ADDICTION TREATMENT

Forum

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Drug screening & testing have great potential for doing either good or harm during MMT.

IN THIS ISSUE

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Clinical Concepts

Substance-Abuse Monitoring in MMT

Drug screening and testing – substance-abuse monitoring – is an aspect of methadone maintenance treatment (MMT) that has great potential for doing either good or harm. Yet, this is an area in which treatment clinics are provided very little specific, evidence-based guidance and few best-practices recommendations.

Consequently, most clinics have traditionally established policies and procedures in this area based on convenience or habit, while adhering to the few regulations that do exist. Monetary constraints also are taken into account, but there often is a simple acceptance of whatever screening and testing services are most readily available, rather than choosing the best approach from a therapeutic perspective.

This article discusses a few areas of confusion that have surfaced during research for a more comprehensive and evidence-based White Paper report currently in development by *AT Forum*.

A Therapeutic Tool

In general medicine, "monitoring" is a *therapeutic tool* allowing oversight of a patient's progress and response to treatment. It is not intended as a form of meddling surveillance merely to detect noncompliance or misbehavior by the patient.

For example, blood glucose levels are used to gauge response to insulin in controlling diabetes. Blood pressure readings assess the effectiveness of antihypertensive medication.

Similarly, monitoring for substances of abuse in MMT settings is *one important*

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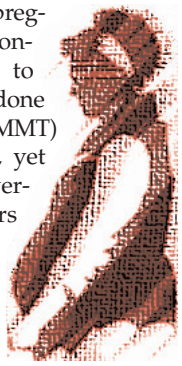
Research Update

Pregnancy & MMT



Substance abuse in pregnant women is of great concern due to the risks to unborn children. Methadone maintenance treatment (MMT) is the standard of care, yet there have been controversies through the years regarding effective and safe methadone dosing in these women, and the advisability of breastfeeding after delivery. There also has been increasing interest in using buprenorphine.

These issues have been extensively studied and some current findings are briefly summarized here.

Methadone vs Buprenorphine?

There have been reports that buprenorphine may be equally effective and safe as methadone during pregnancy. However, whereas methadone is classified by the FDA as a Pregnancy Category B medication, relatively limited data are available on buprenorphine during pregnancy and it carries a C classification, recommending greater caution in its use. A recent Treatment Improvement Protocol from CSAT specifically notes that buprenorphine has not as yet been fully approved for use in pregnant patients.[1]

A neonatal abstinence syndrome (NAS) requiring medical intervention is sometimes experienced by methadone-exposed newborns, and some preliminary evidence suggests that buprenorphine may help reduce the incidence and/or severity of NAS.[2] However, most investigations have found that the two opioid medications are generally

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Events to Note

For additional postings & information, see:
www.atforum.com

April 2005

American Counseling Association Annual Convention
April 6-10, 2005
Atlanta, Georgia
Contact: 800-347-6647; www.counseling.org

Western Psychological Association 85th Annual Convention
April 14-17, 2005
Portland, Oregon
Contact: 253-851-7546; www.westernpsych.org/

ASAM (American Society of Addiction Medicine) - 36th Annual Conference
April 15-17, 2005
Dallas, Texas
Contact: 301-656-3920; www.asam.org

May 2005

American Psychiatric Association Annual Meeting
May 21-26, 2005
Atlanta, Georgia
Contact: 703-907-7300; www.psych.org

June 2005

NMHA (Natl. Mental Health Assn.) Annual Conference
June 9-11, 2005
Washington, DC
Contact: 703-684-7722; www.nmha.org

CPDD (College on Problems of Drug Dependence) – 67th Annual Meeting
June 18-23, 2005
Orlando, Florida
Contact: 215-707-3242; www.cpdd.org

UPCOMING 2005...

American Psychological Association 113th Annual Convention
August 18-21, 2005
Washington, DC
Contact: 202-336-5500; www.apa.org

American Psychiatric Association 57th Institute
October 5-9, 2005
San Diego, California
Contact: 703-907-7300; www.psych.org

American Public Health Association 133rd Annual Meeting
November 5-9, 2005
New Orleans, Louisiana
Contact: 202-777-APHA; www.apha.org/meetings/

[To post your announcement in AT Forum *and/or our web site, fax the information to: 847-392-3937 or submit it via e-mail from www.atforum.com]*

A.T.F.

Straight Talk... from the Editor

Drug Monitoring: Therapy or Tyranny?

Drug screening and testing – "substance-abuse monitoring" – is a challenging and difficult aspect of methadone maintenance treatment (MMT).

Studies have found persistent substance abuse in 20% of patients during MMT, with half of those persons also continuing to use illicit opioids. A prior *AT Forum* survey (Spring 2004) found that up to a third of patients may experience full-blown relapses, with most cases occurring within 6 months of entering treatment. However, there is an ever-present danger of drug lapses or relapses even in the most abstinent and stable patients.

If any level of substance abuse can be detected sooner rather than later, more effective and timely interventions might be implemented to stem relapses and prevent treatment dropouts. Substance-abuse monitoring can play an important role, as part of an overall therapeutic strategy, for achieving those objectives.

Do It Right, Or Pay A Price?

As our interview with Greg Carlson in this edition makes clear, the federally-mandated 8 substance-abuse assessments per year can make an MMT program look good, because a great deal of drug use will go unrecorded. But this is ineffective for providing better patient care.

Realistically, a greater frequency of monitoring can create a burden in terms of added staff time and expense. However, as Carlson suggests, unless drug screening is done often enough it has little value; so either do it right or the money might be wasted.

There are additional cost issues: What is the cost of formerly stable patients relapsing without it being recognized and contracting HIV or hepatitis? What is the cost to an MMT program when patients leave treatment prematurely due to continuing substance abuse that wasn't detected?

Who Is Accountable?

Unfortunately, urinalyses are used too often to identify and punish offending MMT patients. Such practices might be characterized as "therapeutic tyranny" (recently noted by Robert Newman, MD, in *European Addiction Research* [2005;11, p.12]).

Rather than contributing to the therapeutic process, as effective monitoring should do, it ends up creating a hostile environment of antagonism, distrust, and dishonesty.

However, it seems unfair to hold MMT programs solely accountable when they are provided little in the way of specific guidance from federal and state authorities or accreditation organizations. And, the few explicit regulations that do exist are of minimal help for improving substance-abuse monitoring practices.

Thus, clinics are left on their own to educate themselves and satisfy the requirements of agencies to which they are accountable. At the same time, questions about where funding will come from for better approaches remain largely unanswered.

Substance-abuse monitoring is important and we will be exploring this subject further from various perspectives. Please help by responding to the survey in this edition of *AT Forum*.

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NEW SURVEY: Drug Monitoring in MMT?

Please respond to the following survey questions:

1. At your clinic, how many drug screens or tests at a *minimum* must *each* patient have during a 12-month period? _____
2. What substances are *always* assessed? (check all that apply): ❑ alcohol; ❑ amphetamines; ❑ barbiturates; ❑ benzodiazepines; ❑ cocaine; ❑ marijuana; ❑ methadone; ❑ opioids; ❑ PCP; ❑ other: _____.
3. Are on-site drug screens (not requiring shipping to a laboratory) used? ❑ Often; ❑ Sometimes; ❑ Never.
4. If on-site screening devices are used, what specimens are collected? ❑ Urine; ❑ Oral fluid; ❑ Both.
5. Are you responding as a ❑ patient, or ❑ clinic staff member?

***There are several ways to respond to* AT Forum *surveys:* A.** provide your answers on the postage-free feedback card in this issue; **B.** write, fax, or e-mail [info above]; or, **C.** visit our web site to respond online. As always, your written comments are important.

Wide Reach of *AT Forum*

Did you know… *AT Forum* reaches more readers than most other publications in the addiction treatment field.

According to data recently compiled by the International Society of Addiction Journal Editors, there are 75 journal and newsletter publications worldwide specifically addressing addiction treatment topics. The average print circulation of each is a mere 1,250 copies (median 1,000; range 155 to 4,000). In contrast, *AT Forum* is mailed free of charge to 12,000 subscribers in the U.S. every quarter.

Plus, *all* of our publications are freely accessible at our website: **www.ATForum.com**. Each month there are more than 20,000 visitors to the site from around the world.

So, as you think about submitting articles or responding to *AT Forum* surveys, keep in mind that you will be reaching the widest audience of any publication in the field.

www.ATForum.com Updated

Visit our website for the most complete offering of *FAQs* in the field. Sixteen new frequently asked questions, along with evidence-based answers, have been added and the remainder have been updated – a total of 36 FAQs.

Other improvements to the site are ongoing. Navigation tabs have been reordered and sections added. See the new *Terms of Use* and *Privacy Policy* regarding the site. Also, links to *Related Websites* have been checked and updated.

News & Updates, primarily focusing on methadone maintenance treatment, are now added bimonthly to keep readers informed of the latest research and developments in the field.

As always, the *Addiction Resources* section contains a variety of important documents for readers. And, be sure to respond to the latest reader survey on a topic of interest to the field, or provide your comments and feedback – click on the new *Contact Us* tab.

A.T.F.

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way to assess patient progress in treatment, as well as effectiveness of the program itself. There also are vital safety concerns in identifying patients who are experiencing a drug relapse or using substances that may lead to drug overdose or interact with methadone in a harmful manner.

In addiction treatment settings, monitoring also has a surveillance role. For example, there have been long-standing regulatory interests in monitoring, especially screening for methadone, to curtail methadone diversion. Yet, its effectiveness for this purpose is debatable.

Misbehaving patients with diabetes or hypertension who binge on sweets or salty snacks, respectively, receive reprimands and education from their physicians. However, MMT patients who abuse drugs may face worse fates. Punishments for drug-positive urinalyses have included methadone dose decreases, loss of take-home methadone privileges, or withdrawal from methadone entirely; although, the advantages of such "negative reinforcers" have never been convincingly demonstrated.

Substance-abuse monitoring in MMT is typically a 2-stage process, involving drug *screening* and drug *testing*. Distinctions between the two types of analyses, or assays, are important from perspectives of patient benefit, clinic operations, regulatory compliance, and cost. Still, this is a source of some confusion.

Presumptive Screening

Screening uses relatively straightforward techniques for detecting the presence or absence of an illicit drug or drug class (e.g., opioids) in a specimen provided by the patient. Urinalysis is the "gold standard" in this regard.

This has been described as a preliminary or "*presumptive*" approach, meaning that it may serve to quickly eliminate or rule-out the most common substances of abuse; except for methadone, which should be present in the screen. Positive screening results for illicit drugs should be accepted with less certainty.

Easy-to-use drug-screening devices have been developed – using urine or, less commonly, oral fluid specimens – that can provide results in the clinic, at the point-of-collection (POC). These *POC on-site* screens offer important benefits by allowing immediate feedback to MMT patients and an appropriate therapeutic response, if necessary. Laboratories also can perform screening procedures as a first step in the specimen analysis but, considering the availability of on-site screening devices, this may not always be the best approach. See ***Table***.

Where Are Substance-Abuse Monitoring Assays Performed?

	On-Site	Laboratory
Screening *Detects a range of substances.*	***Yes***	***Possibly***
Testing *Confirms presence of substances.*	***Not Practical***	***Yes***

Confirmatory Testing

Testing, on the other hand, uses more technically sophisticated and precise methods to "*definitively confirm*" if a substance detected in a drug screen specimen is truly present. It requires delicate equipment and trained operators, beyond the capabilities of almost all MMT clinics, so it entails shipping the specimen to a qualified laboratory and waiting for results.

When is Lab Testing Necessary?

Since it is more rigorous and less affected by specimen adulteration, and medications or other substances patients may be taking – called "cross-reactivity" – laboratory testing is required for legal proceedings. It also is used when drug monitoring results might decide issues of employment, professional licensing, sports eligibility, and the like.

In most MMT clinics, only a minor proportion of patient specimens typically would be positive for substances of abuse during screening, and not all of those would require confirmatory lab testing.

When informed of the results, many patients will attest to their drug use – along with the quantity and quality of drug, mode of administration, and frequency of use. Considerable research evidence suggests that patient self-reports can provide valuable information, beyond that gained from screening or testing alone, ***if*** the therapeutic environment is supportive and nonthreatening.

Therefore, except for specific cases, such as court-mandated monitoring, the necessity of the added time and expense

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Unless substance-abuse monitoring is done frequently enough it offers little of value.

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for routine laboratory *testing* of *all* MMT-patients' specimens is highly questionable. Yet, it appears that many MMT programs – as well as regulatory and accreditation agencies – often do not make necessary distinctions between screening and testing, or between the relative appropriateness of on-site versus laboratory approaches.

This is despite recommendations from CSAT's own National Advisory Council (NAC) that, *"Drug testing is a medical service and therefore decisions about how it should be done, or when/whether it can be changed, are completely within the purview of the program's Medical Director."* In other words, there should be no official barriers to MMT programs modifying and improving their substance-abuse monitoring practices.

Federal Mandates

According to Greg Carlson – Director, Addiction Medicine, Hennepin County Medical Center, Minneapolis – when he started work in the MMT field more than 35 years ago substance-abuse monitoring was not required at all.

FDA regulations in 1972 were the first to mandate drug testing in MMT, requiring a minimum of 8 random screens during the first year of treatment. However, this was interpreted by most MMT programs, not as a "minimum" but as the clinical "standard."

"So we went from no monitoring requirement at all to a relatively rigorous schedule," he says. "However, it took a week or two to get test results back from the lab, costs were high, and the results were often unreliable."

Through the years, laboratory urinalysis techniques and turnaround times greatly improved. "Still, this represents a significant financial investment during each year," Carlson observes.

He believes that properly-applied monitoring can provide therapeutic benefits in helping to bring about and measure positive changes in patients' lives; however, he adds, "If you're not going to do anything constructive with the results, why invest the time and money in the first place?"

Monitoring Frequency

Unless monitoring is done frequently enough it has little value, Carlson believes. Federal Regulations revised in 2001 require only a ***minimum of 8 random*** substance-abuse assessments each year during MMT (without actually distinguishing between screening or testing, or the type of specimen to be assessed).

Why 8 was chosen is unknown. Carlson and colleagues used a computer-generated model to simulate how long a patient's drug use might go undetected with different scenarios (reported in *AT Forum*, Fall 2004). Theoretically, with 8 yearly screens, a patient relapsing to weekly cocaine abuse could go nearly 11 months before it is detected.

This makes sense, since on a *truly random* basis all 8 urinalyses could come in the first month. Even if only one urinalysis is done each month, on a random day, patients will soon figure out that the remainder of each month and 4 months every year will be unmonitored "holidays" to freely abuse drugs if they are so inclined. Increasing the monitoring frequency to every month – 12 times yearly – offers little improvement.

In Carlson's opinion, "drug screening less frequently than twice-monthly is clinically ineffective and a waste of money. At the current minimum urinalyses per year only daily or near-daily drug users would be easily detected and you may not even need drug screening for that if proper counseling is ongoing."

Therefore, clinics need to be flexible in their approach. Some clinicians have suggested that specimen collection should become a very frequent and routine part of the therapeutic regimen. To control expenses only a random portion of all specimens collected need to be assessed. There have been studies demonstrating that the mere act of collecting samples as part of ongoing monitoring, whether or not *all* samples are assayed, has beneficial effects on treatment outcomes, Carlson notes.

A critical therapeutic question is: *How long should a drug relapse continue before it is detected?* Serious relapse is always a possibility during any stage of recovery, and the sooner problems are detected the greater the chances of helping the patient before he/she drops out of treatment entirely. Money saved by infrequent monitoring is offset by high costs of clinical ineffectiveness.

On-Site Screen Advantages

On-site drug-screening devices are relative newcomers to substance-abuse monitoring, although they have been available for more than a decade. They come in different formats: dip sticks, cups, cassettes, and card devices – all of which visually display results in only minutes while patients are present.

During recent years, costs for these have decreased while their quality has increased dramatically. It is important to understand that looking only at past research studies conducted using older on-site devices, rather than more current versions, can be misleading.

The effectiveness of these modern on-site devices for preliminary screening purposes in MMT programs has been underestimated. Their ability to produce results that are accurately either drug-positive or drug-negative approaches that of more sophisticated laboratory assays, in most cases.

And, as Carlson notes, "the quicker you have access to information the more helpful it can be. On-the-spot drug screening results provide a more powerful clinical tool."

Official Recognition

New government guidelines from SAMHSA for Federal Workplace Testing programs have accepted on-site screening procedures and recognized their potential utility. And, CSAT's NAC has stated, *"Properly conducted POC urine testing [that is, point-of-collection on-site screening] … is adequate and probably offers clinical benefits, in terms of rapidity of clinical feedback, over and above those of laboratory testing of either OF [oral fluid] or urine."*

Furthermore, they recommend that additional monitoring should be performed whenever there is an appearance

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Patient safety and therapeutic merit should be driving forces behind monitoring in MMT.

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of patient intoxication, and "POC testing [i.e., screening] of urine may be especially helpful for this purpose."

Therefore, there is nothing in any guidelines or regulations prohibiting on-site drug screening and, in fact, this modality appears to have been recommended by official sources.

Safety & Therapeutic Challenges

The driving force behind substance-abuse monitoring in MMT, as with other practices, should be patient safety and the therapeutic merit in fostering addiction recovery. As Carlson stresses, "this is but one clinical tool that must be integrated with other information about the individual patient."

He notes that, if clinic staff are using urinalyses to "catch" patients in a game of "cops 'n robbers," or if results from infrequent assessments are being misinterpreted, it could do more harm than good. "For example, we've had transfers from programs where patients were administered only the minimum 8 screens per year and were supposedly doing very well," he says. "When we do weekly drug screens during the first month after transfer they 'suddenly' become patients with serious substance abuse problems."

As noted at the outset, this is an aspect of MMT for which clinics have no officially sanctioned manual or protocol to follow. Therefore, the challenge ahead will be for clinic staff to become more educated and develop better substance-abuse monitoring practices based on available evidence. *AT Forum* plans to assist in that endeavor.

A.T.F.

NOTE: Due to space limitations, references for information contained in this article have not been listed. Watch for a comprehensive evidenced-based report from *AT Forum* titled, *"SAM* in MMT (*Substance-Abuse Monitoring)."*

AT Forum Survey Results: Sleep Disorders

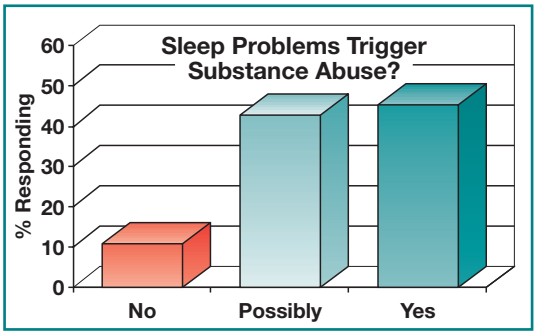
Sleep Disturbances Are Common During MMT

Approximately 130 readers (60% of them clinic staff) responded to the survey on "Sleep Disorders in MMT" relating to a feature article on the subject in the Summer 2004 edition of *AT Forum* (Vol. 13, #3).

On average, respondents noted that half (50%) of the patients at their respective clinics had complained of persistent sleep disorders. However, nearly a third of those responding said that 80% or more of patients had serious problems with sleep, which is consistent with other surveys of MMT populations.

Few Patients Get Rx Meds

Most readers (89%, see ***graph***) agreed to some extent that sleep disturbances can trigger drug or alcohol abuse during MMT. Yet, responses indicated that only 1 in 4 clinics (25%) prescribe medications to help patients sleep.



The most frequently prescribed sleep medications included (in order of frequency): zolpidem, trazodone, diphenhydramine, doxepin, quetiapine, and some benzodiazepines (e.g., diazepam, alprazolam). However, a few physicians noted concerns about addictive potential with quetiapine.

Readers Share Experiences

"I've always had sleep problems, which have gotten worse since starting MMT. I have a very hectic lifestyle and can't seem to make myself lay down at night. I get on average about 2 to 3 hours of sleep each night. The clinic doctor has given me sleep aids but all they do is make me groggy in the evening and don't allow me to stay asleep. I've tried melatonin and valerian root, and [diphenhydramine] but nothing helps."

"Many patients at our clinic suffer from PTSD (post-traumatic stress disorder) and that adds to their sleep problems. If these patients do not get relief from trazodone or short-term zolpidem, we try to refer them for sleep evaluations."

"I've been on methadone for 32 years and have always had sleeping problems – I wake up every 2 hours."

"At our clinic we've had success with acupuncture in helping patients achieve greater quality of sleep. It also helps with pain management, anxiety, and depression."

"I've been an MMT patient for 10 years and the only thing that helps me sleep is splitting my take-home dose; otherwise, I frequently wake up due to withdrawal during the night. Yet, the clinic doesn't approve of this."

New Sleep Meds Soon Available

Most of the current sleep-aid medications are recommended for short-term use only; whereas, sleep problems are often chronic afflictions. A newer generation of drugs is coming along that may provide involuntary night owls with the sweet dreams they are longing for. At the same time, these agents are not expected to promote abuse or dependency.

Last December (2004), the FDA approved ***eszopiclone***, the first prescription non-benzodiazepine sleep medication considered safe and effective for long-term use. It is indicated for patients who have difficulty falling asleep as well as for those unable to sleep soundly through the night. Studies are continuing on its effectiveness for patients also suffering from depression or pain.

Another drug, ***indiplon***, is a unique non-benzodiazepine agent that works on specific brain receptors responsible for promoting sleep. Studies demonstrated its safety and effectiveness for long-term use. An application for approval of indiplon to treat multiple forms of insomnia has been submitted to the FDA.

Finally, ***ramelteon*** is a unique medication that may promote sleep by helping to regulate the body's 24-hour sleep-wake cycle. It is a non-benzodiazepine agent affecting special brain centers comprising a "master clock" that helps the body shift easily between phases of day and night to encourage sleep onset. A new drug application for ramelteon has been submitted.

A.T.F.

MMT Pioneers: Marie Nyswander, MD - Listening to Patients

Despite a life marked by many changes, Marie Nyswander, MD, seems destined to have become a leader in the addiction treatment field.

Her straightforward manner, her unsentimental compassion, and her easy rapport with patients were legendary. Most important, at a time when her fellow psychiatrists viewed drug-addicted persons with disdain as being mentally-deficient moral outcasts, she promoted the idea of addiction as a disease.

It is commonly recognized that no other American psychiatrist of her generation benefitted the lives of so many opioid-addicted patients.

Addiction as a Medical Problem

Marie was born Mary Elizabeth Nyswander (which she later changed to Marie) in Reno, Nevada, in 1919. Her father, James, was a mathematics professor and her mother, Dorothy, earned a doctorate in psychology after the couple's divorce when Marie was still a toddler.

Marie was raised by her mother and the two eventually moved to New York City in 1936. Marie attended Sarah Lawrence College and later went to Cornell University Medical College, graduating in 1944.

After completing a surgical internship, she joined the Navy as a surgeon. However, the Navy had no place for female surgeons in those days and Nyswander was posted to the Lexington Narcotic Hospital in Kentucky run by the U.S. Public Health Service.

The Lexington experience was a turning point. Nyswander saw drug addicts from all walks of life branded as psychopaths, mistreated, and subjected to racial insults. She became convinced that these patients could and should be treated more humanely, as individuals.

When she left the service, Nyswander decided that surgery was not for her and pursued a career in psychiatry. She trained at New York Medical College in the late 1940s and established a private psychiatric practice in the early 1950s.

She volunteered much of her time treating impoverished drug-addicts and, in 1955, Nyswander helped establish the Narcotic Addiction Research Project — a first of its kind outpatient program providing actively addicted patients with intensive individual psychotherapy. She also set up a clinic to treat jazz musicians addicted to heroin and by the early 1960s was treating addicts in an East Harlem storefront clinic.

Nyswander described her clinical experiences in a book, *The Drug Addict as a Patient* (1956). Her patients' repeated cycles of brief recovery inevitably followed by drug relapse were frustrating, yet she believed they could be helped by clinicians willing to learn more about addiction. She presented a radical viewpoint, at the time, that addiction should be approached from the perspective of *patients with a **medical** problem*.

Nyswander's empathy with patients may have been influenced by her self-acknowledged addiction to nicotine; she was a 3-pack-a-day smoker. In Nat Hentoff's excellent book on her work, *A Doctor Among the Addicts* (1968), she tells of once attempting to quit: "The craving for cigarettes exists as an entity, separate from pleasure. Nor did the craving diminish with time. …if it's this hard to stop smoking, think what it must be like to stop taking a drug such as heroin."

Birth of MMT

Another turning point came for Nyswander in the early 1960s when she was invited to join Vincent Dole, MD, at Rockefeller University in New York City. He was embarking on a project exploring new pharmacotherapies for opioid addiction and had read Nyswander's book. He believed she had the necessary skills and experience in working with drug-addicted patients. In 1964, a third member joined the team – Mary Jeanne Kreek, MD – who was a young clinical investigator and first year resident in internal medicine.

After testing a number of agents, the team soon discovered that methadone stemmed withdrawal and relieved narcotic hunger, yet at stabilized doses it did not produce the euphoria of other opioids. By spring 1965, the team had data on 22 patients successfully treated with methadone and published their remarkable findings. Expansion of their program and further publications soon followed, giving birth to the methadone maintenance treatment field.

Essential Lessons; Seeing the Inner Person

According to Mary Jeanne Kreek – who is now Professor and Head of the Laboratory of the Biology of Addicted Diseases at Rockefeller University – Nyswander was intense and rather firm at times. However, she was always open-minded when it came to discussing individual patients and their treatment.

"Many therapists and clinicians would dismiss what patients were saying as the ramblings of disturbed, addicted minds," Kreek notes. "Yet, Marie reminded us again and again, '***listen to the patient***.'"

"Marie felt that much could be learned by careful listening," Kreek says. "Then, if the whole story was not forthcoming, patients could be questioned."

A major new concept of the team was viewing addiction as a *brain disease*. Patients should not be defined by their past behaviors and merely viewed as criminals or weak-willed. "Marie knew that behavior management alone was insufficient to deal with addiction," Kreek continues. "However, the notion of using pharmacotherapy, such as with methadone, to treat the drug-addicted brain was a new idea and slow to catch on."

In 1965, Nyswander married Vincent Dole, and she passed away in 1986 at the age of 67. Each year since 1983 the Nyswander-Dole Award created in their honor – and now simply known as "The Marie Award" – has been bestowed on individuals who have made outstanding contributions to the methadone treatment field.

Looking back, Dole once remarked that her secret was an ability to see the inner person. No doubt, such vision was aided by better listening to patients.

A.T.F.

comparable in terms of health outcomes for mothers and their newborns, including NAS.[3,4]

Usually, small groups of pregnant patients were studied,[4] and doses may have been inadequate for some; ranging from 30 to 100 mg/day of methadone, and 8 to 24 mg/day of buprenorphine.[2,4] Patient selection criteria defining which pregnant women might do better on methadone versus buprenorphine when entering treatment are still unresolved.

Adequate Methadone Dosing?

MMT continues to be plagued by misunderstandings of its use during pregnancy. In a recent newspaper advice column, an obstetrician described methadone as having harmful effects, especially at higher doses. It was alleged that all fetuses develop dependence and, after birth, go through a painful withdrawal that is worsened by the amount of methadone the mother is taking.[5]

It was once thought that methadone during pregnancy should not exceed 20 mg/day. Current guidelines acknowledge that pregnant women require at least 50 to 150 mg/d for therapeutic efficacy, often more.[1] Additionally, significant dose *increases* are often required during later stages of pregnancy.[6]

Researchers have determined that NAS is unaffected by maternal methadone dose,[7] even in women receiving up to 200 mg/d.[8] In fact, NAS tended to be more severe in newborns of women receiving low doses. Consequently, pregnant women should receive *whatever* dose is most therapeutically adequate on an individual basis.[6-8]

Furthermore, it seems the best way to deliver *adequate* methadone during pregnancy is to split the daily dose into two or more amounts, particularly during the 3rd trimester.[9] This has been found beneficial for the developing fetus [10] as well as in helping to reduce ongoing substance abuse by the mother.[9]

Continued Substance Abuse?

Pregnancy and concerns about the health of their unborn children appear to motivate many women to enter MMT and achieve illicit-drug abstinence. However, ongoing stresses often seem to overcome this motivation and pregnant patients do not appear to become more abstinent in treatment than any other women.[11]

In comparing pregnant and non-pregnant groups of women, investigators have found equivalent rates of retention in treatment and ongoing substance abuse. [11] A newly-reported Swiss study found that 64% of pregnant women continued abuse of heroin and cocaine, and this reversed the normally positive effects of methadone on birthweight in their newborns.[12]

Pregnant women should receive whatever methadone dose is most therapeutically adequate on an individual basis.

Some researchers have reported even higher rates of substance abuse.[11] And, such problems also are found in pregnant women treated with buprenorphine.[4]

Research in this area often neglects to consider how low, subtherapeutic maternal methadone doses may affect continued illicit-drug use. Women in the Swiss trial with high rates of substance abuse, noted above,[12] were receiving only 50 mg/d of methadone on average, with most administered less than 70 mg/d. In contrast, a recent study found that three-quarters of women receiving methadone doses averaging 94 mg/d (and ranging up to 240 mg/d) achieved illicit-drug abstinence during their pregnancies.[13]

Breastfeeding Concerns?

Participation in MMT does not prohibit breastfeeding, although methadone is excreted in human milk. Long ago, researchers observed that the typical 0.012 to 0.057 mg/day of methadone in breast milk would not have any adverse clinical effect on a newborn;[14] also, due to variable metabolism, this amount does not correlate with any particular daily methadone dose in the mother.

The American Academy of Pediatrics [15] and the American Osteopathic Association [16] have both come out in favor of mothers in MMT breastfeeding their infants. They emphasize the health benefits of breastfeeding for those infants whose mothers are in successful recovery from addiction.

To minimize possible infant exposure, it might be recommended that breastfeeding not be done during the time of expected peak serum methadone level (SML) in the mother, which is typically from 1 up to 6 hours after dosing. For example, the mother might take her daily methadone dose just after breastfeeding and prior to the infant's longest sleep time, or use a milk supplement for feeding during peak SML periods.[14]

Some flexibility in the scheduling of dosing would be required. And, the benefits versus risks should be considered; taking into account any potential contraindications to breastfeeding, such as HIV infection, and the mother's continued substance abuse, if any.

1. CSAT. Substance Abuse Treatment for Persons With Co-Occurring Disorders. TIP 42. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2005. DHHS Publication (SMA) 05-3992.
2. Jones H. Role of buprenorphine in the treatment of opioid dependent pregnant women. In: Program and abstracts of the 6th European Europad Conference; November 1-3, 2004; Paris, France.
3. Gourarier L, et al. A prospective study of 259 pregnant women treated with either buprenorphine or methadone through delivery, and neonatal parameters of their 260 children. Paper presented at: CPDD (College on Problems of Drug Dependence) 65th Annual Meeting; June 2004; San Juan, Puerto Rico.
4. Primorac A, et al. Double-dummy, double-blind comparison of buprenorphine and methadone in pregnant opioid-dependent women. Paper presented at: CPDD (College on Problems of Drug Dependence) 65th Annual Meeting; June 2004; San Juan, Puerto Rico.
5. Cressman B. Methadone. Daily Mountain Eagle (Jasper, AL). August 26, 2004.
6. Jarvis MA, Wu-Pong S, Knisley JS, Schnoll SH. Alterations in methadone metabolism during late pregnancy. J Addict Dis. 1999;18[4]:51-61.
7. Kuschel CA, Austerberry L, Cornwell M, Couch R, Rowley RS. Can methadone concentrations predict the severity of withdrawal in infants at risk of neonatal abstinence syndrome? Arch Dis Child Fetal Neonatal Ed. 2004;89(5):F390-F393.
8. Berghella V, Lim PJ, Hill MK, Cherpes J, Chennat J, Kaltenbach K. Maternal methadone dose and neonatal withdrawal. Am J Obstet Gynecol. 2003;189:312-317.
9. DePetrillo PB, Rice JM. Methadone dosing and pregnancy. Int J Addict. 1995;30[2]:207-217.
10. Wittmann BK, Segal S. A comparison of the effects of single- and split-dosing methadone administration on the fetus: ultrasound evaluations. Int J Addict. 1991;26[2]:213-218.
11. Crandall C, Crosby RD, Carlson GA. Does pregnancy affect outcome of methadone maintenance treatment? J Subst Abuse Treat. 2004; 26(4):295-303.
12. Kashiwagi M, Arlettaz R, Lauper U, Zimmermann R, Hebisch G. Methadone maintenance program in a Swiss perinatal center. Management and outcome of 89 pregnancies. Acta Obstet Gynecol Scand. 2005;84(2):140-144.
13. Welle-Strand GK. Medication assisted rehabilitation and pregnancy: the Norwegian experience. In: Program and abstracts of the 6th European Europad Conference; November 1-3, 2004; Paris, France.
14. Kreek MJ, Schecter A, Gutjahr CL, et al. Analyses of methadone and other drugs in maternal and neonatal body fluids: use in evaluation of symptoms in a neonate of mother maintained on methadone Am J Drug Alcohol Abuse. 1974;1(3):409-419.
15. American Academy of Pediatrics Committee on Drugs. The transfer of drugs and other chemicals into human milk. Pediatrics. 2001;108(3):776-789.
16. AOA stands strong on breastfeeding [press release]. US Newswire, July 21, 2003.

A.T.F.

Does Age Matter in MMT?

At a recent national forum on drug addiction in the elderly sponsored by the National Institute on Drug Abuse (NIDA), federal officials said the number of seniors with alcohol and other drug problems is expected to leap 150% by 2020 to 4.4 million. Most, two-thirds, of substance abuse in these older adults – in their 50s and 60s – is long-standing, rather than late-onset.

NIDA noted that elderly addicts have many of the same problems as young persons with addictions, plus other issues unique to their age group. Furthermore, at least half have problems with drugs other than alcohol, with opioids becoming a prominent problem requiring attention. Unfortunately, methadone maintenance treatment (MMT) was not a part of NIDA's agenda.

More Than Just Getting Old

AT Forum has previously focused on this topic – broadly called the "Graying of Methadone" *(see, Fall 1995; Winter 2003; and Fall 2003)*. Generally, the MMT population is aging, with a quarter to a third of patients in some clinics age 50 or older.

It was suggested that aging is more than simply "getting old," but is a process involving biological, social, emotional, and often financial changes affecting a patient's health and well-being. MMT federal regulations, state guidelines, and many clinics have largely ignored the special needs of elderly patients.

Elders Do Well in MMT

A recently reported study[1] examined a large cross section of older patients in MMT. Among 10 programs surveyed, estimates of patients age 55 or older ranged from 2% to 60%. The researchers found that significantly more older patients were married and were "highly successful" in treatment, although fewer were employed.

Overall, older patients had more chronic medical problems than younger ones, but the differences were not statistically significant. Of particular concern were hypertension, diabetes, liver disease, and stroke – which are illnesses expected in an aging population. Older and younger patients were identical in terms of psychiatric problems.

The authors note that they did not expect that the older patients would do so well in MMT. They speculate that this group might be more compliant with treatment and have more stability in their lives.

Another possibility is that, as patients age, they tend to engage in fewer drug-related activities and, consequently, less drug abuse while in treatment. However, other recently-reported research found that if older patients are exposed to illicit-drug use in their neighborhoods and social relationships they are significantly more likely to abuse drugs.[2]

Time for Action

The evidence suggests that older patients can do just as well in MMT as younger ones and, in many cases, much better. Yet, there is still very little research on the special needs of those older patients.

Prior articles in *AT Forum* have called for broader surveys regarding the aging population in MMT, as well as special programs, seminars, or other efforts focusing on "graying of methadone" issues. Yet, to date, there have not even been presentations or panel discussions on this topic at association conferences in the field.

1. Firoz S, Carlson G. Characteristics and treatment outcome of older methadone-maintenance patients. *Am J Geriatr Psychiatry.* 2004;12(5): 539-541.

2. Rosen D. Factors associated with illegal drug use among older methadone clients. Gerontologist. 2004;44(4):543-547.

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Please respond to the following survey questions:

1. At your clinic, how many drug screens or tests at a *minimum* must *each* patient have during a 12-month period? _____
2. What substances are *always* assessed? (check all that apply): ❑ alcohol; ❑ amphetamines; ❑ barbiturates; ❑ benzodiazepines; ❑ cocaine; ❑ marijuana; ❑ methadone; ❑ opioids; ❑ PCP; ❑ other: _____.
3. Are on-site drug screens (not requiring shipping to a laboratory) used? ❑ Often; ❑ Sometimes; ❑ Never.
4. If on-site screening devices are used, what specimens are collected? ❑ Urine; ❑ Oral fluid; ❑ Both.
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