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Medication Assisted Treatment for Opioid Use Disorder

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By 2015, the United States Center for Disease Control and Prevention (CDC) was reporting that drug overdoses had surpassed traffic fatalities as the leading cause of accidental death in the United States. The rise in the use of long-acting, high-dose, opioid pain relievers, coupled with crackdowns on the physicians who prescribed them, had led to more deaths from all illegal drugs combined.[1] In the ten years between 2002 and 2012, heroin dependence in the United States more than doubled, with four out of five new heroin users switching over from prescription painkillers because heroin was cheaper and easier to obtain.[2]

According to the CDC, drug overdose deaths and opioid-involved deaths continue to increase in the United States. The majority of all drug overdose deaths (more than six out of ten) involve an opioid. Since 1999, the number of overdose deaths involving opioids has quadrupled. From 2000 to 2015, more than half a million people died from drug overdoses. Ninety-one Americans die every day from an opioid overdose—36,000 annually.[3]

Overdoses from prescription opioids are a driving factor in the 15-year increase in opioid deaths. Since 1999, the amount of prescription opioids sold in the U.S. nearly quadrupled, yet there has not been an overall change in the amount of pain that Americans report. Deaths from prescription opioids—drugs like oxycodone, hydrocodone, and methadone—have more than quadrupled since 1999.[4] Despite a high rate of opioid related overdose deaths nationwide, only about 10% of the 23, million Americans with an Opioid Use Disorder (OUD) receive treatment in any given year.[5]

Even with the harrowing data about the epidemic and the increasing number of deaths annually, the Legal Action Center reports that 'despite the devastating toll of this epidemic—both human and financial—a demonstrably effective medical response…is tragically, and senselessly, underutilized: Medication Assisted Treatment (MAT).'[6]

More than 20 years ago, the National Institutes of Health (NIH) Consensus Development Panel concluded that opioid dependence is a medical, brain-related disorder to be treated like any other chronic medical illness:

'Opioid dependence (addiction) is defined as a cluster of cognitive, behavioral, and physiological symptoms in which the individual continues use of opiates despite significant opiate-induced problems. It is characterized by repeated self-administration that usually results in opioid tolerance, withdrawal symptoms, and compulsive drug-taking. Withdrawal symptoms include – anxiety, restlessness, runny nose, tearing, nausea, and vomiting.'

Untreated opioid dependence often leads to criminal activity, continued illicit drug use, increased mortality, and increased health risks including hepatitis B and C and HIV/AIDS. Medication is an essential tool in the treatment of chronic diseases. For opioid dependence, methadone, buprenorphine (known as Suboxone when combined with naloxone), and naltrexone (known as Vivitrol) are the three FDA approved drugs that have been proven effective. Because opioid dependence is a chronic condition, treatment lasts for as long as it is needed, often for life.

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Methadone has been widely used to treat opioid dependence since the 1960s and is still an excellent treatment option, particularly for patients who do not respond well to other medications. Methadone is only available through approved, federally registered outpatient treatment programs, where it is dispensed to patients on a daily basis, providing an opportunity for counselors to offer psychosocial interventions designed to enhance the motivation of patients to develop a recovery plan and obtain and maintain abstinence from heroin and other illicit drugs. Methadone stops heroin cravings, the leading cause of relapse, and blocks the painful effects of heroin withdrawal. Whereas heroin destabilizes the brain, methadone helps stabilize it. A 1997 NIH Panel concluded that the safety and efficacy of methadone maintenance treatment (MMT) has been 'unequivocally established' adding that 'methadone maintenance coupled with relevant social, medical and psychological services has the highest probability of being the most effective of all available treatments for opioid addiction.'[7]

Despite the evidence of its effectiveness for treating opioid dependence, controversy over the use of MMT remains because methadone is itself a narcotic, and because some people remain in treatment indefinitely. Although it is true that methadone is a narcotic, it does not produce the satisfactory feeling of a high or a euphoric effect in people who are opioid dependent. In contrast, the action in heroin has an immediate onset, lasts four to six hours, and is typically injected, snorted or smoked several times a day. Methadone's onset of action is slow and its 24-hour half-life results in long- lasting action, effectively blocking the euphoric effect of the opiate use and making it unattractive for abuse.

In 2002, an additional agent, buprenorphine (Subutex®) was approved by the FDA for use in the treatment of opioid use disorder. Buprenorphine's action is a little different from that of methadone, in that it is a partial opioid agonist. However, like methadone, buprenorphine relieves drug cravings without producing the "high" or dangerous side effects of other opioids. As with methadone, buprenorphine is dispensed daily and only at a highly regulated opioid treatment program where counseling and other behavioral interventions are offered for as long as the individual in treatment needs them.

Suboxone® is a formulation of buprenorphine that is taken orally or sublingually and contains naloxone (an opioid antagonist) to prevent attempts to get high by injecting the medication. If an opioid dependent individual were to inject Suboxone, the naloxone would induce withdrawal symptoms, which are averted whentaken orally as prescribed. For that reason, Suboxone can be prescribed on a weekly basis at a physician's office if the physician has obtained a DATA 2000 Waiver, issued by a Federal agency, allowing him or her to prescribe it. Individuals receiving Suboxone are required to meet certain requirements for counseling and other similar interventions, including urine drug screens and other specialized interventions used to prevent diversion. The use of methadone and buprenorphine creates a steady state of tolerance that effectively prevents death from overdose, even for individuals who continue to use heroin while in treatment.[8]

A recent article in the Journal of the American Medical Association (JAMA) a study found little difference in the efficacy of methadone vs. buprenorphine in the treatment of prescription opioid dependence. Long- term maintenance with either drug was associated with less opioid use and better adherence to treatment than either opioid taper or 'drug free' psychological treatment, regardless of whether methadone or buprenorphine was used.[9]

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In an article published in March 2017, new evidence is reported that 'retention in methadone and buprenorphine treatment is associated with substantial reductions in the risk for all cause and overdose mortality in people dependent on opioids.' And, 'the time after immediately after leaving treatment with both drugs are periods of particularly increased mortality.'[10]

Why, then, when it is so clear that medication is the most effective approach to the treatment of opioid use disorder, is there so much controversy surrounding it? One problem is the lack of acceptance of opioid dependence as a chronic disease, in the same way that diabetes or hypertension are chronic diseases.

Research clearly shows that long-term MAT is much more effective as a treatment strategy rather than as a shorter-term detoxification plan. When people with opioid dependence terminate MAT, they relapse rapidly—over 80% of methadone patients who stop using it will return to using heroin within one year.

When compared with both short-term and long- term detoxification strategies, maintenance treatment using methadone or buprenorphine combined with psychosocial counseling is a far more effective treatment for opioid use disorder—because the disease is chronic and does not lend itself to short or even medium-term treatment.[11]

Although it is subject to stigma, there is no question that MAT not only helps those suffering from opioid dependence, it also helps the broader society. The crime rate linked to heroin abuse is astonishing: more than 95% of people using heroin reported committing crimes ranging from homicide to theft during an 11-year-at- risk interval. MAT has been shown to improve life functioning and decrease heroin and other opioid use; criminal behavior; drug use practices, such as needle sharing, that increase human immunodeficiency virus (HIV) risk; and HIV infection. Methadone is also cost- effective. The Vermont Office of Alcohol and Drug Abuse Programs found that for each dollar spent on methadone treatment, twelve to fourteen dollars would be saved in health and social costs, namely in crime reduction, health care cost reduction, and increased employment among those with opioid dependence.[12]

Access to treatment and collateral costs to society are changing because of the changing face of opioid dependence. Most individuals who began using heroin in the 1960s were young men (82.8%; mean age, 16.5 years) whose first opioid of abuse was heroin (80%). During the last decade, that profile has changed dramatically with new users having a mean age of almost 23, living in suburban and rural areas (75%), and having been introduced to opioids through prescription drugs (75.0%). Although men still outnumber women among those with opioid dependence, women are rapidly closing the gap. While heroin users in the 1980s were equally distributed between whites and persons who identified with other races, 90% of those who began use in the last decade were white.[13]

Among the implications of these changes is that the locations and approaches to MAT have had to change over the last ten years. Where methadone clinics were previously located mostly in urban settings with dense populations, the growth in need for such services is now primarily in ex-urban and rural settings, where the presence of treatment providers is not always welcome. Because of a large burden of comorbidities, persons with untreated opioid use disorders experience high rates of hospitalization often leading to misdiagnosed opioid withdrawal that impacts patient and staff safety, outcomes, patient satisfaction, and staff morale. For example, Delaware's largest hospital system, Christiana Care, has observed increased rates of discharges against medical advice and increases in readmissions. To standardize the management of opioid

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withdrawal and improve this situation the hospital system's Behavior Health and Acute Care Service Lines implemented a Pathway that embedded screening tools and algorithms into the electronic health record with the goal of improving identification of patients in opioid withdrawal and managing their withdrawal with Suboxone.

Project Engage, a peer counseling program started in collaboration with the University of Pennsylvania with the primary goal of connecting patients with treatment in the community is notified when patients are in withdrawal and helps them transition to medication- assisted therapy (MAT). Within the first 11 months 857 patients answered "yes" to one of the two screening questions. 175 of 857 had a COWS score >8 suggesting opioid withdrawal, 43% of whom received Suboxone.

Results from a physician led consultation showed that 46% of these patients accepted continuing care with MAT and 59% of those were on MAT a month later through the use of a 'warm handoff ' between the hospital and a community-based opioid treatment program or private physician with a DATA waiver to prescribe buprenorphine.

Another relatively new population of focus is young men and women who present in couples where both members of the couple are opioid dependent and are in their child-bearing and parenting years. Their babies are subject to substance exposure, neonatal abstinence syndrome, and other potential developmental concerns. In July 2017, the American Academy of Pediatrics published an online clinical report which gave recommendations to its members for screening and helping families where substance use is a problem. In its report, The AAP highlighted the impact of parental substance abuse on healthy family functioning, routines, and relationships, raising the need for family-based and other family and client centered approaches to treatment as opposed to the usual mandated group therapies generally associated with medication assisted treatment.

Since 2010, as the face of the opioid crisis has changed and the epidemic has grown, Connections Community Support Programs, Inc. has responded in a number of ways. First, we have opened treatment centers in previously unserved rural areas including Smyrna, Harrington, and Millsboro. Although we also have treatment centers in the more urban areas of Newark and Dover, we have seen the most rapid growth in the rural centers. Second, we have added family-specific services including Ecosystemic Structural Family Therapy and specific services for women and children, including recovery coaches for pregnant and parenting women. In some cases, we have allowed family therapy and participation in recovery coaching to improve pregnancy and fetal health outcomes to substitute for the 'treatment as usual' approaches. We have also joined hands with Christiana Care to ensure that patients identified during medical hospitalizations are transitioned effectively to community medication assisted treatment at the time of discharge.

While the benefits of these approaches remain to be seen, we know that locating resources in parts of the State where they were previously absent has saved lives. Retention in treatment is high, with some families remaining for the births of multiple children, many of whom have been born with minimal effects from in utero substance exposure as the result of the help their mothers have received to stay free of illicit drugs and exposure to infectious diseases and premature labor during pregnancy. By increasing access to all of the medications used to treat opioid dependence, coupling them with services that people need and want, and increasing retention in treatment, we

hope to continue to have a positive impact on reducing the negative outcomes of the opioid epidemic in Delaware.

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