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The rise of opioid overdose: Is availability of Naloxone within the community the answer we need?

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Abstract

Rates of substance use and overdose are continually on the rise within our communities. Recent events highlight the increase rate of opioid overdose in particular and reflect current trends of a two-fold increase in such an event. Opioids are problematic as they can be prescribed legally or gained illegally. Symptoms of opioid overdose can be reversed with the provision of naloxone. Rising prices for naloxone may prevent organizations from carrying large quantities of it, which is problematic given recent events. As there is no typical presentation of opioid addiction or those with concurrent mental health issues, the influence or effect of each on the individual and with each other should be examined in their entirety. Different types of treatment are examined, as well as several of the strengths and limitations of each. Moving forward, blending the strengths of each type of treatment may be required.

Keywords: Opioid use, naloxone, treatment models

The rise of opioid overdose: Is availability of Naloxone within the community the answer we need?

Rates of substance use and overdoses related to their use are continually on the rise within the community. Nationwide, 1 in 10 individuals has used an illicit drug in the past month (NIDA, 2015). Recent events highlight the staggering rates of overdose and issues that may arise as a result. On August 15, 2018, almost 100 individuals overdosed on K2 within hours of each other in New Haven, CT (CNN, 2018). In May 2018, roughly the same number of individuals overdosed on K2 in five different locations in Brooklyn, NY (Byfield, 2018).

These overdoses clearly highlight the growing rise of opioid use and the increased risk of overdose. Every 19 minutes an individual may overdose from opioid use in the United States (CDC, 2012; MacMillan, 2018). Opioids rise to concern as they can be prescribed legally (e.g., oxycodone, methadone, and/or tramadol), or obtained illegally (e.g., heroin, illicit fentanyl). It is important to note that opioids are often prescribed for control of moderate to severe pain. When used properly, they work effectively. Issue arises when an individual misuses or abuses a prescribed medication. The rates of opioid related overdose have increased in recent years by 200%, representing subsequent increases in the likelihood that an individual may overdose (MacMillan, 2018; NIDA, 2017; Rudd et al., 2016). More than ever before, the above events and the aforementioned statistics highlight the need for effective treatments and solutions in prevention, clinical practice, policy, and advocacy.

When an opioid overdose occurs, three hallmark symptoms present. The first symptom is depressed breathing (WHO, 2018); for example, the individual may have difficulty breathing and breathe less than 6 times a minute. Their breathing may also be quite erratic in its presentation or a gurgling sound may be heard (NIDA, 2017).

Naloxone, also known as Narcan, may be utilized when an opioid overdose occurs, as it reverses the effect of the opioid by binding to the opioid receptors (NIDA, 2017). It is important to note that it does not aid in any other type of substance overdose (NIDA, 2017). Given in a variety of different forms (i.e., intranasal or intramuscular), naloxone utilization by emergency responders and/or family members may aid in preventing a fatal overdose as it is effective in restoring breathing when an overdose occurs (Beheshti, et al., 2015). The time element of naloxone administration and provision of emergency care is also crucial to its success (MacMillan, 2018). For example, when an individual who is by themselves overdoses on an opioid and is not found soon enough by someone, the success of emergency efforts may decrease in their effectiveness. Hence, the sooner naloxone is administered the higher the likelihood that it may be effective.

In order to aid the provision of naloxone by emergency responders or bystanders, the majority of states have enacted immunity to individuals who administer naloxone in the community (Gupta, Shah, & Ross, 2016). Many lawmakers have noted that naloxone is crucial to the opioid epidemic within certain communities. More and more organizations, agencies, and emergency responders have received funding to carry naloxone. One limitation, however, is that the ranging of pricing for naloxone has increased to range from $40 to $700 per dose (Gupta, Shah, & Ross, 2016). This may prevent some from purchasing it or carrying it in large quantities; as a result, there may not be enough to handle a large amount of overdose.

What then, is the issue with naloxone? As noted by the US Surgeon General (2018), naloxone can truly only be seen as effective when combined with ongoing clinical treatment. Thus, while naloxone has clinical utility, is only one small piece of the proverbial pie. As noted by Beheshti et al., (2015), the provision of naloxone may not deter opioid use. If an individual is

medically treated for symptoms of an overdose, but no further intervention is provided or issues of concurrence are examined, the individual will most likely relapse (Doleac & Mukherjee, 2018). Truly, a broader discussion of the steps following the administration of naloxone for opioid overdose must be discussed, including concurrence and issues of stigma that may be at play (Mincin, 2018; October-Edun, 2018).

Why Do We Need to Consider Issues of Concurrence?

There is no one portrait or "typical" presentation of an addict, particularly in the case of opioids (Pocilyuko & MacMillan, 2018). As noted by Coffey (2018), addiction and mental health diagnoses are never specific or exact. The majority of individuals may experience a combination of addiction, mood, anxiety, or psychotic disorders (Blazer, 2000; Coffey, 2018). Currently, we do not fully understand the issues of concurrence, or the presence of multiple disorders, as estimates may vary depending on how they are estimated (Pocilyuko & MacMillan, 2018). Some may feel that concurrence is a form of self-medication; for example, an individual who has issues with anxiety utilizes pain medication to relieve the symptoms. However, it is not always possible to determine this, and as such, concurrence truly resembles the "chicken and egg" notion of causality.

Currently, there is a disparity in the number of individuals who abuse substances and those who go on for treatment. One problem is that currently less than 1% of individuals receive treatment for addictions (NIDA, 2015). When an opioid overdose occurs and naloxone is administered, this may represent the first steps of clinical treatment for many. More needs to be done to connect individuals to services once emergency medical care is provided.

While clinical treatment effectively takes into account the presence of multiple disorders, such as opioid addiction and depression, the focus is not on which came first but how the two

influence and effect each other (Pocilyuko & MacMillan, 2018). Several types of treatment approaches exist, each with their own utility, substance, and/or population that they may be most useful for. The most commonly used is the public health approach.

Public health approaches include prevention, treatment, and recovery. The focus of this approach is that addiction needs a chronic illness management approach (SAMSHA, 2016). While the approach acknowledges the presence of other concurrent conditions, the focus stays on the presence of the opioid addiction. Emphasis is on the provision of evidence-based behavioral and medical assisted treatments (SAMSHA, 2016), with a focus on achieving remission (SAMSHA, 2016). If an individual presents to an emergency room after receiving naloxone for an opioid overdose, this may begin the continuum of care. However, as the provision of care begins with an effective screening, assessment, and diagnosis, this represents one key limitation of the public health approach. Within the emergency room setting, for example, feasibly there may not be enough time to conduct a thorough screening, and health care professionals may not have the necessary training needed to perform one. The public health approach also assumes that the individual will go forward for services at another location. Without the necessary insurance or referral, the individual may not utilize treatment options and the cycle of addiction may begin again.

An alternative form of treatment is one that views the individual from a 360 degree perspective with an emphasis on the strengths perspective. This type of treatment takes into account all issues that may arise, but also their culture, value systems, spirituality, social support systems, and environment (Horton & Luna, 2018; Khoury & Rodriguez del Barrio, 2015; October-Edun, 2018). When considering opioid overdose, this type of approach may be able to highlight what positives the individual has in their life. Education and advocacy are a key part of

this treatment; without education, the opioid addict may overdose again and return to their former patterns of abuse. One limitation of this type of treatment is that in the majority of cases it begins after emergency medical care has been provided. It relies on the individual to move forward with treatment; again, this raises issues of feasibility with respect to insurance or referral to such treatment.

Moving Forward

Given the high rate of use and the staggering rates of overdose, opioid addiction represents a public health epidemic that clearly needs to be addressed. Individuals who abuse opioids may have issues of concurrence that exist and are not addressed by our current models of prevention, education, advocacy, and treatment. Many within the community feel that the availability of naloxone is the answer. While the administration of naloxone is beneficial for opioid overdose, it represents one small part of the treatment path. Truly, a broader lens of treatment is needed. The two treatment models highlighted above represent ways to treat opioid addiction. However, each has its strengths and limitations. It is possible that the best of both models could be combined together to provide for a comprehensive, quality continuum of care.

References

Beheshti, A., Lucas, L., Dunz., T., Haydash, M., Chiodi, H., Edmiston, B., ... Horzempa, J. (2015). An evaluation of naloxone use for opioid overdoses in West Virginia: A literature review. *American Medical Journal*,*6*(1), 9-13.

Byfield, E. (2018). K2 Overdoses Rise to 100; NYPD Arrests 36 in Brooklyn outbreak. Retrieved from the world wide web: https://www.nbcnewyork.com/news/local/K2-Overdoses-New-York-City-Brooklyn-Officils-NYC-Police-Arrest-483616651.html

Center for Disease Control (CDC). (2012). CDC grand rounds: Prescription drug overdoses — a U.S. Epidemic. *Weekly*, *61*(1), 10–13.

CNN. (2018). More than 90 people overdosed on K2 in one New Haven park. Retrieved on the world wide web: https://www.cnn.com/2018/08/15/health/new-haven-overdoses/index.html

Doleac, J.L., & Mukherjee, A. (2018). The moral hazard of lifesaving innovations: Naloxone access, opioid abuse, and crime (March 6, 2018). Available at SSRN: https://ssrn.com/abstract=3135264.

Gupta, R., Shah, N.D. & Ross, J.S. (2016). The rising price of naloxone: Risks to efforts to stem overdose deaths. *New England Journal of Medicine*, *375*, 2213-2215.

Khoury, E., & Rodriguez del Barrio, L. (2015). Recovery-oriented mental health practice: A social work perspective. *British Journal of Social Work*, *45*(1), i27–i44.

MacMillan, T. (2018). Addiction in the community: The role of emergency services. In New Directions in Treatment, Education, and Outreach for Mental Health and Addiction (MacMillan, T., & Sisselman-Borgia, A. (eds).). New York: Springer Publishing.

Mincin, J. (2018). Addiction and stigmas: Overcoming labels, empowering people. In New Directions in Treatment, Education, and Outreach for Mental Health and Addiction (MacMillan, T., & Sisselman-Borgia, A. (eds).). New York: Springer Publishing.

National Institute on Drug Abuse [NIDA]. (2015). Nationwide trends. Retrieved on the world wide web at: https://www.drugabuse.gov/publications/drugfacts/nationwide-trends

National Institute on Drug Abuse. (2017b). *Trends and statistics*. Retrieved on the World Wide Web: https://www.drugabuse.gov/related-topics/trends-statistics.

October-Edun, R. (2018). Practice, advocacy, and outreach: Perspectives on addiction services. In New Directions in Treatment, Education, and Outreach for Mental Health and Addiction (MacMillan, T., & Sisselman-Borgia, A. (eds).). New York: Springer Publishing.

Pociluyko, P., & MacMillan, T. (2018). Evolution of addiction terminology. In New Directions in Treatment, Education, and Outreach for Mental Health and Addiction (MacMillan, T., & Sisselman-Borgia, A. (eds).). New York: Springer Publishing.

Rudd, R.A., Aleshire, N., Zibbell, J.E. & Gladden, R.M. (2016). Increases in drug and opioid overdose deaths – United States: 2000 – 2014. *Morbidity and Mortality Weekly Report, 64*(50), 1378-1382.

Substance Abuse and Mental Health Services Administration (SAMSHA). (2016). Facing addiction in America: The Surgeon General's report on alcohol, drugs, and health. Washington, DC: US Department of Health and Human Services.

United States Surgeon General. (2018). Surgeon general's advisory on naloxone and opioid overdose. Retrieved on the world wide web:

https://www.surgeongeneral.gov/priorities/opioid-overdose-prevention/naloxone-advisory.html.

World Health Organization (WHO). (2018). Information sheet on opioid overdose. Retrieved on the world wide web at: http://www.who.int/substance_abuse/information-sheet/en/.

