Successful Strategies in Addressing Opioid Overdose Deaths

White Paper

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Center for Substance Abuse Treatment

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I. INTRODUCTION

A. Background

In November 2009, the Center for Substance Abuse Treatment (CSAT) Division of State and Community Assistance charged its State Systems Technical Assistance Project (SSTAP) with convening a 1.5-day panel discussion to explore successful strategies for States to use in addressing opioid-related overdose (OD) deaths. This meeting, planned in cooperation with CSAT's Division of Pharmacologic Therapies, sought to share information about existing Federal and State activities—particularly the experiences of States in addressing OD deaths. CSAT is one of three Centers of the Substance Abuse and Mental Health Services Administration (SAMHSA). JBS International, Inc.—a North Bethesda, Maryland, health and housing consulting firm—is the SSTAP contractor.

On February 24–25, 2010, CSAT gathered a group of representatives from Single State Authorities (SSAs), Federal Agencies, and professional organizations in Bethesda, Maryland—all with experience on the issue of opioid-related OD and death—to share their experiences, lessons learned, and recommendations for strategies to address this issue. Many Federal Agencies have initiated projects aimed at addressing opioid-related OD deaths. States are also increasingly involved in activities directed at the prevention of OD, using a range of strategies. State agencies asked CSAT for more information about these promising State strategies and their potential for being transferred to other States and communities.

In response to this concern, CSAT invited representatives from States with high rates of opioid-related deaths, including those most active in developing strategies, to participate in the meeting. This panel discussion sought to describe these existing activities and their outcomes as guidance for other States. CSAT asked participants to focus not only on what State agencies need to know about existing and promising strategies, but also on recommendations regarding how CSAT can help States with this issue.

The outcome of the meeting is this white paper, intended to assist States as they make decisions about policies, relationships, strategies, and actions to prevent opioid-related deaths. As the panel discussions made clear, effective State plans will need to be comprehensive, involving not just the substance abuse prevention/treatment community, but also numerous other public, private, and governmental stakeholders—public health departments, the medical community, departments of correction, drug courts, family services, social service providers, parents, and many others.

B. Participants

Participants included SSAs, State Opioid Treatment Authorities, a State medical examiner, and other representatives from Florida, Kentucky, Maine, Massachusetts, Missouri, Nevada, New Mexico, North Carolina, Oklahoma, Oregon, Rhode Island, Utah, Vermont, Washington, and West Virginia. Other participants represented the Centers for Disease Control and Prevention (CDC), the American Association for the Treatment of Opioid Dependence (AATOD), the Association of State and Territorial Health Officials, and the National Association of State Alcohol and Drug Abuse Directors. The final participant list of meeting attendees is attached as the appendix.

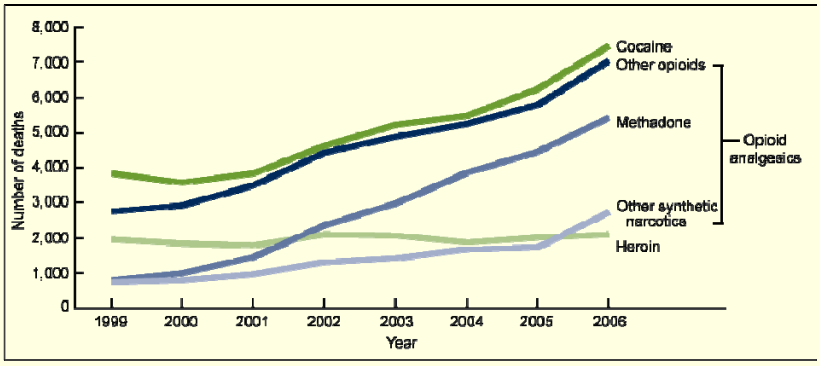
II. EXTENT OF THE NATION'S OPIOID-RELATED OVERDOSE PROBLEM

The number of Americans who die from unintentional opioid ODs has been rising at an alarming rate since 1999, according to both national and State statistics. The CDC reports that poisoning (OD) is the second leading cause of injury death nationwide and is the leading cause of injury death for people aged 35–54 years, surpassing both firearms-related and motor vehicle-related deaths in this age group (Warner, Chen, and Makuc, 2009).

Using data from the National Vital Statistics System Mortality File, researchers in the CDC's National Center for Health Statistics found that, from 1999 through 2006, the number of fatal ODs involving opioid analgesics increased each year and more than tripled from 4,000 to 13,800 deaths (Warner et al., 2009). Figure 1 shows this steady rise in opioid-related deaths.

Figure 1.

Poisoning deaths involving opioid analgesics, cocaine and heroin: United States, 1999–2006



Note: Drug categories are not mutually exclusive. Deaths involving more than one drug category shown in this figure are counted multiple time.

Source: CDC/NCHS, National Vital Statistics System.
Warner M, Chen LH, Makuc DM. Increase in fatal poisonings involving opioid analgesics in the United States, 1999–2006. NCHS data brief, no 22. Hyattsville, MD: National Center for Health Statistics. 2009.

The major findings from the CDC study of non-intentional ODs include the following:

- From 1999 through 2006, poisoning deaths involving methadone rose more rapidly than those involving other opioid analgesics, cocaine, or heroin.
- From 1999 through 2006, people aged 35–54 years had higher poisoning death rates involving opioid analgesics than those in other age groups.
- In 2006, more than one type of drug was mentioned in the majority of poisoning deaths that involved opioid analgesics, with benzodiazepines involved in 17 percent of deaths, cocaine or heroin in 15 percent, and benzodiazepines with cocaine or heroin in 3 percent.

This study also found that in 2006, the death rates for OD involving opioid analgesics varied enormously—more than eightfold—across States. In 16 States, the rate of death from unintentional poisonings was significantly higher statistically than the overall U.S. rate of 4.6 deaths per 100,000 people. In 2006, the five States with the highest OD death rates were West Virginia, Utah, New Mexico,

Oklahoma, and Nevada, with rates ranging from 10.5 to 15.6 per 100,000 (Warner et al., 2009). State comparisons need to be done with caution because death rates tend to be higher in States that have medical examiners and more comprehensive reporting systems. Data from the States attending this meeting paralleled the national trend of rising deaths from opioid analgesic ODs. Following are some of the data the States presented.

- Washington State has run a data system with annual State data reports for 20 years. In 2001, this State data system flagged the huge increase in opioid deaths as a problem.

- Utah data shows a huge rise in unintentional poisoning deaths starting in 2000. By 2000, prescription drugs had passed cocaine to become the fourth most popular drug in the State. Methadone showed the highest prescription-adjusted mortality rate compared to all other drugs. In the most recent year reported, 280 of 300 unintentional drug poisoning deaths resulted from the use of legal—not illicit—drugs, most of them opioids. Utah saw a slight drop in drug OD deaths in 2008.

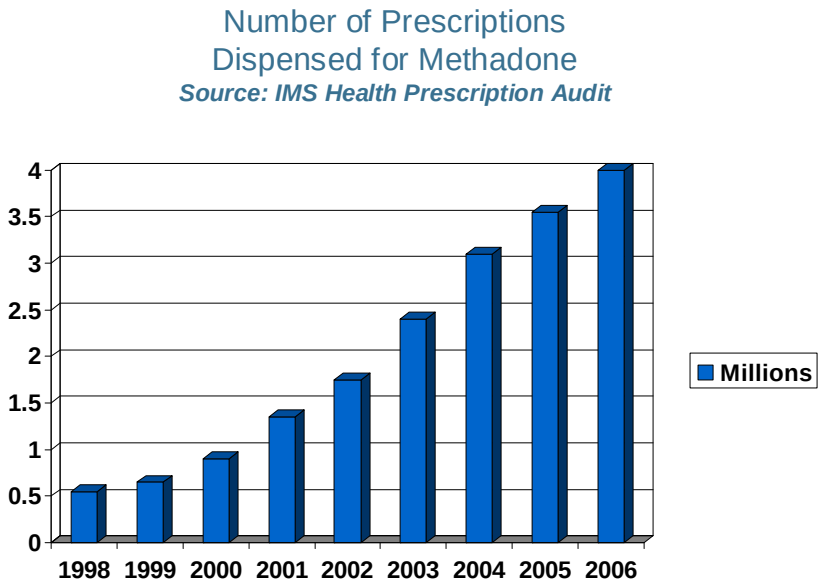
- Massachusetts data show that deaths due to opioid-related ODs were more than 6 times higher in 2007 than in 1990; the crude rate for opioid-related poisoning deaths increased 156 percent between 1990 and 1998 and 90 percent between 1999 and 2007 (Massachusetts Department of Public Health, 2009).

- West Virginia data show this same rise in non-intentional drug OD fatalities between 1999 and 2006, with a slight drop in 2007 and 2008. Between 1999 and 2004, West Virginia experienced a 550 percent increase in the fatal OD rate—the largest increase in the country. A study of fatal pharmaceutical abuse in West Virginia found that opioid pharmaceuticals were involved in 93 percent of drug OD deaths, and multiple pharmaceuticals were involved in 79 percent of deaths (Hall, Logan, Toblin, et al., 2008). Diversion was involved in 63 percent of deaths, nonmedical routes of administration in 26 percent, and doctor shopping (i.e., attempts to obtain multiple prescriptions for the same drug) in 21 percent of deaths.

A. Causes of the Overdose Problem

Extensive study has gone into identifying the reasons for the rapid rise in this century of OD deaths from opioid analgesics, with the greatest increases involving use of methadone. Most now recognize that the rise in opioid ODs has occurred in conjunction with an increase in the number of physicians who are prescribing methadone for pain. With the encouragement of insurance companies, many physicians began to prescribe methadone for pain instead of more expensive opioid medications. Methadone is a long-acting opioid requiring a complex dosing schedule, and few physicians receive training on this during medical school. Methadone relieves pain for 4 to 8 hours, but remains in the body for up to 59 hours. A study by the U.S. Government Accountability Office (GAO) showed that a lack of knowledge about the unique properties of methadone has contributed to some deaths (GAO, 2009). In addition, recent studies have shown a rise in the distribution and prescription of opioids (Pletcher, Kertesz, Kohn, and Gonzales, 2008; Hall, Logan, Toblin, et al., 2008; Manchikanti and Singh, 2008). The increase in prescribed opioids for pain has increased the presence and accessibility of these drugs in people's homes, where residents can give or barter away leftover medications. Table 2 shows the rise in methadone prescriptions since 1998; these prescriptions are external to methadone used in opioid treatment program (OTP) sites.

Figure 2.



Initially, some people suspected that diversion from OTPs was implicated in the rise of OD deaths. SAMHSA/CSAT and other Federal Agencies have thoroughly analyzed this issue. In both 2003 and 2007, SAMHSA/CSAT conducted an extensive review of the problem, and both studies reached the same conclusion: The country's methadone treatment system is not a factor in the rising OD death rates, although a small number of OD deaths are related to OTP patients. Conclusions of other studies reinforce this, including the following examples:

- **U.S. Department of Justice (DOJ) report.** "From 1999–2006, the number of methadone-related deaths increased significantly. Most deaths are attributed to the abuse of methadone diverted from hospitals, pharmacies, practitioners, and pain management physicians. Some deaths result from misuse of legitimately prescribed methadone or methadone obtained from narcotic treatment programs, including use in combination with other drugs and/or alcohol" (DOJ, 2007).

- **U.S. Government Accountability Office (GAO) report.** "Most officials from Federal and State agencies, as well as experts in addiction treatment and pain management that we spoke with, cited the increased availability of methadone due to its use for pain management as a key factor in the rise in deaths, while some added that addiction treatment in OTPs was not related to increased deaths" (GAO, 2009).

It should be noted that a number of States attending this meeting reported that there had been no opioid-related deaths in their OTPs for at least 5 years in some cases.

B. Emerging Shifts in Treatment Populations

Both national and State data indicate that the rise in prescription opiate abuse is creating a shift in the population requesting opioid-related treatment. A younger population (aged 18–25) is using opioid drugs, and it appears that these drugs may be serving as a gateway to using heroin and other illicit drugs.

Prescription opiate abuse among younger people. According to SAMHSA's National Survey on Drug Use and Health, people aged 12 or older use prescription pain relievers—in a nonmedical way—more extensively than any other type of therapeutic drug. Washington State has looked at the problem among

young people and reports that opiate abuse is becoming a major problem among youth and young adults. A survey in Washington State found that 12 percent of high school seniors had misused opiates in the past 30 days. More than half of these students had done so three or more times and, of these, 40 percent had gotten the opiates from a drug dealer, presumably as they ran out of friends, family, and dentists to supply prescription opioids. Many more young people between ages 18–25 are now trying to get into methadone-related treatment. In fact, 40 percent of referrals to drug treatment programs in Washington State are now for clients between ages 18 and 25.

The Washington data indicate that there is a new trend in which young people initiate drug use with prescription opioids and may then shift to heroin. Washington State researchers asked heroin users in needle exchange programs whether they had used prescription opioids before they first tried heroin. Just 9 percent said yes 3 years ago compared to 37 percent today.

Population shifts among those entering OTPs. AATOD is conducting a long-term survey of patients enrolled in OTPs. From January 2005 to January 2010, this large sample survey has collected data on 38,900 people enrolled in 76 OTPs in 34 States, including 14 major cities and a number of rural areas. The survey is documenting the dramatic shift in the OTP population. Whereas 20 years ago, many OTP patients were aging into their 50s and 60s, the largest group now entering OTPs is between ages 18 and 25, closely followed by people aged 26–29. The enrollees whose primary drug of choice is prescription opioids have very different characteristics from traditional OTP enrollees whose primary drug is heroin. Following are some of the key differences:

- Ninety-seven percent of those dependent on prescription opioid drugs are Caucasian, compared to 54 percent among heroin users, and a higher percentage of women choose prescription opioids as their primary drug than choose heroin.
- Sixty percent of those dependent on prescription opioid drugs have employment as their major source of income, compared to 37 percent among heroin users.
- Seventy percent of prescription opioid drug abusers are entering an OTP for the first time, compared to just 31 percent of those dependent on heroin.
- Forty-five percent of prescription opioid drug abusers report having chronic pain unrelated to their drug use, compared to 32 percent among enrollees dependent on heroin.

Pharmaceutical manufacturers were struck by one critical factor: 33 percent of OTP enrollees with prescription opioids as their primary drug of choice report having injected this drug. This suggests that opioid-dependent people may be progressing to injecting them.

III. FEDERAL INITIATIVES

State prevention and intervention strategies both reflect and can benefit from Federal policies and initiatives. As CDC data, beginning in 1999, demonstrated an alarming rise in opiate-related OD deaths across the country, a number of Federal Agencies began to study the problem and to take action. SAMHSA/CSAT, which regulates U.S. methadone maintenance treatment, has assumed a central and active role. In 2003, CSAT initiated a major review of OD deaths related to methadone and repeated the review in 2007. Among the strongest findings from these reviews were that: (1) the rise in OD deaths has occurred in tandem with the increase in the medical use of prescribed opioids for pain; and (2) a small number of methadone OD deaths do occur among patients in OTPs, primarily during the induction period. Both reports strongly recommended that methadone prescribers receive improved education. Physicians receive little or no education on this issue during medical school, and the reports particularly recommended more training for primary physicians. In response, CSAT has established the following:

- **Opioid treatment program training.** Started 4 years ago, CSAT has developed a series of educational activities to help improve the quality of the staff in methadone treatment facilities. This training, which focuses on the fundamentals of methadone treatment and on risk management, is scheduled to continue for several more years. Several States at the meeting had used this strategy, bringing together physicians, nurses, nurse practitioners, and physician assistants from OTPs across their State to attend the 1-day CSAT training; they highly praised the "Dan and Ted Show" (i.e., two consultants who deliver the CSAT training).

- **Physician continuing medical education on opioid prescribing.** CSAT has become much more active with the medical community, recognizing that much education related to methadone has broader application in prescribing for pain management.

- **Voluntary OTP reporting of patient deaths.** In 2008, CSAT asked States to report the death immediately of any patient in an OTP, as well as submit a followup report when the cause of death became final from medical examiner reports and death certificates. An excellent study done in Texas by Jane Maxwell indicated that OD was reported as the primary cause of death in 5 percent to 10 percent of OTP patients, and that OTP patients have a higher than expected death rate from such diseases as cancer and heart and liver disease. CSAT is collecting this information from OTPs to provide data and increase knowledge about the health and mortality of OTP patients. Data show that from the 400 reports that CSAT has received to date, 7 percent of OTP patient deaths were attributed to OD, and 40 percent had unknown causes, with the most prevalent causes of death being cancer and liver disease.

- **Implementation of National All Schedules Prescription Electronic Reporting Act of 2005 (NASPER).** Congress enacted NASPER to support States in improving their Prescription Drug Monitoring Programs, which operate in about 38 States. When appropriated funds became available in 2009, CSAT awarded NASPER formula grants of from $40,500 to $455,000 to 13 States—Alabama, California, Connecticut, Illinois, Indiana, Kansas, Kentucky, Maine, Michigan, Mississippi, Nevada, New York, and Ohio. Awards are tied to the number of pharmacies in the State divided by the number of pharmacies in all approved States. DOJ awarded similar grants to five States. Congress could authorize future appropriations.

- **Opioid OD surveillance group.** Many lives may be saved when emerging drug trends are recognized early. For example, a few years ago, a sudden epidemic of more than 1,000 deaths occurred in the Midwest related to illicitly produced fentanyl. To identify early trends, SAMHSA/CSAT established relationships with local and State public health experts, epidemiologists, and other experts in the health and addictions field. This opioid OD surveillance group meets every 2 weeks to share information on local trends and State and national activities.

- **Improvement of medical examiner case definition.** As SAMHA's 2003 assessment report on methadone-related deaths pointed out, the lack of a standard case definition for medical examiners to use in defining methadone-associated deaths creates an obvious and serious problem. The various case definitions used across the country make it extremely difficult to assess the national extent and cause of methadone-related deaths. CSAT's Division of Pharmacological Therapies has worked with medical examiners for many years on this issue. In 2009, SAMHSA helped medical examiners define a case definition for methadone-related deaths that States across the country can consistently use; a paper describing this case definition will be coming out soon.

Federal Agencies and associations have implemented major initiatives, including the following:

- **Drug Enforcement Administration (DEA).** The DEA worked out a successful voluntary arrangement with drug manufacturers to restrict the distribution of 40-milligram diskettes through pharmacies. This prescribed methadone in tablet form had been a source of diversion. As of January 15, 2008, pharmacies had stopped distribution. The diskettes are now limited to addiction treatment, for distribution only in OTPs and hospitals. This was a significant action, quickly resulting in a significant drop in prescribed diskettes.

- **Food and Drug Administration (FDA).** Working with drug manufacturers, the FDA conducts an ongoing mitigation activity for certain opioids to reduce the risk of adverse effects from OD. This initiative is called the FDA Opioid Risk Evaluation and Mitigation Strategies program.

- **SAMHSA/FDA.** SAMHSA is cooperating with the FDA in developing educational materials targeted to patients using opiates. The materials seek to inform people about misusing opioid medications.

- **Office of National Drug Control Policy (ONDCP).** ONDCP has a new strategy that involves implementing Federal interagency workgroups to study specific drug issues. A staff member from CSAT's Division of Pharmacologic Therapies co-chairs the workgroup on strategies to address emerging drug threats.

- **Association of State and Territorial Health Officials (ASTHO).** ASTHO, composed of State medical officials who oversee multiple State agencies, focuses on advancing the policy agenda of States. For August/September 2010, ASTHO has set substance abuse and injury prevention as priority issues, with many injury prevention and behavioral health topics discussed on its Web site (www.ashto.org). ASTHO is developing a national working group to review research and inform injury prevention policy. ASTHO also plans to develop concrete projects with State agencies, using a systems approach.

IV. CHALLENGES FACING STATE AGENCIES

A. Crosscutting Overall Themes

As the State representatives profiled their many activities regarding prevention of opioid OD deaths, it was clear that the priority focus of SSA activities will vary depending on circumstances in the particular State. Based on increased mortality reporting from OTPs, most States reported finding no deaths related to opioid treatment for addiction in their methadone clinics; many reported no OTP-related deaths in the past 5 years. Despite this, State substance abuse agencies are working hard to make their OTP system as strong as possible, emphasizing clinic policies, physician oversight responsibilities, and more training for OTP administrators, physicians, and clinic staffs. Several States reported a small number of OD deaths related to their OTPs; these States focused on OTP policies and closer monitoring and training for OTP staffs, particularly physicians.

States that have the highest national rates of prescribed opioid use tend to emphasize a broad range of policy and education strategies aimed at primary physicians, emergency department staffs, first responders, parents, and the public. Despite differences in their OD prevention plans and strategies, the States identified certain overarching themes that emerged during their discussions. The themes included the effects of continuing stigma against methadone treatment; funding and resource shortages; the critical importance of partnerships; the need to integrate treatment interventions and referrals into OD prevention efforts; the need for targeted attention to adolescents and young adults; and the current lack of evidence and research to guide States on the effectiveness of OD strategies.

- **Stigma.** The stigma and bias against methadone maintenance treatment still exist some 40 years after research proved its value for treating opioid dependence. This stigma underlies a score of issues that States confront as they develop OD strategies. Such issues include: State moratoriums on establishing new OTPs despite large, unmet treatment needs for the opioid-dependent population; unwillingness of the criminal justice system to set up methadone treatment in jails and prisons; the requirement of some drug court judges that people must leave methadone treatment to participate and of some family court judges that clients must stop their methadone treatment before receiving custody of their children; the Oxford House requirement that residents may not be on methadone maintenance; and the willingness of insurance companies to pay for buprenorphine but not for methadone treatment, although methadone is both less expensive and more appropriate for some patients. This pattern of bias underscores the necessity that all OTPs be managed to high, rigorous professional and medical standards.

- **Funding and resource shortages.** Nearly every State reported a shortage of funds and staffing resources for substance abuse activities. States are asking SSAs to develop new strategies and actions without new funding. States said they must be as creative as possible. In one State, the legislature has called for 33 new responsibilities relating to the opioid OD issue without providing money for these projects. States are reflecting the national economic situation. A recent report by the National Association of State Budget Officers and the National Governors Association said that State fiscal conditions have continued to worsen and that State revenues can be expected to lag 1–3 years behind a national recovery from recession. During the past year, 36 States cut nearly $56 billion in spending. State representatives felt it would help greatly if new Federal grant funding could be targeted to OD prevention.

- **Partnerships.** State participants reported developing a vast range of partnerships with other State agencies, research organizations, medical associations, health and social service professionals, emergency departments, first responders, community groups, and many others. Some States used task forces, coalitions, and memoranda of understanding. Participants agreed that prevention of opioid OD deaths is a complex issue, involving many different stakeholders. They said that States must work with a variety of partnerships to successfully implement their plans and strategies. Convening cross-agency workgroups is a challenge for State governments

in the current restrained funding environment, and participants felt that technical assistance from the Federal Government would greatly help with this task.

- **Interface with the criminal justice system.** Coordination with the criminal justice system is a key area for OD prevention, and most States reported activities in this area. Many OD deaths occur when drug users reenter the community after serving time in detention centers, prison, or jail. The most common strategy for States is to ensure entry into OTP treatment as prisoners leave incarceration. Rhode Island uses CSAT's Access to Recovery grant plus State funds to support these reentry treatment costs. However, some States are beginning to introduce methadone treatment into jail settings and are then able to coordinate continuation of care in the community. One State is planning to introduce buprenorphine treatment within a prison setting. States are also working to change anti-methadone policies in drug courts and family drug courts.

- **Integration of treatment interventions/referral into OD prevention efforts.** As States initiate more OD initiatives, more people—including primary care physicians, emergency department staffs, first responders, and parents—are able to identify people at risk of or dependent on opioids. OD intervention needs to lead to treatment. Participants felt that these individuals should be educated to see that this as a two-pronged effort—to counteract the OD and then encourage treatment. Physicians and other interveners should receive help on how to refer these individuals into treatment, how to engage them in this difficult discussion, and to have actual treatment contacts in hand. They need materials, technical assistance, and training to promote this interface between OD and treatment interventions. Participants suggested that people need basic how-to guidance materials, which are not currently available.

- **Targeted attention to adolescents and young adults.** Many participants expressed concern about the treatment field's readiness to cope with the current influx of young patients, 18–25 years old, who are becoming dependent on prescription opioids at an early age. As described previously, early trends suggest that this population starts prescription opioid use early, thinks prescription opioids are safe and will not be addictive, and appears to be turning to heroin as prescription opioids become harder to obtain. This population tends to resist treatment and resist staying in treatment—they want short-term answers and do not see their dependency as a long-term problem. States have not developed specific treatment models and strategies for this young population, which objects to participating in treatment with the typically older OTP population.

  Participants strongly encouraged States to work with parents of adolescents and young adults who have opioid dependency problems. Participants from several States reported that these are often middle- or upper-income parents from suburbia—people who lack previous experience with opioid addiction. The parents want help in dealing with the problem and getting their children into treatment. Such help is often not available and may require, for insurance reasons, that the parents use involuntary commitment procedures. Several States have found that these parents are extremely responsive to Narcan training and distribution programs; and parents who have saved their children's lives with Narcan also make strong advocates for prevention before State legislatures. One State recommended setting up parent coalitions and parent networks.

- **Evidence and research on effectiveness of strategies.** Very little evidence-based research exists on the most cost-effective and efficacious strategies for States to use in reducing opioid OD; States want more guidance on this. Massachusetts, when developing its comprehensive State OD prevention plan, turned to international sources to identify successful strategies. Of the many strategies that States described at this panel meeting, only a few had received funds to evaluate their outcomes. States said they were frustrated at not knowing the outcomes of their actions. Examples: (1) Did physicians change their opioid prescribing practices after receiving Webinars and other training; (2) Why do so many physicians train to become registered providers of buprenorphine for addiction, and then not treat any patients; and (3) When informed by letter that a patient has shown up on the Prescription Drug Monitoring Program with multiple opioid prescriptions, does the prescribing doctor take action and, if so, what action?

State representatives particularly requested studies that would look at OD outcomes for opioid-dependent patients who receive drug-free treatment compared to those receiving medication-assisted treatment (MAT). Currently, the shortage of OTPs and registered physicians eligible to prescribe buprenorphine forces many opioid-dependent patients into drug-free treatment programs. Participants believe that drug-free treatment programs are less effective than MAT for opioid-dependent people. The Caldata study in the 1990s showed that MAT is more cost-effective than drug-free treatment for opioid-dependent patients (Gerstein, Johnson, Harwood, et al., 1994). Evidence that MAT is also the more effective treatment regarding outcomes and fewer OD deaths would be a potent argument for more adequate public funding of OTPs.

B. Data Needs

In general, State participants felt that they needed to improve their ability to collect data. Two States with substantial, longstanding data collection systems need increased capacity to analyze and interpret the data collected. One State pointed out that data sharing across agencies is not enough; a data infrastructure is needed that provides the capacity for understanding the data and for integration and analysis. For example, a profile of clients across substance abuse, criminal justice, and health services might provide insights into intervention points and opportunities that SSAs are now missing.

Some States reported that it was difficult to convince people that opioid OD is a problem in their State. Data helps tremendously in building a case. Vermont, for example, built its case for State action by collecting medical examiner data, poison control data, and other data on admissions and discharge to treatment.

Epidemiological data, when available, is an effective way to target prevention funds to those areas in a State with the greatest OD problem. For example, Massachusetts geocoded the rate of fatal and nonfatal ODs in communities across the State and then used a Strategic Prevention Framework State Incentive Grant (SPF-SIG) from the Center for Substance Abuse Prevention (CSAP) to fund prevention projects in the 15 communities with the highest OD rates. The threshold for communities to apply for funds was 30 or more fatal or nonfatal ODs. With geocoding, several communities rose to unexpected prominence. Local units of government received the funds rather than treatment clinics, which meant that the money could be used broadly across the community for such stakeholders as law enforcement, schools, and health and human service providers.

There is great interest in collecting data concerning the death of any patient enrolled in an OTP either currently or within the past 3 years. CSAT has asked State agencies to voluntarily collect such data, and AATOD is recommending that OTPs do this. State participants at the meeting are requesting these data from all OTPs; several States now mandate that OTPs collect the data. The value is twofold: (1) such data pinpoint any mortality related to an OTP so that the issue can be dealt with; and (2) the effort provides a wealth of data about the health and mortality of OTP patients. Already, death certificates are showing that the population of OTP patients has many serious health problems. The data underscore the need for these patients to be receiving healthcare coordinated between the OTP and their other healthcare providers. Primary care physicians, gastroenterologists, and cardiologists—physicians who treat these patients for such issues as heart, kidney, and liver disorders—need to know that they are receiving methadone maintenance treatment so that their prescription medications can be coordinated.

State data on the cause of death from medical examiners and/or coroners clearly need to be accurate. Serious problems exist concerning these data. These problems are being addressed at both the national and State levels. SAMHSA/CSAT is addressing the lack of a consistent national standard for defining opioid OD, as described previously. Lethality issues can be hard to untangle when multiple drugs are involved, with benzodiazepines being a particular problem. Defining the cause of death in MAT patients is inherently complex, since, regardless of the cause of death, these patients may have a high level of methadone in their blood. Medical examiners often do not know the person is in methadone treatment. One State said that a conscientious medical examiner reported multiple causes of death for an OTP patient as death caused by (1) four gunshot wounds to the chest, and (2) accidental death with a high

level of methadone in the blood. States report that they are developing strategies to work around the following kinds of issues:

- **Problems coordinating with State Medical Examiner Offices.** In some States, the medical examiner's office is nonfunctional or refuses to cooperate with the SSA. States are finding alternative sources of information from coroners, other State agencies, or vital records statistics. For example, Oklahoma works closely with the Bureau of Narcotics and Dangerous Drugs to review autopsy reports.

- **Statutory barriers.** Sharing data between the medical examiner and such interested parties as an OTP may present statutory barriers. For example, in one State, the medical examiner can query an OTP about the methadone dosage of a decedent who was an OTP patient, but is not allowed to inform OTPs about the cause of death. This information can be shared only in a mortality/morbidity conference setting. OTPs therefore must obtain the cause of death of OTP patients from the State's vital records.

- **Difficulty getting good medical examiner data.** Many States do not conduct the full medical review for determining cause of death. Many States also do not require use of uniform language on their death certificates, which is good epidemiological practice. Data may simply not be available. In one meeting participant's State, the medical examiner's office no longer includes ODs in its violent death reporting. This medical examiner said that the number of OD deaths occurring among young people is "amazing," but he did not have the staff to pull this data out of the system.

- **Lag time before availability of death data.** It can be 6 to 12 months before the medical examiner's information becomes available, long after an OTP has reported the death to the State. Since medical examiners do not report final results back to the OTP, the OTP staff may have to set up a mechanism for acquiring this information, such as by regularly checking the State's Web site for death certificates. Only at that point can the OTP report the final cause of death to the State and CSAT.

A medical examiner from West Virginia described the process used uniformly in that State to define opioid-related deaths. The State has a uniform death certification process required for all cases. Regarding a person taking opioid medication, a multi-step process is necessary to determine what is an opioid-related death rather than death from some other cause. In West Virginia, this process involves: (1) investigation at the death scene, including noting any illicit drugs present; (2) access to and review of medical records; (3) autopsy with a full toxicology review; and (4) access to prescription records. In a peer review process, the medical examiner examines the combinations of drugs prescribed and not prescribed, other medical conditions involved, the contribution of any preexisting conditions, and the route of administration of the drugs. The West Virginia medical examiner recommended that, to accurately determine when a drug OD has actually occurred, States need to establish this level of review.

C. Public Education and OD Prevention

Educating the public and other providers about MAT is one strategy that States practice widely. In addition to physicians, some of the target groups that meeting participants specifically mentioned include State counselors associations, mental health providers, drug courts, and schools.

Teaching the public about how to reverse opioid OD appears to be a highly effective strategy for preventing OD deaths. Four States—Massachusetts, New Mexico, New York, and Rhode Island—are implementing statewide public information campaigns on use of Narcan. These programs train bystanders (family members, friends, first responders) in how to use naloxone to reverse OD. The Statewide Narcan Program in New Mexico, started in 2000, costs roughly $30,000 per year with funding from the New Mexico Department of Health. The State estimates that the program has saved about 1,500 lives.

Massachusetts has eight programs serving 12 cities where program personnel are distributing intra-nasal Narcan to bystanders after personnel have been educated and trained about the drug. Between December 2007 and November 2009, the program enrolled 4,302 individuals and documented 513 OD reversals. This Narcan pilot will be evaluated with funds from a CDC research grant to provide evidence on the extent to which Narcan programs reduce opioid-related deaths.

Some States may need to make regulatory changes to initiate a Narcan OD prevention program. In such programs, people are educated about how to reduce OD risk, recognize signs of an OD, access emergency medical services, and administer intra-nasal naloxone. Potential bystanders are instructed to deliver naloxone when OD occurs and to take other actions (rescue breathing and contacting the emergency medical system). This training, conducted in Massachusetts by certified trainers, takes about 15–30 minutes, after which each participant receives an OD prevention kit containing instructions, two syringes prefilled with Naloxone Hydrochloride, and a nasal atomization delivery device. States may want to take additional steps to implement this strategy, such as addressing third-party reimbursement and introducing 911 "Good Samaritan" legislation to protect people who fear contacting emergency services about an OD. States using a Narcan strategy report that parents of at-risk young people strongly support this effort. In addition, Massachusetts reports that an "astounding number" of emergency first responders are requesting training.

Educating the public on how to dispose of their opioid medications is emerging as an important area for State and Federal action. Research indicates that many young people obtain prescription drugs from friends and family members who were initially prescribed the medication. Utah conducted a survey that examined what people do with leftover medications. It found that 20 percent of people had been prescribed an opiate medication in the past year, and 70 percent of them had leftover medications. Of those, 70 percent had kept these leftover drugs in their homes. These figures suggest that as many as one in five American homes may contain leftover medications. An obvious conclusion is that a strategy to educate the public about how to safely dispose of their medications would be valuable. An overall policy on disposal is needed, since Federal Agencies such as the CDC, FDA, DEA, and SAMHSA all recommend slightly different disposal procedures. The Utah study examined which disposal methods would be most acceptable to the public and found that:

- 80 percent of people said they would use a drop-off box at a pharmacy.
- 40 percent of people would use a drop-off box at a police station.
- 40 percent would use a mail-back envelope provided with the prescription.

D. Opioid Treatment Programs

States are using an array of strategies to prevent any OD deaths associated with their methadone maintenance treatment programs. In the broadest sense, State agencies and SOTAs view this effort as one piece of their quality management and continuous quality improvement program with OTPs. Both CSAT and State agencies have developed strategies—policies and educational programs—to address the following potential weaknesses in the methadone treatment system:

- **Insufficient data on the mortality and death of OTP patients.** As discussed previously, the State agencies are now collecting data on any OD, unexplained, or accidental deaths among patients enrolled in OTPs. Several States are also conducting studies and learning a considerable amount about the health issues of OTP patients.

- **Education and technical assistance for OTP physicians and medical directors.** Particularly during the induction period, OTP patients require intensive attention from physicians and nursing staff. SOTAs want to be sure that the OTP part-time physicians understand the full scope of their authority and responsibility for monitoring and care of patients. Several States have conducted education conferences on physician oversight and leadership responsibilities in OTPs. States are also teaching liability issues and risk management through CSAT-sponsored conferences. A further strategy is to conduct telephone follow up with physicians and medical directors after the sessions to reinforce learning and answer any questions.

- **Education for nursing and clinical staffs of OTPs.** Some OTP experts are concerned about the scope of practice for clinical staffs in OTPs, such as nurse practitioners and physician assistants. Due to limited physician time, these clinical staff members may be assuming a more responsible role in dosing and other matters than is appropriate. For example, only the CSAT-authorized physician should be reviewing, approving, signing, and submitting exception requests to CSAT for a patient's take-home medication. Nurses may need more supervision and leadership than they are receiving from physicians. The States that have conducted education sessions around such issues report that nurses welcome this assistance.

SOTAs at the meeting discussed a broad array of strategies that they are implementing in the areas of OTP policies, management, and quality improvement. Following is a partial list of such strategies based on initiatives in North Carolina:

1. **Critical incident and death reporting.** Strengthen requirements that OTP administrators communicate immediately and verbally to inform the SOTA when any sentinel events occur, including OTP patient deaths, accidental child poisonings whether fatal or nonfatal, clinic violence, crime, and diversion.

2. **OTP patient and family education.** Encourage stronger emphasis on patient and family education related to signs and symptoms of OD in the induction phase of treatment; require that physicians ensure the existence of a locked box and safe storage of methadone at home before granting a request for a take-home exemption.

3. **OTP coordination and medical consultation.** Encourage greater coordination of care with appropriate consent between OTP physicians and other primary care physicians, including family medicine, internal medicine, obstetrics, surgeons, and general practice.

4. **Provider education and improvement.** Establish a monthly OTP physician and physician assistant teleconference consultation for sharing practice and administrative issues and concerns regarding improved education and policies; also participate in quarterly meetings of OTP program directors to improve communications and networking.

5. **SOTA monitoring and oversight.** Conduct closer reviews of annual patterns and trends in number and types of all deaths in OTPs, including closer examinations of motor vehicle crashes of OTP patients to assess any possible impairment caused by inappropriate methadone dose levels.

6. **SOTA administrative oversight.** Publish a schedule of Federal/State holidays for approved clinic closings, with such recognized holidays limited to single-day rather than multi-day events to create a shorter window of vulnerability for new OTP patients.

E. Office-Based Opioid Treatment (OBOT) with Buprenorphine

In some States, more patients are being treated with OBOT buprenorphine than in methadone treatment clinics. (Nationwide, about 250,000 opioid-dependent patients are treated with methadone.) States that have large numbers of physicians registered to use buprenorphine for treating addiction are developing strategies for supporting these physicians. New Mexico, for example, has large parts of the State where only buprenorphine is available for treating opioid addiction. The State has regular ongoing buprenorphine training for physicians through a program at the University of New Mexico, where 300 physicians have received training and have registered with the DEA to prescribe buprenorphine. The major issue to be dealt with is why only 100 of these registered physicians are actually seeing patients with addictive disorders.

Because buprenorphine treatment is still relatively new, both challenges and promising strategies for this modality are emerging. Per capita, Vermont has the highest number of registered buprenorphine physicians in the country, and medical education is a major focus of State intervention efforts. Vermont is

finding that it needs to revise its early efforts in light of the huge and unexpected surge in buprenorphine use. In 2003, Vermont created Buprenorphine Practice Guidelines, and the State now sees these guidelines as too rudimentary. For example, physicians are ordering urine screens indiscriminately and often, even though all tests repeatedly come back negative, and are ordering expensive, unnecessary screens for multiple drugs. Payment for all these screens has become an issue with Medicaid. The State will now work with physicians to establish rational and clinically appropriate guidelines for drug screens, with the savings potentially available for treatment.

Other Vermont initiatives include a coordinated effort with Medicaid to incentivize doctors to take on more drug-involved patients; doctors had complained that Medicaid did not pay enough for these difficult patients, and there was concern about patient follow up. This Medicaid/SSA partnership is setting up a pilot program to provide support from Medicaid care managers to four different practices: an addiction psychiatry physician, a primary care physician, an obstetrician/gynecologist, and a pediatrician. Under a memorandum of understanding between the Department of Health and the State's Medicaid agency, the four coordinators have been trained, and data on the patients and their follow up are being collected and analyzed. Vermont is also providing a listserv to mentor doctors who provide buprenorphine, and more physicians are now using this resource. New Mexico is adopting similar strategies to support physicians, with a listserve for mentoring and a pilot project that provides health workers who will be available to buprenorphine patients and will support physicians as they treat these patients.

Some participants expressed concern that buprenorphine, because it is so successful, may need more intensive long-term monitoring. One participant noted that buprenorphine is now available on the street, while it is the most prevalent contraband in some prisons. The concern is that, because buprenorphine is prescribed through individual physicians, little is known about actual physician practices.

F. Prescription Drug Monitoring Programs (PDMPs)

Most States represented at the panel meeting had either established or new PDMPs. The consensus was that these programs offer considerable promise as an aid to intervention and treatment for people abusing prescription drugs. In addition, States are beginning to use PDMPS as a way to ensure that people on high opioid dosages for noncancer pain receive their pain management from specialists. Traditionally, PDMPs have been used as a tool to identify drug diversion. However, the participants wanted PDMPs to be perceived as intervention/treatment tools, not as criminal justice tools.

Participants uniformly reported that their States were not taking full advantage of what the PDMPs could offer. Some of these advantages include: (1) identifying patients who are "doctor shopping" for multiple prescription opioids; (2) alerting physicians to patients who may be developing a dependency on their prescribed opioid medications; and (3) identifying patients trying to enroll in more than one OTP program. At another level, the prescription data available in the PDMP can be used to set limits on the opioid prescription behavior of individuals, either by setting access limits for patients using high levels of opioids, or by setting a cutoff limit above which a pain specialist must see patients receiving high levels of opioids for noncancer pain. A limitation of PDMPs is that they cover a single State, so prescriptions filled in adjacent States cannot be tracked.

In most cases, States had no automatic mechanism for signaling physicians that their patients were receiving multiple prescriptions for opioids. Also, participants said that most physicians were not using the PDMP database to check the prescription records of new patients or when renewing prescriptions. Pharmacies are generally not required to check the PDMP database before filling a customer's prescription for opioids. States reported on a variety of strategies for increasing use (and usefulness) of PDMPs, particularly by physicians, emergency departments, pharmacies, and OTPs. In Utah, a large and diverse task force recommended a number of strategies to increase the value and access of professionals to the State PDMP, including the following:

- Physicians can designate up to three staff members to use the database.
- Mental health therapists who are under the supervision of a physician can access the data to compare and confirm what is happening in treatment.
- Pharmacies must submit a weekly report based on PDMP data.
- Emergency departments with an OD incident are required to access the PDMP database and send a letter about the incident to every physician who has prescribed medications for this patient.

The use of PDMPs by methadone treatment programs is not a clear-cut issue. Some States encourage or mandate that OTPs use their State monitoring system to guard against dual enrollment in methadone programs and to verify whether patients have other prescriptions for opioid medications. However, due to confidentiality concerns, AATOD cannot recommend that OTPs use these systems. According to attorneys at the Legal Action Center, such entities as law enforcement have access to the PDMP databases. Once an OTP logs into a database with the name of a patient, that name stays in the system, potentially subjecting the person to future prosecution.

G. Guidance to Physicians on Pain Management

As explained earlier, the cause of the Nation's rapid rise in opioid-related OD deaths is due to the huge increase in physicians prescribing methadone for pain. Many physicians had little or no education in using methadone for pain and did not understand its lethal potential. The addiction field has 40 years of experience in prescribing methadone for addiction. Several States that are confronting high rates of OD from prescription drugs are heavily invested, along with their departments of health and medical associations, in providing guidance and education to the medical community. Physicians most frequently targeted include primary care physicians and emergency department staffs.

Several States have been successful in developing prescribing guidelines for using opioids in treating both chronic and acute pain. These are massive efforts, involving State task forces composed of many State agencies, professional associations, and other stakeholders, many of whom are physicians. These States are also requiring implementation of the guidelines through their State legislatures.

States use many methods to provide clinical education to physicians. Some of the strategies the States listed include: educational seminars, continuing medical education units, Web site data and information, Webinars, and grand rounds. Utah has evaluated its provider education program through followup surveys conducted 1 month, 3 months, and 6 months following the education sessions. The evaluation asks how providers are incorporating the State's prescribing guidelines into their clinical practice. Utah conducts continuing medical education (CME) in both large and small groups, but they prefer the small group format. The evaluation suggests that the CME is successful. Of providers who had gone through the full CME process, with up to 25 CME hours, 80 percent have incorporated the guidelines and are executing them faithfully.

One participant at the meeting noted that OTPs do not generally focus on pain management for their own patients. This is an area where he recommended that more be done by the methadone treatment system.

V. STATE PREVENTION/INTERVENTION STRATEGIES

A. Overview of State Efforts

Prior to this panel meeting, NASADAD sent a brief 15-item query to States asking about their initiatives to prevent and reduce opioid ODs. During the brief 5-day response period (February 18–23, 2010), more than half the States responded to this survey—providing a capsule view of current State activities. More than 50 percent of the respondents reported that they have targeted efforts underway related to opioid OD.

The 26 responding States were geographically distributed across the country, representing both small and large States. Because of the brief response time, it is possible that responses came predominantly from States more active in OD prevention activities. However, the survey received a valid, accurate response on the one fact most easily checked—the percentage of States that are providing oversight of prescribing through PDMPs. The survey found that 65 percent of reporting States operate a PDMP. According to the DOJ, 34 States (68 percent) currently operate PMDPs. Another 5 percent of States have passed legislation and are now in some stage of implementation.

Survey findings include the following:

- 54 percent of States are working with medical examiners or coroners to get better data on opioid ODs.
- 50 percent of States have convened a task force or conference with providers to develop initiatives.
- 54 percent of States have developed or distributed educational materials to OTPs, with 54 percent developing materials for clinicians and 35 percent developing materials for patients and their families.
- 46 percent of States have developed or distributed educational materials for private medical practices, with 43 percent developing materials for physicians and 39 percent developing materials for patients and their families.
- The majority of States are delivering medical education (in-person, through printed materials, or on the Internet), with 62 percent delivering such education to physicians, 23 percent to emergency department staff, 23 percent to emergency medical technicians (EMTs), and 62 percent to other health professionals, such as pharmacists and nurses.

Recently, many States have changed methadone clinic policies. Such policy change seeks to eliminate the small percentage of MAT-related OD deaths, as well as to improve the reporting of any adverse consequences from treatment. Policy changes include the following:

- Seventy-seven percent of States have increased their monitoring of OTPs regarding the reporting of adverse events.
- Twenty-seven percent of States changed policies related to OTP admissions and inductions, such as policies on drug testing and dosing.
- Thirty-eight percent changed OTP dosing policies, such as replacing liquid for tablets and take-home policies.
- Sixty-five percent of States convened their opioid treatment providers to describe the new policies and provide technical assistance.

- Fifteen percent of SSAs were distributing Naloxone OD reversal kits to either patients or family members, a strategy that, in some States, departments of health implement rather than the SSA.

B. Selected Sample of State Initiatives

During the meeting, each State representative presented a profile of the OD activities in that person's State, describing the activity, the issues involved in implementing the strategy, partners involved and, when available, the outcomes of the strategies. States see the problem of OD deaths as requiring multiple strategies, and the meeting discussion covered many kinds of interventions. Following are highlights of selected strategies that State representatives described.

Comprehensive State opioid OD prevention plan

- **Massachusetts.** The Bureau of Substance Abuse Services, part of the Massachusetts Department of Public Health, has developed a comprehensive State plan, "Opioid Overdose Prevention Strategies in Massachusetts: February 2010." This plan details specific strategies and activities with three goals: (1) reduce the incidence of fatal and nonfatal OD and prevent OD from occurring (eight strategies); (2) improve the management of OD if it occurs (seven strategies); and (3) reduce the amount of misused, abused, and diverted prescription opioids (seven strategies).

Public education campaigns and materials

- **Washington State.** The State designed a homepage for its new Web site that offers data summaries and education materials about pain medication for many different groups, including healthcare providers, patients, teenagers, and older adults. The site receives many "hits."

- **Massachusetts.** As part of a pilot Narcan distribution/training program to reduce opioid OD deaths, Massachusetts has developed a pamphlet and pocket card, magnet, and graphic novella on preventing and responding to an opioid OD. The State has distributed the materials to more than 10,000 active users, first responders, family members, and treatment providers.

Community OD prevention programs

- **Massachusetts.** The Narcan distribution pilot program serves 12 cities, trained more than 4,000 bystanders to administer intra-nasal Narcan, and reported 513 OD reversals in less than 2 years.

- **Vermont.** Three police departments have independently set up a drug take-back program, with more than 100,000 pills turned in; the SSA and a university will help sustain and expand the program.

Data collection projects

- **Kentucky.** The State has an extensive data collection project with all public and private OTPs in the State. Baseline, ongoing treatment, discharge, and followup data are available on roughly 98 percent of the State's OTP patients who have voluntarily agreed to be included in this data system. The data are being used for the Kentucky Opiate Replacement Outcomes Study, conducted in partnership with the University of Kentucky's Center on Alcohol and Drug Research.

- **Oregon.** Oregon is collecting data from a 4-year special program for young parenting adults, aged 18–25, many of whom are transitioning from prescription opiate drugs to heroin. These young parents need treatment and are at risk of becoming involved with child welfare; they have neither Medicaid nor health insurance. This holistic program focuses on treatment and recovery as well as a family change in attitudes. Data will examine people in a parenting role in addition to the standard treatment and epidemiologic information.

Work with medical examiners or coroners to get better data on opioid overdoses

- **Washington.** The State developed a data protocol for identifying whether those who died from prescription opioid ODs were either currently enrolled in a methadone program or had been enrolled in the past 3 years.

Education for OTP physicians and clinic staffs

- **North Carolina.** Using CSAT's educational module and expert trainers, North Carolina convened a 1-day meeting on physician leadership and safe practice for all OTP clinical staffs in the State. The meeting brought together 35 physicians from the State's 40 OTPs, as well as 57 nurse practitioners and dosing nurses and 35 other OTP staff members—physician assistants, program directors, and senior counselors.

Oversight of prescribing (PDMPs)

- **Washington.** This State worked with a Medicaid "Narcotics Review Panel" to identify individuals with very high levels of prescription opioid use for chronic noncancer pain, and then established guidelines requiring that these individuals—based on dosage—receive consultations with pain management specialists. Also, Medicaid has developed protocols that restrict the access of people who use multiple sources of prescription opioids (high utilizers), limiting them to using one primary care provider, one pharmacy, and one emergency room for a period of 2 years.

- **Washington.** Working with emergency department (ED) professionals, mostly physicians, the State has developed 13 guidelines, specific to emergency physicians, on reducing OD. All the State Colleges of Medicine will probably adopt the guidelines over the next year. The State agency is also working with a group of ED physicians in Spokane to develop a coordinated data-sharing agreement to reduce drug shopping among EDs. So far, 17 EDs are participating, and Washington hopes to expand the agreement to include all EDs in the State.

Guidelines for pain management

- **Washington.** In 2007, working with the medical directors of State agencies, Medicare, and healthcare authorities, the SSA issued interagency guidelines on opioid dosing for chronic noncancer pain. Following 18 months of public hearings, the guidelines pertain to initiating and optimizing treatment, including dosage at which a patient must be referred to a pain specialist. A bill requiring certain health boards and commissions to adopt these rules on pain management is now before the State legislature.

- **Utah.** In March 2009, Utah issued opioid prescribing guidelines that include a separate section of recommendations on treating acute versus chronic pain. Utah found that physicians were prescribing the majority of oxycodon for acute pain; the new guidelines recommend that physicians not prescribe oxycodon and other long-acting medications for acute pain. In developing the guidelines, Utah used data from Washington State as well as seven existing clinical guidelines found to be current and evidence based, including guidelines that the Federation of State Medical Boards developed. The guidelines also include short briefing and intervention screening instruments.

Medical education with physicians and other healthcare professionals

- **Utah.** After the State provided education for physicians regarding prescribing opioids, along with a public education campaign, the State's database showed a decrease in OD deaths that year for the first time in 10 years.

- **Virginia.** The State's PDMP has extensive Web-based training on pain management for health professionals.

- **Missouri.** Experienced nursing staff members from OTPs provide education on opioid-dependent patients to students in nursing schools and to other health professionals.

- **Vermont.** Vermont held a large Chronic Pain and Narcotics Community Forum with uplinks to Webinars in five States. Many participated, but the State does not know whether the forum changed physicians' practices.

Task forces and coalitions

- **Utah.** A person from the Utah Department of Health led a huge multi-agency task force to address issues of prescription drug use, with representatives from the Department of Health and the Department of Human Services, professional organizations, community agencies, and advocacy groups. Despite various individual agendas, the task force had many positive outcomes, including providing much broader access to the PDMP.

- **Vermont.** This State's SSA works closely with the State's Department of Public Safety and has a Prescription Drug Task Force composed of health and safety representatives, as well as law enforcement. This task force has been a useful forum for collaboratively examining the data and developing strategies.

- **Oregon.** In cooperation with the State's Department of Human Services Public Health Division, the SSA is putting together an interagency workgroup of State agencies to examine unintentional poisonings and prescription drug use and abuse. The group will work to find out how each department is focusing its efforts and to develop a coordinated State plan for dealing with OD.

- **Rhode Island:** The SSA, in conjunction with health insurance companies, the State's Department of Health, and the State Board of Pharmacies, is developing guidelines and standards for what insurance companies will pay for opioid-dependent patients in either methadone or buprenorphine treatment.

- **Kentucky:** A Kentucky Coalition has been formed recently to address prescription issues in the State, particularly opiates. Called the Responsible Prescribing Group, this coalition includes the Kentucky Medical Association; Kentucky Hospital Association; State Board of Medical Licensure; State pharmacy, nursing, and dental boards; workers' compensation; PDMP; Humana and other health insurers; private providers; the State's Office of Drug Control Policy; and the SSA. Organizations are sending high-level officials to coalition meetings.

Coordinated work with the criminal justice system

- **Rhode Island.** The State implemented a pilot program that inducted people into methadone maintenance while they were incarcerated, and then they entered an OTP upon re-entry into the community. The State plans a similar pilot program with buprenorphine.

- **New Mexico.** This State has an active pilot program in which 450 prison inmates have received methadone treatment while still in jail, with 80 percent of them transferring to a community OTP upon release. State funds cover the program's $200,000 cost.

VI. MENU OF SUGGESTED STRATEGIES AND ACTIONS

A. Federal Actions

Throughout the meeting, participants from States and national organizations suggested a number of ways in which SAMHSA/CSAT could assist State efforts to prevent and reduce opioid OD deaths. The specific strategies they discussed include the following.

Federal leadership in establishing definitions of opioid-related deaths. SAMHSA/CSAT is currently working with medical examiners to establish a standard definition for opioid-related deaths. The definition will be of great benefit in providing consistency across States by standardizing their wide variation in data and improve the evidence base on deaths related to opioid use. When the paper on this standard definition is released, CSAT's influence will be important for implementing its use by medical examiners and coroners across the country.

Communication and coordination with other Federal Agencies and professional associations. Participants hope that SAMHSA/CSAT will assume a leadership role in interacting at the national level with the many Federal and professional stakeholders involved in this issue. Mutual understanding of the data, trends, and possible strategies will be the backdrop for the many levels of integrated action that must also occur at the State level. Specifically suggested coordination includes the following:

- **Coordination with CSAP.** Several States use CSAP's SPF-SIG grants to fund their Narcan distribution and education programs with professionals, first responders, parents, and patients. This prevention strategy has already saved many lives, and CSAT should encourage CSAP to promote the strategy as part of community prevention efforts.

- **Communication with the Veterans Administration (VA).** Several States reported that VA hospitals no longer participate in their State PDMP. States want to see the policy changed so that the VA patients would be integrated into these data systems.

- **Other partnerships.** Other high-level SAMHSA partnerships that participants specifically mentioned were with the National Institute on Drug Abuse (for targeted research), the American Medical Association and other medical specialty associations and boards (for development of specialty medical guidelines), the Department of Defense, and the American Society of Addiction Medicine.

Dissemination of national trends and data. CDC and DEA, as well as a number of other groups, are collecting a considerable amount of data on opioid OD deaths. CSAT could disseminate these national trend data to all stakeholders as well as to State agencies. The information would help State agencies in comparing national with State data.

Education guidelines. CSAT could develop education guidelines and curricula on important topics and disseminate them to the field. Topics that the guidelines need to cover include the safe disposal of prescription medications, prescribing, and a curriculum for students on opioid medications. (One State reports that high school students think that it is safe to snort prescription opioids—that this carries no risk of addiction.) Programs need succinct factsheets, such as the one that SAMHSA is developing with the FDA.

Toolkit. CSAT could consider developing and distributing a toolkit on prevention of opioid ODs to OTP and to people in buprenorphine treatment. The toolkit could also be useful for opioid-dependent people who are reentering the community after incarceration. CSAT could also develop a toolkit with OD activities for those not in treatment, focusing on the value of Narcan for reversing ODs.

Media campaigns. CSAT might conduct a media campaign in conjunction with National Recovery Month. The campaign could have a range of targets—for example, dentists and pain specialists for a campaign on issues pertaining to prescribing opioids for pain.

A special discretionary grant program. With State finances so constrained, State representatives strongly recommended that SAMHSA offer a discretionary grant program focused on opioid OD prevention. A host of State strategies await pilot testing and evaluation. Much more information is needed in the field to establish an evidence base for successful strategies, as well as to determine the comparative effects of the different practices.

Technical assistance with State task forces. State representatives hoped that CSAT would work with them in developing interagency State task forces to accomplish such complex projects as development of clinical guidelines.

B. State Actions

This white paper discusses many strategies that State agencies and SOTAs use in addressing opioid OD. Following are highlights of some of these strategies, which participants suggest that other States may be able to use.

Data systems

- Enhance use of PDMPs.
- Develop interagency data infrastructures to support integration and interpretation of data from vital statistics, substance abuse treatment, Medicaid, and departments of health and corrections.
- Use epidemiological data as a basis for geomapping to match OD strategies to targeted local needs.
- Collect, interpret, and better understand critical incident and other health data relating to OTP patients.

Prevention/public relations

- Provide community education on youth and prescription opioid addiction, including new trends concerning prescription opioids as a gateway drug for adolescents and young adults.
- Develop school curricula on safe use of medications and on sports medicine.
- Conduct Narcan education and training to recognize and counteract opioid OD, targeting parents and friends of people at risk for OD.
- Develop community strategies for disposal of leftover opioid medications.

Professional education

- Develop prescribing guidelines on opioid dosing for pain targeted to physicians, dentists, and other specialized groups.
- Develop CMEs and follow-on activities for physicians concerning opioid prescription guidelines.
- Conduct educational efforts with emergency departments on screening, brief intervention, and referral to treatment (SBIRT) for patients after an OD incident.
- Provide Narcan kits, education, and training on reversing OD for emergency first responders.

Treatment

- Develop differing OD prevention strategies to reflect the different focus and issues of buprenorphine and OTP patients.
- Develop pain management service for OTP patients within the OTP system.
- Develop listservs and other mentoring activities to provide consultation and information to physicians delivering buprenorphine treatment.
- Provide guidelines and education on scope-of-practice issues for OTP clinic staffs.
- Develop reentry treatment programs for incarcerated people with opioid dependency.
- Engage in strategies addressing treatment and retention needs of adolescents and young adults with opioid dependency.

Influencing State policy

- Develop relationships and interagency working groups aimed at developing State plans and OD policies, including work with State legislatures.
- Engage State task forces, including diverse government and professional stakeholders, to assess State OD issues and develop clinical guidelines on OD for targeted groups.
- Develop mutual working relationships with State medical examiners, coroners' offices, and others concerned with vital statistics concerning fatal and nonfatal ODs.
- Provide educational forums for a range of stakeholders, including physicians, nurses, emergency medical technicians, trauma centers, and maternal child health agencies.
- Form parent coalitions and task forces concerned with opioid OD.

C. Provider Actions

Although this panel meeting focused on Federal and State actions, State representatives mentioned a number of strategies that local treatment providers are implementing to reduce OD. They include the following:

- **Intervention with people who OD.** Local providers and first responders encounter many people who are at risk of or who are experiencing an OD. Meeting participants strongly encouraged the principle that they should use such an incident as a "teachable moment"—as an opportunity to intervene and refer people to treatment. Two important strategies are: (1) to provide clinicians, first responders, parents, and others a list of contacts for addiction treatment; and (2) to help clinicians and others to know how to broach this difficult subject with their patients.
- **Coordination with other physicians.** Meeting participants expressed considerable concern about whether OTP clinicians (and clinicians prescribing opioids for pain) are adequately communicating with their patients' other health providers. Without this coordination, patients receiving methadone for either addiction or pain management are vulnerable to OD from another unwitting medical source. Secrecy about methadone treatment creates a barrier to coordinated care. One State participant described the scope of this issue, reporting that the medical examiner found that an OTP patient had died from both a coronary and high levels of methadone in his blood. Neither the medical examiner nor the patient's parents knew that this man, who lived at home, had been a methadone maintenance patient for 7 years.

- **Patient education.** OTP providers need a strong education component to teach patients how to safeguard their methadone medication. OTP providers in one State reported the deaths of two children that stemmed from their parents' take-home medication that was not secured. Providers should consider patient lockboxes, as well as carefully determine which patients may have take-home medications. Providers can also help educate patients on how to advocate on their own behalf when they face discriminatory actions due to their medication-assisted treatment.

- **Public education in communities.** Several States reported that the nursing staff in local OTPs provided expertise to help educate others in the community—professional healthcare providers, first responders, parents, and many others. As mentoring programs for physicians who are prescribing buprenorphine and methadone are established, staff members are also sharing their expertise through a local consulting role.

- **Campaign/educational materials.** Both the Federal Government and States are developing public education campaigns and materials on preventing OD. Local providers—whether OTP staff, drug-free treatment program staff, emergency department and SBIRT staffs, or primary care and pain management physicians—are important conduits for distributing these materials to patients and to others involved in their lives. Providers are in a position to explain and emphasize the importance of these messages.

- **Practice policies.** As providers develop stronger risk management policies, they must ensure that risk management does not trump good clinical practice. For example, a meeting participant pointed out that too many treatment programs are discharging patients for showing the symptoms of their addictive disease. Because benzodiazepines combined with opioid use are implicated in so many OD deaths, some treatment programs are not admitting patients who report benzodiazepine use. Neither of these policies represents good clinical practice.

- **Administrative policies**. OTP administrators can assess and change any administrative policies that may make patients vulnerable to OD. For example, an OTP with many new, vulnerable patients might want to consider staying open on weekends to provide methadone throughout the entire week.

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APPENDIX A

The Substance Abuse and Mental Health Services Administration (SAMHSA)

presents

Successful Strategies in Addressing Opioid Overdose Deaths

Hyatt Regency Bethesda
Susquehanna/Severn
Bethesda, Maryland
February 24–25, 2010

PARTICIPANTS

David H. Albert
Senior Planner and Policy Analyst
Washington State Department of Social and Health Services
Division of Behavioral Health and Recovery
626 8th Avenue SE
Olympia, WA 98501
Phone: (360) 725-3701
E-mail: David.Albert@dshs.wa.gov

Rebecca L. Boss, M.A., LCDP
Administrator
Rhode Island Department of Mental Health, Retardation, and Hospitals
14 Harrington Rd., Barry Hall
Cranston, RI 02829
Phone: (401) 462-0723
E-Mail: rboss@mhrh.ri.gov

Michael Botticelli
Assistant Commissioner
Massachusetts Department of Public Health
Bureau of Substance Abuse Services
250 Washington Street, 3rd Floor
Boston, MA 02108
Phone: (617) 624-5151
E-mail: michael.botticelli@state.ma.us

Ray A. Caesar, M.Ed., LPC, LADC
DUI and Specialty Services Administrator
Oklahoma Department of Mental Health and Substance Abuse Services
1200 N.E. 13th Street
Oklahoma City, OK 73117
Phone: (405) 522-3870
E-Mail: rcaesar@odmhsas.org

Barbara A. Cimaglio
Deputy Commissioner
Vermont Department of Health
Division of Alcohol and Drug Abuse Programs
108 Cherry Street
Burlington, VT 05401
Phone: (802) 951-1258
E-mail: bcimag1@vdh.state.vt.us

Spencer Clark, M.S.W., ACSW
Director of Operations and Clinical Services
Assistant Chief of Community Policy Management
North Carolina Department of Health and Human Services
Division of Mental Health, Developmental Disabilities, and Substance Abuse Services
325 N. Salisbury Street
Albemarle Building, Suite 679
Raleigh, NC 27603
Phone: (919) 733-4670
E-mail: Spencer.Clark@dhhs.nc.gov

Olin W. Dodson, M.A., LPCC
State Opioid Treatment Authority
New Mexico Department of Human Services
Behavioral Health Services Division
37 Plaza La Presna
Santa Fe, NM 87505
Phone: (505) 476-9251
E-mail: olin.dodson@state.nm.us

David Felt, M.Ed., M.S.W., LCSW, CAC
Treatment Programs Administrator
Utah Department of Human Services
Division of Substance Abuse and Mental Health
195 North 1950 West
Salt Lake City, UT 84116
Phone: (801) 538-4379
E-mail: ddfelt@utah.gov

Sean J. Haley, Ph.D.
Senior Research Analyst
National Association of State Alcohol and Drug Abuse Directors
1025 Connecticut Avenue, Suite 605
Washington, DC 20036
Phone: (202) 293-1250
E-mail: shaley@nasadad.org

Therese M. Hutchinson
State Opioid Treatment Authority
Oregon Department of Human Services
Oregon Health Authority
Addictions and Mental Health Division
500 Summer St. NE, E 86
Salem, OR 97301
Phone: (503) 945-5765
E-mail: therese.hutchinson@state.or.us

Jeff Jamar, M.A., M.B.A., LCSW, CADC
Branch Manager
Kentucky Cabinet for Health and Family Services
Department for Behavioral Health, Development, and Intellectual Disabilities
Division of Behavioral Health
Substance Abuse Treatment Branch
100 Fair Oaks Lane, 4E-D
Frankfort, KY 40621
Phone: (502) 564-4456
E-mail: jeff.jamar@ky.gov

Erin Johnson, M.P.H.
Prescription Pain Medication Program Manager
Utah Department of Health
560 E. S. Temple, Suite 501
Salt Lake City, UT 84102
Phone: (801) 538-6542
E-mail: erjohnso@utah.gov

Jim A. Kaplan, M.D.
Chief Medical Examiner
West Virginia Office of the Chief Medical Examiner
619 Virginia Street West
Charleston, WV 25302
Phone: (304) 767-1615
E-mail: james.a.kaplan@wv.gov

William A. Lanier
EIS Officer
Centers for Disease Control and Prevention Organization
Utah Department of Health
Bureau of Epidemiology
288 North 1460 West
Salt Lake City, UT 84116
Phone: (801) 538-6527
E-mail: wlanier@utah.gov

Todd W. Mandell, M.D.
Medical Director
Vermont Department of Health
Division of Alcohol and Drug Abuse Programs
1103 Packer Corners Road
Guilford, VT 05301
Phone: (302) 251-0089
E-mail: pctwman@myfairpoint.net

Cheryl L. Marcum, B.A., CRADC, MATP
State Opioid Treatment Authority
Missouri Department of Mental Health
Division of Alcohol and Drug Abuse
1706 E. Elm Street
Jefferson City, MO 65101
Phone: (573) 526-4507
E-mail: cheryl.marcum@dmh.mo.gov

Michele F. McCarthy, M.R.C., LPCC, CRC
State Opioid Treatment Authority Program Administrator
Kentucky Cabinet for Health and Family Services
Department for Behavioral Health, Development, and Intellectual Disabilities
Division of Behavioral Health
100 Fair Oaks Lane, 4E-D
Frankfort, KY 40621
Phone: (502) 564-2880 Ext. 4460
E-mail: michele.mccarthy@ky.gov

Merritt E. Moore, M.A. CCAC, LPC, NCC
Adult Services Coordinator
West Virginia Department of Health and Human Resources
Bureau for Behavioral Health and Health Facilities
350 Capitol Street, Room 350
Charleston, WV 25301
Phone: (304) 558-3847
E-mail: Merritt.E.Moore@wv.gov

Denise G. Osborn, J.D., M.P.H.
Director of Injury Prevention and Behavioral Health
The Association of State and Territorial Health Officials
2231 Crystal Drive, Suite 400
Arlington, VA 22202
Phone: (571) 522-2310
E-mail: dosborn@astho.org

Mark W. Parrino, M.P.A.
President
The American Association for the Treatment of Opioid Dependence
225 Varick Street, Suite 402
New York, NY 10014
Phone: (212) 566-5555
E-mail: mark.parrino@aatod.org

Sarah Ruiz, M.S.W.
Assistant Director of Planning and Development
Massachusetts Department of Public Health
Bureau of Substance Abuse Services
250 Washington Street, 3rd Floor
Boston, MA 02108
Phone: (617) 624-5136
E-mail: sarah.ruiz@state.ma.us

Marcia Trick, M.S.
State Opioid Treatment Authority Coordinator
National Association of Alcohol and Drug Abuse Directors
1025 Connecticut Avenue, NW, Suite 605
Washington, DC 20036
Phone: (202) 293-1250
E-mail: mtrick@nasadad.org

FEDERAL REPRESENTATIVES

Alejandro A. Arias, Ed.D.
Acting Branch Chief
Performance Partnership Grant Branch
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1059
Rockville, MD 20857
Phone: (240) 276-2569
E-mail: alejandro.arias@samhsa.hhs.gov

John J. Campbell, M.A.
Acting Director
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1057
Rockville, MD 20857
Phone: (240) 276-2891
E-mail: john.campbell@samhsa.hhs.gov

Amina A. Chaudhry, M.D., M.P.H.
Medical Officer
Division of PharmacologicTherapies
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 2-1079
Rockville, MD 20857
Phone: (240) 276-2701
E-mail: amina.chaudhry@samhsa.hhs.gov

Li Hui Chen, M.S., Ph.D.
Senior Service Fellow
Centers for Disease Control and Prevention
National Center for Health Statistics
3311 Toledo Road
Hyattsville, MD 20782
Phone: (301) 458-4446
E-mail: eyx5@cdc.gov

CAPT Carol Coley, M.S.
Senior Program Management Advisor
Performance Partnership Grant Branch
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1061
Rockville, MD 20857
Phone: (240) 276-2892
E-mail: carol.coley@samhsa.hhs.gov

Cheryl J. Gallagher, M.A.
Public Health Advisor/Team leader
Performance Partnership Grant Branch
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1079
Rockville, MD 20857
Phone: (240) 276-1515
E-mail: cheryl.gallagher@samhsa.hhs.gov

Greg Grass, M.S.W.
Public Health Advisor
Performance Partnership Grant Branch
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1092
Rockville, MD 20857
Phone: (240) 276-2919
E-mail: greg.grass@samhsa.hhs.gov

Anne M. Herron, M.S., CAC, CRC, NCAC II
Acting Director
Division of Services Improvement
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1091
Rockville, MD 20857
Phone: (240) 276-2856
E-mail: anne.herron@samhsa.hhs.gov

LT Brandon T. Johnson, M.B.A.
Program Management Officer
Performance Partnership Grant Branch
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1084
Rockville, MD 20857
Phone: (240) 276-2889
E-mail: brandon.johnson@samhsa.hhs.gov

Robert Lubran
Director
Division of Pharmacologic Therapies
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1059
Rockville, MD 20857
Phone: (240) 276-2714
E-mail: robert. lubran@samhsa.hhs.gov

Sherrye C. McManus, M.P.H., M.S.W.
Lead Public Health Advisor/Team Leader
Performance Partnership Grant Branch
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1065
Rockville, MD 20857
Phone: (240) 276-2576
E-mail: sherrye.fowler.@samhsa.hhs.gov

Theresa M. Mitchell Hampton, Dr.P.H., M.Ed., LCPC
Public Health Advisor
Performance Partnership Grant Branch
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1102
Rockville, MD 20857
Phone: (240) 276-1365
E-mail: theresa.mitchell@samhsa.hhs.gov

Veronica Munson, M.S.
Public Health Advisor
Performance Partnership Grant Branch
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1094
Rockville, MD 20857
Phone: (240) 276-2901
E-mail: veronica.munson@samhsa.hhs.gov

Melissa V. Rael, M.P.A., B.S.N., RN
Senior Program Management Officer
Performance Partnership Grant Branch
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1100
Rockville, MD 20857
Phone: (240) 276-2903
E-mail: melissa.rael@samhsa.hhs.gov

Nicholas P. Reuter, M.P.H.
Senior Public Health Analyst
Division of Pharmacologic Therapies
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1094
Rockville, MD 20857
Phone: (240) 276-2716
E-mail: nicholas.reuter@samhsa.hhs.gov

Gayle J. Saunders
Public Health Advisor
Division of State and Community Assistance
Center for Substance Abuse Treatment
Substance Abuse and Mental Health
Services Administration
1 Choke Cherry Road, Room 5-1077
Rockville, MD 20857
Phone: (240) 276-2905
E-mail: gayle.saunders@samhsa.hhs.gov

Margaret Warner, Ph.D.
Injury Epidemiologist
Centers for Disease Control and Prevention
National Center for Health Statistics
3311 Toledo Road, Room 6424
Hyattsville, MD 20782
Phone: (301) 458-4556
E-mail: mwarner@cdc.gov

CONTRACTOR STAFF

Purti R. Bali, B.A.
Project Associate
AFYA, Inc.
c/o JBS International, Inc.
5515 Security Lane, Suite 800
North Bethesda, MD 20852
Phone: (240) 645-4269
E-mail: pbali@jbsinternational.com

Patricia A. Kassebaum, M.A.
Senior Writer
JBS International, Inc.
5515 Security Lane, Suite 800
North Bethesda, MD 20852
Phone: (240) 645-4524
E-mail: pkassebaum@jbsinternational.com