METHADONE USE AND ABUSE: REDUCING THE INCIDENCE OF METHADONE OVERDOSES AND DEATHS

Report of the Advisory Committee on the Use and Diversion of Methadone

June 2011

General Assembly of the Commonwealth of Pennsylvania
JOINT STATE GOVERNMENT COMMISSION
108 Finance Building
Harrisburg, PA 17120

The Joint State Government Commission was created by the act of July 1, 1937 (P.L. 2460, No. 459), as amended, as a continuing agency for the development of facts and recommendations on all phases of government for the use of the General Assembly.

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THE GENERAL ASSEMBLY OF PENNSYLVANIA

SENATE RESOLUTION

No. 135 Session of 2007

INTRODUCED BY GREENLEAF, PILEGGI, ARMSTRONG, ORIE, ROBBINS, FONTANA, BOSCOLA, FERLO, RAFFERTY, ERICKSON, D. WHITE, FUMO, WONDERLING AND STACK, JUNE 11, 2007

REFERRED TO JUDICIARY, JUNE 11, 2007

A RESOLUTION

Directing the Joint State Government Commission to establish a task force and advisory committee to study the distribution and use of methadone, including the diversion of methadone from its proper and legal uses, and to make a report to the Senate on the distribution and use of methadone, including recommendations for changes in State law and regulations.

WHEREAS, Methadone is used to detoxify opiate addicts, including individuals addicted to heroin, because it suppresses withdrawal symptoms and reduces cravings by blocking the high associated with heroin; and

WHEREAS, The National Institute on Drug Abuse found that among outpatients receiving methadone, weekly heroin use decreased by 69%, criminal activity decreased by 52% and full-time employment increased by 24%; and

WHEREAS, While the advantages of methadone treatment are well documented, the diversion of methadone from its proper and legal uses is a serious problem because this powerful drug can become available for sale on the street; and

WHEREAS, Methadone abuse is dangerous because the drug stays

in an individual's system for longer than many other narcotics, often more than two days; and

WHEREAS, The Food and Drug Administration has warned physicians about the risk of accidental overdoses or dangerous interactions with other drugs if patients get too much methadone too often; and

WHEREAS, According to the National Center for Health Statistics, methadone was mentioned in 3,849 of the 30,308 drug poisoning deaths reported for 2004, a 29% increase from the previous year; therefore be it

RESOLVED, That the Senate direct the Joint State Government Commission to establish a bipartisan task force consisting of two members appointed by the President pro tempore of the Senate and two members appointed by the Minority Leader of the Senate; and be it further

RESOLVED, That the task force create an advisory committee of individuals with expertise in the distribution and use of methadone, including representatives of the medical, drug treatment and criminal justice communities; and be it further

RESOLVED, That the task force and advisory committee study the distribution and use of methadone, including the diversion of methadone from its proper and legal uses, and make a report to the Senate on the distribution and use of methadone, including recommendations for changes in State law and regulations.

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EXECUTIVE SUMMARY

The diversion of methadone from legitimate purposes has increased rapidly over the past decade. Methadone, when properly prescribed and used in accordance with doctors' orders, is both an accepted treatment protocol for opioid addiction and an accepted treatment for pain management. Methadone that is diverted or abused contributes to dire, and many times fatal, consequences.

To address the mounting problem of methadone-related overdoses and deaths, Senate Resolution 135 of 2007 (P.N. 1163) directed the Joint State Government Commission to assemble an Advisory Committee to make recommendations to the General Assembly on how the diversion, misuse, and abuse of methadone can be reduced in the Commonwealth. Individuals with expertise in the medical and pharmaceutical, drug treatment, and criminal justice communities were included in the Advisory Committee. The Advisory Committee was divided into two subcommittees: Opioid Treatment Programs (OTP) and Physicians and Pain Management (PPM). This report is the product of the Advisory Committee's input and expertise in the use of methadone for opioid addiction and pain management.

Though the topic of methadone is not without controversy, and certain issues that the Advisory Committee addressed remain unresolved in this report, common ground was found on some recommendations that were discussed. The Advisory Committee reached agreement on a number of recommendations which comprehensively cover the fields of methadone maintenance treatment (MMT) and pain management. They include topics relevant to both MMT and pain management settings, such as the induction period, adverse heart effects, the Commonwealth's prescription monitoring program, diversion and theft, and death reviews. Recommendations are also targeted to address each subcommittee's focus. For example, OTP recommendations relate to polysubstance abuse, counseling, clinic security, and parking lot security. Recommendations more specific to PPM relate to patient education, physician education, and protocols for prescribing methadone for pain management.

A recommendation to require that physicians provide Narcan, a drug commonly prescribed to forestall overdose, to all methadone patients is not recommended by the Advisory Committee as a body. Similarly, the Advisory Committee did not find agreement on whether or not regulations should be revised to increase counseling hours for certain patients.

The Advisory Committee sought to discuss as many issues as possible, in accordance with the Joint State Government Commission's long-standing protocol to develop meaningful, useful consensus. Where the Advisory Committee did not reach consensus on recommendations perhaps opportunities exist to revisit those topics in future reports**.** Where the Advisory Committee did reach consensus on recommendations, legislators and policy makers will find the final report is a useful base of information on the diversion, misuse, and abuse of methadone.

The Advisory Committee makes the following recommendations:

Induction Period. The Advisory Committee recommends increased testing of new patients during the induction period.

Adverse Heart Effects. The Advisory Committee supports the continuing work of the Substance Abuse and Mental Health Services Administration (SAMHSA) with regard to methadone maintenance treatment and heart safety. This work is widely supported by the American Association for the Treatment of Opioid Dependence (AATOD), the Pennsylvania Association for the Treatment of Opioid Dependence, (PATOD), Save A Life, and the Drug and Alcohol Service Providers of Pennsylvania (DASPOP).

Polysubstance Abuse. The Advisory Committee recommends the development of special treatment protocols for patients with polysubstance abuse problems.

Prescription Monitoring Program. The Advisory Committee recommends that the General Assembly continue its dialogue regarding the prescription monitoring program to determine if it is achieving its goals.

Diversion and Theft. The Advisory Committee recommends that clinics maintain and continue to improve their theft and diversion policies and procedures.

Clinic Security. The Advisory Committee recommends clinics implement best practices to handle threats to clinic and patient safety.

Parking Lot Security. The Advisory Committee recommends that clinics employ security guards and install security cameras for parking lots and outside property.

Take-Home Doses. The Advisory Committee recommends that clinics implement best practices for patients' take-home doses.

Diversion. The Advisory Committee recommends that in the OTP setting patients be observed taking the liquid dose and required to speak with the dosing nurse before and after receiving the dose. In the pain management setting, diversion is far harder to control and the physician community needs to establish best practices for noncompliant patients, and for prescribing and following up appropriately.

Methadone Incident and Death Reviews. The Advisory Committee recommends that the standardization of methadone incident and death reviews be made a priority across all delivery settings: OTPs, pain management clinics, and physician offices.

Physician Education. The Advisory Committee recommends that physician education be revised to include training in addiction and treatment.

Patient Education. The Advisory Committee recommends that patients prescribed methadone be educated about how to properly use the drug and what the major concerns are that accompany it.

INTRODUCTION

Senate Resolution 135 of 2007 directed the Joint State Government Commission to establish a task force and advisory committee to study the "distribution and use of methadone," the "diversion of methadone from its proper and legal uses" and "recommendations for changes in State law and regulations."[1] As required by Senate Resolution 135, therefore, this report is an examination of the distribution and use of methadone through a system of opioid treatment program (OTP) clinics and pain management doctors, the diversion and misuse of methadone, and recommendations for changes in state law and regulations relating to OTP clinics in the Commonwealth of Pennsylvania.

Methadone use has grown tremendously over the past decade. Sadly, along with that growth, the number of methadone-related deaths has spiked as well. According to the Methadone Mortality Working Group of the U.S. Drug Enforcement Administration, the number of methadone prescriptions increased by nearly 700 percent from 1998 through 2006.[2] There were about 500,000 methadone prescriptions in 1998, with steady growth to slightly more than 4 million by 2006.[3] The federal Government Accountability Office (GAO) concluded that "available information indicates that there are three distinct populations who are dying: individuals with a prescription for methadone; individuals undergoing methadone maintenance treatment in OTPs; and individuals who obtained methadone from some other source, such as diversion. The federal Substance Abuse and Mental Health Services Administration (SAMHSA) identified several risk factors for methadone-related mortality:

- the concomitant use of benzodiazepines, other opioids, and/or alcohol;
- an elevated risk of some patients for Torsades de Pointes;
- inadequate or erroneous induction dosing and monitoring by physicians, primarily when prescribing methadone for pain; and
- drug poisoning that occurs as a result of diversion of the drug and its nonmedical use.[4]

[1] Senate Resolution 135 of 2007, P.N. 1163.

[2] Methadone Mortality Working Group, "Methadone," Methadone Mortality Working Group, Office of Diversion Control, U.S. Drug Enforcement Administration, April 2007. 8.

[3] Ibid. 10. It should be noted that in 2006 there were 35 times as many prescriptions for hydrocodone, 10 times as many for oxycodone, and twice as many fentanyl prescriptions as there were for methadone.

[4] SAMHSA, "Summary Report of the Meeting: Methadone Mortality–A Reassessment," SAMHSA, Washington, D.C., July 20, 2007, accessed January 28, 2010, http://dpt.samhsa.gov/pdf/Methadone_Report_10%2018%2007_Brief%20w%20attch.pdf. 1.

The website WebMD's *Pain Management Health Center* notes that the increase in methadone mortality corresponds with the increase in prescriptions, surmising that, "Increased concerns about the abuse potential of the pain reliever OxyContin and the desire for a relatively inexpensive long-acting opioid painkiller led to the shift in methadone use."[5] Thus, some experts conclude that methadone has become a substitute for other pain relievers.

Identifying methadone as the culprit in the increase in opioid analgesic deaths has proved elusive. SAMHSA found that because of problems associated with lack of data and lack of standard death reviews, the hypothesis is not supported that methadone deaths are rising along with deaths from all opioid analgesics. SAMHSA concluded that data neither show a correlation between increased deaths and methadone maintenance treatment (MMT) nor a correlation between increases in methadone deaths and the treatment of pain.[6]

The distribution of methadone from manufacturers during the years 2000 to 2006 grew substantially for pharmacies, hospitals, and practitioners, and increased much more slowly for OTPs.

Table 1
Methadone Distribution by Business Activity
Grams per 100,000 Population
2000 – 2006

	2000	2001	2002	2003	2004	2005	2006	Percent Change
Practitioners	0.31	2.25	3.75	5.44	12.78	15.56	18.20	5,771%
Hospitals	39	81	108	142	168	186	209	203
Pharmacies	412	596	819	1,179	1,529	1,748	2,034	394
Opioid Treatment Programs	1,503	1,742	1,869	2,068	2,371	2,089	2,631	75

Source: U.S. Drug Enforcement Administration, Automation of Reports and Consolidated Orders System, April 2007.

In 1999, there were 786 methadone-related deaths reported to the Centers for Disease Control and Prevention (CDC) and 2,757 deaths from other opioids (including oxycodone, morphine, hydromorphine, and hydrocodone). As a percentage, methadone related deaths amounted to 22 percent of all the listed opioid deaths. By 2004, the CDC found the number of methadone-related deaths had grown to 3,849 and the number of other opioid deaths rose to 5,242. See Table 2.

[5] Salynn Boyles, "CDC: Alarming Increase in Methadone Deaths: Deaths from Opioid Painkillers Have Tripled Since 1999," *Pain Management Health Center*, WebM.D., September 30, 2009, accessed July 14, 2010, http://www.webM.D..com/pain-management/news/20090930/alarming-increase-in-methadone-deaths.

[6] SAMHSA, "Summary Report of the Meeting: Methadone Mortality – A Reassessment," Washington, D.C.: July 20, 2007.
http://www.dpt.samhsa.gov/pdf/Methadone_Report_10%2018%2007_Brief%20w%20attch.pdf. 15.

Table 2
Methadone-Related Poisoning Deaths
By State
1999 – 2005

	1999	2000	2001	2002	2003	2004	2005	Ratio 2005:1999	Methadone deaths per 100,000 population, 2005
United States total	786	988	1,456	2,360	2,974	3,849	4,462	5.7	1.5
Alabama	16	12	26	33	25	46	47	2.9	1.0
Arizona	20	14	28	57	71	66	87	4.4	1.5
Arkansas	9	3	9	32	36	50	53	5.9	1.9
California	73	51	37	115	144	205	214	2.9	0.6
Colorado	15	16	19	27	30	40	55	3.7	1.2
Florida	34	51	128	218	270	434	430	12.6	2.4
Georgia	14	16	41	50	71	95	123	8.8	1.3
Illinois	29	56	52	68	64	69	81	2.8	0.6
Indiana	5	5	13	20	45	33	51	10.2	0.8
Kansas	4	5	9	24	22	33	45	11.3	1.6
Kentucky	9	28	50	78	129	129	156	17.3	3.7
Louisiana	4	5	21	41	54	71	102	25.5	2.3
Maine	6	20	13	43	36	55	61	10.2	4.6
Maryland	7	18	20	24	40	96	145	20.7	2.6
Massachusetts	10	8	23	24	36	58	93	9.3	1.4
Michigan	12	14	15	43	50	97	126	10.5	1.2
Minnesota	11	5	12	16	25	33	35	3.2	0.7
Missouri	16	14	19	24	69	41	85	5.3	1.5
Nevada	18	24	47	50	50	86	93	5.2	3.9
New Hampshire	2	7	12	33	37	29	51	25.5	3.9
New Jersey	26	17	27	48	54	50	77	3.0	0.9
New Mexico	32	24	27	32	33	43	28	0.9	1.5
New York	120	94	126	135	147	137	179	1.5	0.9
North Carolina	47	90	107	190	249	267	299	6.4	3.4
Ohio	7	20	37	59	74	141	158	22.6	1.4
Oklahoma	20	38	42	43	92	129	111	5.6	3.1
Oregon	9	28	45	82	88	99	123	13.7	3.4
Pennsylvania	11	18	15	39	73	93	114	10.4	0.9
South Carolina	14	13	15	11	20	40	60	4.3	1.4
Tennessee	12	15	19	44	78	110	134	11.2	2.2
Texas	25	50	89	136	155	160	199	8.0	0.9
Utah	20	27	39	61	80	101	112	5.6	4.5
Virginia	20	37	74	90	112	114	121	6.1	1.6
Washington	52	66	83	140	160	252	269	5.2	4.3
West Virginia	7	8	38	76	68	106	60	8.6	3.3
Wisconsin	11	18	21	39	41	72	72	6.5	1.3

Source: Lois A. Fingerhut, Office of Analysis and Epidemiology, "Increases in Poisoning and Methadone-Related Deaths: United States, 1999-2005," CDC, U.S. Department of Health and Human Services. February 2008, accessed July 18, 2008, http://www.cdc.gov/nchs/products/pubs/pubd/poisoning/poisoning.htm.

Methadone thus accounted for 42 percent of all opioid deaths recorded by the CDC. In terms of absolute figures, methadone related deaths grew by almost a factor of six from 1999 to 2005, from 786 to 4,462.[7] An analysis of methadone related deaths in large metropolitan areas, completed by the Drug Abuse Warning Network (DAWN), shows that the majority of methadone deaths are accompanied by other drugs.[8] Notably, these are:

- alcohol;
- illicit drugs (heroin/morphine, cocaine, other illicit drugs);
- narcotic analgesics;
- antidepressants;
- benzodiazepines; and
- other psychotherapeutic drugs.

As the number of methadone-related deaths has increased, a number of federal authorities have attempted to explain the phenomenon. In February 2008, the National Center for Health Statistics (NCHS) released a report stating that, "It has been difficult to determine the extent to which increases in opioid-related deaths have been due to specific prescribing practices, improper taking of the medication by patients, diversion of the drug from the patient to someone else, or other means."[9] SAMHSA concluded in 2004 that most methadone deaths involve abuse or misuse of methadone diverted in ways other than from opioid treatment programs (OTPs) and when taken in combination with other drugs and/or alcohol.[10] It has been the experience of members of the SR135 Advisory Committee that polysubstance abuse is the biggest threat to the lives of OTP patients. The National Drug Intelligence Center (NDIC), a branch of the U.S. Department of Justice, stated in November 2007 that most methadone diversion occurs from hospitals, pharmacies, practitioners, and pain management physicians. The NDIC states that diversion from OTPs results in methadone deaths to a "much lesser extent..."[11]

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[7] National Drug Intelligence Center, "Methadone Diversion, Abuse, and Misuse: Deaths Increasing at Alarming Rate," National Drug Intelligence Center, U.S. Department of Justice, November 16, 2007. 1.

[8] Elizabeth Crane, Ph.D.. and Nita Lemanski, "Methadone-Involved Deaths in 8 Metropolitan Areas: 1997-2001," *The DAWN Report*, Drug Abuse Warning Network, Office of Applied Studies, Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. April 2004, accessed July 14, 2010, http://dawninfo.samhsa.gov/old_dawn/pubs_94_02/shortreports/files/DAWN_tdr_meth.pdf.

[9] Lois A. Fingerhut, Office of Analysis and Epidemiology, "Increases in Poisoning and Methadone-Related Deaths: United States, 1999-2005." CDC, U.S. Department of Health and Human Services. February 2008, accessed July 15, 2010, http://www.cdc.gov/nchs/products/pubs/pubd/poisoning/poisoning.htm.

[10] National Drug Intelligence Center, "Methadone Diversion, Abuse, and Misuse: Deaths Increasing at Alarming Rate," National Drug Intelligence Center, U.S. Department of Justice, November 16, 2007. 2.

[11] Ibid.

The CDC reported that there were 114 methadone-related deaths in 2005 in Pennsylvania, over ten times as many as occurred in 1999 when 10 deaths were reported.[12] Furthermore, Pennsylvania ranked 10th highest for the ratio of deaths from 1999 to 2005. See Table 3.

Table 3
Rank of States by Ratio
Methadone-related Poisoning Deaths
1999-2005

	1999	2000	2001	2002	2003	2004	2005	Ratio 2005: 1999	Methadone deaths per 100,000 population, 2005
United States total	786	988	1,456	2,360	2,974	3,849	4,462	5.7	1.5
Louisiana	4	5	21	41	54	71	102	25.5	2.3
New Hampshire	2	7	12	33	37	29	51	25.5	3.9
Ohio	7	20	37	59	74	141	158	22.6	1.4
Maryland	7	18	20	24	40	96	145	20.7	2.6
Kentucky	9	28	50	78	129	129	156	17.3	3.7
Oregon	9	28	45	82	88	99	123	13.7	3.4
Florida	34	51	128	218	270	434	430	12.6	2.4
Kansas	4	5	9	24	22	33	45	11.3	1.6
Tennessee	12	15	19	44	78	110	134	11.2	2.2
Michigan	12	14	15	43	50	97	126	10.5	1.2
Pennsylvania	11	18	15	39	73	93	114	10.4	0.9

Source: Lois A. Fingerhut, Office of Analysis and Epidemiology, "Increases in Poisoning and Methadone-Related Deaths: United States, 1999-2005." CDC, U.S. Department of Health and Human Services, February 2008. Accessed July 15, 2010, http://www.cdc.gov/nchs/products/pubs/pubd/poisoning/poisoning.htm.

[12] Lois A. Fingerhut, Office of Analysis and Epidemiology, "Increases in Poisoning and Methadone-Related Deaths: United States, 1999-2005." CDC, U.S. Department of Health and Human Services. February 2008, accessed July 18, 2010, http://www.cdc.gov/nchs/products/pubs/pubd/poisoning/poisoning.htm.

Title 28 of the Pa. Code requires OTPs to report to the Pennsylvania Department of Health (DOH) "unusual incidents" that result in deaths.[13] OTPs are not required to specify if methadone is involved in the death, and it is often the case that the extent of the role of methadone, if any, is unknown. Thus, it is difficult to reconcile the methadone deaths reported by the CDC with the deaths reported by Pennsylvania OTPs. For the years 2006 to 2009, the number of deaths reported by Pennsylvania OTPs ranged from 21 to 27, an average of 24 deaths per year. Unusual incidents identified as overdose deaths averaged 3.75 per year. Again, these overdose deaths may be of any drug overdose, and are not limited to or might not include methadone. Where methadone was involved it is often difficult, if not impossible, for authorities to determine how the deceased obtained the drug.

Table 4
Opioid Treatment Programs
Deaths Reported in Pennsylvania
2006 – 2009

Cause	2006	2007	2008	2009
Illness/Disease	7	10	4	10
Overdose	4	5	4	2
Accident/Injury	2	3	2	2
Homicide/Suicide	3	1	3	3
Unknown Causes	6	6	8	9
Total	22	27	21	26

Source: Division of Drug and Alcohol Program Licensure, DOH email message to Joint State Government Commission, June 29, 2010.

[13] 28 Pa. Code Section 715.28(c)(2). Unusual incidents include "Death or serious injury due to trauma, suicide, medication error or unusual circumstances."

FEDERAL AND STATE REGULATION OF OPIOIDS TO TREAT ADDICTION

Federal Regulation

Until the late 1960s, federal law regulated opioids used to treat addiction, beginning with the Harrison Narcotic Act of 1914**.** This Act regulated the manufacture, distribution and prescription of opioids. Under the Act's provisions, manufacturers, pharmacists and physicians had to be licensed, keep records for inspection, and pay modest fees to the U.S. Department of the Treasury. Physicians were allowed to dispense or distribute opioids "to a patient…in the course of (the physician's) professional practice only" as long as they kept the required records.[14]

In the late 1960s addiction and addiction-related mortality and crime increased, and support grew for the concept of opioid maintenance programs. Clinics were established in affiliation with hospitals to dispense opioids in a controlled manner to patients addicted to illicit opioids. Since 1970 Congress has enacted several significant statutes to limit and control the availability of psychoactive drugs and their use to treat addiction.[15]

From Federal Regulation to Accreditation

For several decades the Food and Drug Administration (FDA) regulated methadone treatment. The regulations focused on the safety of methadone and also on preventing the diversion of the drug. Methadone was dispensed only in special clinics

[14] SAMHSA Treatment Improvement Protocol. Tip 43: Chapter 2. History of Medication-Assisted Treatment for Opioid Addiction.

[15] Controlled Substances Act (1970) requires all manufacturers, distributors and practitioners, who prescribe, dispense or administer controlled substances to register with DEA; the Narcotic Addict Treatment Act (1974) amended the Controlled Substances Act and recognized the use of an opioid drug to treat opioid addiction. This Act also established the National Institute of Drug Abuse (NIDA) as an authority to regulate the treatment of opioid addiction together with the Food and Drug Administration (FDA); the Drug Addiction Treatment Act (2000) amended the Controlled Substances Act mandating separate registration for practitioners who dispense opioids in addiction treatment. The Controlled Substances Act and its amendments can be found at 21 U.S.C. 9801 et seq. Furthermore, Senate Bill 754 providing Federal oversight of methadone treatment, known as the Methadone Treatment and Protection Act of 2009 was introduced in March 2009. It amends the Public Health Service Act and, among other things, establishes a Controlled Substances Clinical Standards Commission to develop safe dosing standards for methadone, increases funding for the controlled substance monitoring program and requires the completion of a Model Opioid Treatment Program Mortality Report and the establishment of a National Opioid Death Registry. It also requires opioid treatment clinics to make acceptable arrangements for the distribution of methadone to patients restricted from taking home doses when the clinic is closed. This bill did not move during the 111th Congress, but has been reintroduced as the Prescription Drug Abuse Prevention and Treatment Act of 2011 in U.S. Senate Bill 507 (March 8, 2011).

that were strictly regulated. Little attention was paid to the nature of methadone as a drug treatment, the needs of the patients or even the needs of the staff providing the treatment.

After years of discussion by many professional groups new federal regulations took effect in May 2001.[16] The 1972 FDA regulations were repealed and a new accreditation-based regulatory system was created. The new system shifted administration and oversight from the FDA to the Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services.

Methadone maintenance treatment is now regulated by the Center for Substance Abuse Treatment (CSAT). CSAT is an agency of SAMHSA. To get CSAT approval, OPTs are required to be accredited like other healthcare facilities. The accrediting agency visits each clinic, notes its procedures, talks to staff and patients, gives it grades and determines if it will be accredited. Several accreditation agencies, such as the Committee for the Accreditation of Rehabilitation Facilities (CARF) and the Joint Commission for the Accreditation of Healthcare Organizations (JCAHO) work within general accreditation guidelines put together by CSAT. They require clinics to have systems for records, training, and making treatment decisions.

The new regulations allow the development of treatment programs outside the clinic system. Such programs serve long-term stable patients. Patients do not see changes at the same speed since it depends on how their state and clinic adopt the new accreditation system: some states adopt the federal regulations, other states develop their own regulations. States and clinics can create stricter regulations but not so strict as they violate standards for clinic accreditation.[17]

State Regulation - Pennsylvania

In 2002, the Pennsylvania Department of Health (DOH) amended its standards for approval of narcotic treatment programs by adding 28 Pa. Code Chapter 715 (relating to standards for approval of narcotic treatment programs). The purpose of the final-form rule-making was to revise and update current narcotic treatment standards for the approval of narcotic treatment programs to conform to updated federal regulations and requirements. DOH noted that the federal regulations had been revised and protocols and treatments for narcotics addiction had changed over the past 25 years. Therefore, the need existed to amend the State methadone regulations to more closely align with the federal regulations as well as to incorporate current treatment practices for narcotic addicts.[18] On July 9, 2010 Governor Rendell signed the Act of July 9, 2010, P.L. 348, No. 50, which created the Department of Drug and Alcohol Programs. The new

[16] Federal Register, Wednesday, January 17, 2001, Part II, Department of Health and Human Services. Substance Abuse and Mental Health Services Administration. 42 CFR Part 8. Opioid Drugs in Maintenance and Detoxification Treatment of Opiate Addiction; Final Rule.
[17] "The New Federal Regulations What Do They Mean for Patients?" National Alliance of Methadone Advocates, Education Series Number 10, June 2003.
[18] Pennsylvania Bulletin, Vol. 32, No. 46, November 2002.

department was scheduled to begin operations on July 1, 2011 and to assume all responsibilities for OTP programs currently handled by DOH. However, Governor Corbett's proposed 2011-2012 budget recommends maintaining drug and alcohol programs in DOH and does not provide funding for the Department of Drug and Alcohol Programs.

Narcotic treatment programs are expected to comply with applicable federal laws and regulations. Such entities must apply for and receive approval as required from DOH, DEA, CSAT or an organization designated by SAMHSA. DOH forwards a recommendation for approval to federal officials after a review of policies and procedures and an onsite inspection of the facility. Once licensed, the facility must undergo an annual inspection to determine compliance with DOH narcotic treatment program regulations. DOH may deny, suspend or revoke approval of a narcotic treatment program if the applicant or program fails to comply. [19]

[19] 28 Pa. Code Chapter 715. Standards for Approval of Narcotic Treatment Programs.

OTP CLINICS

This chapter focuses on the history and development of methadone as an analgesic in Germany, the distribution and use of methadone as a treatment for opioid addiction in the United States, and a profile of the OTP clinic system in Pennsylvania.

History and Development of Methadone

Methadone was developed in Germany in 1939 by scientists working for I.G. Farbenkonzern at the Farbwerke Hoechst who were looking for a synthetic opioid that could be created to solve Germany's opioid shortage. Following the end of World War II, records on this research were confiscated by the U.S. Department of Commerce Intelligence, investigated by a Technical Industrial Committee of the U.S. Department of State and brought to the United States. Since the patent rights were no longer protected, pharmaceutical companies were able to purchase the rights for commercial production of methadone for one dollar.

By 1947, commercial production of methadone was introduced in the United States by Eli Lilly and Company, Pharmaceuticals as an analgesic. Initially, it was given the trade name Dolophine (derived from the Latin "dolor" (pain) and "finis" (end)). This company obtained Food and Drug Administration (FDA) approval in 1947 for the manufacture of Dolophine 5mg and 10mg tablets.

Also in 1947, Mallinckrodt Pharmaceutical received approval to manufacture a bulk compounding powder. In 1993, Mallinckrodt Pharmaceutical received approval for a branded generic Methadose 5mg and 10 mg tablet. Mallinckrodt also makes 5mg, 10mg and 40mg generic tablets and received FDA approval for the plain generic tablets in 2004. The company is the major producer in the United States, selling bulk methadone to most of the producers of generic preparations and distributing its own brand name product in the form of tablets, dispersible tablets and oral concentrate under the name Methadose.[20]

Distribution and Use of Methadone as a Treatment for Opioid Addiction

Methadone became the drug of choice for treating patients addicted to opioids (including heroin) in the United States in the 1970s. Nationally, the number of people

[20] "Methadone: History," Museum of Learning, http://www.museumstuff.com/learn/topics/methadone::sub::History.

addicted to heroin and other opioids has been increasing: in 1997, 140,000 patients were being treated; ten years later, in 2007, the number had risen to 260,000 patients. Many of these patients who are addicted to heroin and other opioids are treated in a system of OTP clinics. There are 1,200 OTP clinics nationwide that work with methadone. With the exception of four states,[21] every state in the nation has an OTP clinic system.[22]

With the increase in heroin addiction in the 1960s, opioid maintenance drug research efforts focused on methadone. Two medical researchers are widely credited with pioneering the use of methadone as a treatment for heroin addiction. Dr. Vincent Dole and his wife, Dr. Marie Nyswander, began researching the use of methadone in the mid-1960s. Dr. Nyswander had written the "only significant book on street addicts" in conjunction with her psychiatric work with drug addicts in New York City.[23] Dr. Dole, who was at the time beginning his research on the biology of addiction, partnered with Dr. Nyswander. Together, they launched a decade long effort to revise the medical field's treatment of drug addiction, particularly heroin addiction, which resulted in the widespread use of methadone dosing as a treatment. This drug was selected after observations of its use in patients withdrawing from heroin.[24] Patients did not experience euphoric or tranquilizing effects associated with opiates and they could socialize and work normally without the incapacitating effects of short-action opioids such as morphine or heroin. Appropriate doses of methadone appeared to reduce or block the euphoric and tranquilizing effects of all opioid drugs, including morphine, heroin and opium. Studies showed no change appeared to occur in tolerance levels for methadone over time. Methadone was effective when administered orally and, because it has a half life of 24 to 36 hours, it can be taken once a day. Methadone also reduces opioid cravings which are a factor in relapse, and is a means by which patients can end their heroin addiction. Finally, while methadone has potentially dangerous side effects, it is among the safest and most effective pharmaceutical treatments available to treat heroin addiction if the patients are not using other drugs and alcohol and have no complicating conditions.[25]

Dr. Patrick O'Connor, of the Yale University School of Medicine, said of methadone and other medications used to alleviate addictions, "To have these medications work effectively, you need to stay on them for long periods of time. We have really struggled to get the public and physicians to think of this more like a standard chronic disease—like diabetes, like cancer, like chronic lung disease—and not apply a special stigma to it."[26]

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[21] North Dakota, South Dakota, Montana and Nebraska do not have legal methadone treatment programs

[22] Robert Lubran, Director of the Division of Pharmacologic Therapies, Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration (SAMHSA) presentation to Senate Resolution 135 Advisory Committee on the Distribution and Use of Methadone, March 13, 2009.

[23] Dennis Hevesi, "Dr. Vincent P. Dole, Methadone Researcher, is Dead at 93," *The New York Times*, August 3, 2006. http://www.nytimes.com/2006/08/03/nyregion/03dole.html. Accessed on October 5, 2010.

[24] SAMHSA/CSAT Treatment Improvement Protocol, Tip 43: Chapter 2, History of Medication-Assisted Treatment for Opioid Addiction.

[25] Ibid.

[26] Lauran Neergaard, "Longer-lasting options could help treat drug addiction," *Sunday Patriot-News*, November 14, 2010.

Methadone is a Schedule II drug,[27] classified by the U.S. Drug Enforcement Administration (DEA) under the Controlled Substances Act.[28] Methadone is available in a number of forms: as a tablet, an oral solution, and an injectable liquid. Tablets are designed to be swallowed intact while others are intended to be dissolved first in liquid. Oral solutions are produced either as a ready-to-drink solution or as a concentrate, which must be mixed with water or fruit juice. Methadone is also available as a liquid that is administered via injection.[29]

Methadone is counted among a number treatments valued for their effectiveness in reducing mortality associated with opioid addiction, and it is also relatively easy to administer. Patients of methadone maintenance programs can be expected to function normally provided that they are not drinking alcohol or taking drugs that interact, often dangerously, with methadone. Many methadone maintenance treatment (MMT) patients require continuous treatment over a period of years. Additionally, there are other important elements of heroin treatment that require comprehensive social and rehabilitation services. It is important for MMT patients to stick with the dosing schedule, which can be sometimes difficult for a number of reasons. Maintaining consistency is "a formidable task" for patients, according to Dr. Nora Volkow, director of the National Institute of Drug Abuse.[30]

Other Medication-Assisted Treatments

Although methadone maintenance treatment has been utilized successfully over the past 30 years to treat opioid dependency, other medications and modalities have been suggested for the same purpose. These include addiction-to-abstinence programs, as well as alternative medications such as:[31]

Buprenorphine

Buprenorphine was classified by the DEA in 2002 as a Schedule III drug. It has less potential for abuse than Schedule II drugs and is a currently accepted medical treatment for addiction. Buprenorphine is a newer treatment option than methadone and it may increase safety and treatment access for opioid-dependent patients. It also has a longer half-life and may carry less risk of overdose.[32] Because it is safer and less

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[27] Findings required for a Schedule II drug are: (A) The drug or other substance has a high potential for abuse; (B) The drug or other substance has a currently accepted medical use in treatment in the United States or a currently accepted medical use with severe restrictions; (C) Abuse of the drug or other substances may lead to severe psychological or physical dependence.

[28] The Controlled Substances Act of 1970 (Public Law 91-513)

[29] "Methadone Fast Facts," http://cybersafe.gov/ndic/pubs6/6096/index.htm.

[30] Lauran Neergaard, "Longer-lasting options could help treat drug addiction," *Sunday Patriot-News*, November 14, 2010.

[31] "Methadone Fast Facts," http://cybersafe.gov/ndic/pubs6/6096/index.htm.

[32] Anita Srivastava and Meldon Kahan, "Buprenorphine: a potential new treatment option for opioid dependence," Centre for Addiction and Mental Health, University of Toronto, Toronto, Ontario, Canada, *CMAJ*, 174(B):1835

susceptible to abuse, buprenorphine treatment may be delivered by qualified physicians in their offices in addition to specialty treatment programs.[33] Doctors must be specially licensed to prescribe buprenorphine but they need neither additional licensing nor training to prescribe methadone. It is important to note that physicians may not prescribe methadone for addiction outside of the OTP setting. The effects of buprenorphine do not increase with increased dosages, however, making it less effective for addicts with severe opiate tolerance. The DOH reported that as of mid-May 2009, 49 licensed drug and alcohol treatment facilities were using some form of buprenorphine (Subutex or Suboxone). The DOH noted that it was aware of one death during a residential detoxification that was related to the use of buprenorphine with other depressants. With regard to diversion, the DOH was advised by facilities that it is not uncommon for individuals to self-report the use of illicit buprenorphine when they present for admission.[34]

Naltrexone

The FDA approved naltrexone to treat opioid addiction in 1984. Some opioid treatment providers have found that naltrexone is useful for highly motivated patients who have undergone detoxification from opioids and need additional support to avoid relapse or who desire an expedited detoxification schedule because of external circumstances. The drug may benefit some patients in the beginning stages of opioid use and addiction. However, other patient groups have demonstrated poor compliance with long-term naltrexone therapy because the drug neither eases cravings for the effects of illicit opioids when used as directed nor produces withdrawal symptoms when discontinued.

In October 2010 Vivitrol, a depot injection[35] of Naltrexone, administered monthly, was approved by the FDA for the additional indication of preventing relapse of opioid addiction.[36] It is too early to evaluate the results from this newly approved delivery system.

Despite the introduction of new drugs, such as buprenorphine and naltrexone for the treatment of opioid addiction, methadone remains the drug most commonly used to combat opioid addiction in the United States. In addition, there are drug free alternatives to medication-assisted treatment available throughout the Commonwealth, including drug-free outpatient and various drug-free residential treatment services. Drug-free treatments are largely focused through the lens of intensive counseling. The Advisory

[33] Robin E. Clark, Ph.D., and Jeffrey D. Baxter, M.D., "Overview of Buprenorphine Treatment for Opioid Addiction," Center for Health Policy and Research, University of Massachusetts Medical School.

[34] Janice P. Kopelman, Deputy Secretary for Health Promotion and Disease Prevention, DOH letter to Joint State Government Commission, July 6, 2009. Some information in the letter was also gathered by the Deputate for Quality Assurance at DOH.

[35] A depot injection is an intramuscular injection where the medication stays at the location of the injection and is absorbed over a period of time.

[36] U.S. FDA, "FDA approves injectable drug to treat opioid-dependent patients," October 12, 2010, http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm229109.htm. Accessed May 9, 2011.

Committee strongly expressed its belief that counseling also must go hand in hand with any sort of medication-based treatment.

Profile of the OTP Clinic System in the Commonwealth Of Pennsylvania.

The DOH informed the Joint State Government Commission that there were 802 outpatient narcotic treatment admissions to OTPs reported in the Department's Client Information System (CIS) in Fiscal Year 2007-2008. The DOH advises that licensed drug and alcohol treatment providers in Pennsylvania who receive federal, state or local funds from the DOH are required to report the treatment services they provide to the Bureau of Drug and Alcohol Program's (BDAP) CIS. Conversely, providers not receiving federal, state, or local funds from the DOH are not required to report to the CIS, although some do so voluntarily. The DOH cautioned that the statistics generated from CIS should not be interpreted as a complete representation of all drug and alcohol treatment services in Pennsylvania.[37]

The DOH advises that there are no data on the average length of time a client stays on methadone in Pennsylvania. The CIS collects data only at admission and discharge. Many providers do not submit a discharge form when the patient has terminated treatment; therefore, there are many open methadone maintenance admissions in CIS that may not be receiving treatment any longer but who do not have a discharge record that could be used to calculate lengths of stay. Patients are admitted after a rigorous assessment and then follow a physician-determined plan for treatment, including dosing schedules that are appropriate to need. When patients meet their treatment goals they are evaluated for discharge.[38] The criteria for methadone eligibility are addressed in both state and federal regulations.

Data available on January 7, 2010 show that the Commonwealth of Pennsylvania had a total of 55 narcotic treatment programs for methadone maintenance established in OTP clinics.[39] The Commonwealth is divided into four regions. Region 1, which encompasses the southeast portion of the state, has 20 OTPs serving 5,982 patients, out of a capacity for 7,168 patients. Eleven clinics are located in Regions 2 and 3 in central Pennsylvania.[40] These clinics serve 2,414 patients out of a capacity for 3,310. Region 4, which covers the northwest portion of the state, has 24 OTPs serving 6,709 patients out of a possible capacity for 8,314 patients. The statewide total of patients being served through narcotic treatment programs for methadone maintenance established in OTP clinics in Pennsylvania is 15,105 patients with a capacity to serve 18,792 patients.

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[37] Janice P. Kopelman, Deputy Secretary for Health Promotion and Disease Prevention, DOH letter to Joint State Government Commission, July 6, 2009. Some information in the letter was also gathered by the Deputate for Quality Assurance at DOH.
[38] Ibid.
[39] DOH, Narcotic Treatment Programs, January 7, 2010.
[40] DOH, Narcotic Treatment Programs, "Methadone Maintenance Map."

The DOH provided a profile that was limited to newly admitted OTP patients recorded in the CIS, and included information on age groups, gender, employment status at admission, education level at admission, payer type at admission, and admissions reporting using multiple substances, including alcohol.[41]

Based on the data that were provided, the ages of patients is slightly skewed toward the younger age groups, with about 80 percent being between the ages of 18 and 44, and of those, most are between 25 and 34. Men are represented slightly more than women, at 57 percent and 43 percent, respectively. Nearly three-quarters of patients are unemployed at the time of admission, and approximately 83 percent received no education beyond a high school diploma. Forty-three percent are Medicaid recipients, a number that would be expected considering the clinics reporting to the CIS are recipients of public funding. Slightly more than 60 percent are multiple drug users at admission, a population that could be particularly at risk for bad outcomes when taking methadone. No statewide data are collected on polysubstance use while in treatment.

Age at Time of Admission to OTP
FY 2007-2008

	Admissions	Percent
17 and Under	0	0.0
18-24	151	18.9
25-34	296	36.9
35-44	172	21.4
45-54	130	16.2
55 and Over	53	6.6
Total	802	100.0

Gender of Patients Admitted
FY 2007-2008

	Admissions	Percent
Male	458	57.1
Female	344	42.9
Total	802	100.0

[41] Janice P. Kopelman, Deputy Secretary for Health Promotion and Disease Prevention, DOH letter to Joint State Government Commission, July 6, 2009. Some information in the letter was also gathered by the Deputate for Quality Assurance at DOH.

Employment Status at Admission
FY 2007-2008

	Admissions	Percent
Full Time	78	9.7
Part Time	45	5.6
Retired	5	0.6
Unemployed	592	73.8
Leave of Absence	1	0.1
Inmate of Institution	0	0.0
In the Armed Forces	0	0.0
Homemaker	2	0.2
Student	3	0.4
Disabled	69	8.8
Other	2	0.2
Unknown	5	0.6
Total	802	100.0

Education Level at Time of Admission
FY 2007-2008

	Admissions	Percent
Less than High School	212	26.4
High School Graduate	452	56.4
Some Education After High School	119	14.8
College Graduate or More Education	19	2.4
Unknown	0	0.0
Total	802	100.0

Payer Type at Admission
FY 2007-2008

	Admissions	Percent
Self-Pay	94	11.7
Medicare (Elderly)	1	0.1
Medicaid (MA)	344	42.9
Other Government Payments	1	0.1
SCA	60	7.5
Other	301	37.6
Unknown	1	0.1
Total	802	100.0

Admissions Reporting
Using Multiple Substances
(Including Alcohol)
FY 2007-2008

	Admissions	Percent
Multiple Drug Use	487	60.7
Non-Multiple Drug Use	315	39.3
Total	802	100.0

The OTP clinic system provides a number of services to patients undergoing MMT. As required by licensure, clinics' skilled and professional staffs provide physical examinations, monthly drug testing, regular monitoring, daily doses of methadone to curb opioid cravings, patient education, and family education and counseling.

State Narcotic Treatment Program regulations require testing for opiates, methadone, barbiturates, cocaine and benzodiazepines at least monthly or more often if indicated in the treatment plan. In addition, as required by 28 Pa. Code Section 715.14 many facilities test for marijuana and alcohol where these substances are abused in the locality of the clinic or have been identified in the patient's drug and alcohol history as being a drug of abuse or use. Facilities must develop procedures to ensure that test samples are unadulterated and these procedures include random observation. State regulations do not support take-homes for patients with recent abuse of drugs (opiate or non-narcotic), including alcohol. Individualized patient treatment plans address such instances.[42]

The DOH indicated that OTPs measure recovery based upon the client's individualized treatment plans. Each client's plan is unique, which would not allow one standardized method of measuring recovery in the same way for each person.[43]

Best Practices

To address concerns about patient and community safety, and arrive at actionable solutions, the Advisory Committee proposed a list of best practices that are currently utilized by OTPs. It is the committee's belief that these practices should continue and be adopted by programs that are seeking to improve health and safety.

[42] Janice Kopelman, Deputy Secretary for Health Promotion and Disease Prevention, DOH, to Joint State Government Commission, July 6, 2009. Some information in the letter was also gathered by the Deputate for Quality Assurance at DOH.
[43] Ibid.

Risks

The risks involved in methadone maintenance treatment (MMT) for opioid addiction occur at various stages of treatment. Risks are highest in the induction period when a new patient begins MMT and during treatment when a patient's dosage is increased. Other risks occur when some patients undergoing MMT suffer possible adverse heart effects. Furthermore, some drug interactions pose a serious risk for patients undergoing methadone maintenance treatment. Sixty percent of OTP patients recorded in the DOH Client Information System (CIS) have other substances in their systems upon admission to treatment. There are no statewide data collected regarding whether or not patients continue to use or abuse other substances while in treatment. Experts advise that methadone can lead to strong interactions with any drugs, even those that are prescribed and taken under a doctor's supervision. OTP patients are at particular risk when their doctors are unaware of their MMT status. Methadone prescribers must make attempts to ascertain what, if any, other drugs MMT patients are taking.

Induction Period

Advisory committee members noted that the induction period is the most dangerous period for a new patient who must be closely monitored for adverse effects. The induction period lasts from two to 15 weeks and sometimes longer with methadone. The risk that a patient may experience serious or life-threatening side effects, such as difficulty breathing, extreme drowsiness, slow, shallow breathing, fast, slow, pounding or irregular heartbeat, faintness, severe dizziness, confusion or even death is greatest when the patient first starts taking methadone. A patient is also at risk when switching from another narcotic medication to methadone or when the dose of methadone is increased.[44] Methadone maintenance treatment programs usually follow the practice of "Go Low, Go Slow" with new patients, beginning with a low dose and gradually increasing that dose. The patient is monitored closely during these periods.

Polysubstance Abuse

Subcommittee members expressed their ongoing concern regarding MMT patients' polysubstance use and other individuals with substance use disorders. Generally, polysubstance abuse describes the situation when individuals are abusing more than one drug, including alcohol, at a time. In the case of MMT specifically, it describes patients who are taking prescribed doses of methadone while abusing two or more other substances. Experts agree that drug interactions pose significant threats to the health and safety of MMT patients, and most reports of deaths that involve methadone occur along with the presence of other drugs. During a meeting of the Senate Resolution 135 Advisory Committee Dr. Robert Lubran, Director of the Division of Pharmacologic Therapies, Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration (SAMHSA) advised that SAMHSA has received reports of approximately 100 deaths of OTP patients nationally. These patients tested positive for

[44] "Methadone," Medline Plus, U.S. National Library of Medicine and National Institute of Health, accessed October 28, 2010, http://www.nlm.nih.gov/medlineplus/druginfo/meds/a682134.html.

other medications and drugs such as cocaine, benzodiazepines and phenobarbital in many cases. SAMHSA/CSAT data show a number of illicit drugs are likely to be present in polysubstance abuse. These include alcohol, marijuana, cocaine, methamphetamines, and heroin among others.[45]

SAMHSA provides the following protocols, highlighted in its *Quick Guide for Clinicians Based on TIP 43 Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs*, for handling polysubstance abuse:

Alcohol**.** The effects of concomitant alcohol and MMT medication use are additive and more sedating than either alone. Patients who are alcohol dependent may have liver damage as well as more medical and mental disorders, greater criminality, and poorer social and family relationships than patients who are not alcohol dependent. Alcohol-related factors are a major cause of death in patients in MMT.

Benzodiazepines/Prescription Sedatives**.** High doses can cause severe intoxication, high risks of injuries or fatal overdose, and sedation or respiratory depression. Patients have reported taking these drugs within one hour of their MMT medication to boost the treatment medication's multiple substance use effect. When used in prescribed doses, benzodiazepines are not dangerous for patients in MMT.

Cocaine/Other Stimulants**.** Patients in MMT who use stimulants may be disruptive and exhibit severe mood swings. Adequate doses of methadone have been found to reduce cocaine use in some cases.

Marijuana**.** Some studies have found that marijuana use does not affect MMT outcomes adversely. Patients in MMT sometimes use marijuana to self-medicate for anxiety or insomnia. Marijuana use should be discouraged because it increases the likelihood of patients' engaging in activities that will lead to relapse.

Nicotine**.** Although many OTPs avoid addressing nicotine dependence because it may create additional stress for patients, research has shown that a smoking intervention neither detracts from nor interferes with addiction recovery. Patients stabilized on MMT medications are less likely to abuse other substances than individuals who are not enrolled in MMT. Members of the Advisory Committee iterated the position that MMT be perceived as a solution to and not a cause of polysubstance abuse.

[45] "Quick Guide for Clinicians Based on TIP 43, Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs," U.S. Department of Health and Human Services, 2005. 31. http://www.kap.samhsa.gov/products/tools/cl-guides/pdfs/QGC_43.pdf.

OTPs can address multiple substance use by:

- adjusting treatment medication dosages;
- increasing counseling and psychosocial services;
- increasing drug testing; and
- detoxifying patients (through either outpatient or inpatient treatment) from other substances, especially from central nervous system (CNS) depressants.

Discharge from MMT because of other substance use should be done only when all reasonable alternatives have been exhausted.

Methadone's dangers are exacerbated when they interact with other drugs and polysubstance abuse is a recognized threat to MMT patients, especially since 60 percent of those recorded in the CIS are polysubstance abusers on admission. The Advisory Committee discussed but did not come to consensus on recommendations for the following protocols:

- Allow expanded on-site testing at clinics after the initial off-site test (there is no regulatory limitation to the number of tests that can be performed on site, however, both federal and state regulations require that testing meet the minimum number of tests required and must be performed by an approved laboratory, which is generally an off site laboratory).
- Develop treatment protocols specifically for poly-addicted clients.
- Increase the frequency of drug testing especially with patients who test positive.
- Test new patients more frequently.
- Separate weekly testing in the induction phase from testing at other times.
- Test weekly until the end of the induction period (the induction period being defined as the initial period leading to stabilization).
- Test monthly to meet Medical Assistance requirements; testing every other week (bi-weekly) for up to six months following induction.
- Confirm that a psychiatrist has prescribed benzodiazepines when a patient tests positive for that drug, and medical necessity is approved by the clinic director.
- Require the Department of Public Welfare (DPW) to review the need for licensed psychiatrists in drug and alcohol programs.

The Advisory Committee recognized that some new patients are likely to continue old patterns when they begin MMT and need to be supported in their early recovery, generally perceived to be the first six to 12 months. Existing testing provides new patients and clinicians with a tool: patients have an incentive to stop abusing, and clinicians have data necessary to make decisions as to the provisions that need to be implemented. Patients are already required to tell the physician about all of the drugs taken, including prescription drugs. It is general practice for clinics to require patients to provide prescriptions for the clinic's and prescribing physician's review. Furthermore,

patients are counseled about the risks of prescribed or illicit drugs or alcohol while receiving methadone maintenance treatment.

Members noted that physicians in Pennsylvania are currently unable to access Prescription Monitoring Program (PMP) data. Access to these data would allow doctors to know whether and which other PMP medications a patient may have been prescribed. Benzodiazepines, for example, can react dangerously with methadone, the result of which could be a number of severe outcomes. People are particularly troubled by the risk of impaired driving when benzodiazepines interact with methadone. Therefore, the Advisory Committee recommends that the General Assembly continues its dialogue regarding the PMP to determine whether the current program best achieves the goal of reducing prescription drug abuse or if access should be expanded to include additional health care providers.

The DOH has indicated that although the Narcotic Treatment Program regulations require regular testing for several substances including benzodiazepines, facilities are not required to report these results to the DOH. Information regarding positive test results is collected in a questionnaire completed during the annual DOH monitoring inspection, however, this is a self-report point-in-time survey only and results vary by region and facility.[46] The DOH noted that state regulations do not mandate any difference in treatment plans for those with polysubstance issues. However, all treatment services are medically directed and treatment plans must include goals consistent with the assessment of patient needs.

Counseling

28 Pa. Code Section 715.19 states that patients are required to attend counseling for a minimum of two and a half hours per month during the first two years of treatment, one hour of counseling per month during years three and four and one hour bi-monthly, thereafter.[47] Additional counseling is required where dictated by the on-going assessment. Failure to attend counseling is a clinic issue and frequently dealt with via a clinic contract which could impact take-home doses privileges, dosing times and other provisions.[48] The Advisory Committee discussed at length the proposal that counseling hours be extended for patients under certain conditions. For example, positive drug tests are a clear indication that the patient is in need of a change to his treatment protocol, a change that might be met with increasing counseling. The committee was also keen to point out that patients need to be treated as holistically as possible, meaning that the addiction may be one aspect of a patient's trouble and that other negative situations might be impacting the patient's life. For example, employment trouble, family problems, physical or mental health problems might all be connected to or contributing to the addiction problem. Therefore, members noted, counseling might need to be directed

[46] Janice Kopelman, Deputy Secretary for Health Promotion and Disease Prevention, DOH, to Joint State Government Commission, July 6, 2009.
[47] 28 Pa. Code Chapter 715 Standards for Approval of Narcotic Treatment Programs. Adopted November 15, 2002, effective November 16, 2002.
[48] Ibid.

beyond the addiction and at other emergent problems. Moreover, patients should be counseled on the dangers posed by diverted methadone.

Some members were wary of becoming prescriptive with regard to counseling hours. Their concern was that recommendations defining specific responses might interfere with OTPs' ability to prescribe individualized counseling plans. In effect, while these members agreed that an increase in counseling hours, for example, may well be warranted, it would be imprudent to specify the increase when individual treatment plans require individualized responses.

Other members hold the opinion that regulations may help ensure that patients receive counseling that addresses specific needs. While some members felt that state requirements to increase counseling hours may prove advantageous to patients' treatment plans there was no consensus on this issue.

Take-Home Doses

Under the appropriate conditions, patients may be permitted to take doses of methadone home with them when they leave the clinic. An OTP patient may request a single take-home dose for a day when the OTP clinic is closed for business, including Sundays and State and federal holidays. Beyond this, decisions on dispensing take-home medication are determined by the medical director in accordance with eight criteria[49] for take-home medication specified in Federal regulations.[50] It is unlikely that take-home medication would be required in the Commonwealth since all existing OTP clinics are open seven days a week. If, for some reason, a clinic is not open seven days a week alternative arrangements should be made with another clinic or with a hospital. While some members suggested that all clinics remain open for seven days a week, except for federal holidays, other members noted that they should remain open on federal holidays as well.

Members agreed on the need to develop best practices for checking on take-home doses. Members discussed but did not agree that in addition to testing for methadone and other drugs that methadone blood levels be monitored. Such a policy might prevent giving increased doses of methadone to patients who request an increase for themselves but in fact want to sell a portion of it for cash. Additionally, members agreed that patients must demonstrate participation in the program, attend all required meetings, and test negative for illicit drug use for 90 days without incident to be eligible for a take-home dose. Appendix II shows an example of the type of information and agreement signed by patients when they are permitted take-home doses.

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[49] 42 CFR, Part 8, §12(i). The eight criteria are: (1) Absence of recent drug and alcohol abuse. (2) Regular OTP attendance. (3) Absence of behavioral problems at the OTP. (4) Absence of recent criminal activity. (5) Stable home environment and social relationships. (6) Acceptable length of time in comprehensive maintenance treatment. (7) Assurance of safe storage of take-home medication. (8) Determination that rehabilitative benefits of decreased OTP attendance outweigh the potential risk of diversion.

[50] "Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs," *A Treatment Improvement Protocol TIP 43*, U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, http://www.samhsa.gov.

Adverse Heart Effects

Methadone treatment for opioid addiction is suspected of taking a role in leading to an adverse heart effect known as the QTC Prolongation Syndrome. There is some disagreement in the methadone treatment community, however, on whether ECGs should be required more frequently and research is ongoing.

In their study, "Cardiac Considerations during Methadone Maintenance Treatment (MMT)," Stewart B. Leavitt, PhD and Mori J. Krantz, MD, FACC, noted that "(S)ome patients in methadone maintenance treatment programs may have conditions or behaviors associated with increased risks or arrhythmia, including: abuse of cardiotoxic substances, cardiovascular disease, electrolyte imbalances and prescribed medications that may foster cardiac repolarization disturbances." Furthermore, they noted, "recent data suggest that in some individuals, methadone – alone or, more commonly, in combination with other drugs and/or cardiac risk factors – can prolong the QTC interval – QTC Prolongation Syndrome. This may contribute to the development of the serious arrhythmia Torsade de Pointes (TdP) in susceptible patients." However, the authors noted that "current evidence, however, is insufficient to support altering routine dosing practices or requiring electrocardiograms (ECGs) for all patients entering or continuing MMT and should not deter the appropriate use of methadone." [51]

The American Association for the Treatment of Opioid Dependence (AATOD) recommends that OTPs be responsible and vigilant about assessing for the risk of cardiac conduction disturbance in methadone maintained patients and policies should be guided by the evidence of risk for QTc prolongation and TdP.[52] Again, the evidence does not justify routine ECG screening for all methadone treatment patients, since there is some question as to whether deaths are respiratory or related to cardiac arrhythmia.[53] The Pennsylvania Association for the Treatment of Opioid Dependence (PATOD) and AATOD are contributing to SAMHSA/CSAT's ongoing efforts to develop guidelines for clinics with regard to QTc and TdP.[54] See Appendix I.

The Pennsylvania DOH noted that SAMHSA has released an advisory regarding cardiac arrhythmia complications, specifically QTc-prolongation and TdP. Furthermore, Pennsylvania facilities have been asked to assess for this risk and develop appropriate policies. However, since the advisement regarding QTc-prolongation and TdP was just issued the DOH has no statistics relative to the number of patients with this complication. [55]

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[51] Stewart B. Leavitt, Ph.D. and Mori J. Krantz, M.D., FACC, "Cardiac Considerations during MMT*" *(Methadone Maintenance Treatment), *Addiction Treatment Forum*, October 2003.

[52] American Association for the Treatment of Opioid Dependency (AATOD), http://www.AATOD.org.

[53] R.A. Cruciani, "Methadone: To ECG or not to ECG, that is the question", *Journal of Pain and Symptom Management*, November 2008; 36:5: 545-552. S.B. Leavitt, M.J. Krantz, "Cardiac Considerations during MMT," *Addiction Treatment Forum*. October 2003.

[54] See Appendix for Letter from AATOD.

[55] Janice Kopelman, Deputy Secretary for Health Promotion and Disease Prevention, DOH, to Joint State Government Commission, July 6, 2009.

Naloxone (Narcan)

Subcommittee members discussed the distribution and use of Narcan. Narcan is a drug considered by some to be an antidote to adverse life threatening reactions to methadone; however, the distribution and use of Narcan is controversial. The current standard of care does not support the dispensing of a narcotic antidote for a patient undergoing MMT. It is available at the discretion of the prescribing practitioner, and there is no prohibition against prescribing it.[56] Concerns largely address fears that with Narcan available, people who should be rushed to the hospital through the 9-1-1 system might show sufficient recovery and be led to believe that the danger has passed. The adverse reaction can outlast the saving effects of Narcan, however, and the patient can relapse without proper emergency medical care.

Members were unable to reach consensus on a recommendation for the distribution of Narcan. There was some support for regulations to require that doctors prescribe Narcan to all MMT patients entering the induction period. However, members were reluctant to endorse legislation that would undermine a doctor's authority to make medical decisions for individual patients. Some pilot studies show it saves lives and some clinics in Pennsylvania are distributing it to patients. Medical practitioners and national and international medical organizations, including the World Health Organization (WHO), claim it is ill-advised to distribute Narcan as a matter of course to all patients.

Diversion and Theft from OTP Clinics

Diversion and theft of methadone is an ever present concern for the operators of OTPs and public health and safety authorities. Ongoing relationships between OTPs and public authorities can be leveraged to develop best practices for enhanced clinic and parking lot security and surveillance. Solutions need to consider the patients' treatment while jeopardizing neither the patients' nor the communities' health and safety.

Diversion and theft may occur at any one of several points: in transit from manufacturers, from end distributors, from reverse distributors, from patient's dosages, prescriptions obtained via the Internet using improper prescription information and from individuals entering deceased patients' homes under the guise of authority figures ostensibly to collect all unused drugs for inspection. Reported thefts of methadone being transported to pharmacies, hospitals, and distributors increased from 28 in 2004 to 68 in 2006, for total dosage units (du) stolen of 18,547 and 67,867 respectively. In 2006 an additional 9,125 du were lost in transit to OTPs.[57] The Methadone Mortality Working Group of the U.S. Drug Enforcement Administration (DEA) stated, "Current data suggest that medication from pain management is likely the source of methadone for illicit use."[58] Data on theft from end distributors, reverse distributors, via the Internet, from patient

[56] Tom Riordan, M.D. email to Joint State Government Commission, September 30, 2010.
[57] "Methadone Diversion, Abuse, and Misuse: Deaths Increasing at an Alarming Rate," NDIC, U.S. Department of Justice, November 16, 2007. 4.
[58] "Methadone," Methadone Mortality Working Group, Office of Diversion Control, U.S. Drug Enforcement Administration, April 2007. 41.

dosages or from deceased patients' homes are not currently available for Pennsylvania. The possible consequence of any of the above mentioned violations is likely to be serious illness or death. The DOH does require in 28 Pa. Code Section 715.28 that OTPs develop and implement policies and procedures to respond to the selling of drugs on the premises and thefts, break-ins, burglaries or similar incidents at the facility.[59] These and other "Unusual Incidents" must be reported to the DOH within 48 hours, including:

- complaints of patient abuse (physical, verbal, sexual and emotional);
- death or serious injury due to trauma, suicide, medication error or unusual circumstances;
- incidents with potential for negative community reaction or which the facility director believes may lead to community concern; and
- drug related hospitalization of a patient.

The DOH states that each report is assessed to determine whether follow-up action or additional information is required. Data collection is primarily in the aggregate, but some incidents, such as deaths, are analyzed and reported separately. The DOH continuously reviews data to identify trends.

At present, OTPs that receive funding from the DOH are required to submit to the CIS. A broader data gathering effort might be in the best interest of the OTPs, their patients, and the community so that public health and law enforcement authorities would know with more certainty the status of methadone thefts and diversion from OTPs.

Impaired Driving

Subcommittee members considered the serious issue of impaired driving, which has been the subject of legislative proposals regarding MMT.

[59] (a) A narcotic treatment program shall develop and implement policies and procedures to respond to the following unusual incidents: physical assault by a patient; inappropriate behavior by a patient causing disruption to the narcotic treatment program; selling of drugs on the premises; complaints of patient abuse (physical, verbal, sexual and emotional); death or serious injury due to trauma, suicide, medication error or unusual circumstances; significant disruption of services due to disaster such as fire, storm, flood or other occurrence; incident with potential for negative community reaction or which the facility director believes may lead to community concerns; theft, burglary, break-in or similar incident at the facility; drug related hospitalization of a patient; other unusual incidents the narcotic treatment program believes should be documented. (b) These policies and procedures shall include the following: documentation of the unusual incident; prompt review and investigation; implementation of a timely and appropriate corrective action plan, when indicated; ongoing monitoring of the corrective action plan. (c) A narcotic treatment program shall file a written Unusual Incident Report with the Department within 48 hours following an unusual incident including the following: complaints of patient abuse (physical, verbal, sexual and emotional); death or serious injury due to trauma, suicide, medication error or unusual circumstances; significant disruption of services due to a disaster such as a fire, storm, flood or other occurrence; incidents with potential for negative community reaction or which the facility director believes may lead to community concern; drug related hospitalization of a patient. 28 Pa. Code Chapter 715.28.

Despite a range of informed opinions on the subject of impaired driving, subcommittee members were only able to reach agreement on some recommendations addressing impaired driving. These recommendations include:

- Provide comprehensive education on the effects of methadone, alcohol and other drugs on driving through presentation, video or other media.

- Require clinic patients to sign and date a form to demonstrate that they have received this orientation.

- Advise patients that they will be denied methadone if they come to the clinic in an impaired state.

- Advise clinic patients that law enforcement officials will be notified if they drive away from the clinic in an impaired state.

- Train all clinic security in identifying and reporting impairment to the clinic.

In addition, staff, particularly security staff, should observe patients as they arrive, walk into the facility, and so on, and report any concerns regarding intoxication to the nursing staff.

The nursing staff has the affirmative responsibility to assess the condition of each patient prior to administering medication. Nurses should refuse to dose any patient for whom they have a reasonable belief that such patient is impaired. The assessment should include at least the following:

- Engaging the patient in conversation to listen for any slurring of speech or problems in thinking.

- Looking at the patient's gait for any signs of shuffling, etc.

- Looking at the patient's eyes for constricted/dilated pupils or other signs. (Most clinics direct patients to avoid wearing sunglasses at the dosing window).

- Use of a "breathalyzer" or other test for alcohol (where there is suspicion of intoxication).

- For patients who are impaired, the nursing staff should alert security and/or administrative personnel of the problem. These staff can and should offer to call a family member or otherwise provide a way for the patient to get home without driving. If the patient insists on driving, the staff can and should immediately call law enforcement authorities. Also, by consistently and predictably refusing to dose patients who are

impaired, the clinics provide a powerful disincentive for patients to make the trip to the clinic in an impaired state.

- The OTP clinic has an obligation to educate patients about not driving while impaired, about the effects of various licit and illicit drugs/alcohol regarding impaired driving, and what the clinic's response will be if they do so. Patients should be provided with a written summary of this education and the clinic's policy regarding notification of authorities for the patient to sign. A copy will be given to the patient and another will be placed in the chart.

- OTP's need to effectively train both nurses and security staff in identifying impaired patients and what is the appropriate response under the program's policies/procedures. This training should be done upon hire and be repeated periodically.

- Where a patient is impaired but has shown no evidence of taking illicit drugs, programs should have in place available laboratory services to monitor blood levels of approved prescription medications, including methadone, which the OTP patient may be taking.

By regulation, a physician must determine if a dose increase is indicated. Members also noted that sanctions for selling illicit substances or displaying the potential for other illegal activities are provided for by regulation.[60]

Under 75 Pa. C.S.A. § 3801 et seq., Pennsylvania prohibits impaired driving after imbibing alcohol or utilizing drugs. Section 3802 (d) relates to controlled substances and provides that:

> "an individual may not drive, operate or be in actual physical control of the movement of a vehicle under any of the following circumstances:
>
> (1) There is in the individual's blood any amount of a:
>
> (i) Schedule I controlled substance, as defined in the act of April 14, 1972 (P.L. 233, No. 64)[61] known as The Controlled Substance, Drug, Device and Cosmetic Act;
>
> (ii) Schedule II or Schedule III controlled substance, as defined in The Controlled Substance, Drug, Device and Cosmetic Act, which has not been medically prescribed for the individual; or
>
> (iii) Metabolite of a substance under subparagraph (i) or (ii).
>
> (2) The individual is under the influence of a drug or combination of drugs to a degree which impairs the individual's ability to safely drive, operate or be in actual physical control of the movement of the vehicle.

[60] 28 Pa. Code Section 715.21 (Patient termination).
[61] 35 P.S. § 780-101 et seq.

(3) The individual is under the combined influence of alcohol and a drug or combination of drugs to a degree which impairs the individual's ability to safely drive, operate or be in actual physical control of the movement of the vehicle."

Methadone is classified as a Schedule II controlled substance under Section 4 (2)(ii) and (iii) of The Controlled Substance, Drug, Device and Cosmetic Act. It is not illegal to drive while taking prescribed medication, but it is illegal to drive while impaired.

The Pennsylvania Department of Health advised that in February 2009, SAMHSA surveyed states regarding the matter of impairment during driving. No state responding to the survey reported having a regulation that addressed this issue and no state required patients to be driven by someone else during the induction phase. Two references cited were the NHTSA's *Drugs and Human Performance Fact Sheets* and the Legal Action Center Report of 2000.[62]

Patient confidentiality is of high importance to OTPs, for both ethical and legal reasons, as the programs are beholden to federal confidentiality statutes. However, subcommittee members stated that it is not a violation of a patient's confidentiality if police are alerted when a patient is seen exchanging drugs in the parking lot, threatening the staff, or driving an automobile erratically and they support continuation of this policy. Some members expressed concern about the lack of confidentiality inherent in a provision which allows clinic personnel to call police in situations where a patient refuses to relinquish the car keys.

Clinic Security

28 PA Code Section 715.26 (Security) of the OTP regulations provides that a narcotic treatment program "shall meet the security standards for the distribution and storage of controlled substances as required by federal regulations including 21 CFR 1301.72 and 1301.74 (relating to physical security controls; and other security controls)." The facility must notify the Pennsylvania Attorney General's Office when drugs are missing, whether or not the theft was witnessed.[63]

Furthermore, Section 715.26 also provides that narcotic treatment programs "shall provide the Department (of Health) with a specific plan describing the efforts it will make to avoid disruption of the community by its patients and the actions it will take to assure responsiveness to the community." The plan "shall designate a staff member to act as community liaison."

Additionally, Section 715.28 requires a narcotic treatment program to "develop and implement policies and procedures to respond to the following unusual incidents

[62] Janice Kopelman, Deputy Secretary for Health Promotion and Disease Prevention, DOH, to Joint State Government Commission, July 6, 2009.
[63] 28 Pa. Code Chapter 715 Standards for Approval of Narcotic Treatment Programs. Adopted November 15, 2002, effective November 16, 2002.

such as, physical assault by a patient, inappropriate behavior by a patient causing disruption to the narcotic treatment program, selling of drugs on the premises" and other disruptions. Following an incident, the narcotic treatment program must document, review and monitor the incident and file a written Unusual Incident Report with the Department (of Health) within 48 hours.

In addition to the requirements of Chapter 715, the Pennsylvania Association for Treatment of Opioid Dependence (PATOD) in partnership with state authorities, has established guidelines for its members including the requirement that clinics open seven days a week (including non-member clinics); the protocol of "Go Low, Go Slow" to ensure patient safety during the induction phase of treatment, the requirement for more frequent physician/patient contact than the required semiannual appointments and the vigilance in not admitting patients they should not admit nor in dispensing medications they ought not dispense.

Subcommittee members addressed the issue of clinic security and agreed on the need to develop best practices to handle threats to health and safety. Members agreed to the implementation of a no-loitering policy with permission granted only to those allowed on the premises. Additionally, members recommended that security guards and video cameras both be required to monitor loitering inside of the clinic. Furthermore, security guards and video cameras must be adequate in number to protect the staff, patients and community. Depending on the size of the population and the location of the clinic the number of security guards and video cameras may be varied so long as the staff, patients and community are protected.

Parking Lot Security and Surveillance

Subcommittee members acknowledged that the parking lot areas adjacent to the facility can sometimes be a problem with patients and others loitering. Occasionally, there may be incidents where patients are selling part of their drug dosage. If theft of drugs or the sale of drugs occurs in the parking lot or other property belonging to the OTP clinic and is witnessed by OTP staff, the OTP can then report the incident to law enforcement without compromising patient confidentiality. Along with the recommendation for security guards and video cameras inside the buildings, advisory committee members recommend guards and cameras for parking lots and outside property where these precautions are deemed appropriate.

Diversion of Liquid Doses

Subcommittee members recognized the importance of preventing diversion of liquid doses. It is believed to be a rare occurrence that liquid doses are diverted through expectoration. Nonetheless, it is assumed that the practice would become a more frequent avenue of diversion in the absence of dispensing protocols. Protocols such as observing the patient when he takes the dose, and requiring him to speak with the dispensing nurse before and after receiving the dose is one of the procedures OTPs routinely exercise in order to prevent liquid dose diversion.

RECOMMENDATIONS FOR OTP CLINICS

Advisory Committee Recommendations for OTP Clinics

Induction Period: The induction period for methadone is a particularly critical time for new patients. Because dosing may need to be adjusted for effectiveness and safety, new patients should be closely monitored until they reach a point of stability with the drug. Traditionally, the recommendation has been to "Start Low, Go Slow." It is recommended that physicians continue to follow this protocol. To assist doctors and clinic staff monitoring new patients, the Advisory Committee recommends increased testing of new patients during the induction period.

Further, because methadone is unique among opioids due to its unique characteristics, new patients need to be made aware of potential dangers and consequences associated with the drug. The Advisory Committee recommends that OTPs provide all necessary information to patients, emphasizing the risks of methadone and the expectations for successful treatment.

The Advisory Committee discussed whether or not it would recommend clinics establish baseline plasma levels for new patients to assist the evaluation of subsequent drug tests. Consensus was not reached on the usefulness and reliability of baseline plasma results and thus no recommendation was made.

Adverse Heart Effects: AATOD, PATOD, DASPOP, and Save A Life are cooperating with SAMHSA to develop guidelines to assist OTPs and patients through risks associated with QTc prolongation and TdP, and to settle on a protocol for ECG monitoring. The Advisory Committee supports the continued work of SAMHSA with regard to MMT and heart safety.

Polysubstance Abuse: The Advisory Committee recognized that polysubstance abuse upon admission is a continuing problem for some patients. There are no statewide data collected that provide information about polysubstance abuse during and after treatment for opiate addiction.

The Advisory Committee recommends the following best practices be adopted as standard protocols for the treatment of polysubstance abuse.

- Allow expanded on-site testing at clinics after the initial off-site test (at present, clinics are allowed to perform limited drug testing and must send comprehensive drug tests off-site to licensed laboratories).

- Develop treatment protocols specifically for poly-addicted clients.

- Test weekly until the end of the induction period (the induction period being defined as the initial period leading to stabilization).

- Confirm that a psychiatrist or psychiatric clinical specialist (nurse) has prescribed benzodiazepines when a patient tests positive for that drug and such use is determined to be medically necessary by the clinic medical director. The medical director may use his or her discretion in instances where psychiatrists are not available in a particular area.

- Require the Department of Public Welfare (DPW) to review the need for licensed psychiatrists in drug and alcohol programs.

The Advisory Committee discussed but did not reach consensus on the following:

- Consider increasing the frequency of drug testing with patients who test positive.

- Consider testing new patients more frequently was discussed.

- Test monthly to meet Medical Assistance requirements; testing every other week (bi-weekly) for up to six months following induction.

Prescription Monitoring Program: The Advisory Committee recommends that the General Assembly continues its dialogue regarding the PMP to determine whether the current program best achieves the goal of reducing prescription drug abuse or if access should be expanded to include additional health care providers.

Counseling: There was a concern of some members that recommendations defining specific responses with regard to counseling hours could dilute counseling's effectiveness. In effect, while the members agreed that an increase in counseling hours may be warranted, it would not be prudent to specify the increase when individual treatment plans call for individualized responses in treatment. Other members held the opinion that counseling hours must increase for patients with unremitting problems and that regulations may be necessary.

Diversion and Theft: Clinics are, as a standard practice, vigilant about preventing theft and diversion from their facilities. The Advisory Committee recommends that clinics maintain and continue to improve their theft and diversion prevention policies and procedures.

Clinic Security: Subcommittee members addressed the issue of clinic security and agreed on the need to develop best practices to handle threats to clinic and patient safety. Members further agreed to the implementation of a no-loitering policy with permission granted only to those allowed on the premises. Additionally, members recommended that security guards and video cameras both be required to monitor loitering inside of the clinic. Furthermore, security guards and video cameras must be adequate in number to protect the staff, patients and community. Depending on the size of the population and the location of the clinic the presence and number of security guards and video cameras may be varied so long as the staff, patients and community are protected.

Parking Lot: Subcommittee members acknowledged that the parking lot areas adjacent to the facility can sometimes be a problem with patients and others loitering. Occasionally, there may be incidents where patients are selling part of their drug dosage. If theft of drugs or the sale of drugs occurs in the parking lot or other property belonging to the OTP clinic and is witnessed by OTP staff, the OTP can then report the incident to law enforcement without compromising patient confidentiality.

Along with the recommendation for security guards and video cameras inside the buildings, advisory committee members recommend guards and cameras for parking lots and outside property as appropriate.

Take-home Doses: Members agreed on the need to develop best practices for checking on take-home doses. Furthermore, members agreed that in addition to testing for methadone and other drugs that methadone blood levels may be monitored at the discretion of the clinic. Such a policy might identify patients who request an increase for themselves but in fact want to sell a portion of it for cash. Additionally, members agreed that patients must demonstrate participation in the program, attend all required meetings, and test negative for illicit drug use for 90 days without incident to be eligible for a take-home dose. Appendix II shows an example of the type of information and agreement signed by patients when they are permitted take-home doses.

Diversion of Liquid Doses: Protocols such as observing the patients when they take the dose and requiring them to speak with the dispensing nurse before and after receiving the dose is one of the control protocols used to prevent liquid dose diversion.

Death Reviews: The Advisory Committee recommends that the standardization of methadone death reviews be made a priority. With standard death reviews, public health authorities and law enforcement would have data necessary to reduce the amount of diversion and abuse associated with methadone. As it stands now, the lack of data and substantive information are greatly hindering their ability to develop strong policies.

Coroner and Medical Examiners: The Advisory Committee supports the creation of standards and protocols for coroners and medical examiners investigating deaths and incidents where methadone may have been present. To this end, it supports the establishment of a methadone death and incident review team as had been described in House Bill 140 of 2011.

Impaired Driving: The Advisory Committee recognized that impaired driving is a threat to patients and the community, and despite wide ranging opinions, was able to find consensus on some recommendations to reduce dangers. There is consensus that clinics should intervene to prevent any impaired patient from driving. Further, advanced training for nurses and other staff to identify impairment is recommended. Patient education materials about the dangers of impairment and potential notification of law enforcement authorities should be presented in writing.

Narcan/Naloxone: Discussion over whether or not to require physicians to provide Narcan, a drug commonly prescribed to forestall overdose, to all methadone patients was not resolved by the Advisory Committee.

UNIFORM REPORTING REQUIREMENTS FOR CORONERS AND MEDICAL EXAMINERS

The State Narcotic Treatment Program regulations require that unusual incidents be reported to the DOH. A list of reportable incidents is found at 28 Pa. Code Section 715.28.[64] Reports are submitted on State forms and each incident is evaluated to determine whether follow-up action is required. Facilities failing to submit reports are cited for the deficiency and a plan of corrective action is required.[65] The DOH notes that it has not seen an increase in the number of incidents of diversions, overdoses and deaths over the last five years. Furthermore, the DOH has never revoked the license of a methadone program.[66]

The DOH notes that its regulations require that unusual incidents be reported within 48 hours. Although the DOH maintains information on the number of deaths reported, those deaths are not separated by category; therefore, the number would include deaths from accidents and natural causes as well as from overdoses. Frequently there is no cause of death known by the facility. The DOH notes that it does not conduct formal death reviews. However, every reported death is reviewed thoroughly by the Division of Drug and Alcohol Program Licensure, under the Deputate of Quality Assurance. If appropriate, the medical and clinical file is requested for review or an on-site inspection is conducted. If the DOH notes repeat occurrences in a facility, an investigation is conducted and a plan of corrective action is required, if warranted.[67]
SAMHSA reported that nationally:

> Cause of death (COD) continues to be classified and reported differently from one jurisdiction to the next. In some cases, methadone is reported as a cause of death when it is only a contributory factor or not a factor at all, while in other cases it is the cause of death but is not reported as such. Moreover, better information is needed to describe how methadone-associated deaths occur. For example, data could help us understand whether the drug's potential for lethality may be the result of a slow onset of action, leading to repeated dosing – and, ultimately, overdose – as an individual attempts to achieve the desired drug effect.[68]

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[64] See note 59 above.
[65] Janice Kopelman, Deputy Secretary for Health Promotion and Disease Prevention, DOH, to Joint State Government Commission, July 6, 2009. Some information in the letter was also gathered by the Deputate for Quality Assurance at DOH.
[66] Ibid.
[67] Ibid.
[68] SAMHSA, "Summary Report of the Meeting: Methadone Mortality – A Reassessment," Washington, D.C. July 20, 2007.
http://www.dpt.samhsa.gov/pdf/Methadone_Report_10%2018%2007_Brief%20w%20attch.pdf. 16.

The situation regarding coroners' and medical examiners' reviews is the same in Pennsylvania. Advisory Committee member Graham Hetrick, Dauphin County Coroner, provided a policy statement in which he noted the importance of utilizing data from the Commonwealth's 67 Medical Examiner/Coroner organizations:

> The Coroner system can provide us with information that goes beyond the anecdotal and if properly organized can give us insights of statistical significance. With this knowledge we will have the knowledge available for meaningful legislation and regulation.
>
> In my own office I did a study of Unattended Drug Overdose (UDO). Methadone was often one of a combination of drugs that caused the demise of the subjects. It was also notable that the mean age of the average UDO was approximately 40 years of age. It is possible to organize the data using simple Excel format and convert this data to SPSS [Statistical Package for the Social Sciences] statistical software. I propose that we formulate a program in which we can provide non-proprietary collection software and give this tool to the coroner offices. The statewide collection of the data and final interpretation could be done by an existing state agency such as the Department of Health or the Office of the Attorney General.
>
> The implementation of the program would require a systemization of the investigative process in drug overdose cases. It would entail training of both coroner's offices and various police agencies.
>
> Some of the outstanding deficiencies in the present investigative process are the following:
>
> - Failure to obtain the type and quantity of drugs at the scene
> - Failure to obtain the prescription information
> - Issuance date
> - Dosage
> - Prescriber
>
> There is a tendency to not perform as diligent an investigation in many overdose cases because the investigators see the act itself as a self-inflicted event. This causes a lower perceived value of the victim. The perception then causes a reduced urgency and diligence in the collection of all the information pertinent to building a solid victimology.
>
> The software itself would simply be a formatted Excel sheet that would be filled out by the coroner's offices and then forwarded on a quarterly basis to the data consolidator. At the point of consolidation statistical software can yield trends of importance such as:
>
> - Frequent prescribers and their locations

- Demographics of the users
- Combinations of the drugs used in overdose
- Geographic, economic and social implications

> Some of this information can be valuable to ongoing investigations on a contemporary basis. Other data will give information for long term studies.[69]

The Advisory Committee recommends that the standardization of methadone death reviews be made a priority. With standard death reviews, public health authorities and law enforcement would have data necessary to reduce the amount of diversion and abuse associated with methadone. As it stands now, the lack of data and substantive information are greatly hindering their ability to develop strong policies. A statewide database could be developed that would include mortality and morbidity information when methadone is present or in the area of the incident. The data, functioning as a public health database, would be separable by geographic area, and include demographic data that are scrubbed of personal identifiers. The data, including those from OTPs and pain management, could be used by public health authorities to develop new policies and focus resources on prevention of methadone accidents and deaths.

[69] Graham Hetrick, M.S., F.D., B.C.F.E., Coroner of Dauphin County, Pennsylvania letter to Joint State Government Commission, April 26, 2010.

METHADONE AND PAIN MANAGEMENT

Methadone, long associated with the clinical treatment of heroin addiction, has emerged as a leading culprit in a rapid increase in overdoses and deaths in the past decade. Experts from all ranks of government and those closely associated with methadone treatment modalities have scrambled to find solutions. Evidence suggests that there is a strong correlation between the increases in methadone deaths and the increasing popularity of using it as an analgesic.

The medical profession, particularly physicians working in pain management specialties, has evaluated the profession's understanding and use of methadone as an analgesic. It appears that the increasing incidence of overdose and death can be sourced back to some of the same reasons OxyContin, Oxycodone, and others became widely misused and abused. Fraudulent prescriptions, "doctor shopping," thefts, and diversions are likely contributors to the increase in the methadone problem.

In his book, "Responsible Opioid Prescribing, A Physician's Guide," Dr. Scott Fishman, MD, states clearly and simply,

> All patients complaining of pain are suffering from something and deserve a physician's empathy and compassion. But a small minority of people seeking treatment may not be reliable or trustworthy. The problem for the clinician at the frontline of medicine is not that such patients are bad people who are committing sins; it is that the help that such patients are asking for will not remedy their problem and may be harmful to themselves and others…A physician must therefore maintain a discreet but keen vigilance for potential harm from any treatment. In the case of treatments that include controlled substances, this must include the potential for deception and abuse.[70]

It is well recognized that doctors, especially those working in pain management fields, are the front line defense of pain medication misuse and abuse. Yet, the Advisory Committee noted on several occasions that many doctors are ill-prepared to recognize and effectively handle patients who are suffering from medication addictions. Further, it was stated that methadone is an "outlier," and that what doctors know about pain medications does not necessarily translate to methadone.[71]

[70] Scott M Fishman, M.D., "Responsible Opioid Prescribing, A Physician's Guide" Waterford Life Sciences, Washington, D.C.:2007. 21-22.
[71] Advisory Committee meeting, July 9, 2009.

Methadone for Pain Management

Methadone's popularity for pain management has been increasing sharply over the past decade. It is also relatively inexpensive when compared to other long-term pain medications and has shown itself to be an effective analgesic. DEA data show that the distribution of methadone for pain management nearly tripled from 2002 to 2007, increasing from 2.3 million grams to 6.5 million grams. The number of grams distributed from hospitals grew by 90 percent; the number of grams distributed by pharmacies grew by 177 percent; and from other practitioners by 377 percent. See Table 5.

Table 5
Methadone Distribution by Type of Business
for Pain Management
Number of grams distributed
2002-2007

	2002	2003	2004	2005	2006	2007
Hospitals	309,315	393,685	466,352	521,216	584,144	590,649
Pharmacies	2,329,083	3,274,331	4,246,007	4,863,736	5,986,488	6,442,516
Other practitioners[a]	10,381	15,113	35,492	43,260	51,046	49,503

[a] Other practitioners include those licensed and registered to distribute methadone. Further details were unknown to the DEA at the time of gathering the data.

Source: GAO, "Methadone-Associated Overdose Deaths: Factors Contributing to Increased Deaths and Efforts to Prevent Them," GAO-09-341, March 2009. 19.

Manchikanti and Singh reported in their paper, "Therapeutic Opioids: A Ten-Year Perspective on the Complexities and Complications of the Escalating Use, Abuse, and Nonmedical Use of Opioids," that the therapeutic use of opioids had increased significantly in the U.S. from 1997 to 2006. Sales of hydrocodone increased by 244 percent, of oxycodone by 732 percent, and of methadone by 1,177 percent. The estimated number of prescriptions filled for controlled substances increased from 222 million in 1994 to 354 million in 2003.[72]

[72] Laxmaiah Manchikanti, M.D., and Angelie Singh, "Therapeutic Opioids: A Ten-Year Perspective on the Complexities and Complications of the Escalating Use, Abuse, and Nonmedical Use of Opioids," *Pain Physician 2008 Opioid Special Issue*, 11:S63-S88, PainPhysicianJournal.com, http://www.painphysicianjournal.com/2008/march/2008;11;S63-S88.pdf. S77.

Prescribing

There are several reasons why methadone is prescribed for pain management. As highlighted in the *Journal of the American Osteopathic Association*, "Although initially used in patients with cancer, methadone is being increasingly used in the end-of-life care setting for patients with nonmalignant pain syndromes."[73]

Methadone**:**

- provides an attractive alternative to the expensive transdermal fentanyl patch in patients with debilitating states of advanced dementia or with arthritis;
- can help deconditioned bedridden individuals with adult failure to thrive who have generalized pain or allodynia;[74]
- is available in liquid form for patients who can no longer swallow pills;
- has high bioavailability and long duration of action following rectal administration, an alternative to intravenous administration;
- is synthetic and has no cross-allergenicity, it may be used in patients with morphine allergy; and
- has slow development of action and long duration which serves to reduce establishment of reward behaviors that can occur with faster-acting and shorter-duration opioids.[75]

When prescribed as pain medication, methadone can be prescribed by licensed and registered practitioners and dispensed by licensed and registered pharmacists. Appropriately licensed and registered practitioners may also dispense methadone directly to patients, but according to the DEA, this is not a common practice.[76]

Methadone is administered in a number of different ways, including tablet, liquid, and intravenously.[77] It is readily absorbed in oral form, and has a bioavailability three times greater than morphine. In other words, as oral medications pass through the digestive system, some portion passes through without having been absorbed, some portion is metabolized. The portion that neither passes through nor is metabolized is absorbed into the circulation where it fulfills its intended purpose. Methadone has a bioavailability of close to 80 percent, whereas morphine is 26 percent.[78] Three times more methadone than morphine thus reaches the circulatory system.

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[73] John F. Manfredonia, D.O., "Using Methadone to Control Pain in Patients During Final Stages of Life," *The Journal of the American Osteopathic Association*, Vol. 107, June 2007. 17-21. http://www.jaoa.org/cgi/content/full/107/suppl_4/ES17.

[74] Allodynia refers to pain from stimuli that are not normally painful.

[75] See note 73 above.

[76] GAO "Methadone-Associated Overdose Deaths, Factors Contributing to Increased Deaths and Efforts to Prevent Them," GAO, GAO-09-341, March 2009. www.gao.gov/new.items/d09341.pdf . 8.

[77] James D. Toombs, M.D., "Oral Methadone Dosing for Chronic Pain, A Practitioner's Guide," *Pain Treatment Topics*, March 12, 2008. http://pain-topics.org/pdf/OralMethadoneDosing.pdf. 2.

[78] James D. Toombs, M.D., and Lee A. Kral, Pharm.D, "Methadone Treatment for Pain States," *American Family Physician*, April 1, 2005. http://www.aafp.org/afp/2005/0401/p1353.html.

Methadone has a half-life of about 30 hours, ten times longer than that of morphine.[79] However, the analgesic effects of methadone last only about four to six hours. Since the pain relieving qualities of methadone are of far shorter duration than its half-life, patients might be tempted to take methadone doses more frequently than prescribed. This is a potentially dangerous practice, and methadone levels in the blood plasma need to be carefully monitored by the prescribing physician during the induction phase. Other pain medications, such as morphine, oxycodone, and hydrocodone do not pose the same threat and can be taken on a shorter schedule. The analgesic effects of methadone increase over time without increases in dosing, and may take as long as ten days before a stable level of pain management is reached.[80]

Methadone is less expensive than other opioid pain medications, costing only a fraction of the others on a per month basis. See Table 6. Internet-based prescription drug retailers list 5mg methadone tablets at $.60 apiece. In comparison, OxyContin tablets cost from $1.99 to $2.39 apiece.[81]

Table 6
Estimated Monthly
Drug Retail Costs

Agent	Dosage	Cost
Methadone	90 pills	$53.97
Morphine extended release	60 pills	$97.98
MS Contin	60 pills	$183.02
OxyContin	60 pills	$242
Fentanyl Patch (generic)	10 patches	$133.33
Duragesic Patch	10 patches	$242.66

Source: Drugstore.com, January 25, 2010, http://www.drugstore.com.

[79] John F. Manfredonia, D.O., "Using Methadone to Control Pain in Patients During Final Stages of Life," *The Journal of the American Osteopathic Association*, Vol. 107, June 2007. 17-21.
[80] James D. Toombs, M.D., and Lee A. Kral, Pharm.D, "Methadone Treatment for Pain States," *American Family Physician*, April 1, 2005. http://www.aafp.org/afp/2005/0401/p1353.html.
[81] Drugstore.com, price as of January 15, 2010.
http://www.drugstore.com/qxn00054457025_332828_sespider/methadone_hcl/methadone_hcl.htm.

Protocols

Methadone can have dangerous side effects, and therefore strict protocols must be followed to maximize patient safety. Methadone interacts with many other drugs that, in combination with methadone, may have adverse side effects. Widely recognized among experts are the dangers of benzodiazepines, which have been found in 74 percent of methadone-related deaths.[82] Methadone can cause slow or shallow breathing and dangerous changes in heart beat that may not be felt by the patient.[83] These risks are especially noted during the first few days of taking the drug. This induction period requires that the doctor closely monitor the patient's tolerance for the drug and the prescribed dosage. The common rule of thumb is to "Start Low, Go Slow." Following this advice, a new patient starts with a low dose and is monitored every five to seven days by his doctor.[84] The dose can then be modified according to the patient's tolerance and the methadone's effectiveness.

Government Oversight and Diversion Control

Diversion and thefts are threats at each level of the distribution chain of methadone, from the manufacturer to the patient. The National Drug Intelligence Center (NDIC) reported that the theft of methadone "during transit from the manufacturers to businesses and theft from businesses and reverse distributors increased the availability of methadone at the midlevel and retail level."[85] Reported thefts of methadone being transported to pharmacies, hospitals, and distributors increased from 28 in 2004 to 68 in 2006, for total dosage units (du) stolen of 18,547 and 67,867 respectively. In 2006 an additional 9,125 du were lost in transit to OTPs.[86] The Methadone Mortality Working Group of the U.S. DEA stated, "Current data suggest that medication from pain management is likely the source of methadone for illicit use."[87] The NDIC believes that sources for retail-level methadone dealers are bulk theft operations, burglaries and armed robberies of pharmacies, the Internet, and international poly-drug dealers.[88] There is no evidence that methadone thefts are occurring in Pennsylvania from end distributors or resellers. Further, there are no statistics measuring theft from the Internet, from patient dosages, or from deceased patients' homes.

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[82] James D. Toombs, M.D., and Lee A. Kral, Pharm.D, "Methadone Treatment for Pain States," *American Family Physician*, April 1, 2005. http://www.aafp.org/afp/2005/0401/p1353.html.

[83] "Methadone Use for Pain Control May Result in Death and Life-Threatening Changes in Breathing and Heart Beat," FDA, U.S. Department of Health and Human Services, April 4, 2009, http://www.fda.gov/Drugs/DrugSafety/PublicHealthAdvisories/ucm124346.htm.

[84] James D. Toombs, M.D., "Oral Methadone Dosing for Chronic Pain, A Practitioner's Guide," *Pain Treatment Topics*, March 12, 2008. http://pain-topics.org/pdf/OralMethadoneDosing.pdf. 4.

[85] "Methadone Diversion, Abuse, and Misuse: Deaths Increasing at an Alarming Rate," NDIC, U.S. Department of Justice, November 16, 2007. 4.

[86] Ibid. 4.

[87] "Methadone," Methadone Mortality Working Group, Office of Diversion Control, U.S. Drug Enforcement Administration, April 2007. 41.

[88] "Methadone Diversion, Abuse, and Misuse: Deaths Increasing at an Alarming Rate," NDIC, U.S. Department of Justice, November 16, 2007. 6.

Statistics from the 2006 National Survey on Drug Use and Health compiled by the Office of Applied Studies at SAMHSA showed that about 75 percent of people who abused prescription pain medications did not obtain it from street dealers. Fifty-eight percent of persons aged 12 or older who used pain relievers nonmedically in the past 12 months reported the source of the drug was a friend or relative. Approximately 20 percent reported they got the drug from just one doctor. Only 3.9 percent got the pain relievers from a drug dealer or other stranger, and only 0.1 percent reported buying the drug on the Internet. Among those who reported getting the pain reliever from a friend or relative for free, 80.7 percent reported in a follow-up question that the friend or relative had obtained the drugs from just one doctor.[89]

There are several different means through which methadone is controlled in pain management settings. Like all opiates, it is a Schedule II narcotic and is governed by the Federal Controlled Substances Act. According to the GAO report,

> Under the act, controlled substances are classified into five schedules based on the extent to which the drug has an accepted medical use, and its potential for abuse and degree of psychological or physical dependence. Schedule II controlled substances—which include opioids such as morphine, oxycodone, and methadone—have a currently accepted medical use and a high potential for abuse, and may lead to severe psychological or physical dependence. DEA's regulation of the manufacturing, distribution, dispensing, and prescribing of controlled substances, including Schedule II drugs, encompasses the following:
>
> - Manufacturing. DEA limits the quantity of Schedule II controlled substances that may be produced by each manufacturer in the United States each year. DEA determines these quotas based on a variety of factors, including disposal and inventories. DEA also sets aggregate production quotas that limit the production of bulk raw materials used to manufacture Schedule II controlled substances.
>
> - Distribution. DEA regulates transactions involving the sale and distribution of Schedule II controlled substances by manufacturers and wholesale distributors. Manufacturers and distributors are required to report their inventories of controlled substances to DEA, and these data are available for monitoring the distribution of controlled substances throughout the United States and identifying retail registrants that received unusual quantities of controlled substances.

[89] "Results from the 2006 National Survey on Drug Use and Health: National Findings," Office of Applied Studies, SAMHSA, 2006, http://www.oas.samhsa.gov/NSDUH/2k6NSDUH/2k6results.pdf. 1.

- Dispensing and prescribing. Practitioners who dispense, administer, or prescribe controlled substances must obtain a valid registration.[90]

The Commonwealth exercises control through The Controlled Substance, Drug, Device and Cosmetic Act (Act of April 14, 1972, P.L. 233, No. 64). Only six states do not have a prescription drug program with authority to monitor Schedule II substances.[91]

The Pennsylvania Attorney General's Office, as a member of the advisory committee, noted that there is little evidence of diversion between the manufacturer and dispensing pharmacies in Pennsylvania. Pharmacists are held under strict guidelines by Federal and State law. Section 27.18 of Title 49 of the PA Code (State Board of Pharmacy) states:

> A pharmacist may decline to fill or refill a prescription if the pharmacist knows or has reason to know that it is false, fraudulent or unlawful, or that it is tendered by a patient served by a public or private third-party payer who will not reimburse the pharmacist for that prescription. A pharmacist may not knowingly fill or refill a prescription for a controlled substance or nonproprietary drug or device if the pharmacist knows or has reason to know it is for use by a person other than the one for whom the prescription was written, or will be otherwise diverted, abused or misused. In addition, a pharmacist may decline to fill or refill a prescription if, in the pharmacist's professional judgment exercised in the interest of the safety of the patient, the pharmacist believes the prescription should not be filled or refilled. The pharmacist shall explain the decision to the patient. If necessary the pharmacist shall attempt to discuss the decision with the prescriber.[92]

Prescription Drug Monitoring Plans

Diversion of prescription drugs can be difficult to trace if they are first obtained through a legal prescription. Law enforcement authorities have attempted to stanch the flow of legal drugs into misuse and abuse by establishing prescription drug monitoring programs (PDMPs). PDMPs vary from state to state, but typically require pharmacists to log information about certain prescriptions each time they are filled. The reports are filed with law enforcement or public health authorities, who are able to monitor the prescriptions to detect patterns of fraud or diversion.

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[90] "Methadone-Associated Overdose Deaths: Factors Contributing to Increased Deaths and Efforts to Prevent Them," GAO-09-341, March 2009. 8, 9.

[91] Those states are Arkansas, Georgia, Missouri, Nebraska, New Hampshire, and Montana. See "Drugs Monitored Under State PMP Programs—Maps (August 2010)." National Alliance for Model State Drug Laws, http://www.namsdl.org/presdrug.htm.

[92] 49 PA Code Section 27.18(c).

In Pennsylvania, the PMP applies to retail pharmacies, and is specified in 28 PA Code Section 25.131 "Every dispensing practitioner." The text reads:

> Every pharmacy shall, at the end of each month, on forms issued for this purpose by the Office of the Attorney General of the Commonwealth, provide the Office of the Attorney General of the Commonwealth with the name of each person to whom a drug or preparation, which is classified by the Comprehensive Drug Abuse Prevention and Control Act of 1970, 21 U.S.C.A. § 3801 and the act as a controlled substance in Schedule II, was sold, dispensed, distributed, or given away, except when used in anesthetic procedures, together with such other information as may be required, under the act.

Despite strict controls, however, the Pennsylvania Office of Attorney General outlined several diversion scenarios with which it has some experience.

1) The pharmacy could report a loss of drugs in either of two ways:
a) an inventory check turned up missing inventory indicating possible internal theft.
b) the pharmacy could be robbed or burglarized in which the criminal makes off with the drugs. Both of these occur.

2) The pharmacy could suspect that a diversion occurred or is being attempted due to a prescription form being forged, altered or otherwise fraudulent. This could occur either before the pharmacy fills the prescription, or on review of their records they discover that a previously filled prescription was found to be false.

3) If a doctor dispenses the drug at his office, rather than write a prescription, he may discover a loss from inventory usually due to internal theft. A doctor's office could also suffer a loss from a robbery or burglary of his office. These do not occur as frequently as pharmacy robberies or burglaries, but they do occur.

4) A doctor could also find that a prescription pad belonging to him was missing. This would indicate a theft of the pad, usually done internally, but patients have also been known to walk off with a doctor's pad if he or his staff is careless about leaving them on a counter or desk, for example, unattended. Obviously, the prescription pad can then be used to forge prescriptions to take to a pharmacy to fill.

5) A patient could also begin a pattern of doctor shopping wherein the drug seeker goes from doctor to doctor claiming some symptoms for which he knows a certain drug, such as methadone, would be prescribed and hoping that multiple doctors will diagnose him consistent with his need for that drug and each give him a real prescription that he would fill at different pharmacies.

6) Law enforcement could notice an upsurge in seizures of methadone on the street, undercover buys involving same, or drug overdoses involving same, which would cause them to begin seeking the source of those drugs.

In investigating diversions, the Attorney General's office follows a series of steps.

1) If a pharmacy reported an internal loss, the Attorney General (AG) would usually do an audit of their inventory to confirm same and to see if other types of drugs were also missing. The AG would determine who has access to those drugs in the pharmacy, try to determine when (what day, shift) those losses seem to occur in order to narrow down possible suspects, and perhaps place hidden cameras in the pharmacy to see if criminal activity can be observed. The AG would gather evidence and also conduct interviews with employees. If a case developed to the point of an arrest, the AG would also notify the state licensing board if any licensed professional, such as the pharmacist, committed a violation. If the pharmacy was robbed or burglarized the AG might work with the police agency that has jurisdiction over that particular crime to assist in identifying the actors based on where the drugs end up and tracking them back to the criminals who took them.

2) If a pharmacy did not report a loss, but the AG had reason to suspect a crime and suspected the losses are not being reported because of the involvement of employees who are covering up the losses, the AG would use its authority under the Controlled Substances Act to inspect the pharmacy and audit their inventory records. Once a loss was confirmed through the audit process the AG would proceed with its investigation. The AG would usually do this in conjunction with someone from the parent owner of the pharmacy, such as the risk management or loss prevention entity of the corporation.

3) The AG would handle a report from a doctor who dispenses in much the same way. However, if the AG suspected a doctor who dispenses was himself diverting, it would usually do an audit and inventory of his stock for dispensation to determine any "losses" and proceed from there. The AG is able to track through federal records the drug shipments that a dispensing doctor receives, thus giving it a starting point on how many dosage units of methadone he has to account for. His patient records would then show (or should show per regulation) where those drugs were dispensed. It may require actual interviews with patients to determine if they did indeed receive the amount of drugs noted in the event the doctor or an employee is diverting and writing off that inventory by attributing more doses to a patient than the patient actually receives.

4) An investigation into doctor shopping generally starts with a review of the information in the state PMP for Schedule II drugs. A patient who sees multiple doctors and receives multiple prescriptions that he fills at multiple

pharmacies is a potential red flag indicator of a doctor shopper. Pennsylvania has no particular statute which prohibits doctor shopping per se. Rather, the investigation would have to prove that the "patient" obtained the drugs by fraud or misrepresentation by visiting these doctors for treatment for a condition that did not exist or obtained them from doctors who would not have prescribed same if they knew the "patient" was under the care of another doctor and receiving the same drugs from some other doctor. These can be difficult cases to prove and really require the cooperation of the doctors, which results in potential time out of their practice for court proceedings and so on.

5) Forged prescription cases can also start as a flag from the PMP C-II program. A person who obtains multiple prescriptions from multiple doctors (or the same doctors) filled at multiple pharmacies may simply be forging prescriptions from those doctors and filling them at various pharmacies so as not to alert suspicion from any one pharmacy. Methadone prescriptions cannot be refilled so a new prescription is needed each time. Since the dosage given is usually only for a certain amount of days, a drug seeker generally needs multiple prescriptions to meet his addiction needs during that same time period. AG investigators may select an individual from the PMP C-II profile and start contacting doctors to see if there is a legitimate prescription. Once a doctor advises that the subject is not a patient or did not receive such a prescription a forged prescription case begins. Also, a pharmacy may alert the AG to this if they notice discrepancies on the prescription form or have some other suspicion and call the doctor for verification and find that the prescription is fraudulent.

6) The AG has many cases where doctors actually provide legitimate prescriptions or actual drugs in exchange for cash, sexual favors, or other considerations in which no doctor-patient medical treatment relationship is established. Those cases are usually investigated by using an undercover operative who visits the doctor seeking to purchase the prescription. The AG also conducts surveillance in order to identify other persons who are obtaining the drugs in a similar manner and at some point interview them about their relationship with the doctor. These people frequently cooperate completely and giving statements and testimony against the doctor. A search warrant is usually served to seize the doctor’s records, if any exist, for the patients that have been identified. Those records are examined for indicators that no medical treatment relationship exists or the records are adulterated. Financial investigative methods are often used to trace the funds used by undercover operatives and others to pay the doctor and so on. Obviously if a doctor is involved in criminal activity the AG notifies the state licensing board so it can take action regarding his license. The AG also notifies the DEA which can then revoke his privileges to order or prescribe certain classes of drugs. If a doctor is found guilty of, or pleads

guilty to a felony violation of the state drug law his license to practice in Pennsylvania is automatically revoked for a 10 year period.[93]

Social Costs and Matters of Public Health

To begin answering this question, it is critical to understand the legitimate purposes of methadone. First, as a long-lasting opioid, methadone is used successfully to help individuals overcome an opiate addiction by reducing the cravings for opiates for between 24 and 36 hours. Second, in recent years methadone has been used more frequently as a narcotic analgesic to treat chronic pain. Both purposes have been shown to be highly successful in meeting the needs of patients. Methadone is clearly a safe and effective drug for these purposes if it is dispensed and used properly. Methadone is also an extremely dangerous drug if it is not dispensed or used properly and the impact of it being diverted cannot be understated.

When methadone is diverted to individuals not under a physician's care and expertise, it presents an immediate danger to their health. The Food and Drug Administration issued a Public Health Advisory[94] indicating that methadone use for pain control could result in life-threatening changes in breathing and heart beat and possibly death from the side effects of the drug. This advisory was issued to alert both patients and caregivers about the need to adhere to the specific prescribing directions.

From the community perspective, the diversion of methadone represents a safety threat, especially as a result of diversion by theft. An illicit market for methadone supports the criminal element in communities.

Diversion as a matter of public health

Because methadone is a controlled substance under the Federal Controlled Substances Act, it is a heavily regulated drug, thus, when it is diverted from its legal and legitimate purposes, it poses a threat to the public health through misuse or abuse by addicts and non-addicts. As far back as 1978, officials were aware of the threat to the public of methadone diversion as evidenced by testimony presented to the U.S. House Select Committee on Narcotics Abuse and Control. The committee documented numerous instances of methadone addiction, deaths due to illicit use and other causes.[95] Many of the current regulations were promulgated as a result of the federal government's concern about methadone diversion and its impact on public health.

[93] Steve Wheeler, PA Office of the Attorney General in email to Commission staff November 11, 2009.
[94] "Public Health Advisory: Methadone Use for Pain Control May Result in Death and Life-Threatening Changes in Breathing and Heart Beat," accessed November 9, 2009, http://www.fda.gov/CDER/drug/advisory/methadone.htm.
[95] "Federal Regulation of Methadone Treatment (1995)," *The National Academies Press*, Institute of Medicine, accessed November 9, 2009, http://www.nap.edu/openbook.php?record_id=4899&page=98. 98.

How diversion leads to other criminal activity.

The Department of Justice reports that the retail distribution of methadone diverted from various sources is likely much more significant than what is currently being reported by law enforcement agencies.[96] Opioid abusers reported in a 2005 survey that their primary opioid drug of abuse was one prescribed.[97] The abusers reported that their sources for obtaining the illicit prescription opioid were: dealers, friends or relatives, doctor's prescriptions, emergency rooms and theft.[98] The following passage from a 1995 Institute of Medicine report highlights how methadone diversion results in other criminal activity:

> DEA officials often note that many methadone patients are polydrug users and that they continue to use drugs as evidenced by urine tests. At first sight, this observation may seem beside the point since methadone is specific only to opiate addiction. But the observation becomes relevant to DEA's perspective on diversion in regard to two points. First, DEA (like its predecessor, BNDD) has strongly argued that methadone treatment, in addition to dispensing the medication, must include comprehensive medical and social services, which should include addressing other drug use. Second, and more pertinent to diversion, methadone patients who continue to use other illicit drugs have an incentive to sell their methadone to purchase other drugs; thus, in DEA's view, methadone programs that fail to address other drug use may, in effect, be subsidizing drug abuse.
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> According to Eugene Haislip, Deputy Assistant Administrator for Diversion Control of DEA, the failure by programs to address other drug use creates "little incentive for an individual to become drug free because their steady supply of methadone provides them with a constant source of illicit income with which to purchase other drugs, primarily cocaine.[99]

[96] "Methadone Diversion, Abuse and Misuse: Deaths Increasing at an Alarming Rate:" U.S. Department of Justice, National Drug Intelligence Center, http://www.justice.gov/ndic/pubs25/25930/25930p.pdf. 6.
[97] Ibid. 6.
[98] Ibid. 6.
[99] "Federal Regulation of Methadone Treatment (1995)," *The National Academies Press*, Institute of Medicine, accessed November 9, 2009, http://www.nap.edu/openbook.php?record_id=4899&page=99. 99.

RECOMMENDATIONS FOR PAIN MANAGEMENT

Given the rapidly increasing number of overdoses and deaths that appear to be connected to methadone, there are a number of recommendations that can be made to improve patient safety when methadone is being prescribed in a pain management setting.

Physician Education

Physician education is of the utmost importance to maintaining safe patient treatment where opioids, particularly methadone, are employed for pain management. Joseph Merrell, M.D., wrote in the *Journal of General Internal Medicine* about physician education with regard to addiction and methadone:

> The separation of opiate addiction treatment from the medical care system has resulted in a lack of education and experience among physicians in methadone treatment and addiction medicine more generally. While physicians regularly treat the medical complications of addiction, physicians lack skills in the screening, assessment, treatment, and referral of patients with substance abuse problems. Current curricula within medical school, residency, and continuing education programs for generalist physicians devote little time to addiction medicine topics.[100]

Members of the Advisory Committee reflected similar experiences and attitudes to Dr. Merrill's. In medical education, it seems from their experiences, addiction education is almost relegated to voluntarily attending seminars.

The National Center on Addiction and Substance Abuse at Columbia University (CASA) surveyed primary care physicians on their opinions regarding their ability to diagnose substance abuse. Whether the efforts to improve the nation's health through high profile campaigns to reduce chronic ill health associated with such maladies as hypertension and diabetes, or because chronic disease is widespread, over 80 percent of primary care physicians reported that they are "Very Prepared" to diagnose or identify patients with hypertension and diabetes. Fewer than half, 44 percent, felt the same way about depression. Physicians' confidence to diagnose or identify patients with substance abuse problems dropped off considerably thereafter. Thirty percent felt they could diagnose or identify misuse of prescription drugs, 20 percent felt the same about

[100] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1495048/

alcoholism, and 17 percent were confident they could identify or diagnose abuse of illegal drugs.[101]

The Association of Medical Education and Research in Substance Abuse (AMERSA), after more than a decade of developing drug-abuse education for medical professionals, recognized in 1985 that general practitioners, psychiatrists, and pediatricians needed to be proficient in the following areas:

1) epidemiology, including knowledge of the natural history of substance abuse and risk factors;
2) physiology and biochemistry of dependency and addictions;
3) pharmacology, including knowledge of the effects of commonly abused drugs and drug-drug interactions;
4) diagnosis, intervention and referral;
5) case management, including short and long-term consequences of abuse and dependency; and
6) prevention through health promotion, early identification and patient education.[102]

According to the President's Commission on Model State Drug Laws, up to 50 percent of all general hospital admissions are alcohol and drug-related, and 50 to 60 percent of emergency room admissions are alcohol-related.[103] The President's Commission goes on to state that many patients leave the hospital with their substance abuse problem undiagnosed. Of the 15 percent of doctor office visits, that are alcohol-related, approximately two to three percent are diagnosed. The report further states that "drug abuse, less familiar to most doctors, is probably diagnosed even less often."[104]

The President's Commission formulated a Model Health Professionals Training Act to improve health professionals' education in the areas of alcohol and drug abuse. The Model Act addresses accreditation and curriculum statutes for medical schools, nursing schools, paramedic schools, and health professional training schools. Primarily, the Model Act specifies that 30 hours be spent in the study of drug and alcohol abuse and addiction, and that the curriculum in each state be developed in consultation with the American Society of Addiction Medicine and the state's medical society. The Model Act also stipulates that each practitioner complete at least ten hours of continuing medical education in abuse and addiction.[105] The President's Commission believes that the Model Act will translate the efforts of the American Medical Association, the Physicians'

[101] "Primary Care Physicians: More Training Needed to Diagnose Substance Abuse," *CSAT by Fax*, Vol. 5, Issue 18, U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Abuse Treatment, November 8, 2000.
[102] "Model Health Professionals Training Act Policy Statement," President's Commission on Model State Drug Laws, The White House, 1993 F-123.
http://www.namsdl.org/resources/v4f%20model%20health%20professionals%20training%20act.pdf.
[103] Ibid. F-121.
[104] Ibid. F-122.
[105] See Appendix for full text of the Model Health Professionals Training Act.

Consortium on Substance Abuse Education, and others into an established mechanism for professional training.

Another model policy for health professional education was developed by the Federation of State Medical Boards. Known as the "Model Policy for the Use of Controlled Substances for the Treatment of Pain," the model policy is endorsed by the American Academy of Pain Medicine, the Drug Enforcement Administration, the American Pain Society, and the National Association of State Controlled Substance Authorities.[106] The model is designed to communicate a number of important observations that address the gravity of opioid prescribing from the standpoints of society, the physicians, and the patients. First and foremost, the model recognizes that pain management is "important and integral" to the practice of medicine. Second, opioids may be necessary for the relief of pain. Third, when used for other than the relief of pain, opioid analgesics pose a threat to the individual and society. Fourth, doctors have a responsibility to reduce the potential for diversion and abuse of opioid analgesics. Finally, doctors will not be "sanctioned" solely for prescribing opioid analgesics for "legitimate medical purposes."

There are seven guidelines that are recommended that state medical boards adopt as criteria for physicians who are prescribing opioids for the treatment of pain.[107]

1) Evaluation of the Patient: a complete history and evaluation of the patient should be conducted, including any history of substance abuse.
2) Treatment Plan: A treatment plan, including objectives, should be written and evaluated or adjusted depending on the etiology of the pain and the success of the plan.
3) Informed Consent: The patient or the patient's surrogate (or guardian) should be informed and aware of the risks and benefits of opioid treatment for pain.
4) Periodic Review: The physician should periodically review the course of pain treatment, including new information about the patient's health and the etiology of the pain. Information from family members and caregivers should be taken into consideration as well.
5) Consultation: The physician should be willing to consult with other experts, paying special attention to patients who are at risk for medication misuse, abuse, or diversion.
6) Medical Records: The physician should keep accurate, complete, and current records.
7) Compliance with Controlled Substances Laws and Regulations: The physician should remain in compliance with all state and federal laws and regulations regarding controlled substances.

[106] Scott M. Fishman, M.D., "Responsible Opioid Prescribing," Waterford Life Sciences, Washington, D.C.:2007. pp. 131-133. See also http://www.fsmb.org/pdf/2004_grpol_controlled_substances.pdf.
[107] Ibid.

Patient Education

SAMHSA and the FDA have a joint social marketing campaign to educate patients on the safe use of methadone. The effort, titled *Follow Directions: How to Use Methadone Safely*, is intended to inform patients, as well as their families and health care providers.[108]

Outreach materials include a brochure, written in both English and Spanish, that provides background information on safe and effective use of methadone, and steps on how to navigate the risks and recognize dangerous side effects.[109]

OTP clinics in Pennsylvania provide patient education, and some have instituted orientation programs for new patients and their families. It is less clear that doctors prescribing methadone for pain management have developed patient education protocols tailored to the use of methadone.

Screening for Substance Abuse

Recommendations made by the Advisory Committee include:

- All physicians within the Commonwealth of Pennsylvania should assess patients for drug and alcohol dependency with recognized screening tools for drug and alcohol dependency disorders, and when such disorders are identified refer the patients for appropriate drug and alcohol treatment as part of their medical care, before beginning treatment with methadone.

- Pain management patients with drug and alcohol dependency problems need to be monitored carefully by their treating physicians for drug seeking behavior or illicit drug use. In the event that drug seeking behavior or illicit drug use is identified, these patients would be considered poor candidates for pain management treatment with methadone due to the high lethality of the drug in these circumstances.

Doctors treating patients with acute and chronic pain not responding to common pain relievers may choose the route of treatment with methadone. It is vital importance that they be prepared to handle the unique characteristics of methadone. Its uncommon characteristics are confounded by the illicit trade of the drug. Doctors need to be prepared to identify and respond to addicted patients, and to be aware that methadone is increasingly associated with diversion, misuse, and abuse.

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[108] "SAMHSA and FDA Join to Educate the Public on the Safe Use of Methadone," SAMHSA and FDA joint press release, April 28, 2009.
http://www.dpt.samhsa.gov/methadonesafety/downloads/methadone_press_release_2009-04-28.pdf.

[109] "Follow Directions: How to Use Methadone Safely," *Medication-Assisted Treatment for Substance Abuse Disorders*, Division of Pharmacologic Therapies, U.S. Department of Health and Human Services, http://www.dpt.samhsa.gov/methadonesafety/print_materials.aspx.

CONCLUSION

In the face of an alarming increase in opioid overdoses across the U.S., state and national agencies are increasing their efforts to improve their understanding of opioid use. Methadone in particular has posed challenges because it is at the same time an efficacious treatment for opioid addiction and chronic pain and is associated with many overdose deaths. Furthermore, comprehensive data are not robust enough to draw conclusions about the breadth and depth of the methadone problem. The National Drug Information Center, the Substance Abuse and Mental Health Services Administration, the Methadone Mortality Working Group, and the National Highway Traffic Safety Administration are but a few of the federal agencies that have done work specifically related to methadone diversion abuse. In Pennsylvania, the Department of Health, specifically the Division of Drug and Alcohol Program Licensure, is active in working with OTP clinics. Moreover, numerous pieces of legislation related to methadone were introduced in the House and Senate during the 2009-2010 session and several have been introduced in the 2010-2011 session. The problem has been widespread for several years and is rising in popular consciousness.

OTP clinics have historically shouldered the burden of maintaining safe environments for their patients and communities, and layers of rules and regulations from state, federal, and accreditation agencies have sought to ensure that the clinics fulfill these responsibilities. Over the past 10 to 15 years, physicians have increasingly prescribed methadone as an alternative pain medication to other potent drugs with a history of abuse.

This report is the product of the Advisory Committee's work to reduce the diversion, misuse, and abuse of methadone in Pennsylvania. After a number of discussions, several recommendations were developed. The Advisory Committee did not reach agreement on whether or not increased regulation of OTPs would be advantageous to patients. There is agreement that OTPs must do what is necessary to deliver safe, efficacious, and appropriate treatments to their patients while maintaining vigilant concern for the surrounding community. Members instead chose to explore best practices as they currently exist in the field, and to recommend those for adoption by OTPs across Pennsylvania.

There is some indication from the data that there is a connection between the increased use of methadone for pain management and the rise in diversion and abuse of the drug. National authorities are not in agreement on this point, and causation has not been established. Nonetheless, it is recognized by many, including the Advisory Committee, that physicians are not well positioned to handle methadone as a pain management alternative despite their increased prescription of it. There is insufficient education in medical school curricula to prepare doctors for recognizing, evaluating, and

treating addiction, especially in the area of opioids. By extension, patients themselves may not be made fully aware of the unique properties of methadone. Methadone is not like other pain medications. It requires careful monitoring during the induction phase, whether used for addiction treatment or pain management. Methadone has a short duration of effectiveness, yet remains in the body's system for hours after the beneficial effects wear off. Improperly prescribed and dosed by doctors, and improperly taken by patients yields dangerous consequences. Thus, physician and patient education are vitally important if health and law enforcement authorities are to stem the danger.

The Advisory Committee comprehensively addressed methadone diversion, misuse, and abuse, and was able to reach consensus on a number of recommendations. These include recommendations on the induction period, adverse heart affects, the Commonwealth's prescription monitoring program, diversion and theft, and death reviews. OTP recommendations relate to polysubstance abuse, counseling, clinic security, and parking lot security. Recommendations more specific to pain management relate to patient education, physician education, and protocols for prescribing methadone. There were some topics on which consensus was not reached. These include requiring distribution of Narcan to patients and revising regulations to increase counseling hours. These are contentious issues, with advocates who have the well-being of patients and communities at the forefront of their positions. The divergence of expert opinion on these topics suggests they could be the focus of further study by the General Assembly.

APPENDIX I

Memorandum from:
Janice F. Kauffman, R.N. M.P.H., Chair AATOD Policy Committee
Addressing the SAMHSA/CSAT report on QT Interval Screening in Methadone Maintenance Treatment

AATOD
American Association for the Treatment of Opioid Dependence, Inc.

Expanding Access to Quality Addiction Treatment Services

225 Varick Street, 4th Floor ▪ New York, NY 10014 ▪ Phone: (212) 566-5555 ▪ Fax: (212) 366-4647
E-mail: info@aatod.org ▪ www.aatod.org

Memorandum

To: Bonnie Wilford, M.S.
Project Director and Senior Principal
JBS International, Inc.

Cc: Mark Parrino, M.P.A., President of AATOD
AATOD Board of Directors

From: Janice F. Kauffman, R.N., M.P.H.
Chair - AATOD Policy Committee

Date: August 30, 2010

Re: Methadone Mortality Reassessment: SAMHSA/CSAT
QT Interval Screening in Methadone Maintenance Treatment: Report of a CSAT Expert Panel

The AATOD Policy Committee has had the opportunity to review the QT Interval Screening in Methadone Maintenance Treatment CSAT Expert Panel Report and would like to offer comments as you prepare the final document. It is apparent that the Expert Panel put a lot of work into this well done and clearly written document. The literature review is extensive and thorough and will serve as an excellent resource to our colleagues.

AATOD takes the risk for QTc prolongation and TdP very seriously. As you are aware and referenced in this document, AATOD issued a cardiac risk guidance document to the field on March 19, 2009 in response to our concerns about Methadone Mortality in the United States. We concur with the preponderance of recommendations offered by the CSAT Expert Panel document to the field, notably:

1. OTPs should develop comprehensive cardiac risk plans that include a more thorough personal and family medical history of QT syndrome, cardiac conduction defects, and arrhythmias.

2. All medications, electrolytes and toxicology screens (including testing for alcohol not mentioned in your document) should be scrutinized for the presence of conditions, drug interactions and illicit drugs use that potentially add to cardiac risk. Based on this information, treatment plans should address these risk factors and documentation that the patient understands the risks and options be maintained in the medical record.

3. Physician, clinical personnel and patients should be educated about these risks so that patients receive safe, efficacious treatment.

Although the report states "the conclusions provide only general guidance and are not intended to supplant clinical judgment in treating individual patients, nor do they

represent Federal requirements or accreditation standards" (Page 15 line 7-9), they do articulate specific conclusions about clinical procedures that are potentially disruptive and unintentionally detrimental to continued patient care.

1. The Expert Panel Report states: "there is not universal agreement as to the prevalence of QT interval prolongation or TdP in patients treated with methadone" (Page 1 line 31-32) and "an optimal strategy for reducing QT-associated risk has not yet been established" (Page 14, line 35), however specific recommended guidelines suggest otherwise. For example, "a routine ECG to measure QT interval should be performed on every patient within 30 days of admission" and, "ECGs should be performed annually or whenever the methadone dose exceeds 120 mg/day." (Page15, line 22-24) While the literature argues for and against routine testing prior to admission to an OTP, the evidence does not justify routine electrocardiographic (ECG) screening for all methadone treatment patients and does not conclude at what dose level a patient should obtain ECG screening.

The document provides important cautionary guidance for the use of methadone but only in OTPs. It does not pose the same caution to physicians who prescribe methadone for pain management. The conclusions for routine screening and monitoring are not balanced with the Methadone Overdose Mortality Assessment data. Our concerns are as follows:

1. The specific conclusions of the CSAT Expert Panel, although well intended, will have the operational impact of regulatory practice to the field. This is evidenced by the conclusion in the July 19, 2010 ASAM Induction and Stabilization Report. This report states "A routine ECG to measure QT interval should be performed on every patient within 30 days of admission. Additionally ECGs should be performed annually or whenever the methadone dose exceeds 120mg. /day." (Page 13, lines 1-4). If physicians and program administrators in OTPs do not incorporate the specific ECG and dosing guidelines outlined in the reports issued by an expert panel of a Federal authority there will be significant risk to program operations.

2. Premature recommendations for costly routine screening practices will result in potential barriers for methadone treatment patients and an unfunded financial burden for programs.

3. It is anticipated that OTP access to liability insurance will become more costly and challenging for the programs. Premiums are expected to increase and it is also possible that insurance companies will begin to issue exclusion riders for OTPs around these clinical issues. It is also possible that OTPs may not be able to obtain professional liability insurance. The panel does acknowledge the practical and financial challenges that their conclusions pose to OTPs but does not address a strategy to address the impact of this guidance.

We remain committed to working vigorously with our federal and professional colleagues to optimize safety during methadone treatment. We maintain that appropriate clinical monitoring and follow-up is the best protection for patient safety. We think, however, it is premature to issue routine ECG screening recommendations before there is sufficient evidence to support these vigorous steps.

Thank you for the opportunity to comment on these important practices.

APPENDIX II

Information and warning for take-home doses provided by an OTP clinic

NEW DIRECTIONS TREATMENT SERVICES
2442 Brodhead Road Bethlehem, PA 18020
Phone: 610-758-8011 Fax: 610-758-8013

WARNING!

TAKE-HOME METHADONE MUST BE SECURED!

Methadone is a powerful synthetic opioid that is very helpful in the treatment of heroin dependency. Because it is a medication controlled by the federal government, patients must be monitored by a physician who understands all of its side effects. Additionally methadone is dispensed in high doses to which patients have built up a tolerance. Methadone can therefore cause death in children and adults if accidentally ingested because there is no tolerance to the medication.

Patients admitted to New Directions will receive take-home doses of methadone when the Clinic is closed. Some patients may earn the privilege to receive take-home doses of methadone on a regular basis. (In either case, it is very important that the methadone is always secured so that no one but the patient has access to this medication). To accomplish this, we recommend all take-home doses of methadone be kept in a locked storage area. The security of the take-home methadone is an important responsibility of each patient.

Note that it is illegal for a patient to give away or sell methadone take-home doses. Violators may be arrested and incarcerated. Any patient deemed by the program to handling their take-home medication in an illegal or irresponsible manner will lose take-home privileges either permanently or for an extended period of time.

Methadone does not need to be refrigerated, and should not be kept in a refrigerator where children or other adults could mistakenly drink the medication, unless it is stored in a locked box!

Your signature below indicated that you have reviewed New Directions warning about the security of take-home methadone doses, and agree to store any take-home issued to you in a secure method as recommended above.

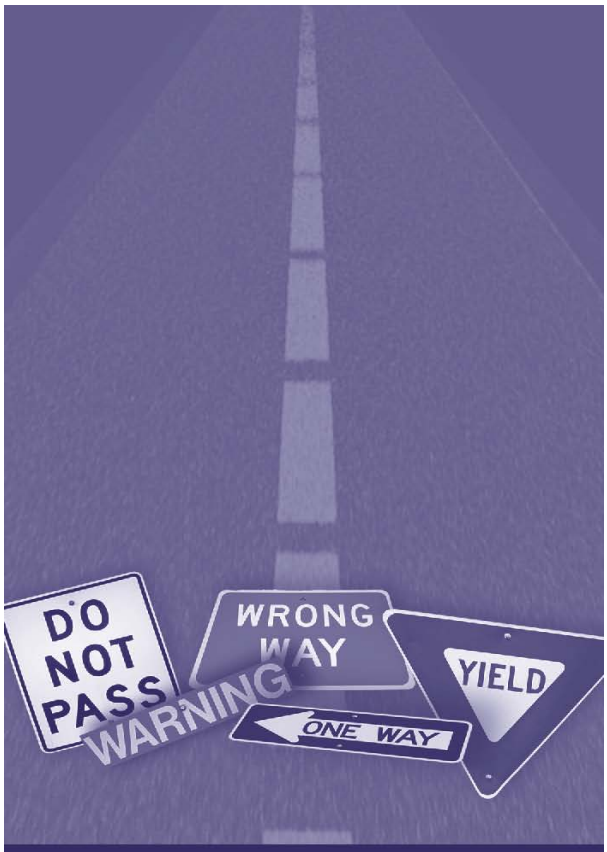
A copy was offered to the Patient.

_____ _____
Patient Date

_____ _____
Witness Date

APPENDIX III

The following information is provided in a brochure available through SAMHSA andthe FDA for methadone patient education.



FOLLOW DIRECTIONS

How to Use Methadone Safely

U.S. Department of Health & Human Services
Substance Abuse and Mental Health Services Administration
Food and Drug Administration

Methadone

Methadone provides relief for patients who do not respond to non-narcotic pain medicines and has also been used for decades to treat individuals who suffer from addiction and dependence on heroin and narcotic pain medicines.

When taken as prescribed, methadone is safe and effective. But all medicines have risks. Patients and healthcare providers need to understand the power and physical effects of methadone in order to get the maximum benefits.

A Proven Road to Relief— If You Keep Your Eyes on the Road

Whether known by Dolophine, Methadose or its generic name, methadone has provided relief to millions of patients. Methadone works by changing how the brain and nervous system respond to pain. It is also used in drug detoxification and treatment programs to lessen the symptoms of withdrawal and to block the effects of opiate drugs. Methadone allows individuals to recover from their addiction and to reclaim active and meaningful lives.

Patients being treated for pain generally receive a prescription from their doctor and take the medication at home. Patients taking methadone for addiction receive their doses at accredited programs under supervision. After a period of stability, these patients are given methadone to take at home between program visits. In all cases, if not taken correctly, methadone can be dangerous.

The Dangers of Overdose

Pain relief from a dose of methadone lasts about four to eight hours. But there are big differences in how each patient reacts to methadone. Even after the pain relief effects wear off, methadone remains in the body for much longer. Taking more methadone to relieve the pain can cause unintentional overdose.

Navigate the Risks: Two Simple Steps

1. Take Methadone *exactly* as prescribed.

To be safe, people must take only the dose prescribed, at the times prescribed. Methadone can build up in the body to a toxic level if taken too often, if the dose is too high, or if it is taken with certain other medicines or supplements.

2. Know—and share—your complete health history.

People who take methadone need to give health professionals every detail of what they are taking. This is especially important for a first-time user of methadone. A long list of medications can interact with methadone:

- Methadone may be more hazardous when used with alcohol, other opioids (opium-like substances) or illicit drugs that depress the central nervous system.
- Be especially careful about other medicines that may make you sleepy, such as other pain medicines, anti-depressant medicines, sleeping pills, anxiety medicines, antihistamines, or tranquilizers.
- Other medicines to watch out for include diuretics, antibiotics, heart or blood pressure medication, HIV medicines and MAO inhibitors.
- If you are taking medicine that may cause disruptions in your heartbeat (known as arrhythmias), you should be especially cautious taking methadone.
- Even if a medication is not on this list, it could still be dangerous.

Older adults and people with debilitating conditions may be more sensitive to methadone's effects. To avoid danger, people should tell health professionals about any illnesses or conditions. Here are just a few that doctors must know about:

- A history of drug or alcohol addiction
- Pregnancy and nursing (current or planned)
- Seizure disorders, such as epilepsy
- Cardiac conditions such as low blood pressure or long QT syndrome (racing heart)
- Breathing disorders such as asthma, sleep apnea or chronic obstructive pulmonary disease

- Mental illness
- A history of head injury or brain tumors
- Other conditions, including liver or kidney disease, underactive thyroid, curvature of the spine, gallbladder disease, adrenal gland disorders such as Addison's disease, prostate enlargement and urination problems

Using Methadone: Steer Clear of Danger

What Can Patients Do to Stay Safe?

- Methadone can be addictive. Patients should take care not to abuse it.
- Never use more methadone than the amount prescribed.
- If you miss a dose or if you feel it is not working, do not take extra. For pain management patients, take only the recommended dose at the recommended time. For patients in methadone maintenance treatment for addiction, contact your clinic for instructions.
- *No one* should use methadone if it has not been prescribed for them.
- Be especially careful if taking methadone for the first time.

When Taking Methadone:

- Do not consume alcohol or medicines that contain alcohol.
- Be careful when driving, operating heavy machinery or doing anything that requires you to be alert. Methadone, like many other medications, can slow thinking and reaction time and make you drowsy.
- Store methadone at room temperature and away from light.
- Always take methadone in the exact dosage amount and form you have been prescribed.
- Take steps to prevent children from accidentally taking methadone.
- Never give methadone to anyone else even if the person has similar symptoms or suffers from the same condition as you because it can be dangerous.
- Dispose of unused methadone by flushing it down the toilet.

Suddenly stopping or going off methadone treatment can be dangerous. Patients should talk to their doctors first. To minimize withdrawal symptoms, health professionals can work out a plan to gradually reduce the medication.

Take Side Effects Seriously

Some side effects are emergencies. Patients should stop taking methadone—and contact a physician or emergency services right away—if they:

- Have difficulty breathing or shallow breathing
- Feel light-headed or faint
- Get hives or a rash; have swelling of the face, lips, tongue or throat
- Feel chest pain
- Have a fast or pounding heartbeat
- Have hallucinations or confusion

Make sure your family members and members of your household know what symptoms to look for, especially signs of shallow breathing or loud snoring.

Other side effects are not life-threatening, but can still be cause for concern. Patients should immediately talk to health professionals if they have: severe or persistent nausea, vomiting, constipation, loss of appetite, weight gain, stomach pain, sweating, mood changes, vision problems, flush or red skin, sleep difficulties, decreased sexual desire or ability or missed menstrual periods.

Feel Lost? Here's Help

Patients who develop a problem with methadone or have questions should speak with a physician or contact 1-800-662-HELP.

Helpful information also can be found at the following Web sites:

U.S. Department of Health and Human Services (HHS)
www.hhs.gov

Substance Abuse and Mental Health Services Administration (SAMHSA)
www.samhsa.gov

Center for Substance Abuse Treatment (CSAT)
www.csat.samhsa.gov

CSAT's Division of Pharmacologic Therapies
www.dpt.samhsa.gov/methadonesafety

Food and Drug Administration (FDA)
www.fda.gov

SMA-09-4409