further understand young peoples’ attitudes toward prescription and OTC drug use, we asked our survey respondents to chart known drugs by level of risk (low to high) and access (degree of difficulty). The results showed that the total youth surveyed clearly identified drugs such as heroin as high risk and difficult to obtain, and caffeine as low risk and easy to obtain. Most youth placed prescription drugs closer to the high risk and difficult to obtain category. However, youth identified as “vulnerable” viewed most prescription drugs as somewhat lower risk and easier to obtain than did the general sample. Youth identified as past-year users placed most medicines as lower risk and easier to obtain than both the “general” and “vulnerable” populations.

SOURCES OF DRUG INFORMATION

Youth seek information about the risks associated with non-medical use of prescription and OTC drugs from a variety of sources. The good news is that mothers are their number one source for information, followed by fathers, friends, and the Internet. (Physicians, nurses, and other members of the health care community are not commonly sought out regarding the risks of prescription and OTC drugs.) The Internet plays an even larger role among past-year users and those identified as vulnerable youth. Indeed, for these young people, the Internet is a voice more powerful than the family unit. Little wonder that our findings support the concept that one of the best protective factors against youth drug use is an active, involved parent or adult caregiver.

Thus, it was discouraging to find that, when we surveyed parents, we found that many believe the abuse of prescription and OTC drugs does not involve great risk. There is a deep belief that “my child” would never abuse these drugs. What we have found is that parents do not understand the intentional abuse of medicines to get high because this behavior was not as widespread when they were teenagers. Today we have the most drug-experienced generation of parents in history, but the substances their children are abusing are vastly different than the ones of their generation. These parents do not perceive that prescription and OTC drugs can be as dangerous as street drugs.

Taking all of this information, we conclude that, as a society, we are at a critical point regarding the abuse of prescription and OTC drugs. Such abuse is mistakenly viewed as safer than other forms of drug abuse by both parents and youth. Young people know where to find these drugs and have ready access to them through their parents’ medicine cabinets, as well as family members, friends, and the Internet. Also, risk and social disapproval attitudes among vulnerable youth indicate a real potential for the intentional abuse of prescription and OTC drugs to get high to increase over the coming years.

We know that providing this information to the health care community and to the public is absolutely vital. As with methamphetamine abuse, the abuse of prescription and OTC drugs is very real and individuals are moving to this behavior. While there is good news in the substance abuse field and significant progress to report, we have a long way to go and need to pay specific attention to the emerging dangers of current attitudes and behaviors regarding prescription and OTC drugs.

Improving Highway Safety: It's Not Just About Alcohol

Robert L. DuPont, M.D., FASAM

President, Institute for Behavior & Health, Inc., and

Chair, Advisory Committee on Non-Medical Use of Prescription Stimulants

I've been asked to present an idea that many of you have not thought about to any appreciable extent – drugged driving. We all have applauded a dramatic change in attitudes toward drinking and driving. The criminal justice system and the health care system both have been instrumental in this change. Nearly two million Americans are arrested annually for alcohol-impaired driving, which is now the single most common reason for arrest in the country. But when it comes to highway safety, it is not just about alcohol. Yet drugged driving is an epidemic that is almost completely overlooked.

Widely recognized data on substance use over the past few decades show an increase in the rates of use of many illegal drugs, yet the reduction in those rates from 1978 to 1992 is virtually unrecognized. What happened during this period is important for us to understand. Namely, there was a concerted effort to focus on the negative health effects associated with all use of illegal drugs (and particularly marijuana), and the rates of use fell.

After 1992, when rates rose again, it marked a change in attitudes – what Lloyd Johnson calls a “normalization” of illicit drug use. Since then, we have seen a more modest decline in rates of drug use. One of the reasons for the modest decline is the extent to which drugs are perceived as dangerous. If the risk of drug use is perceived as high, use declines. To the extent that drug use is seen as “normal” and “safe,” use increases – it is that simple. A recent and dramatic example involves rates of Ecstasy use. As the result of a concerted effort to present the dangers of Ecstasy, there were dramatic declines in its use.

The question, then, is what is the perceived risk of drug-impaired driving?

PREVALENCE OF DRUG-IMPAIRED DRIVING

In 2005, the National Survey on Drug Use and Health (NSDUH) found that 10.5 million persons aged 12 and older reported driving under the influence of an illegal drug in the past year. The age group with the highest rate of drugged driving was young adults (ages 18 to 25), at 13.4 percent. One in six adolescents reported driving under the influence of an illegal drug. A survey by Students Against Destructive Decisions (SADD) found that 34 percent of adolescents reported that they had been a passenger with someone who had smoked marijuana and 29 percent said they had personally driven after smoking marijuana.

A striking thing to me is that youth are aware that driving and drinking is a problem. They understand that combining alcohol with driving may lead to their arrest and they understand that it is not safe. Yet the same youth believe that combining drugs and

driving is not likely to get them arrested and is not likely to lead to a traffic crash. Yet survey data from Mothers Against Drunk Driving (MADD) show that 37 percent of respondents listed driving under the influence of alcohol or other drugs is the greatest highway safety problem.

Other data suggest the frequency and impact of drugged driving. A study at the Maryland Shock Trauma Unit of drivers injured in traffic crashes found that 51 percent tested positive for illegal drug use, while 31 percent tested positive for alcohol and 66 percent tested positive for both drugs and alcohol. The figure for marijuana use (26.9 percent) was close to that for alcohol (30.6 percent). A very high percentage of drivers tested positive for marijuana alone, including about 50 percent of drivers in the 16 to 20 age group, and 30 percent of drivers up to age 44.

▪ Alcohol	30.6%
▪ Marijuana	26.9%
▪ Marijuana and alcohol	37.9%
▪ Cocaine	11.6%
▪ Methamphetamine	5.6%
▪ Benzodiazepines	11.2%
▪ Opiates	10.2%

Highway fatality data show a very sharp decline in fatalities until 1991-1992. The Department of Transportation has identified drugged driving as one of the reasons the decline in fatalities subsequently leveled off.

A study in the State of Washington looked at fatally injured drivers and those who were charged with vehicular assault or vehicular homicide. Among fatally injured drivers, drugs and/or alcohol were present in 62 percent of cases. Illegal drugs were present in 35 percent of drivers, while alcohol was present in 41 percent. In the vehicular assault and homicide cases, 51 percent of drivers tested positive for alcohol and/or drugs. Illegal drugs were present in 18 percent of drivers and alcohol was present in 32 percent. We know that the combination of alcohol and other drugs is especially impairing to driving skills.

RESPONSES TO DRUGGED DRIVING

The most important challenge we face in addressing drugged driving is to achieve a wider understanding of the extent of the problem. Until that happens, we will not see many changes.

A second challenge is to establish a new standard for driving performance. In many States, there is no additional penalty for use of illegal drugs while driving, so police only look for alcohol. During one year in Maryland, for example, police conducted about 25,000 tests of drivers for alcohol use, but less than 100 tests for drug use.

A variety of actions are needed, as follows:

- Extend the Maryland Shock Trauma and Washington State studies to obtain National data.

- Identify and evaluate best practices regarding testing for drugged driving.
- Develop and evaluate models for screening for drugged driving. Test felony arrestees, drivers in major vehicular accidents where there are serious injuries or death, drivers who fail sobriety tests, and where there is reasonable suspicion of drug-taking (e.g., drugs are found in the car).
- Develop a system for monitoring drivers convicted of drugged driving or who test positive for use of drugs when treated in hospitals and trauma units.

Several positive outcomes can be anticipated if these measures are implemented. Just as drunk driving is a major door into treatment for alcoholism, drugged driving has the potential for being a major avenue into treatment for drug addiction. In addition, there is considerable leverage to ensure compliance with addiction treatment if individuals must stay in treatment to continue driving.

There also are barriers to the actions I have proposed. The most important barrier is failure to appreciate the seriousness of drugged driving. Implementing drug testing on the highway is another barrier. It is not easy to obtain a urine sample in a highway situation. Oral fluids testing is the obvious solution to the problem, but current testing is not sensitive on-site to marijuana use. This is a technically solvable problem and, given a serious investment, innovation in oral fluids testing will occur to meet the need. Finally, there is the presumption that some amount of drug use while driving is acceptable. The fact is that there is no acceptable level of drug use while driving, and we need to move away from this paradigm.

Emerging Treatments for Methamphetamine Abuse

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Methamphetamine use has been a serious problem in some parts of the country for decades. In Southern California, we have been seeing methamphetamine users for about 20 years. Recently, however, use of this very powerful central nervous system stimulant has emerged in many areas of the U.S. where it had not been seen before.

Methamphetamine is obtained in two ways. It is easily manufactured in home laboratories, although recent legislation has reduced the availability of the precursor chemicals needed to make it. This is a very positive development because, in addition to reducing the drug supply, it also discourages the laboratories themselves, which are inherently dangerous. Unfortunately, drug traffickers have responded by increasing the amount of methamphetamine imported from super laboratories in Mexico and Southern California.

Methamphetamine is available in several forms – including powder, paste, and crystalline forms – depending on the recipe used to manufacture it. One challenge in understanding methamphetamine abuse is that all our information about the neuropharmacology of methamphetamine is based on the pharmaceutical product. However, addicts do not use the pharmaceutical agent: they use the drugs manufactured in bathtubs, garages, and super labs. We are seeing patients who are experiencing the effects of methamphetamine as well as the precursor chemicals, many of which are not designed to be consumed by human beings.

Methamphetamine has been around a long time. One of the reasons it has become more problematic is that the route of administration has changed dramatically. In the 1970s, about three-fourths of users snorted the drug and the remaining one-fourth injected it. Today, about 65 percent of methamphetamine users smoke the drug and about one-fourth inject it. Users of the drug discovered a particularly desirable initial rush when it was smoked. Smoking also leads to more rapid onset of addiction, and those who smoke the drug experience a more potent craving as the result of a Pavlovian conditioning response. This leads to a more persistent kind of addiction.

PREVALENCE OF METHAMPHETAMINE USE

Worldwide, methamphetamine is the largest illicit drug problem except for cannabis. The World Health Organization estimates that there are over 26 million methamphetamine users worldwide. Methamphetamine use has been a problem for some time in Southeast Asia. It is now becoming a problem in Eastern Europe and in South Africa, where there is great concern that its use is contributing to the spread of HIV.

In the U.S., survey data suggest that methamphetamine use is declining while treatment admissions continue to increase. Those entering treatment typically have used the drug for 7 to 8 years. We can expect treatment admissions to continue to rise for some time, as individuals already using the drug move through the later stages of addiction.

1992	10	1998	32
1993	14	1999	32
1994	22	2000	36
1995	30	2001	42
1996	25	2002	53
1997	32	2003	57
Per 100,000 aged 12 and over			

California, and possibly Oregon and Hawaii, have the most experience with methamphetamine treatment. California data from 2004-2005 show that methamphetamine is now the dominant drug throughout the State. California's Proposition 36, which put \$600 million into treatment as opposed to jails, meant that 250,000 persons received substance abuse treatment. Fifty-four percent of this total population were methamphetamine users. Data from counties in Southern California show that treatment admissions are increasing.

CONSEQUENCES OF METHAMPHETAMINE USE

It has been somewhat difficult to win public recognition of the methamphetamine epidemic. One reason is that, unlike opiates, few overdose deaths are associated with methamphetamine. The real health consequences of methamphetamine use arise after persistent use over time. For example:

- **Cardiac and cardiovascular disorders.** In Hawaii, where officials are monitoring emergency room death rates related to methamphetamine use, they are seeing methamphetamine-related medical effects such as cardiac and cardiovascular disorders.
- **Pulmonary disorders.** As more methamphetamine is ingested through smoking, an increase in pulmonary disorders can be expected.
- **Skin problems.** Methamphetamine users scratch themselves to try and dig the perceived "bugs" out from under their skin.
- **Tremors.** Individuals who inject the drug develop powerful tremors and, often, very severe needle marks.
- **Dental problems.** "Meth mouth" reflects severe dental disease.
- **Psychiatric consequences.** Methamphetamine users have high rates of delusion, including persecutory paranoia and auditory hallucinations. Often these are the symptoms that cause people to seek treatment.
- **Flashbacks.** After chronic use of methamphetamine, some abstinent patients experience flashbacks that mimic a methamphetamine psychosis reaction.

- **Prenatal effects.** Available data on prenatal methamphetamine exposure look very much like the data on prenatal cocaine exposure.
- **Hepatitis C.** This is a significant problem. In one sample of 700 persons, 44 percent of methamphetamine users who injected the drug were positive for hepatitis C.
- **Brain effects.** Users like what methamphetamine does to their brains. Use of methamphetamine for extended periods of time releases large amounts of dopamine, one of the brain's pleasure chemicals. The release of dopamine is the basis of the euphoria users experience with methamphetamine. It is powerful and can overshadow normal rewards such as food.

CLINICAL ISSUES WITH METHAMPHETAMINE

The brain chemistry of a methamphetamine user is significantly damaged and the effects last for quite some time. It is helpful for counselors to understand that they are working with individuals who have a functional brain injury that does not heal quickly.

The route of administration of the drug is important in this regard. Injection users experience the most difficult symptoms and their prognosis in treatment is much poorer than for other patients. The least severe set of symptoms are experienced by intranasal users, followed by smokers.

Both men and women who use the drug develop a powerful, positive connection between methamphetamine and sex. The drug is said to enhance sexual pleasure and sexual performance. Counselors must be educated to be comfortable talking about sexual behaviors because this is a significant issue with methamphetamine users.

It has been reported that rates of methamphetamine use by adolescents are declining, but this may not be true everywhere. In California, for example, two of the larger adolescent treatment centers in the State are for methamphetamine users. It is a particularly problematic issue for adolescent females.

On the West Coast in the 1990s, methamphetamine became the most widely used illicit drug among men who have sex with men (MSM). Today, there are increasing reports of methamphetamine use among MSM in the Midwest and on the East Coast. In this population, methamphetamine use is closely connected to sexual identity and sexual expression, impulsivity, sexual sociality, and sexual compulsivity. Gay male methamphetamine users are at extreme risk for HIV transmission and are clearly a priority target group for treatment.

TREATMENT OF METHAMPHETAMINE USERS

There is a perception that methamphetamine users are somehow less treatable than those who are addicted to other drugs, but there is no evidence to support this belief. After reviewing multiple Federal, State, and local datasets, an analysis of dropout, retention, and re-incarceration rates, and other outcomes, researchers have found that methamphetamine users respond in a manner equivalent to individuals admitted to treatment for other substance use disorders.

Psychosocial treatments for methamphetamine users currently have the greatest empirical support, although research on pharmacotherapies is promising. Specifically, contingency management has promise as a component of treatment. The Matrix Model psychosocial treatment approach was shown to be of benefit during a multi-site clinical trial. Among the pharmacotherapies, bupropion appears to reduce craving and the reinforcing effects of methamphetamine, with particularly strong effect for less severe users.

An interesting new hypothesis is provided by data from a Japanese study. This study sheds some light on serotonin, methamphetamine, and aggression. Researchers suggest that even after a year's abstinence, methamphetamine users have a depleted serotonin level, and these depleted levels are associated with elevated levels of aggression.

The good news is that normal levels of dopamine eventually appear in the brains of abstinent methamphetamine users. The only thing that can reverse an individual's recovery is to use more of the drug. Once understood, this is a major incentive to remain abstinent.

Teaching Appropriate Prescribing

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I feel really gratified to find this tremendous interest on the part of such a diverse group of stakeholders in the appropriate prescribing of opioids. I hope that we are entering a new era in which this problem is given the attention it requires. Pain management practices have changed greatly over the past 16 years. In the early 1990s, the leaders in pain management pushed for more adequate prescribing of opioids for cancer patients. Even today, many cancer patients are not receiving opioids for pain. Soon after, we realized that opioids would also be useful for patients with chronic pain, who outnumber cancer patients by about 10 to 1. Now, 16 years later, we face an epidemic of prescription drug abuse.

Originally, physicians denied that prescription opioid abuse had anything to do with their prescribing. What I am finding now is that physicians do acknowledge the existence of a prescription drug abuse problem. They want to know what they can do about this – they want concrete, practical protocols on what to do. What I will discuss today is:

- Is there any reason to believe that prescribing has anything to do with prescription opioid abuse?
- Do we really know how to prescribe opioids appropriately?
- If so, how can we get doctors to do it?
- If not, what research is needed to know how to prescribe opioids appropriately?

RELATION OF PHYSICIAN PRESCRIBING TO PRESCRIPTION OPIOID ABUSE

The degree to which physician prescribing is a driver of prescription opioid abuse remains a question. My colleagues and I are developing a new surveillance system that surveys individuals who are being treated for prescription opioid addiction. This survey provides another perspective on whether opioid prescribing drives prescription opioid abuse. About 50 percent of people addicted to prescription opioids say that their abused prescriptions come directly from a doctor. A smaller number – fewer than 10 percent in self-report surveys – say that they shop for prescriptions from multiple doctors. The new era of State prescription monitoring will begin to give us more objective, targeted data on doctor shopping, so we will no longer need to rely on the self-reports of patients.

Determining a specific, accurate algorithm that can define and detect inappropriate “doctor shopping” behavior is an urgent need. What criteria should be used for identifying doctor shopping? Our team is starting to accumulate objective data about data shopping in Massachusetts, using our own working criteria for doctor shopping: namely, the use of more than four pharmacies and four doctors in a 12-month period. We found that, between 1996 and 2005, about four percent of people met this criteria for doctor shopping for Schedule II opioids. In 2005, those individuals received 45,000 prescriptions – a total of 2.5 million dosage units in a Commonwealth with an adult

population of 4 million. The new State prescription monitoring systems represent the opportunity for a major advance in reducing the amount of opioids acquired through doctor shopping.

SOURCES OF PRESCRIPTION OPIOIDS USED FOR NON-MEDICAL PURPOSES

As reported in the federal NSDUH survey, most young people who obtain prescription opioids for non-medical use do so from a friend or relative. But what are *their* sources? The thinking is that most of these opioids come from prescriptions – from medications left lying around in medicine cabinets. However, 13 percent of people report that they use the opioids prescribed to them, presumably for pain, for non-medical purposes. We do not know whether these people actually have pain or not.

As the DEA points out, dealers are an important source of prescription drugs among those addicted to them, but we don't know exactly where these dealers get their medications. A recent study based on DEA data found that about 14 million dosage units per year are stolen from U.S. pharmacies – not a small number but actually a tiny fraction of the overall number of dosage units that are being diverted. In looking at the sources of prescription opioids used for non-medical purposes, the bottom line is that prescriptions – both directly and indirectly – significantly fuel the problem of prescription opiate abuse.

KNOWLEDGE ABOUT APPROPRIATE PRESCRIBING OF OPIOID ANALGESICS

The World Health Organization (WHO) has developed a stepladder algorithm to be used by physicians in using opioid analgesics to treat cancer pain. However, there are no comparable instruments to help physicians prescribe opioids appropriately for chronic pain. Medical writings from 4,000 B.C. show that opioids were being used then for chronic pain, and probably had been for some time before the advent of writing. But the first randomized, placebo-controlled trial of opioids for chronic pain was not published until 1996. The last 10 years have produced roughly 30 randomized, controlled trials. Case series show the long-term safety and efficacy of opioid medications. The controlled trials, all funded by the pharmaceutical industry, have produced these consistent findings:

- All the opioids tested work.
- All the pain syndromes tested can be relieved by opioids.
- Pain relief is partial and occurs only for a subgroup of patients.

The rule for opioids, as for other medications used to treat chronic pain, is that about 50 percent of people get about 50 percent of their pain relieved. There is no guarantee that opioids in general will work for any specific person with chronic pain. Therefore, if a person has been prescribed opioids for chronic pain and the opioids are not working for them even after the medication has been juggled in reasonable ways, that person should be taken off opioids. Although not a new idea with other medications, this concept of taking people off opioids has received very little attention. Physicians just seem to expect opioids to work for pain. How to help people exit from opioid medication is not being taught as part of physician education on how to prescribe opioids.

IMPROVING PHYSICIANS' PRESCRIBING PRACTICES

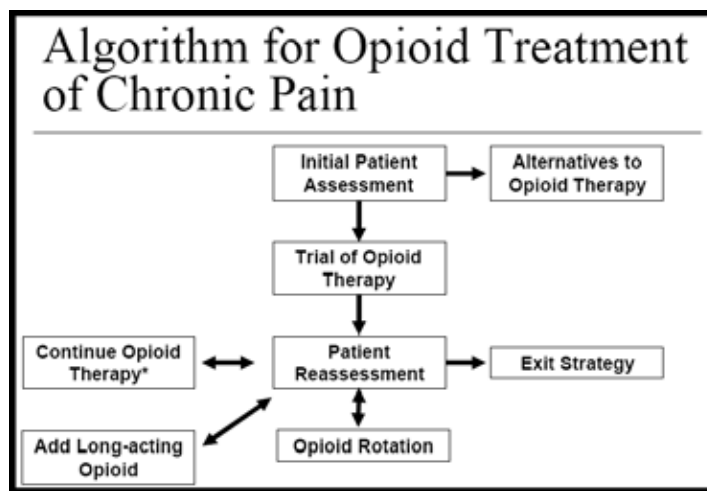
The current research suggests that better prescribing practices in opioid treatment for chronic pain could make a difference in the problem of prescription opioid abuse. Some of these findings include:

- 30-45 percent of persons receiving treatment for addiction to prescription opioids received their first opioid prescription from a physician.
- Between 10 and 25 percent of persons who ultimately became addicted to prescription opioids did not have (or acknowledge having) a prior substance use disorder.
- 20-40 percent of patients who receive long-term opioids for pain have a comorbid substance use disorder.

Do we know how to do a better job of prescribing opioids? If we don't have a way of targeting opioids

appropriately and of identifying patients at risk for substance-related problems and monitoring how they are doing in opioid therapy, then no amount of opioids is going to be the correct amount. In fact, we do have ways to better target opioid therapy to get it to the right person at the right time. This simple algorithm for opioid prescribing practices is based on years of experience. The

algorithm (following) guides the physician through patient selection and assessment, but also shows what to consider in beginning a trial of opioids, as well as alternatives to opioid therapy, ongoing reassessment, and developing an exit strategy, and conversion and rotation as part of the treatment strategy.



*Optimize therapy

Each of the decision nodes in this algorithm is supported by a list of clinical tools. These tools are part of a draft tool kit that **our team at Tufts University** is developing for the Commonwealth of Massachusetts. Among these tools are a simple risk assessment and triage protocol (see the text box, following), a screening tool to assess risk among patients being considered for opioid pain management (a validated tool developed with NIDA funding), tools regarding side effects and opioid conversion/rotation, and criteria for an exit from opioid therapy.

What we have found in developing this tool kit is that doctors want to know exactly what to do and they want the tools to do it. We believe that physicians do *not* want lots of

information and education; they don't want choices or pathophysiology or knowledge about receptors. We believe that the focus needs to be on changing physicians' behavior, not on providing them with information. The first focus should be on skills training – on helping doctors assess the risk of opioids for their patients so they can determine which patients to manage themselves and which to refer out. Physicians need to be doing a urine toxicology on every patient, and they need to figure out how to exit patients from opioid therapy.

	Risk Assessment and Triage Protocol	
Low risk	No history of substance abuse, minimal risk factors	Primary care
Medium risk	Past history of substance abuse, risk factors	Co-manage
High risk	Active substance abuse, high risk factors	Refer

Our team is now working on setting up computerized systems for physicians' offices that will support appropriate opioid prescribing. These systems will be designed to assure that the prescribing of opioids for pain can only be done in the correct way.

RESEARCH NEEDS

The current research suggests that a good deal more needs to be known so that we can guide physicians in their use of opioids for chronic pain. Randomized, controlled studies of opioid medications need to be conducted to fill in gaps in our knowledge. At the Federal level, a number of actions need to be taken to help clinicians prescribe opioids effectively. Such actions include:

- **Food and Drug Administration:** The FDA needs to require pharmaceutical companies to characterize the complications of opioid therapy and also should provide incentives for industry to develop abuse-resistant formulations.
- **National Institutes of Health:** The research community needs to conduct prospective, long-term controlled trials of the addiction risk of opioid therapy, to study risk factors for prescription opioid abuse in pain patients, and to conduct prospective studies of opioid tolerance.
- **Substance Abuse and Mental Health Services Administration:** SAMHSA needs to establish a validated opioid prescribing system, as well as validated guidelines for interpreting Prescription Monitoring Program (PMP) data.
- **Congress:** Congress needs to legislate reimbursement for the management of addiction to pain medication and incentives for the development of abuse-resistant formulations of opioid medications.

Training Residents to Manage Co-Occurring Substance Use and Mental Disorders

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The current state of addiction training for psychiatrists is best understood from the perspective of previous U.S. attitudes toward medical education – that is, how the medical community has historically addressed substance abuse and co-occurring psychiatric disorders. The first clear statement came in 1974, when the AMA stated that all physicians should assume responsibility for the diagnosis and referral of these disorders. The Macy Conference on Training about Alcohol and Substance Abuse for All Primary Care Physicians, held in 1994, expanded on the AMA’s statement by defining training expectations for all primary care physicians, specifically recommending a 1-month rotation in addiction treatment centers. We now recognize some underlying problems with these early recommendations and with the education that has emerged from them.

- **The notion that physicians who have limited treatment responsibility will provide detoxification and long-term care.** The medical community needs to recognize and accept that long-term care is a responsibility and core part of the medical services provided by most primary care physicians and psychiatrists.
- **The assumption that referral is an adequate treatment response.** Physicians routinely refer outside the medical system, with almost exclusive reliance on 12-step programs as the vehicle for long-term care. Self-help programs are important, but such major reliance on them ignores the fact that many patients with substance use disorders have medical and psychiatric co-morbidities that are not addressed in such programs.
- **The inability of these recommendations to accommodate recent changes and scientific advances in our understanding of neurobiology** – particularly the importance of medications to treat dependence on alcohol, opiates, and nicotine.

These early assumptions have resulted in training programs that do not adequately prepare physicians to handle substance use disorders. If physicians receive training at all, it is almost exclusively in inpatient programs – detoxification units or freestanding addiction programs. Yet long-term care in the medical system is basically an outpatient activity. Most inpatient addiction programs are short- rather than long-term, so they do not focus on the type of care needed to manage addiction and co-occurring mental health problems. Very few training programs actually implement an integrated curriculum throughout the course of medical training. Many residencies and training programs consist of only a few hours of lectures and occasional grand rounds. In addition, training in addiction and co-occurring substance abuse and mental health disorders is often an elective rather than a mandatory part of the curriculum.

PREVALENCE OF PSYCHIATRIC COMORBIDITIES

Evidence indicates that in most substance abuse treatment settings, individuals with co-occurring psychiatric disorders and substance abuse problems are the norm, not the exception. The best data we have comes from the National Co-Morbidity Survey, done by Kessler and colleagues (1996). Among survey responders who had any lifetime DSM III-R disorder, more than 50 percent also were co-morbid for a substance use disorder (SUD). Of respondents with an SUD, 51 percent had at least one mental health disorder. In terms of 12-month co-morbidity data, this survey showed:

- Almost 43 percent of responders with any SUD had a mental disorder.
- Almost 15 percent of responders with any mental disorder had a SUD.
- The odds ratio was 2.6 for co-morbidity between any 12-month DSM III-R disorder and any SUD.

Recent data from SAMHSA (2005) support these findings. SAMHSA estimates that 20-50 percent of patients in mental health treatment have a co-morbid SUD and 50-70 percent of patients in substance abuse treatment have a co-morbid mental health disorder. The rates of SUD in specific psychiatric conditions are antisocial personality disorder – 84 percent; bipolar I disorder – 61 percent; schizophrenia – 47 percent; and major depressive disorder – 24 percent.

These data raise several troubling questions. First, we have not designed our SUD treatment settings to reflect the fact that the typical patient being treated has a co-occurring disorder. In addition, individuals with co-occurring diseases have a more persistent and severe course. These patients are more refractory to treatment than individuals with single conditions. Although there has been little research to guide us in treating these patients, we do know from a number of studies that remission does occur and that integrated treatment – providing both substance abuse and psychiatric treatment at a single site – is the most effective approach and has the best outcomes (Drake et al. 2004).

CONTEMPORARY MEDICAL PRACTICE

A survey by Friedmann (2000, 2001) offers a window on current practice behaviors regarding substance abuse patients among primary care physicians and psychiatrists. The survey shows that the medical community has a long way to go in the adequate handling of substance abuse issues. Almost none of the respondents were using evidence-based care, either in their screening approaches or in their treatment practices. When asked about screening and treatment practices for substance use disorders, Friedmann found the following:

- **Screening:** 88 percent of responding physicians did report asking patients about substance use, which is good news, but only 13 percent used a screening tool, such as the CAGE.

- **Referral:** 82 percent of physicians referred their patients, but almost all of that was referral to 12-step, mutual-help programs rather than to specialized treatment.
- **Treatment:** Relatively few physicians actually provided treatment; most of these were psychiatrists who were providing counseling.

CURRENT TRAINING OF PSYCHIATRIC RESIDENTS

Since the early 1990s, experts have been calling for psychiatry training in dual diagnosis treatment (Chappel 1993, Halikas 1992). For example, Chappel reported on the lack of adequate addiction psychiatry training and the paucity of dual diagnosis treatment programs. He recommended that supervised clinical experiences be provided in settings that integrated the treatment of mental health disorders and co-occurring SUD. The American Psychiatric Association (APA) issued a position statement in 1994 calling for improved training to treat patients with co-occurring disorders. To date, there is no specific “dual diagnosis” requirement for psychiatric residency training.

In 2001, the ACGME Residency Review Committee (RRC) for psychiatry mandated that residencies must include a one-month, full-time equivalent, supervised clinical rotation in addictions. Presumably, this means that every psychiatric resident in the country should now be receiving that required 1-month clinical rotation. The kind of training these psychiatric residents receive is indicated by a survey of psychiatric programs done in 2000 by Bud Isaacson. At that point, 75 percent of psychiatry residencies already required a clinical rotation in substance abuse. Among the findings:

- **Most rotations take place on detoxification units or in intensive rehabilitation programs.** In addition, residents often see addicted patients with very severe and chronic problems in settings, such as emergency rooms, where patients do not get better and the staff attitude toward the patients is frequently negative and hostile. Few psychiatry residents are exposed to outpatient settings or to patients who are doing well in treatment. They are rarely exposed to clinicians who feel comfortable working with substance abuse patients and endorse that work as a legitimate part of clinical practice.
- **The “integrated” substance abuse curriculum throughout residency training typically consists of 6 to 14 hours, with a mean of 8 hours.** Psychiatric residents receive roughly 1,000 hours of formal education over the course of a 4-year residency. To devote only 8 hours to substance abuse training over this 4-year period is simply a joke. It should be no surprise that we are turning out physicians who are not well prepared or capable of doing a first-class job with substance abuse patients.
- **Only about 19 percent of the faculty involved in this training have any type of certification in addictions,** either by the ABPN or by the American Society for Addiction Medicine (ASAM) (Fleming 1999). Supervisors are more likely to be internists than psychiatrists. The inevitable conclusion is that most of the

faculty and mentors for psychiatric residents are individuals with minimal credibility within the context of an academic psychiatry training program.

- **Skills taught in these rotations are mainly diagnosis and referral, with a focus on 12-step treatment.** There is little or no emphasis on co-occurring psychiatric disorders, and the residents do not receive any experience in the long-term treatment of addicted patients.

Several studies since the mid-1970s have concluded that both medical school and residency tend to increase negative attitudes toward SUD patients and the efficacy of treatment (Chappel and Schnoll 1977, Decker et al. 1979, Geller 1989). Residents come out of training doubting that treatment works. There is some indication that trainees ignore faculty teaching about addiction in favor of negative attitudes and a negative culture passed on by senior residents and nursing staff (Brewster 1990). Some of these problems are still prevalent, as evidenced by a 2006 survey of third- and fourth-year psychiatry residents who are APA Members-in-Training. This APA survey asked residents about their attitudes concerning addiction patients and addiction psychiatry. Findings, not yet published, were:

- 97 percent of the residents considered addiction patients to be a very difficult patient population to deal with.
- Residents did not feel confident in their ability to treat these patients.
- Residents did not understand how addiction treatment can occur in the context of psychiatric practice or be included in their perception of themselves as psychiatrists.
- Residents repeatedly mentioned the lack of mentors and of role models for providing treatment to these patients.

MODELS OF MEDICAL EDUCATION

With the report of Project Mainstream, which was conducted by the Association for Medical Education and Research in Substance Abuse (AMERSA) in 2002, more concrete and positive recommendations have been made concerning medical education and training of primary care physicians and psychiatrists. For example, it is now widely accepted that all physicians should be prepared to conduct screening, brief intervention, and referral to treatment. It is recognized that every physician should be able to either treat or refer, particularly if the patient has medical or psychiatric comorbidities. We also are beginning to look at training recommendations for the sub-specialties, particularly with regard to the need to provide pharmacotherapy for relapse prevention and the need to provide more sophisticated psychosocial counseling. At the 2002 National Leadership Conference, participants recommended that physicians master three specific core competencies, one of which was treating co-occurring medical and psychiatric disorders.

A number of residency programs across the country are doing an exemplary job of training psychiatrists to address substance use disorders. One of these is the psychiatry residency program developed at Boston University, which we believe is a model that can

be adapted for medical as well as psychiatric training settings. A critical component is long-term outpatient care, which gives residents the responsibility and experience of working with individual patients for up to 2 years.

The bulk of the clinical training at Boston University occurs in the third and fourth years of residency, although the substance abuse didactic curriculum is integrated in all four years of residency training. The majority of our faculty members are certified in addiction psychiatry. The primary clinic rotation occurs in a Veterans Administration (VA) dual diagnosis outpatient clinic, with the VA supporting both the clinical operation and resident staff salaries.

The focus of training is on specific substance abuse counseling skills, the use of addiction pharmacotherapies, and the long-term management of dual diagnosis patients. The 4-year curriculum is divided as follows:

- **Years 1 and 2:** Seminars (9 hours in Year 1 and 8 hours in Year 2) focus on topics such as diagnosis and screening, basic phenomenology of the addictive disease process, and an introduction to treatment modalities.
- **Years 3 and 4:** The dual diagnosis rotation in Year 3, with supervision, includes 74 hours of seminars. The PGY Year 4 includes 35 hours of required seminars and an elective rotation with supervision.

This training teaches the skills and competencies necessary to the diagnosis, evaluation, and long-term management of patients with co-occurring substance use and psychiatric disorders. The training specifically focuses on specialized psychotherapeutic skills, such as motivational enhancement, cognitive behavioral therapy, and relapse prevention.

The following table depicts the model curriculum for Years 3 and 4 of the residency, totaling about 126 hours of seminars. Roughly 10 percent of the curricular time in our 4-year psychiatric residency is focused on addiction-related issues – a much more satisfactory figure than the 8 hours that appear to be the norm in many programs.

At Boston University, our program is based on the conviction that several issues are critical to addiction training. First, we must support the trainees with clinical mentors who actually provide treatment. We clearly articulate that psychiatry residents are expected to be responsible for treating addiction patients, and that your special skill as a psychiatrist is to treat addiction patients who have co-morbid conditions. Second, the clinical experience, which is required of all residents, must include supervised longitudinal care.

Our experience has shown that residents don't change their attitudes about addiction until they have followed their own patients for 6 to 18 months, living through the patients' struggles and relapses. Residents at Boston University are able to follow these patients for at least two years. Third, we emphasize the importance of respect for patients who are struggling with a chronic relapsing disease. Trainees must be comfortable with patients

who relapse and yet know that treatment works. Finally, our residents must complete their training with a high level of confidence in their clinical skills treating this population, as an integral part of their identity as psychiatrists.

Model Curriculum for a Psychiatric Residency, Years 3 and 4	Hours
<p>Seminar Topics: Year 3 Dual Diagnosis Clinic</p> <ul style="list-style-type: none"> ▪ Motivational enhancement ▪ Relapse prevention ▪ Cognitive behavioral therapy (CBT) ▪ Co-morbid psychiatric disorders ▪ Drugs of abuse and special populations ▪ Addiction pharmacotherapy ▪ Clinical case presentations <p>Seminar Topics: Year 4</p> <ul style="list-style-type: none"> ▪ Advanced neurobiology and psychopharmacology of addictions <ul style="list-style-type: none"> ➤ Receptors and neurotransmitters ➤ Review of recent research literature ➤ Review of clinical trials; FDA/NIDA submissions 	<p>10</p> <p>3</p> <p>25</p> <p>20</p> <p>5</p> <p>3</p> <p>8</p> <p>35</p>

Based on this experience, my overall recommendations for medical education include the following:

- We need to integrate treatment for substance abuse patients into long-term outpatient care settings, whether in medicine, psychiatry, or family medicine. Instead of trying to create new treatment units and programs, this may best be done by redefining the goals of existing treatment units to make it clear that part of the physicians' job is to deal with these patients.
- We need to recruit subspecialty faculty mentors to provide supervised care in these settings.

Building a Case for Cost-Effectiveness

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I want to begin with 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 latest 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 becomes: Who is paying for treatment? The answer is that, contrary to popular belief, most of the funds for treatment come from the States and localities, not from the federal Substance Abuse Prevention and Treatment (SAPT) Block Grant. 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 OF ALCOHOL AND DRUG ABUSE 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 1 of every 5 dollars spent on treatment goes to pay for actual treatment. The remaining 4 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 of 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 the 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.

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 8 in 1,000 of those with an alcohol or drug problem received treatment. About 5 in 1,000 employees identified as having an alcohol or drug problem are being treated through employee assistance programs.

The National Business Coalition on Health – a group that assesses the quality of care for alcohol problems delivered by health plans across the country – assessed nearly 300 health plans covering 108 million workers and their families. When the actual prevalence of diseases was compared to the corresponding rates of treatment, the results showed a low rate of identification for substance use disorders.

Disease Identification by Health Plans	
Substance abuse	12%
Depression	45%
Diabetes	65%
Hypertension	70%

MAKING COSTS MEANINGFUL TO BUSINESSES

A few years ago, my group at The George Washington University Medical Center developed an online alcohol cost calculator for business (www.alcoholcostcalculator.org), with the goal of making these numbers meaningful to employers. All that is needed to use the calculator is to identify the industry sector, the number of employees, and the State. Input this information, and you immediately receive a report identifying how many workers and family members are likely to have an alcohol use disorder. The same report can be created for drugs. Then, to make it real for businesses, we can use NSDUH data to estimate the number of days of work likely to be missed as the result of unidentified and/or untreated alcohol problems in that industry sector and State, adjusted for the number of employees.

An employer is likely to become interested if he or she sees that nearly 10 work years are missed due to unidentified and untreated alcohol problems over and above other anticipated absences. Employers also can estimate extra health care costs, the number of expected emergency department visits and hospital days, and their related costs.

Unfortunately, simply showing businesses that substance use disorders are expensive is not likely to help them take action. The next step is to identify the likely cost of increasing screening, identification, and treatment of those employees and family members who have an alcohol or drug-related problem. The news here is positive: Clinical trials of screening and brief intervention have documented substantial returns on

the dollars invested in such services. We reliably achieve a \$2.80 return on investment for alcohol screening and treatment. This is not a “gee whiz” number, such as the \$7 to \$12 and higher figures sometimes quoted for every dollar invested. The \$2.80 figure is believable and it is comparable to what is achieved for diabetes, depression, and asthma disease management.

There are other ways to assess and cut costs. For example, my group developed a health plan calculator to help determine the expected prevalence of alcohol and drug problems in the population covered by a given health plan and the cost of *not* identifying those problems. We also created a cost calculator for youth, working with ONDCP and their 35 city initiatives program. Using Baltimore as an example, we calculated that alcohol and drug problems resulted in 66,000 *extra* days that youth were not in the classroom. Since most school systems are paid on a per-child-in-the-seat-per-day basis, varying from \$35 to \$55 per day, days of school lost because of alcohol and drug problems quickly translate into real dollars lost, as well as lost ability to meet the goals of the federal No Child Left Behind program.

EMERGENCY DEPARTMENTS, TRAUMA CENTERS AND THE UPPL

Hospital emergency departments and trauma centers offer another example. My group is beginning to obtain data to validate cost projections associated with illness or injury resulting from substance use disorders, the cost of screening and brief intervention, and the 1-year return on that investment. Emergency department and trauma centers have low rates of identification and treatment of substance use disorders in part because of the Uniform Policy Provision Law (UPPL). 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.

PERSPECTIVES OF THE FEDERAL LEADERS

National Institute on Drug Abuse: Activities and Opportunities for Education

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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.

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 shows 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 not 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 of drugs in the wide variety of diseases experienced by their patients.

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)

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 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.

National Institute on Alcohol Abuse and Alcoholism: Physician Education Activities

Mark Willenbring, M.D.

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National Institutes of Health*

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.

PUBLIC HEALTH BURDEN OF EXCESSIVE ALCOHOL CONSUMPTION

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 dependence typically begins 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 3 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 3 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 current health care system must address this burden and understand more about the heterogeneity of alcohol use disorders. Not every individual follows the same course with respect to alcohol use. Many young people have early onset alcohol dependence but recover by age 25. We do not understand much about that process. A typical case might involve an individual aged 30 to 40. He or she has been ill for 15 to 20 years, with chronic and severe alcohol dependence. Yes another individual may have a chronic but moderate level of dependence, and can remain at that level over decades and well into old age.

TREATMENTS ACROSS THE LIFESPAN

What do we find if we look at a group of individuals who, more than 1 year ago, were dependent on alcohol? About one-third of the group is in full remission, either abstaining from alcohol consumption or engaging in low-risk alcohol use. About 40 percent of the group is 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 are still dependent on alcohol.

What this breakdown demonstrates is that a lot of individuals dependent on alcohol get well and most of them do so without specialized treatment. As I said earlier, we do not yet fully understand this phenomenon.

We must start thinking about developing different treatment approaches for different populations across the lifespan. To start thinking about tailoring interventions, universal prevention might be considered for those who do not drink heavily. For individuals who drink heavily and regularly and who are at elevated risk for consequences later in life, selective prevention or secondary prevention might be considered. When we talk about screening and brief intervention (SBI), this is what we are talking about: selective prevention. With more severe dependence, specialized treatment or abstinence-oriented, time-limited rehabilitation might be considered. For chronic alcohol dependence, there are no models and we generally only treat the complications.

This is an excellent model, but selective prevention and SBI are simply not happening. Of those individuals who are severely dependent on alcohol and who want treatment, only about 0.4 percent actually receive it. This means that 30 percent of the population is in need of either selective prevention or treatment, but only 0.4 percent is actually receiving those services.

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.

A CONTINUUM OF CARE

In place of the current system, we may want to think about a continuum of care for alcohol use disorders that begins with simply exceeding 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 without current consequences. One treatment model might include facilitated self-change and brief motivational counseling for individuals who have limited to mild risk.

The next step may be for individuals with mild to severe risk. Treatment may involve primary medical care and general mental health care, pharmacotherapy, outpatient behavioral services, and remission-oriented rehabilitation programs.

Pharmacotherapy is going to be very important, in combination with outpatient behavioral treatment and remission-oriented treatment programs. We need to further develop the addiction specialty treatment sector. Many patients have severe comorbidities and need fully integrated medical and psychiatric services, delivered by integrated mental health and addiction treatment systems.

ADDRESSING THE PUBLIC HEALTH BURDEN OF ALCOHOL DISORDERS

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 of Mental Health: Addressing Co-Occurring Mental Disorders

Thomas R. Insel, M.D.

*Director, National Institute of Mental Health (NIMH),
National Institutes of Health*

We have heard Dr. Volkow speak of the importance of thinking about substance use disorders as being brain-based, developmental, and treatable disorders. Dr. Willenbring provided the alcohol perspective and the importance of integrating treatment with primary medical care. He spoke about strategies to provide treatment that fit with the concept that these are chronic illnesses requiring a management approach similar to that for diabetes or hypertension. I am going to present a perspective that in some ways intersects with both of these views, but focuses on mental disorders. The three NIH Institutes work very closely together and in many ways take three different approaches to the same problem.

BURDEN OF MENTAL DISORDERS UNDERESTIMATED

Psychiatric residents today do not have a basic sense that mental disorders are a public health issue of urgent importance. In fact, when you compare these disorders to others, as was done by the World Health Organization, it is notable that they represent a burden of illness greater than cardiovascular disease, cancer, injuries, and a whole series of other disorders.

Many people think the big public health burden occurs with the “big three” killers: heart disease, cancer, and stroke. However, when you consider disability (that is, a nonfatal health problem that is chronic, begins early in life, and is disabling), it is fundamentally a description of depression, bipolar disorder, schizophrenia, and autism.

The prevalence of these mental disorders is very high across all age groups. In the 15 to 44 age group – the years of maximal productivity – the top mental disorders of unipolar, depression, alcohol use, drug use, bipolar, and schizophrenia are the sources of the greatest burden. It is just remarkable that the sources of greatest burden are not cardiovascular disease, diabetes, hypertension, or cancer.

It is critical that this information about mental disorders and their burden be conveyed with urgency to health care professionals, policymakers and the public. Individuals entering psychiatry must understand they are taking on the most urgent public health problem in the United States for the population under the age of 44.

It is not just a matter of morbidity associated with these illnesses, but mortality as well. There are 30,000 suicides in the United States each year, 90 percent of them related to mental illness. To put this figure into context, it is almost twice the number of homicides. In fact, suicides are far more common than homicides, AIDS deaths, and all forms of cancer except for colon, breast, and lung cancer.

Unlike other disorders, the indirect costs of mental disorders exceed the direct costs. By indirect costs, we mean the costs for social services. In fact, much of the treatment of mental disorders is outside the health care system. What is amazing is how much of the indirect costs are being paid by the public sector. Medicaid is the single largest payer of mental health services in the country. Fifty percent of all mental health expenditures are paid by the public sector.

There are very high rates of comorbidity between substance use and mental disorders. In one study, half of patients with schizophrenia and 58 percent of those with bipolar disorder also had substance use disorders. Similarly, 80 percent of men and 86 percent of women with alcohol use disorders also meet criteria for another mental disorder.

ADDRESSING CO-OCCURRING DISORDERS

To address the problem of comorbid mental and substance use disorders over the next 10 to 20 years, we must think differently about training. The last 10 years of the twentieth century was the Decade of the Brain, which helped us understand that mental life could be understood as brain activity, and that mental disorders are actually brain disorders. For example, newer diagnostic imaging procedures allow us to see that children diagnosed with schizophrenia experience a tremendous loss of cortical brain matter over a 5-year period. We may not know where the lesion is located in the brain, but this does not prevent us from understanding the disease at the level of neuroscience. The physician of the future who cares for individuals with these mental disorders needs to be a brain doctor, not simply a behavioral scientist or a specialist. We must think of these mental disorders the way we think about other organ systems.

There has never been a better time to be a scientist in this field because whole new arenas of study are opening. I would like to call this the Decade of Discovery. Right now, we are just identifying the location of the brain circuits that are so important. We are just identifying how the brain performs very complicated functions involved in cognition, emotion, memory, and learning. For the first time, we are beginning to understand some of the fundamentals of how the brain works and how different parts of the brain hierarchy work to create complex normal and abnormal behavior. The science is changing and this means the way we educate people about the science needs to be very different than it has been in the past.

A HOPEFUL VISION OF THE FUTURE

I submit that we are in a fundamentally unsustainable state. In the health care system, we diagnose by symptoms, treat by episode, and do most of this by trail and error. What is missing is pathophysiology. We do not understand these disorders – whether it is drug addiction, alcoholism, or depression – the way we understand the various forms of hypertension, Type I diabetes, and certain cancers. Nevertheless, we will get there because we will have more of the tools we need to do so. Within a short time, we will have biomarkers for diagnosis as well as treatments that focus on the core pathology.

The end game is personalized care – determining which treatment is best for which patient. There are evidence-based treatments for most of these disorders, but we do not know to whom the evidence base applies. We need to know how to target treatments so that a daughter or son or parent receives the treatment that is most likely to ensure his or her recovery.

Personalized care requires having tools for strategic prevention, understanding risk at the genetic and behavioral levels, and having the knowledge and skills necessary to provide substance abuse treatment that really brings recovery. We also need an approach based on the recognition that addiction is a chronic illness.

The good news is that these tools have already been shown to work for metabolic diseases and they can work equally well for substance use and mental disorders. The tools simply have not been applied in the appropriate way. Over the next 5 years, discoveries such as biomarkers will make a difference. Still, they will not be enough. The real goal must be to change treatment in the clinics and physicians' offices. We need to do this if we are to be effective in bringing the care of any of these disorders into the framework of primary medical care or even general medical care.

Moreover, the discoveries made must be available to all those who most need them, not just the fortunate few. Dissemination, access, and coordinated care – what I call “evolutionary practices” rather than “revolutionary technology” – are required. We need these evolutionary practices to optimize the treatments now available, and to ensure that new treatments become available and accessible.

My message is a very hopeful one. I cannot emphasize enough the importance of the next generation having a skill set that prepares them for the future. As a resident in psychiatry 25 years ago, a number of things I learned were dead wrong or dangerous. In 25 years, I think we will look back and say: “What were we thinking in 2006 with the kind of training being provided?” We are at the cusp of a revolution in how these disorders are approached. What is required is a transformation of how individuals are trained to treat these disorders. We are lagging behind, so I am here to send that message because it will take a village to make the transformation happen.

Center for Substance Abuse Treatment: Initiative on Prescription Drug Abuse

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*

Prescription drug abuse is a large and serious issue, which is being addressed by two Cabinet-level offices at the highest levels of the Federal government. Given this level of attention and concern, it clearly behooves the U.S. health care delivery system, as well as individual practitioners within that system, to address the problem as well. The Federal government stands ready to assist organized medicine in addressing those issues.

I will talk today about SAMHSA's many and varied efforts directed at understanding and reducing prescription drug abuse. But SAMHSA alone cannot resolve the many facets of the prescription drug abuse problem. . There are many significant issues around the prescribing of controlled drugs that can, and need to be, dealt with by organized medicine 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.

PREVALENCE OF PRESCRIPTION DRUG ABUSE

SAMHSA has been working with ONDCP on prescription drug abuse because this issue constantly arises in our epidemiological studies. Many people worry, correctly, about the National use of marijuana, cocaine, and heroin. But the epidemiological data show that prescription drug abuse is second only to marijuana use and exceeds the use of both cocaine and heroin.

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 4 years from 2002-2005.

SAMHSA/CSAT'S ACTIONS TO ADDRESS PRESCRIPTION DRUG ABUSE

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 identifies 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 accurately describe 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.
- **Computer-assisted screening system.** SAMHSA/CSAT is supporting the development of a computerized Prescription Opioid Documentation System (PODS), which will help prescribing physicians screen and identify patients who may be at elevated risk for problems with analgesics prescribed for pain.
- **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 more accurately categorize 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 in 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.

INITIATIVES TO IMPROVE PHYSICIAN EDUCATION

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 be 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:

- **A continuing medical education (CME) course on prescribing controlled drugs.** 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 and addiction expertise, we expect the course to be ready for launch in 2007.

- **A continuing medical education (CME) course 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 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 is planning a symposium on prescription drug abuse at the 38th annual meeting of the American Society of Addiction Medicine, which will focus on practical tools to improve prescribing practices.
- **Conferences planned for 2007.** SAMHSA is planning a meeting about cardiovascular assessments for patients maintained on opioid medications. In addition, at the 7th International Conference on Pain and Chemical Dependence, SAMHSA/CSAT is collaborating in the development of a session on appropriate prescribing of opioid drugs for chronic pain.
- **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.

At SAMHSA, we are hoping to engage all parties who are writing prescriptions for controlled scheduled drugs. We hope you will help us think through how the Federal government can best assist organized medicine in addressing the crucial issues involved in prescriber education and the prevention of prescription drug abuse.

Drug Enforcement Administration: Sources of Prescription Drug Diversion

Joseph Rannazzisi

*Deputy Director, Office of Diversion Control,
Drug Enforcement Administration*

I bring the perspective of a registered pharmacist who has worked on drug diversion cases as a DEA agent since 1986. With this background, I have seen the change in the prescription drugs diverted over time. In the 1970s and 80s, the primary prescription drugs being diverted were methaqualone, followed later by tripeleennamine and pyribenzamine (“Ts and blues”). Today, the DEA Diversion Drug Trend Report identifies hydrocodone (Vicodin®, Lortab®, and Lorcet®) as the most commonly diverted and abused controlled pharmaceutical in the United States. In fact, Vicodin® is second only to marijuana as the “drug of choice” for adolescents. Xanax® -- a trade name for a formulation of alprazolam (a benzodiazepine) – also appears to be widely diverted and abuse.

METHODS OF DIVERSION

Interestingly, State authorities see different primary sources of diversion than do Federal agents. In March 2006, DEA conducted an informal survey of 450 State, local, and Federal officials, as well as selected professional organizations, to ask about local/regional methods of diversion. State officials identified the following sources:

1. **Doctor shopping.** Many State officials reported that individuals go from doctor to doctor, claiming fictitious illnesses or showing x-rays and medical data for disorders for which physicians typically prescribe opioids.
2. **Prescription forgeries.** Many State officials reported the use of fake or forged prescriptions to obtain opioids.
3. **Thefts from individuals who have been prescribed a medication.** Such thefts sometimes are perpetrated by family members, but also involve ruses such as visits by “potential buyers” to homes that are listed for sale.

At the Federal level, we see diversion of controlled substances that involves a range of professionals in addition to physicians, including podiatrists, nurse anesthetists, nurse practitioners, and pharmacists. Employee pilferage is occurring in hospitals, practitioners’ offices, nursing homes, retail pharmacies, and in manufacturing and distribution facilities. Controlled substances are lost from pharmacies through armed robbery, burglary (especially night break-ins), and in-transit hijacking.

I want to make clear that the DEA is not taking actions against doctors who are operating within the scope of accepted medical practice. The link “Cases against doctors” on the www.DEA.gov website provides access to monographs on each of the 156 medical

doctors and doctors of osteopathy that the DEA has arrested in the last 3 years. A separate link, “Administrative actions against doctors,” takes the reader to the orders showing cause for the DEA’s removal of registration for each affected practitioner. Both links demonstrate that the DEA is not taking action against doctors who have simply prescribed a little too much hydrocodone or oxycodone. The doctors on these lists are not operating as physicians, but as criminal agents.

DIVERSION VIA THE INTERNET

Although State officials did not list Internet purchases as a major source of diverted drugs, the DEA and other Federal agencies consider prescription mills and Internet pharmacies to be a matter of great and growing concern.

Through the Internet, consumers now can purchase controlled substances from online pharmacies and other sources without any of the traditional safeguards provided by U.S. controlled substance laws. The Internet sources circumvent existing Federal and State laws, as well as regulatory protection and traditional safeguards; for example, no “doctor-patient relationship” actually exists. Internet pharmacies, which were originally aimed primarily at users of “lifestyle” drugs (such as Propecia® and Viagra®), now offer controlled drugs such as Vicodin®, Phentermine, Ambien®, and Lortab®.

Typical features of these “cyber” pharmacies are:

- **A high percent of total sales are for controlled substances.** At one rogue Internet pharmacy, some 95 percent of prescriptions filled (about 425 prescriptions per day) were for controlled substances. This compares with an average of 11 percent of prescriptions for controlled substances (or 20 prescriptions per day) filled by the typical independent “brick and mortar” pharmacy in the U.S.
- **Controlled substances sell for vastly inflated prices.** As an example, one rogue Internet pharmacy offers 60 Lortab® (7.5 mg) for \$200, compared to \$47 for 60 Lortab® at the CVS pharmacy Website. The same rogue pharmacy sells 60 diazepam 10 mg tablets for \$201, compared to \$14 for the same quantity of diazepam at the CVS Website. An investigation called “Operation Cyber Chase” compared the costs of Schedule II-IV drugs from E-traffickers with standard retail costs for 100 tabs and found the following cost differences: \$264 vs. \$64 for codeine, \$288 vs. \$44 for Xanax®, and \$198 vs. \$27 for Valium®.

What we are seeing is a fairly complicated and geographically dispersed trail of actions for this Internet activity. As an example, a person in Montana wants hydrocodone for a non-medical use and orders it at *drugs.com*, which is located on an Internet server in Texas. The purchaser first is asked for credit card information. Then, instead of a physical examination, he or she completes a questionnaire asking about height, weight, and the symptom (such as back pain). If the symptom doesn’t warrant the drug requested, some sites even prompt the purchaser to provide an adequate reply. This information goes

through a web company queue to a physician (who could be located somewhere in the continental U.S., Puerto Rico, or overseas), who approves the order and sends it on to a facilitation site.

This web facilitator is not a health professional. The facilitator claims to be only a middleman, bringing together a physician and a pharmacy or, in some cases, managing a computerized bulletin board where pharmacies can bid on prescriptions. The pharmacy, wherever it may be located, then fills the order and sends it to the consumer.

According to the American Medical Association (AMA), the online consultations used by online pharmacies to provide patients with prescription medication fall well below the accepted standard of care. The problems with this method include:

- The patient questionnaires request only minimal information.
- There is no mechanism to determine whether the questions are being answered correctly or truthfully.
- The risks and possible adverse effects of the various drugs are not explained to the “patient.”
- There is no medical assessment of the patient.
- There is no follow-up to determine whether the “treatment” was effective.

Internet prescribing and dispensing thus does not offer an established, legitimate physician-patient relationship. The pharmacy that actually ships the medication does not appear to have verified anything. So how do these illegal Internet prescription drug suppliers recruit pharmacies and physicians? They promise big earnings and target small, financially struggling “mom and pop” pharmacies that are being pushed out of business by the chains, as well as young physicians who are starting into practice with hundreds of thousands of dollars of debt.

The online sale of drugs is the DEA’s biggest concern. We have no way to gauge the size of the market for rogue drug sellers. But we can estimate the increase in the online purchase of prescription drugs from legitimate pharmacies. In 2002, U.S. consumers ordered \$700 million in prescription drugs online from legitimate pharmacies. One year later, in 2003, U.S. consumers ordered \$1.4 billion of legitimate drugs online.

Given these statistics, it is not surprising that the Internet has become the most popular source of diverted Schedule III-V prescription drugs obtained from both foreign and domestic suppliers. The U.S. Senate Permanent Subcommittee on Investigations estimates the current volume of offshore drug shipments to U.S. consumers to be in the range of 20 million drug packages annually – an increase of more than 1,000 percent in just the past 2 years.

REPORTS FROM THE WORKING GROUPS

Charge to the Working Groups

Bertha K. Madras, Ph.D., Conference Chair
Deputy Director for Demand Reduction,
Office of National Drug Control Policy (ONDCP)

I now invite all participants to contribute their expertise to this conference. To facilitate this process, each participant has been assigned to one of seven working groups addressing strategies for: (1) Undergraduate medical education; (2) Improving residency training; (3) Change in continuing medical education; (4) Engaging the licensing boards and accrediting and certifying organizations; (5) Engaging purchasers and payers of health care services; (6) Improving prescriber education and preventing prescription drug abuse; and (7) Public input on overall strategies for improving medical education in substance abuse.

Each of these groups will be led by an expert in the relevant content area. In addition, a member of the Conference Planning Committee will assist each group leader. We would like to ask each working group to review the recommendations developed by participants in the first National Leadership Conference in 2004. Please identify those recommendations that are most germane to the situation being addressed by your group today. The charge to the working groups is then to develop 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 two areas of paramount concern. Please explore those two selected areas, addressing ideas and strategies that could offer reasonable solutions to the challenges and problems faced in those areas. Among the issues we hope you will address are how to identify substance users and abusers and how to train and implement best practices. Each group has a recorder who will take notes of the working group proceedings.

The leader of each group will present that group's thinking, ideas, and suggested strategies to the conference as a whole. We look forward to hearing from each group after we reconvene.

Group 1: Undergraduate Medical Education

CHAIR:

Rika Maeshiro, M.D., M.P.H.

CO-CHAIRS:

Douglas Leonard, D.O.

Laura McNicholas, M.D., Ph.D.

MEMBERS:

Michael Dekker, D.O.

J. Harry (Bud) Isaacson, M.D.

Marianne T. Marcus, R.N., Ed.D., FAAN

Winston Price, M.D., M.P.H.

Jeffrey Samet, M.D.

Stephen A. Wyatt, D.O.

Dr. Maeshiro opened the discussion by presenting data gathered from allopathic medical schools about instruction in substance use disorders (SUD) as part of undergraduate medical education.

The first graph showed the percent of medical schools that require instruction about SUD, based on data drawn from the Liaison Committee on Medical Education's Annual Medical School Questionnaire, Part II. The data indicate that, since 1979, the percentage of schools requiring instruction on SUD has risen increased from 70% in 1979 to nearly 100% in 2006.

The second graph (Graduate's Perception of Time Devoted to Instruction in Drug and Alcohol Abuse, from the Medical School Graduation Questionnaire) shows that from 1987 to 2006, increasing numbers of graduates reported that the time spent on instruction was appropriate. In 2006, 90% of the graduates reported that the amount of time devoted to instruction in SUD was appropriate. Conversely, the number of graduates who perceived the amount of time spent on SUD as inadequate has declined steadily since 1987.

In both allopathic and osteopathic medical schools, the first two years of education had historically 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 takes 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 SUD 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 10 (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.

Conducting a 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?). The data we currently have does not address the *effectiveness* of current education about SUD.

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 SUD and the neuroscience underlying the diagnosis and treatment. Identifying champions would help us to identify best practices – tested content on SUD – 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.

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 SUD 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 SUD. 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 SUD. 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 SUD, 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 solicited to serve as reviewers. Substance abuse specialists could take the lead and add a new library to MedEdPortal. There already exist quite a lot of content about SUD that would be appropriate for MedEdPortal.

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 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 SUD 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 3 to 5 years and is focused on relatively junior faculty who have a whole career in front of them. Faculty development also needs to focus on clinical care in addition to research. In addition, the model would need to guidelines developed by the Sullivan Commission Report on Workforce Diversity. The

goal is to ignite an interest in SUD 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., 3 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 SUD into the undergraduate curriculum is to link it to widely recognized epidemics such as HIV or hepatitis wherever they are taught.

Prompting Medical Schools to Act. The group members agreed that it would be useful to establish an “umbrella” committee similar to the network of organizations formed to support buprenorphine training. Members would represent AAAP, ASAM, AOAAM, AMA, AMSA, APA, NAADPC, and SNMA and other organizations with an interest in SUD training. Such a committee would have the strength that derives from being multi-disciplinary, which hopefully would broaden participation and interest in SUD training as part of undergraduate medical education. The members could perform specific functions,

such as serving as reviewers for MedEdPortal to review curricular materials submitted to MedEdPortal before it is posted.

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.

None of these individual efforts, on its own, will change the world, but together they can create an environment in which change is possible.

There was consensus that it would be useful to measure progress toward implementation of the strategies offered, although it is not entirely clear how that can be done. One possibility would be to use the graduate survey, because that vehicle already exists. If three or four core topics (such as screening and brief intervention, prescribing for chronic pain, etc.) were to be selected, questions could be included in the survey that would track changes in training over time.

GOALS AND STRATEGIES FOR UNDERGRADUATE MEDICAL EDUCATION

Goals. Enhance the effectiveness of teaching about substance use disorders in the undergraduate curriculum. Assure that the content is clinically relevant and reflects current research. Give special attention to the competencies with the widest applications, such as knowledge and skills in screening and brief intervention and the prescribing of drugs with abuse potential.

Strategies. A key recommendation of the Group on Undergraduate Medical Education is to identify “champions” in each medical school to help identify specific curricular needs related to teaching about substance use disorders. Communication of this sort was seen as affording an opportunity to foster faculty interest in teaching about substance use disorders and mentoring students with interests in SUD.

Members of Group 1 also developed strategies related to faculty development, best practices, and the creation of Centers of Excellence to compile information and disseminate program models and related knowledge, as follows:

1. Identify champions in each medical school to help identify specific curricular needs related to teaching about substance use disorders. Work with AAMC and AACOM to establish a faculty network, with a Listserv, to encourage collaboration. Through such communication and collaboration, there will be an

opportunity to foster faculty interest in teaching about substance used disorders and mentoring students with interests in SUD.

2. Pursue a variety of avenues to disseminate information:
 - a. AAMC's MedEdPortal (www.aamc.org/medportal) can be used to compile and disseminate potential model curricula for teaching about SUD at the undergraduate level.
 - b. The MSOP (Medical School Objectives Project) is a potential vehicle for garnering expertise on teaching about SUD.
 - c. A workshop on education and the dissemination of knowledge about SUD could be developed and presented at the next annual meeting of AAMC and AACOM.
 - d. Pursue the development of the Special Interest Group (SIG) on Addiction Medical Education (AddictionMedEd) within the Society of Osteopathic Medical Educators.
3. Coordinate activities through an umbrella committee with representation from organizations such as ASAM, AOAAM, APA, AAAP, AMA, AMSA, SNMA and NAADPC. Early initiatives could include:
 - a. Encouraging organizations like USMLE to include screening and intervention for SUD in their clinical skills examinations.
 - b. Educating all medical students (as well as residents and practicing physicians) about risk factors for physician impairment, as well as how to identify impairment, the ethical and legal obligation to get help for impaired colleagues, and the high rates of recovery for physicians who receive timely and appropriate care.
 - c. Encourage JCAHO to include standards related to screening and brief intervention within the body of safety standards for accreditation.
 - d. Creating an award to recognize the medical schools with the best curricular content on SUD.
4. Implement faculty development projects (as referenced in the IOM Report on Improving the Quality of Health Care [recommendation 7.3] and The Sullivan Commission Report on Workforce Diversity). Encourage NIAAA, NIDA, and other NIH institutes to include a requirement for developing expertise in clinical teaching about SUD for career development grants, such as K-23s , thus encouraging continuation of the tradition of career teaching
5. Fund Centers of Excellence in all relevant disciplines for elective rotations in addiction care for medical students (funding for student travel and housing as well as for development of the curriculum would be needed).
6. Identify or develop and disseminate "best practices" for vertically integrating training about SUD throughout the medical school years.
 - a. Recommend that teaching about SUD be incorporated into required self-study modules.

- b. Ensure that such teaching is linked to instruction about HIV, hepatitis, and other relevant medical disorders.
- c. Develop and disseminate teaching about best practices for prescribing controlled substances and for educating patients about how to manage their prescribed drugs that have abuse potential (e.g., keeping them in a safe place, etc.).

Group 2: Graduate Medical Education

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The Accreditation Council for Graduate Medical Education (ACGME) oversees the training of 98,220 postgraduate (resident) physicians and the accreditation of 7,731 residency training programs in 99 specialty and subspecialty areas. Although several professional organizations have called for a greater integration of substance abuse education into allopathic and osteopathic residency training programs, the impact of these recommendations has been variable. For example, although the ACGME was represented in the development of the Policy Report of the Physician Consortium on Substance Abuse Education, substantive changes in Residency Review Committee (RRC) standards, requiring expanded integration of substance abuse curriculum into residency programs, never occurred (John Gienapp, personal communication).

A similar lack of impact has been observed in osteopathic residency training standards (Eugene Oliveri, personal communication). Recent data indicate that there are RRC program requirements regarding substance abuse education in only five of the 99 specialty training programs (anesthesiology, family practice, internal medicine, obstetrics/gynecology, and psychiatry) (AMA, 1998).

A survey conducted in 1988, which had a 74 percent response rate, revealed that the proportion of departments that offered a curriculum unit in substance abuse was 93/232 (40 percent) for internal medicine, 195/288 (68 percent) for family medicine, 38/139 (27 percent) for pediatrics, and 153/169 (91 percent) for psychiatry (Davis et al., 1988).

A recent National survey was conducted to determine the extent of substance abuse training in residency programs. This survey of 1,831 allopathic and osteopathic residency program directors in emergency medicine, family medicine, internal medicine, pediatrics, psychiatry, and obstetrics/gynecology found that the percentage of programs

requiring substance abuse training ranged from 32 percent (pediatrics) to 95 percent (psychiatry), yielding a combined average of 65 percent. The median number of curricular hours ranged from three to 12. The traditional grand rounds lecture was the most common curricular format used to teach substance abuse topics; only family medicine (55 percent) and psychiatry (75 percent) reported that a majority of their programs required clinical rotations.

In recent surveys, the most commonly cited factors limiting further integration of substance abuse training into residency programs include a perceived lack of time, faculty expertise, identified training sites, and institutional support (Fleming et al., 1999; Isaacson et al., 2000).

While physician training should be geared toward a broad range of skills, including screening, intervention, referral, and follow-up care, it would be desirable that some proportion of substance abuse training be performed in specialized settings in order to expose trainees to this type of care. A separate survey has revealed that fewer than 10 percent of the faculty who teach substance abuse topics perform clinical work in addiction treatment programs, and that teaching is infrequently performed in these settings (Fleming et al., 1999).

Implementing screening, preventive counseling, and brief intervention is best approached as a systems issue (Fleming, 2002). Clinical services and the providers who deliver them need to be linked in terms of both location and reimbursement. Health care settings are complex systems with multiple competing agendas; therefore, implementation strategies must involve convincing purchasers (e.g., employers and government agencies) and payers (e.g., insurance companies and HMOs) to provide financial support and leadership. Both the purchasers and the providers need to be convinced that prevention of and early intervention for SUD will improve the health of their covered populations and reduce health care and social costs. Similarly, professional organizations need to take a more active role in persuading payers to allocate a level of resources to the problem that approximates the impact of SUD on the public health and economy (Fleming, 2002).

Aligning Incentives for Change. The members of Group 2 unanimously agreed that, at present, screening and brief intervention and prescriber education are inadequately addressed during residency training. The group further agreed that the major hurdle is to develop sufficient incentives for a change in institutional (e.g., residency program) and individual behavior. For example, the benefits (carrots) of employing screening and brief intervention are not now sufficient to motivate their adoption. There are so many demands on residency programs and physicians' time that they must be given a powerful reason to undertake a new activity.

Therefore, the group agreed that to bring about the kind of system change that will bring screening and brief intervention into the mainstream of graduate medical education, it will be necessary to align incentives with objectives and to find better carrots and stronger sticks. For example, if residency requirements were put in place for screening

and brief intervention, the demand for training would follow, especially with the stick of consequences acting as a powerful motivator.

If training in screening and brief intervention were to be mandated for physicians, and residency programs were given 5 years to prepare, they would be able to send faculty to conferences, train their trainers, collect information, and prepare curricula. In other words, if the demand were created, specialties would find a way to implement training. If requirements for screening and brief intervention were enacted, doubtless residency programs would teach brief intervention in different ways. But debates about which screening tool is most effective or which interventions are backed by the strongest evidence can be productive and such discussions would be an improvement on the current situation.

Likewise, different specialties doubtless would pursue different approaches to the training. The means of change would come from within the professions and, to the extent that different solutions are proposed, this diversity of approaches would be healthy. Ultimately, the best training methods and curricula would prevail, as the programs themselves seek out the most effective approaches.

RRCs and physicians have demonstrated that they will respond nimbly and innovatively when presented with a reason to implement a policy. RRCs thus are a good vehicle for implementing screening and brief intervention.

Focus on Family and Internal Medicine. The members of Group 2 recommended an initial focus on RRC requirements in family medicine and internal medicine, because physicians in those specialties see the majority of adults and adolescents affected by SUD. After reviewing the existing RRC requirements for these two specialties, the participants determined that addiction is given only cursory treatment, amounting to one or two lectures during residency. They deemed this insufficient exposure to the subject, given that family physicians and internists are most patients' primary point of contact with the health care system.

To change the situation, important work needs to be done in two areas: policy and funding. Entities such as the RRCs, JCAHO, and the AMA need to be engaged to push the issue of SUD training forward. However, dissemination and implementation – along with the funding that will make those possible – also are critical. Members suggested that the working group itself might want to divide into two subgroups: one on replication/implementation and one on policy and funding.

On the funding and policy side, both JCAHO and NCQA could become powerful allies in bringing screening and brief intervention into the mainstream of graduate medical education. One major point of leverage to force change would be a JCAHO requirement for screening (which ought to be a safety measure, rather than a quality measure). This has implications for reimbursement, certification, and staff training. Similarly, there presently is only one HEDIS measure that addresses SUD. Working with NCQA to put in

place a HEDIS measure around screening would be a powerful way to engage the health insurance industry in developing incentives to address the problem.

The ACS requirement that Level I trauma centers screen patients for SUD also is an interesting approach. Members of the group agreed that we need to learn more about how this was accomplished and think about the possibility of translating it to all emergency departments, possibly through a collaboration with the American College of Emergency Physicians.

Finally, the group also discussed the pros and cons of convincing state medical boards to require CME credits in appropriate prescribing. A related proposal was that screening (which is now reimbursable) should be required before any opioid prescription is written.

Core Competencies and How to Develop Them. 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 SUD 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 SUD 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 SUD 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 that represent practitioners in the relevant specialty and/or have the authority to appoint members to the RRCs (such as the AMA), could have significant influence in this process.

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 SUD 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.

GOALS AND STRATEGIES FOR GRADUATE MEDICAL EDUCATION

Goals. Enhance the effectiveness of training about substance use disorders in graduate medical education. Assure that residency and fellowship training reflects current research and clinical best practices. Give special attention to the competencies with the widest application; i.e., knowledge and skills in screening and brief intervention and the prescribing of drugs with abuse potential.

Strategies. Members of Group 2 offered a variety of strategies, including a proposal to bring together representatives of the institutions of medicine to develop minimum standards for training all medical students and residents in the recognition of substance use disorders. They felt that such a gathering would lay the groundwork for an approach to the American Board of Medical Specialties (ABMS) and the various specialty societies and boards with a request for stronger requirements for the content of specialty board examinations related to substance use disorders. The following specific strategies were offered:

1. Bring together representatives of the institutions of medicine in a forum that allows them to focus on the overarching need to set minimum standards for training all medical students and residents in the recognition of SUD. Participants would include the ACGME, the relevant boards of the American Board of Medical Specialties, the chairs of the relevant RRCs, the National Board of Medical Examiners and the National Board of Osteopathic Medical Examiners, and others who create and maintain the requirements for core content in each of the targeted specialties.
 - a. As an interim step, convene working groups that represent the primary care specialties to begin the process of identifying the needed changes in training requirements.
 - b. Engage all organizations involved in the structure of the specialty to participate in this effort.
 - c. Create a model by selecting one primary care specialty (such as internal medicine or family medicine) and approach its leaders to begin a process of revising its RRC program requirements for training in SUD.
2. Work with the ABMS and the various specialty societies and boards to strengthen the language articulating specialty board requirements for the content of examinations related to SUD.
3. JCAHO and NCQA can be powerful allies in bringing screening and brief intervention into the mainstream of graduate medical education.
 - a. Encourage JCAHO to include issues related to SUD as a patient safety standard for accreditation.
 - b. Approach NCQA to explore contributions that can be made on the institutional side of the health care system.
4. At the 2004 ONDCP Conference, Donald Melnick, M.D., of the National Board of Medical Examiners, offered to allow a panel of SUD experts to join the question-writing process. (The impediment to immediate action was the need to find funds to support travel and hotel costs for a week.) This is an opportunity that needs to be pursued.
5. Develop a mechanism to disseminate information about model residency training and fellowship programs that incorporate teaching about SUD.
6. Compile and disseminate information about available fellowship opportunities in addiction medicine and addiction psychiatry.

Group 3: Continuing Medical Education

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Leslie R. Walker, M.D.

Dr. Lundberg opened the discussion by distributing a handout listing the key components of any effort to change medical practice and physician behavior, as identified by the late John Eisenberg, M.D. They are: (1) education, (2) feedback, (3) financial rewards, (4) financial penalties, (5) administrative change, and (6) physician participation in some kind of mix. Dr. Lundberg noted that, although education is listed first, it usually is addressed last.

Dr. Havens defined CME as an infrastructure to promote, enable, and facilitate physician education. The contents of accredited CME programs are derived from practice-based needs, whether at the level of individual physicians, medical communities, or larger physician populations. Physicians are involved in CME programs to fulfill their learning goals. Not all learning requires an accredited provider-based activity, but all accredited provider-based activities should result in, or at least be designed to promote, learning. The presence of a method to assure that all three features are present in a learning activity is the value that the CME accreditation system brings to the learner.

Dr. Havens distributed a handout that contains newly updated ACCME accreditation criteria, noting that the final seven criteria are new and represent a “huge change” in approach. Under the new standards, she said, CME providers must demonstrate that they are developing programs that actually make a difference. Dr. Havens cited current evidence showing that single interventions are not sufficient to change physician behavior: multiple studies show that, to reach physicians and increase the likelihood that they will integrate new information into their practice behaviors, the physicians need to

receive the information 8 to 16 times in a variety of ways and have the opportunity to apply and practice the related skills.

To emphasize the urgent need for more CME on substance use disorders, Dr. McQueen noted the confusion that can result when physicians refer patients for substance abuse treatment who don't need it, as well as the risks that occur when physicians fail to initiate treatment and referral when patients do need it. Both of these occur when physicians have a poor understanding of the continuum of risk to addiction, how to identify a given patient's place on the continuum, and the tools available to help the physician respond appropriately.

Dr. Walker pointed out that most physicians are aware of the statistics on overall prevalence of SUD, but are not convinced they should devote their CME time to the issue if the experience will not contribute to their day-to-day practice, particularly when so many other topics for CME are available. She suggested that planners look at how CME programs about SUD are presented to determine whether they would be more readily accepted if presented as "train-the-trainer" sessions, so that physicians who complete such courses view themselves as experts who can train others (i.e., they have actually gained something), rather than as learners who need schooling in an area with uncertain benefits.

Dr. Havens noted that more than 2,000 CME providers are accredited by ACCME and must comply with the criteria, and suggested that the group discuss ways to identify gaps between current practices and best practices for SUD and how to close these gaps. Dr. Havens noted that CME providers are "dying to have some examples" of how they can design programs to comply with the new criteria. She recommended that Group 3 focus on getting SUD courses to CME providers, and then expand the initiative by providing the same information on the Web, on CDs, and by other methods to reach physicians in a variety of ways at different times. In fact, ACCME plans to use the educational initiatives from the ONDCP conference to demonstrate to CME professionals how their accreditation criteria can be implemented.

Ms. Murray reported that NIAAA is funding a Medical Education Grant that is designed in part to learn about and promote the science of dissemination. The group agreed that some movement has occurred in that direction, and that we know more than we once did about how to disseminate knowledge. Nevertheless, most physicians pay attention to information about SUD only if compelled to do so. Ms. Murray asked, "Who can make physicians do it?"

One approach is to involve consumers in driving physician demand for CME. For example, a documentary about addiction, to premiere on the HBO channel in March 2007, will be preceded by a major marketing effort – including ads in USA Today, CNN, the New York Times, and Web sites to create "a lot of buzz." This may lead physicians to want to prepare for questions from their patients by seeking out CME courses on SUD.

Dr. Kraus noted that the HBO series could be used to kick off a plan to boost physician interest in SUD. He suggested that MedScape respond to hits on subjects related to SUD on its site by informing the visitor about the HBO special and other information that is available.

Principal Points of Agreement. Members of Group 3 agreed that addiction medicine specialists have the knowledge and tools to treat SUD, but lack the ability to attract and motivate primary care physicians. They viewed current efforts to reach out to practicing physicians about SUD as fragmented and inconsistent. Physicians who want information and advice about treating SUD often don't know where to find it. Others receive information about SUD but, because of the factors cited above, often don't use it.

The group also agreed that available CME programs about SUD do not adequately address the needs and viewpoints of women, children and adolescents, and other groups such as American Indians/Alaska Natives, whose cultural beliefs about substance use, treatment, and recovery do not receive sufficient attention and respect in existing educational materials. For example, most CME programs target M.D.s, but not enough attention is paid to D.O.s, and not enough information about SUD and treatment is provided to decision-makers in the criminal justice system.

The members of Group 3 reiterated the 2004 recommendation that a list of available CME offerings on SUD be compiled and housed on a central Web site, along with links to CME sources and ways to contact SUD experts who will advise physicians. In furtherance of this objective, Dr. Lundberg offered to compile such a list from information provided to him by group members (the resulting list will include both electronic and classroom offerings). Web sites serving the target audience would be encouraged to link to the planned SUD/SBI Web portal. The SUD CME site will be promoted in numerous ways to raise physician awareness.

Rather than focusing on model CME programs, as recommended in 2004, the members of Group 3 agreed that a Web site should promote standardization of CME courses by encouraging sponsors to obtain ACCME accreditation, which also will help to assure course quality and continuity.

Whereas the 2004 recommendations emphasized collaboration between organizations that provide CME and government agencies, the 2006 deliberations focused on collaborations between representatives of the addiction field and commercial sponsors, professional organizations, and government agencies that produce CME courses, to create a mutually beneficial synergy of efforts. The members of Group 3 concluded that CME providers are looking for subjects on which to base new products and would welcome well-designed course proposals.

Like the 2004 conferees, the members of Group 3 considered how to motivate physicians to attend to SUD and to use the available tools and information by linking these

objectives to licensure, certification, or professional accreditation. However, the idea was not considered at length and did not emerge as a recommendation.

The members of Group 3 agreed with the 2004 recommendation to encourage adoption of standardized terminology for SUD. Members of the group expressed concern that the terminology currently in use is so varied and complex that it may discourage physicians and medical students from even trying to understand and use the available information.

GOALS AND STRATEGIES FOR CONTINUING MEDICAL EDUCATION

Goals. Change existing medical practice by finding effective ways to motivate physicians to seek, learn, and implement available evidence-based/informed practices in screening and brief intervention, and prescribing drugs with abuse potential. Determine how physicians obtain information and use these conduits to increase demand and interest in CME programs about substance use disorders.

Strategies. The members of Group 3 focused on ways to motivate physicians to seek, learn, and implement available evidence-based practices for screening and brief intervention. They also endorsed the concept of collaborating with organizations that can effectively reach the target audiences, such as the Accreditation Council on Continuing Medical Education (ACCME) and Physicians and Lawyers for National Drug Control Policy (PLNDP). Their detailed strategies include the following:

1. Enhance practicing physicians' access to high-quality CME programs.
 - a. Identify currently available CME programs dealing with substance use disorders and their sponsoring organizations.
 - b. To assure quality, encourage all activities to be sponsored by CME accredited providers. (individual courses are not accredited by ACCME, and many providers are accredited by their state medical society).
 - c. Establish and publicize an accessible information and referral resource or portal such as a Web site, where physicians can identify and/or link to available CME programs.
2. Encourage sponsors to develop CME programs that address substance use issues relevant to particular patient populations, such as children and adolescents, persons with co-occurring addiction and mental disorders, and diverse cultural groups. Explicitly address disparities in the burden of illness in various population groups.
3. Identify multiple conduits that can effectively reach physicians, such as live conferences, internet based enduring materials and live activities, print journals and enduring materials, as well as public forums such as television, radio, and the Internet. Use these media to raise physicians' awareness of SUD and CME courses about them, and to reduce stigma.
4. Create a behavioral change strategy for physicians who are in denial about the presence of substance use disorders in their patients.

5. Foster consumer-driven demand, i.e., a groundswell for physicians to provide care related to substance use disorders.
6. Focus on educating and involving other gatekeepers to treatment, such as school nurses, judges, and traditional healers.
7. Re-examine terminology used in the field that physicians may find confusing or unnecessarily complex.
8. Remember that lawyers and judges frequently interface with individuals whose problems are complicated by their SUD. These professionals can be powerful case finders and motivators for behavior change. Collaborate with PLNDP in this process.

Group 4: Licensure, Accreditation, Certification and Standards

CHAIR:

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CO-CHAIRS:

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Robert Galbraith, M.D.

MEMBERS:

Lawrence S. Brown, Jr., M.D., M.P.H., FASAM

Stephen Cantrill, M.D.

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Catherine Wisner, Ph.D.

Dr. Harp opened the discussion by suggesting that all boards of medicine should secure a place in their local medical schools' curricula to discuss issues relevant to licensure. This would be an opportunity to communicate to students a message that "You need to know something about all areas of medicine, including addiction medicine, to get and keep your license." In Virginia, the Board of Dentistry encourages dental students to attend a board hearing to help them understand what the regulatory process is all about, and Dr. Harp suggested that this could be a model for medical schools as well.

Dr. Harp also recommended that medical boards, medical schools, and medical societies encourage the formation of student committees, with faculty advisors, to provide assistance to students with substance use disorders, citing the PHOENIX Committee at the Eastern Virginia School of Medicine as a possible model for other programs. He added that FSMB holds its House of Delegates meeting in late Spring 2007, and it may be possible to get a resolution before the House to support recommendations from this conference.

Undergraduate Medical Education. The members of Group 4 raised the following concerns and ideas about motivating change in undergraduate medical education:

- If each state medical board implements its own policies on training in SUD, rather than adopting a standard policy, it will be a disservice to the many medical students who train in one state but practice in another.
- There is a great deal of tension between the state boards and the medical schools, and it will be difficult to encourage collaboration. Therefore, the group agreed that developing incentives to cooperate will be important.

- Involving the Association of American Medical Colleges as a change agent would give SUD education national traction.
- Guidelines for physician competencies issued by recognized bodies (such as those from the AMA, AAP, and Project Mainstream) can be useful in guiding curriculum development.
- Assessment is a powerful lever: By changing what is being assessed, it is possible to instigate curriculum change very quickly. Therefore, examination, certification, accreditation and licensure are key levers of change.

Dr. Galbraith introduced this last point, noting that it is quite difficult to induce medical schools to make standardized changes in the absence of changes in the National examinations. However, he cautioned that this lever must be used judiciously, *as it is unwise to change the exams on a continuing basis*. Experience shows that residency requirements also change quickly in response to new examination items. The Residency Review Committees and the major specialty board examinations also are major drivers of curriculum change.

The members of Group 4 agreed that the most practical approach would be to create a pool of collaboratively developed and vetted items that are available to all organizations that sponsor licensure, specialty board and certification examinations.

Graduate Medical Education. Group members agreed that at the level of graduate medical education, the Accreditation Council for Graduate Medical Education and Residency Review Committees, the American Board of Medical Specialties, and the individual state medical boards are the key drivers of change. They further agreed that unless the key competencies required for screening, brief intervention, and prescribing drugs with abuse potential are made part of the core curriculum for the relevant specialties, residents will not be tested on them.

The group recommended examining the current guidelines from the various Residency Review Committees (RRCs) to determine the extent to which they address SUD.

Changing Practicing Physicians' Attitudes and Behaviors. Discussion turned to practicing physicians' beliefs and attitudes, and how they drive practice behaviors. Dr. Rosenthal remarked that changing physicians' beliefs about SUD and attitudes toward the patients who have them is a major challenge. He explained that many physicians have been taught that patients have no control over their addiction, that it runs in families, and that there is nothing to be done about it. Thus, they regard addiction as untreatable and focus instead only on the sequelae (such as broken bones, hepatitis, etc.), which they know how to manage. The group agreed with Dr. Rosenthal that supplying evidence to refute these inaccurate beliefs is necessary but not sufficient to change physicians' beliefs, and that training needs to address the issue. One member of the group suggested exploiting the tremendous impact that senior residents have on junior residents to begin to change erroneous beliefs about SUD.

Dr. Galbraith suggested that patients themselves could be used as a “pressure point” to influence physician behavior. He envisioned some way of disseminating a brief SUD self-awareness test to the population and encouraging people to “Ask your doctor about your concerns.”

Dr. Rosenthal suggested that public service announcements be created (perhaps featuring the Surgeon General) to describe the warning signs of abuse and addiction. Group members remarked on how effective the pharmaceutical industry’s direct-to-consumer advertising campaigns have been in changing physicians’ prescribing behaviors, and suggested they may hold lessons on how to market new information to physicians. Some suggested that pharmaceutical companies might be willing to fund the type of PSA suggested by Dr. Rosenthal, given the industry’s obvious stake in preventing the abuse of prescription drugs. The manufacturers of the new anti-craving medications for the treatment of alcohol addiction also might be interested in such a campaign. Dr. Cesare-Murphy mentioned JCAHO’s “Speak Out” campaign (which has a separate component on mental health) and said that something about SUD might be added.

A member of the work group remarked that physicians typically rely on their own professional networks when making referrals, but few know any experts in addiction medicine or addiction psychiatry. Coupled with the fact that the majority of treatment providers are not physicians, this may explain why primary care physicians tend to refer patients to AA or not at all. The group agreed that there is a need to make physicians more aware of local treatment resources and how to find credentialed experts in addiction medicine and addiction psychiatry (as well as to help physicians understand that AA is a useful adjunct to treatment, but does not in itself constitute treatment). They also agreed that the credentialing of addiction experts requires attention, as does primary care physicians’ understanding of how such expertise can be identified and accessed.

The group discussed whether continuing medical education courses are an effective vehicle through which to educate physicians about SUD. Members discussed whether mandating CME on SUD would be feasible or beneficial. The following points were raised:

- Dr. Harp noted that almost all state boards of medicine and osteopathic medicine require that physicians complete a stipulated number of hours of CME. However, some boards are reluctant to specify which CME courses physicians should take to satisfy the requirement.
- Dr. Galbraith expressed concern that online CME courses sometimes measure “seat time” rather than real learning.
- Dr. Galbraith cautioned that regulatory agencies like the state medical boards must be careful about issuing too many mandates.

- Dr. Cantrill suggested that there might be greater benefit in working with the specialty boards, rather than the state medical boards, on this issue, given that the specialty boards traditionally have been more directive in their educational requirements.
- Dr. Harp suggested that short of state medical boards' requiring physicians to participate in CME courses on SUD as a condition of licensure, the boards could consider providing such courses and make them voluntary.
- Dr. Brown suggested that FSMB develop a model CME program on SUD and offer it to the state medical boards and specialty boards (see the parallel discussion in the report from Group 3).

As the representative of FSMB, Dr. Harp suggested that the Federation could establish a special committee to address the question of mandatory CME on SUD and develop a formal policy statement as guidance for the state medical boards. Dr. Rosenthal asked Dr. Harp to articulate the essence of the policy statement he would ask FSMB to consider. Dr. Harp suggested the following: "Boards of medicine should place renewed emphasis on physician competence in screening, brief intervention, and prescribing controlled substances." (*Note: This became part of Group 4's Strategy 2.*)

Group members noted that unfunded mandates will not be useful, so unless reimbursement systems also change to compensate physicians and other health professionals for the services they are asked to provide, physician behavior is unlikely to change.

Expanding Accreditation Requirements. As the representative of JCAHO, Dr. Cesare-Murphy observed that the likelihood that screening and brief intervention for SUD will become a National Patient Safety Goal is small, given the absence of empirical data as to the number of lives lost because screening and/or treatment was not offered by hospitals. However, she added that there is a mechanism in the existing accreditation standards to call hospitals' and ambulatory care providers' attention to SUD. Because JCAHO surveyors do not examine every standard during the accreditation process, it would be helpful to instruct them as part of the surveyor training process to give greater attention to compliance with the SUD standards.

Dr. Cesare-Murphy said that she would recommend that this be addressed as a surveyor training issue and/or a survey process issue. She also said that adding a standard related to screening and brief intervention also could be considered. She added that long-term care settings (as well as hospitals and ambulatory care settings) would be affected by such changes. She also suggested that a discipline-specific approach – that is, mandating that a physician provide such care – probably would not be implemented, so that a more general requirement should be the goal. Dr. Cesare-Murphy also mentioned that home health care workers do only what physicians order, so if a physician orders SUD screening, it would lead to positive changes in home health care as well.

Training the Entire Treatment Team. Dr. Suchinsky reported that the Department of Veterans Affairs (VA) has integrated mental health and substance abuse treatment into its primary care clinical programs. Although many VA physicians have the knowledge and skills to conduct mental health and substance abuse assessments and referrals, the amount of time they have with patients is not sufficient to do so. As a result, the VA is hiring more nurses to perform these functions. Thus, at the VA, the SUD issue is being taken out of the hands of physicians.

Several group members noted that substance abuse treatment requires teamwork between physicians and other providers, but that an “uneasy truce” often exists because physicians are reluctant to refer patients to non-physicians. The group agreed that, to the extent that the physician’s role in SUD care is lost, so is the opportunity to influence the role of physicians in this care.

Dr. Cesare-Murphy suggested that rather than changing the treatment team model, physicians may need training to help them better understand and use the model. She noted that JCAHO, which is in the midst of a standards improvement initiative, could help drive this process by revising the existing performance standard for screening, assessment, and treatment for SUD. However, Dr. Cesare-Murphy cautioned that JCAHO would be unlikely to require that a physician personally provide such care.

Dr. Wisner, speaking from her experience as a nurse practitioner (NP), said that since NPs ultimately will outnumber physicians as primary care providers, there is a need to think in terms of medical team education, not just physician education. She suggested that once changes are implemented in physician education, they should be extended to other medical professions as well (Project Mainstream is an excellent model in this regard). She also suggested that JCAHO standards pertaining to substance abuse treatment apply to the patient’s “primary caregiver,” whoever that might be. Dr. Wisner noted that the University of Minnesota is considering having medical and nursing students take certain core course together so as to instill a sense of teamwork early in the training process.

Involving Purchasers and Payers. A group member noted that one of the most potent factors in driving physician behavior and access to care is the reimbursement policies of health insurers and managed care organizations. Employers who purchase insurance coverage also need to understand that this is an issue with a potentially huge economic impact.

Dr. Harp noted that, as part of FSMB’s initiative on physician competency, the organization brought together about 35 organizations, including third-party payers, in Dallas in March 2005. That summit went well, so FSMB convened two more: one in Chicago in December 2005 and one in Philadelphia in June 2006. Out of the Philadelphia meeting came an agreement to establish a national coalition on physician competency, which includes payers of care.

In view of this information, the members of Group 4 recommended that third-party payers and purchasers of care (including the Centers for Medicare and Medicaid Services) be involved as appropriate in all activities to follow up the conference.

Providing Care to Children and Adolescents. Dr. Suchinsky remarked that substance abuse treatment standards for children and adolescents are “up for grabs” and recommended that Group 4 address this issue. He said that he has seen very little literature on successful treatment of adolescents with SUD or brief intervention techniques designed specifically for adolescents. The group identified this as an area of special concern, but did not formulate any specific recommendation at this time.

GOALS AND STRATEGIES FOR LICENSURE, ACCREDITATION, CERTIFICATION AND STANDARDS

Goals. Promote systems and standards change and work with credentialing bodies to develop and maintain incentives for provider change, specifically with respect to general knowledge and skills in the identification and treatment of substance use disorders, as well as prescription of medications with abuse potential.

Strategies. The members of Group 4 considered ways to use the systems that 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. Specific strategies involved:

1. Create a joint committee to bring together ASAM, AOAAM, AAAP, AMERSA, and other stakeholders to:
 - a. Identify currently available CME programs dealing with substance use disorders and their sponsoring organizations.
 - b. Encourage all activities to be sponsored by CME- accredited providers. (individual courses are not accredited by ACCME, and many providers are accredited by their state medical society).
 - c. Establish and publicize an accessible information and referral resource or portal such as a Web site, where physicians can identify and/or link to available CME programs.
 - d. Develop a pool of academically-vetted question items on SUD-related topics at various levels of difficulty, normed across different levels of training (student, resident, etc.), that can be offered to the National Board of Medical Examiners, the National Board of Osteopathic Medical Examiners, ABMS specialty boards, medical schools, and other sponsors of certification examinations.
 - e. Create a pool of self-assessment questions for use in CME courses offered by ASAM, AOAAM, AAAP, and other professional organizations to prepare their members for certification and specialty board examinations.
 - f. Follow up with NBME about the offer made by Donald Melnick, M.D. at the 2004 conference to allow a panel of SUD experts to join the question-

writing panels. (The impediment to immediate action was the need to find funds to support travel and hotel costs for a week.)

2. Work 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 SUD and proper prescribing of controlled substances. Specific steps include:
 - a. Ask FSMB to encourage individual medical boards to secure teaching time in the curricula of medical schools in their states.
 - b. Ask FSMB to encourage individual medical boards to interface with residents on relevant topics, including SUD.
 - c. Ask FSMB to consider strengthening the content of licensing and proficiency examinations regarding SUD.
 - d. Approach FSMB regarding the inclusion of SUD education in its ongoing Workgroup on Education of Medical Students and Residents on Professionalism and its Relationship to Licensure and Regulation.
 - e. Consider a resolution for the 2007 FSMB House of Delegates that will encompass all of the above and encourage all boards of medicine to give high priority to SUD education as an essential element to the continuing competency of practicing physicians.

(Note: Dr. Harp will present these recommendations to FSMB.)

3. The Joint Commission for Accreditation of Healthcare Organizations (JCAHO) already includes screening for SUD in its general standards. Enhance the impact of this requirement by:
 - a. Working with JCAHO to include this requirement as a surveyor training issue.
 - b. Raising the issue of a specific item on SUD screening and referral as a provision of care performance element in hospital, ambulatory, long-term, and home health care.

(Note: Dr. Cesare-Murphy will present these recommendations to JCAHO.)

2. Appropriately credentialed addiction experts play an essential role as resources to their primary care colleagues who seek training, consultation and referral. Therefore, efforts to develop ABMS-approved credentialing systems that recognize such expertise – whether as a subspecialty of psychiatry, family medicine, pediatrics, et al., or as a primary or conjoint medical specialty – deserve widespread support.
3. Increase the federal focus on the public health aspects of SUD. For example, NIAAA, NIDA and NIMH could support PSAs on the warning signs of addiction, encouraging people to: “Ask your doctor about your concerns.” The Surgeon General could collaborate with FSMB and medical associations to draft a strong ethical statement that says physicians may not ignore the signs or symptoms of

SUD (e.g., “Substance use disorders are medical illnesses and may not be ignored or go untreated. We do not choose the illnesses we treat.”)

4. Encourage all medical organizations to adopt a standard, clinically focused terminology, as CSAP has done over the years with prevention terminology. For example, in medical forums, refer to “relapse” rather than “recidivism,” to “opioids” rather than “narcotics,” and to “patients” rather than “clients.”
5. Ask federal agencies to support research into strategies that promote system change and provider behavior change, and work with the credentialing bodies to develop and maintain incentives for change. The efficacy of various models should be tested through demonstration projects that are funded through federal grants and contracts.
6. Given the economic drivers of physician behavior, the health insurance industry and CMS should be involved wherever possible.

Group 5: Purchasers and Payers of Health Care Services

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Eric Goplerud, Ph.D.

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Given the relationship between health plans' reimbursement policies and patients' access to care, the members of Group 5 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 are to become 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 get paid.

Members of the group agreed that even the small increase in Medicaid reimbursements under the new CMS "pay-for-performance" measures has proved a significant incentive for change. Therefore, they proposed adding a performance measure for screening and brief intervention to the 10 voluntary performance measures for emergency departments and trauma centers that are currently in place.

As a complement to the new HCPCS coding, the Working Group endorsed current efforts to add screening and brief intervention to the American Medical Association's Current Procedural Terminology (CPT) codes, so as to clear the way for reimbursement for these services by private insurers and Medicare. A parallel strategy would involve bringing together the major commercial insurers to secure their agreement to pay for services based on the 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. While praising the efforts by advocates to remove UPPL laws at the State level, members of the Working 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.

Members of Group 5 noted that there is no existing forum to bring National medical organizations together to brainstorm ideas about reimbursement issues related to SUD. While it is not clear who the convener of such a forum ought to be, there was general agreement that such an organizing point is needed.

Members also expressed concern that any increase in reimbursement of physicians for SUD care in primary care settings should not be taken from the already meager reimbursement for care delivered in specialty addiction treatment settings. The group agreed that additional monies are needed, rather than merely a reallocation of existing funds.

Finally, the group discussed the need for NIH to provide additional funding for clinical research that is oriented toward SUD. Members of the group commented that at present, two-thirds of NIH funding is awarded for basic research and only a third of awards support clinical research. Awards also tend to be made to specialized substance abuse researchers, leaving little opportunity for new clinicians from different specialties who are interested in the field. Practice-based research networks oriented to SUD could engage non-specialty physicians and lead to research that is complementary to the efforts to develop models for the field. It is important to target a broader group of physicians to if screening and brief intervention is to become part of mainstream medicine.

GOALS AND STRATEGIES FOR PURCHASERS AND PAYERS OF HEALTH CARE SERVICES

Goals. Work with the appropriate federal and state agencies and private-sector organizations to identify and overcome specific financing and reimbursement practices that are barriers to care. 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.

Strategies. Given the relationship between health plans' reimbursement policies and patients' access to care, the members of Group 5 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. Their suggested strategies related to funding and payment fell into three broad areas, as follows.

REIMBURSEMENT

- 1. Activate HCPCS Codes and Educate Providers About Their Use:** 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) services beginning January 2007, are not automatically activated in the States. 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 be brought together to work collaboratively with Medicaid Directors to accomplish this task in each State (Attachment 1)

Strategies to educate providers about the new HCPCS codes are also required. Physicians need to be aware that HCPCS codes are available and how to use them to get paid. For instance, the family physician reads the practice advisor so it is an ideal vehicle for informing these physicians on how to use the new codes. Another key strategy is for the Health Resources and Services Administration (HRSA), Community Mental Health Centers, Indian Health Service (IHS), and the Substance Abuse and Mental Health Services Administration (SAMHSA) to get information out to their networks of providers that serve low income and underserved populations.

- 2. Expand the CPT Codes:** A complementary effort to the HCPCS coding is underway. This effort aims to add SBI to the American Medical Association's Current Procedural Terminology (CPT) codes, a change that would clear the way for reimbursement by private insurers and Medicare. A key strategy is to bring together and secure agreement by the major commercial carriers to pay for services based on these codes. Also, if the CPT codes are approved and accepted, newsletters from medical associations can be encouraged to inform physicians about the codes and how to use them to be paid for services.
- 3. Obtain a CMS Pay-for-Performance Measure for SBI:** Members of the group felt that even the small increase in Medicaid reimbursements under the new CMS "pay-for-performance" measures has been a significant incentive for hospitals to report on these voluntary measures. A key strategy is to add an SBI performance

measure to the 10 voluntary performance measures for emergency departments and trauma centers that CMS has in place now (Attachment 2).

- 4. Remove Barriers Created by the UPPL Laws:** Laws adopted long ago by the states, modeled after the Uniform Accident and Sickness Policy Provision Law (UPPL) drafted by the National Association of Insurance Commissioners, allow health insurers to deny payment for emergency care if the patient was under the influence of alcohol at the time a traumatic injury occurred. The effect of the laws has been to increase the burden of uncompensated care, which is reaching crisis proportions for many hospitals. Therefore, UPPL discourages screening and brief intervention for SUD (see Attachment 3). To overcome this problem, the group recommended that ONDCP and other interested parties work with the National medical organizations to support model federal legislation that eliminates UPPL laws Nationwide, rather than continuing the current state-by-state effort.

ADVOCACY

- 5. Engage National Medical Organizations in Advocacy on Reimbursement Issues:** With the advent of the HCPCS codes, and potentially the CPT codes, physicians will have new opportunities to seek reimbursement for SBI, thereby expanding patient access to these services. A key strategy is to encourage National medical societies and their State affiliates to advocate for education about screening and brief intervention and the need for additional training through CME courses on reimbursement issues.
- 6. Develop Champions Within the Medical Specialty Organizations:** Participants agreed it was important to develop substance abuse identification and treatment skills of practitioners in multiple medical specialties. A key strategy is to develop leaders within the various medical specialty societies, rather than having substance abuse practitioners or Federal officials educating members of these specialty societies on substance use disorders and SBI. The emphasis should be on developing leaders and practitioners who have credibility within their own systems.
- 7. Educate Practitioners Through Their Specialty Newsletters:** There is a need to educate physicians about screening and brief intervention in order to expand its use within primary and specialty practice. Educating practitioners about reimbursement issues will help to increase access and ensure quality of services and safety for individuals with SUD. A key strategy is to focus on and use the specialty newsletters to disseminate information, rather than relying solely on the federal agencies to disseminate this information, since physicians routinely turn to their specialty organizations for practice information. (The federal agencies would continue to have a vital role as disseminators of information to the specialty organizations.)

- 8. Encourage Advocacy Within States for Medicaid Reimbursement:** As specialties become educated about substance use disorders and SBI, they can become effective advocates within States for Medicaid reimbursement using the HCPCS codes. A key strategy is to encourage such advocacy by State medical specialty organizations.

PRACTICE CHANGE

- 9. Organize SUD Practice Change Networks at the State and Local Levels:** Participants concurred that physicians from multiple medical specialties need to be involved in substance use identification and treatment. A key strategy is to create collaborative substance use practice change networks, engage physicians with a range of specialties and identify their concerns, conduct effectiveness trials of various substance use interventions, and disseminate findings through the medical specialty organizations. These networks should involve clinicians in the field rather than researchers. Such networks have been in place in other health areas and should be created for the alcohol and drug field.
- 10. Employ the ATTCs in Specific Educational Activities:** At present, only a very small proportion of persons with SUD are identified and treated. The members of Group 5 suggested that it may be time to engage the network of federally funded Addiction Technology Transfer Centers (ATTCs) in this situation. For example, a key strategy is to consider a moratorium on ATTC training of addiction counselors for the next 3 years so that they can focus instead on training primary care practitioners on how to identify and intervene with patients who have SUD.
- 11. Expand Non-Specialty Research and Leadership Development.** A strategy for increasing the number of individuals with SUD who are screened and referred to treatment is to fund more research on treating substance use disorders in primary care settings.
- 12. Expand the Number of Demonstration Projects Supported by CMS and NIH.** CMS already conducts excellent research on disabilities. Treatment of SUD is not significantly different from good chronic care management for other medical conditions. Therefore, a key strategy is for CMS and NIH to fund additional research and demonstration projects on the identification and management of SUD.
- 13. Ensure Accountability Through Outcomes Evaluations.** Participants agreed that it is essential to determine whether funding for screening, brief intervention, and addiction treatment has “made a difference” (in terms of health, societal and economic costs) at the state, local, and practice levels.

Group 6: Prescriber Education and the Prevention of Prescription Drug Abuse

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The members of Group 6 agreed that many segments of the population have a role in education about the prevention of prescription drug abuse. For example, the public needs to be educated through public health information campaigns, as do pharmacists, physicians, and many others. Health insurers and pharmaceutical manufacturers and distributors also should be engaged in collaborative efforts to develop (as well as fund) educational programs.

Physician Education. The group agreed that physicians' educational needs related to prescribing controlled drugs should be approached from multiple perspectives, including:

- Who to teach,
- When to teach,
- What to teach,
- How to teach it,
- How to assess clinical skills in this area,
- How to remediate areas of weakness, and
- How to monitor and address continued problematic prescribing.

Clearly, basic education concerning substance use disorders and how to minimize the potential for abuse of controlled substances must be provided to all physicians and should be integrated into medical education at many levels. From a *developmental* perspective, the optimal times for these educational efforts are: (1) the senior year of medical school, (2) an advanced year of residency training (not PGYI), and (3) early in the post-residency period.

From an *opportunity perspective*, key points for this education are: (1) through mandatory education at the time of initial licensure or license renewal; (2) at the time of registration with the DEA to prescribe controlled drugs; (3) through periodic risk-management educational programs sponsored by malpractice insurers, (4) in connection

with CME courses on the management of chronic pain, chronic anxiety, attention deficit disorders, and other medical conditions or patient populations; and (5) on a periodic basis as part of ongoing CME requirements for continued licensure.

Such education should not be fragmented (as it is at present) and should be taught by faculty with clinical experience and content expertise. An initial list of topics that urgently need to be addressed in medical education includes:

- Screening for addiction risk or history, or the presence of an active addiction, before prescribing.
- Skills in brief intervention for SUD.
- Skills and tools for patient education about appropriate use of medications.
- Strategies for monitoring patients who have been prescribed controlled drugs. (Such monitoring should track functional improvement, titration of medications, monitoring patient adherence to the therapeutic regimen, toxicologic testing, and recognition of and intervention for aberrant behaviors.)
- Indications and contraindications for initiating therapy with a controlled drug.
- Indications for stopping therapy with a controlled drug.
- Strategies for withdrawing a patient from therapy with a controlled drug.

Over the long term, research is needed to identify or develop practical tools that can facilitate safe use of controlled drugs so as to prevent prescription drug abuse. Physicians need concrete, *step-by-step guides* on issues such as prescribing opioids for chronic pain or benzodiazepines for chronic psychiatric syndromes. As one example, *toolkits* could be developed for specific audiences. It is important to encourage the development of resources to fill gaps in the current armamentarium.

No central resource on pain management and other conditions for which controlled drugs are prescribed is widely available to physicians or other health providers who want to know more about this topic. A readily identifiable, easily accessed central repository of information on available courses and other material would be very helpful. As an interim step, organizations that offer information to health care professionals, such as the CSAT and AMA Websites, should be asked to provide links to educational resources. Also, CME courses now available on the Internet, such as those offered by the AMA, should address the risk of abuse and addiction as appropriate.

Several members of Group 6 expressed an interest in developing standardized guidance systems that could be set up in physicians' offices as a method of actually changing physician behaviors. They suggested that an initial pilot should focus on the use of opioid analgesics for chronic pain in outpatient settings. Such guidance systems are ideally suited to use in staff model HMO environments or in geographic locations where there is close collaboration between payers and physicians or licensure agencies and physicians. Such guidance systems have been recognized as among the most promising interventions to increase continuous clinical quality improvement (CQI). However, physician guidance systems represent a very advanced stage of physician education and not feasible in many settings.

Patient Education. Patients need to understand the risks and corresponding responsibilities whenever a controlled drug is prescribed. For example, patients need an understanding of the potential for and consequences of misuse and abuse of controlled drugs (by themselves or others), and a discussion of this subject should be part of the exchange between physician and patient whenever a controlled substance is prescribed – especially when the controlled drug is prescribed for a chronic condition.

Such patient education should be presented within the context of the potential risks and benefits of any medication therapy, as part of an informed consent process. The process should be documented with an Informed Consent Form in the medical record.

To supplement the individualized, patient-specific informed consent process described above, a general patient education guide or pamphlet should be developed that is *category specific* (e.g., for therapy with opioids, with sedative-hypnotics, or with CNS stimulants) for use by physicians, nurses, or pharmacists in educating patients.

Whenever they prescribe controlled substances, physicians need to be prepared to educate their patients on the following points:

- It is illegal to sell or give your prescribed controlled drug to others.
- It is your responsibility to control access to and use of the prescribed drug, as by storing the medication in a locked box or cabinet.
- You are responsible for safely disposing of any unused medication when the treatment episode is complete.

Patients also need to be informed of the signs of an impending problem at the time a drug is prescribed so that they can be alert to the earliest warning signs of abuse or dependence.

GOALS AND STRATEGIES FOR PRESCRIBER EDUCATION AND THE PREVENTION OF PRESCRIPTION DRUG ABUSE

Goals. Training in the clinical, legal and ethical issues involved in prescribing drugs with abuse potential should be integrated into undergraduate, graduate and continuing medical education programs in all specialties. Physicians who complete such training should be able to demonstrate that they have the knowledge and skills required to prescribe in a therapeutic manner to their patients, including patients at risk for, presenting with, or with a history of substance use disorders, so as to minimize the risk of inducing or perpetuating prescription drug misuse or abuse.

Strategies. The strategies developed by members of Group 6 address the fact that most practitioners are not aware that prescribing a controlled drug is a significant diagnostic event and that non-medical use is a substantial risk with all controlled substances.

PHYSICIAN EDUCATION

1. “Mainstream” education on this topic; that is, teach about prescribing and prescription drug abuse in the same way other areas of clinical knowledge and skills are taught.
2. In working with practicing physicians, employ multiple focused interventions (in the same way pharmaceutical manufacturers do with the roll-out of a new drug) through partnerships between Federal agencies and relevant medical organizations, educational providers, and pharmaceutical manufacturers.
3. Identify model programs and use them to develop model curricula.
4. Employ the latest educational media available, including new media such as teleconferencing and online CME programs.
5. Provide practicing physicians with “toolkits” and other practical resources to facilitate screening and history-taking, appropriate prescribing decisions, and careful follow-up monitoring.

RESEARCH NEEDS

6. Identify and disseminate information about sources of funding to support clinical research into the prevention, identification and management of prescription drug abuse.

LICENSURE/CERTIFICATION

7. Incorporate language that reflects competence in prescribing controlled drugs into licensure standards and certification/recertification programs.
8. At the time of re-registration with DEA, require evidence of CME credits and/or focused self-assessment to achieve this competency.

CLINICAL PRACTICE

9. Revise patient charts to move the personal/family history of alcohol and drug problems from the “Social History” to the “Past Medical History,” where it is more likely to be considered in the prescribing decision. Add similar cues to the screens of electronic medical records.

INFORMATION SHARING AND COLLABORATION

10. In the search for solutions, encourage information-sharing and collaboration among health care professionals, enforcement and regulatory leaders, pharmaceutical manufacturers, patient advocates, and government agencies.

Group 7: Public Input on Medical Education in Substance Abuse

CHAIR:

Lewis Gallant, Ph.D.

MEMBERS:

Robert Morrison
Thelma King Thiel

Far too little attention has been paid to educating physicians and other health professionals to respond to the needs of the millions of individuals and families affected by SUD. As a result, physicians do not identify and diagnose alcohol and drug problems with the same acuity they bring to other medical disorders. The role of these front-line health professionals in prevention, early identification, and referral thus remains largely untapped.

Yet physicians are in an ideal position to provide preventive guidance, education, and intervention to children, adolescents, adults, and their families. In fact, it has been estimated that up to 20 percent of visits to primary care physicians are related to such problems (Bradley, 1994). Moreover, patients with alcohol and other drug problems are twice as likely to consult a primary care physician as individuals without such problems.

Recent research shows that the public *wants* such help from their caregivers. For example, in a public opinion survey conducted by the Harvard School of Public Health and The Robert Wood Johnson Foundation (2000), 74 percent of respondents said they believe that addicts can stop using drugs, but that to do so they need help from professionals or organizations outside their families. By “help,” two-thirds said they meant intervention by a health care professional.

Unfortunately, the diagnosis of a substance use disorder often is missed by physicians and, even when such a diagnosis is made, many physicians do not know how to conduct a brief intervention or develop an organized plan for patient referral or treatment.

Clearly, the basic clinical skills of screening, assessment, presenting the diagnosis, negotiating a treatment plan, and ongoing monitoring – all skills that physicians routinely employ in the management of other chronic disorders – need attention when it comes to SUD.

GOALS AND STRATEGIES FOR MEDICAL EDUCATION IN SUBSTANCE ABUSE

Goals. Enhance physicians’ knowledge about the diagnosis and management of substance use disorders, help them acquire the skills they need to act on that knowledge, and provide appropriate incentives to incorporate this new body of knowledge and skills into their medical practice.

Strategies. The members of Group 7 took a “big picture” view of medical education, and endorsed the following specific strategies.

1. Work with NIDA, NIAAA, NIMH, and other Federal agencies to develop and fund a program that would support the development of medical school faculty who are experts on SUD. Experience shows that such individuals become “champions” for adding addiction-related content to the curriculum in undergraduate and graduate medical education and become role models and mentors for students.
 - a. Use funding strategically to incentivize the inclusion of SUD-related topics (such as screening and brief intervention and prescriber education) in medical school curricula.
 - b. Under ONDCP’s leadership, develop a long-term (7- to 10-year) funding strategy, so that grant cycles are of sufficient duration to allow change to occur.]
 - c. Hold grantees accountable for quantifiable, uniform results. The strength of this approach is that each grantee will bring their own approach. They should be given flexibility in the how they obtain results, but not in the uniformity of the results themselves
2. Compile and disseminate information about potential model curricula.
 - a. As a first step, ask the conferees to submit information about possible models for compilation in the project database and dissemination to interested parties.
 - b. Develop a readily accessible central repository for such information.
 - c. Incentivize adoption of the model curricula by requiring that medical school leaders commit to increasing the exposure of students to the SUD content. (This may not involve requiring a specific number of hours, but there does need to be a target for achievement.)
 - d. Support and empower the faculty to provide leadership within medical schools (see Strategy 4).
 - e. Foster a team-oriented approach and a commitment from leadership to develop and monitor implementation of the curriculum change.
3. Ask the Surgeon General to issue a strong ethical statement that physicians may not ignore the signs or symptoms of SUD; e.g.: “Substance use disorders are medical illnesses and may not be ignored or go untreated. We do not choose the illnesses we treat.”
4. Work with NIAAA, NIDA, NIMH, and the Association of American Medical Colleges (AAMC) to establish and fund programs to support the development of young medical school faculty, who can become “champions” for SUD training in their institutions as substance abuse researchers, teachers, and mentors. (This is a critical workforce issue, as there are not enough fully-trained people to handle the SUD-related needs of the population.)

5. Compile and disseminate information about model CME/CEU programs that have been developed by experts and sponsored by credible organizations such as AMA, APA, CSAT, NIDA, et al.
 - a. As a first step, ask the conferees to submit information about possible models for compilation in the project database and dissemination to interested parties.
 - b. Develop a central repository of information about the model programs that is readily accessible to organizations that sponsor CME/CEU courses, and also develop proactive dissemination strategies (*also see Strategy 2*).
6. Words matter, so encourage medical organizations, federal agencies such as NIAAA and NIDA, and Single State Agencies to adopt a standard, clinically focused terminology, as CSAP has done over the years with prevention terminology. For example, in medical forums, refer to “relapse” rather than “recidivism,” to “opioids” rather than “narcotics,” and to “patients” rather than “clients.”
 - a. As a first step, convene an interdisciplinary task on nomenclature.
 - b. Create a rigorous and inclusive process to review the proposed taxonomy.
7. Work with ASAM, AOAAM, AAAP, and AMERSA to create a joint committee of experts to develop questions on SUD-related topics for medical schools, the National Board of Medical Examiners, the National Board of Osteopathic Medical Examiners, and other sponsors of certification examinations.
8. Work with the Federation of State Medical Boards (FSMB) to strengthen the language addressing the requirements of the State medical licensing boards for SUD-related content of board examinations.
9. Advocate for parity and the repeal of UPPL laws with health care purchasers and payers. (Ask the Ensuring Solutions group to convene a meeting of purchasers and payers to discuss these and related issues and possible solutions.)
9. Compile and disseminate information about sources of available funding to support modification of medical school curricula and residency training programs, as well as development of continuing education programs on SUD. (As a first step, look at the funds already disbursed to see the results of programs and determine whether any ought to be redirected. Also, build language into future funding vehicles directing that a fixed percentage must be dedicated to education.)
10. Encourage the VA system to develop models for medical education and to use its clout as a purchaser to renegotiate contracts with medical schools to incorporate them. Most medical schools that are aligned with the VA get high marks for innovation, so the VA system can serve as an important “incubator” for innovative models of in-service education.

11. Ask HRSA to compile an inventory of education programs the agency has funded so as to identify possible models and fill any gaps by funding the development and implementation of clinical models for its target populations (in collaboration with other agencies).
12. Work with multiple agencies, including payers such as Medicare and Medicaid and other organizations, to develop innovative ideas about clinical models. These can, in turn, facilitate the development of reimbursement models. (Alternatively, develop guidelines, and then let economists develop the models.) Wherever possible, make the case that early intervention leads to cost savings.
13. Revise patient charts to move the personal/family history of alcohol and drug problems from the “Social History” to the “Past Medical History,” where it is more likely to be considered in the prescribing decision. Add similar cues to the screens of electronic medical records. (VA could take the lead in this. DHHS is in the initial stages of developing an electronic health record that contains the same components and language across inter-operable stages, as from one hospital to the next.)
14. Through public/private partnerships, identify and/or develop educational materials that physicians can give to patients for whom they prescribe drugs with abuse potential. Engage the pharmaceutical industry in this activity as part of their risk management plans.
15. Create federally funded Centers of Excellence to focus on developing, disseminating, and implementing methods of research, clinical care, and health professions education about SUD. Such centers could participate in a network to develop and implement model curricula for undergraduate, graduate, and postgraduate medical education. (If fully funded, the SAMHSA ATTCs and CAPTs could spin off such Centers of Excellence.)

SUMMARY AND NEXT STEPS

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

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

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 ideas in the short time frame you have had is a difficult challenge – and one which the work groups met superbly.

The many suggestions 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 enunciated here today. As we all know, it will be a daunting task to implement these strategies through the many shareholders who have a vested interest in this topic.

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, such as the FDA and DEA, 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.

Above all, we all share an absolute determination and dedication to making 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.

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

APPENDIX A: CONFERENCE AGENDA

Second 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 Treatment,
the National Institute on Alcohol Abuse and Alcoholism,
the National Institute on Drug Abuse, and
the National Institute of Mental Health,
with support from
The Pew Charitable Trusts,
The Hanley Family Foundation, and
Physicians and Lawyers for National Drug Policy

Thursday, November 30, 2006, 6:00–9:00 pm

- | | |
|-----------------------|--|
| 6:00 – 9:00 pm | Opening Dinner Meeting |
| 6:00 – 6:15 pm | Welcome and Acknowledgments
<i>Bertha K. Madras, Ph.D., Deputy Director for Demand Reduction
Office of National Drug Control Policy, and Conference Chair</i> |
| 6:15 – 7:00 pm | Dinner |
| 7:00 – 7:10 pm | Introduction of the Panel (<i>Dr. Madras</i>) |
| 7:10 – 8:10 pm | Medical Education and Urgent Public Health Issues
<i>Stephen Pasierb, M.Ed. (Trends in Youth Drug Use)</i>
<i>Robert L. DuPont, M.D. (Impaired Driving)</i>
<i>John A. Renner, M.D. (Co-Occurring Disorders)</i> |
| 8:10 – 8:30 pm | Audience Discussion and Interaction with the Panel |
| 8:30 – 9:00 pm | How Can the Medical Community Contribute to Resolving
This Public Health Burden?
<i>Dr. Madras</i> |
| 9:00 pm | Adjourn for the Evening |

FRIDAY, DECEMBER 1, 2006, 8:00 AM – 5:00 PM

**8:30 am – 11:15 am Overview of the Challenges and Opportunities
Confronting Medical Education**

8:30 – 9:00 am Summary of the Day One Panel Presentations, Discussion of
Conference Goals, and Introduction of Director Walters
*Bertha K. Madras, Ph.D., Deputy Director for Demand Reduction,
Office of National Drug Control Policy*

9:00 – 9:30 am Address and Charge to the Conferees
John P. Walters, Director, Office of National Drug Control Policy

9:30 – 10:00 am Building a Case for Cost-Effectiveness
Eric Goplerud, Ph.D.

10:00 – 10:15 am Break

10:15 – 10:45 am Medical Response to Emerging Issues: Methamphetamine
Richard K. Rawson, M.D.

10:45 – 11:15 am Medical Response to Prescription Drug Abuse:
Teaching Appropriate Prescribing
Nathaniel Katz, M.D.

11:15 am – 1:30 pm Lunch and Working Groups Meet

11:15 – 11:30 am Charge to the Working Groups
Dr. Madras

Group 1: Undergraduate Medical Education

Group 2: Graduate Medical Education

Group 3: Continuing Medical Education

Group 4: Licensure, Accreditation, Certification and Standards

Group 5: Funders and Payers of Services

Group 6: Prescriber Education and Prescription Drug Abuse

Group 7: Public Input on Medical Education in Substance Abuse

1:30 – 3:00 pm Leadership and Support by the Federal Agencies

1:30 – 1:50 pm NIDA/NIH: Activities and Opportunities
Nora D. Volkow, M.D., Director, National Institute on Drug Abuse

- 1:50 – 2:10 pm NIAAA/NIH: Physician Education Initiatives
Mark Willenbring, M.D., Director, Division of Treatment & Recovery Research, National Institute on Alcohol Abuse and Alcoholism
- 2:10 – 2:30 pm NIMH/NIH: Addressing Co-Occurring Mental Disorders
Thomas R. Insel, M.D., Director, National Institute of Mental Health
- 2:30 – 2:50 pm CSAT/SAMHSA: Initiative on Prescription Drug Abuse
H. Westley Clark, M.D., J.D., M.P.H., CAS, Director, Center for Substance Abuse Treatment
- 2:50 – 3:00 pm Break
- 3:00 – 5:00 pm Planning for the Future: Strategies for Achieving Change**
- 3:00 – 3:15 pm *Report from Group 1: Undergraduate Medical Education*
- 3:15 – 3:30 pm *Report from Group 2: Graduate Medical Education*
- 3:30 – 3:45 pm *Report from Group 3: Continuing Medical Education*
- 3:45 – 4:00 pm *Report from Group 4: Licensure, Accreditation, Certification and Standards*
- 4:00 – 4:15 pm *Report from Group 5: Purchasers and Payers of Health Care Services*
- 4:15 – 4:30 pm *Report from Group 6: Prescriber Education and the Prevention of Prescription Drug Abuse*
- 4:30 – 4:45 pm *Report from Group 7: Public Input on Medical Education in Substance Abuse*
- 4:45 - 5:00 pm Next Steps, Acknowledgements and Adjournment
Dr. Madras, Presiding

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/co-morbid 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 read ministration 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 (SUD) 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 SUD or biological or familial markers

indicating a predisposition for SUD, 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

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