

Compliance Today – November 2019

Drug diversion prevention programs: Do they belong in compliance?

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In 2017, overdose deaths involving opioids were six times higher than what they were in 1999, with about 130 people dying every day from an opioid overdose.^[1] The increasing trend in opioid-related fatalities and overdoses is being called an epidemic. The individuals misusing opioids are not just the patients our healthcare organizations treat, but they include our colleagues, the healthcare workers providing care within our own organizations. Estimates of how many people working in healthcare have substance use disorders or addictions vary. Sources suggest around 10% of healthcare workers have an addiction at any given time.^[2] Rates of addiction among healthcare workers may be similar to the general public; however, addiction may be higher in healthcare workers because of high-stress jobs, working long hours, and having knowledge about and access to prescription medications. Because only about 1 in 10 people who need treatment for substance use disorder actually receive treatment,^[3] it will remain a challenge to accurately estimate the numbers of healthcare workers with addiction.

Pharmacists, pharmacy staff, nurses, and anesthesiologists may have higher rates of opioid use because of their access to these medications. Anesthesiologists often have the highest rates of opioid use compared to other physician groups.^[4],^[5] USA Today (2014) reported that, in a given year, more than 100,000 healthcare workers are abusing or dependent on prescription drugs.^[6] Healthcare providers have access to medications to help ease pain, anxiety, and sleeplessness, and medications that help reduce withdrawal symptoms. Unfortunately, there are times when healthcare workers choose to take these medications from their place of employment for their own use. Drug diversion is the illegal use of prescription medications for purposes not intended by the prescriber.^[7] It is relatively easy for healthcare workers to divert drugs in their workplace⁸ because of their familiarity with the systems and because of common gaps in security measures. Drug diversion affects more than individuals; it can affect patients, coworkers, payers, and the reputation of the facility where it occurred.^[8]

Diversion implications

Healthcare workers predominately divert medications for their own use but may also do so for monetary gain or to provide the medications to others. Unfortunately, there are several reported cases of patients contracting bloodborne illnesses from healthcare workers who were infected and diverting medications. Between 2008–2016, three outbreaks occurred because of drug diversion by healthcare providers infected with the hepatitis C virus (HCV). The three diversion-related outbreaks led to at least 78 associated cases of HCV and more than 26,217 persons notified for bloodborne pathogen screening.^[9] In 2018, another reported case of HCV transmission, thought to be from a nurse working in two different hospital emergency departments, was reported; at least 12 patients are believed to have been infected from that healthcare workers' diversion of intravenous medications.^[10] Hepatitis C may be the most common infection caused by hospital diversion, but it is not the only one. According to the Centers for Disease Control and Prevention, since 1983 there have been cases

of diversion leading to infections of *Pseudomonas pickettii*, *Serratia marcescens*, *Achromobacter xylosoxidans*, and one other gram-negative bacteremia.^[11]

Limited data is available on the frequency of diversion, and many healthcare workers are unaware of the occurrence in their own workplace. Diversion detection rates with automated medication dispensing systems have been estimated to be 1.12 diverters per 100 hospital beds per year.^[12] This likely underestimates actual cases of diversion happening in hospitals across the country, because this represents only detection rates. Additionally, diversion can and does occur outside of automated medication dispensing systems. This means that individuals working in healthcare settings, either those who are licensed to handle medications or those who should not have access to medications, are able to obtain medications without a record of doing so. Theft of medications like this can occur when medications are not secured at all times or they are left unattended.

Diversion prevention programs

Creation of drug diversion prevention programs in healthcare organizations is a step in the right direction to detecting diversion and preventing further harm. These programs should involve a multidisciplinary committee including, but not limited to, pharmacy, nursing, compliance, risk management, security, occupational health, human resources, medical staff leadership, and anesthesiology. This committee should be responsible for oversight of the diversion prevention program and development of policies and procedures for investigating and reporting diversion. Preferably, at least one person in the organization is assigned responsibility for the program and works to develop strong partnerships across departments. A more robust team is often needed for larger organizations and those with multiple facilities or locations. Additional data analytics support is a beneficial resource for successful monitoring. Data analytics software programs are available that can assist with diversion monitoring. Alternatively, some organizations create internal processes to monitor medication activity data for diversion risk.

Diversion prevention teams should also determine how investigations are handled, ensuring that a consistent process is used for all potential cases regardless of who is involved. Policies and procedures should address when diversion investigations are initiated and how they are handled. Typically, additional tools, such as checklists and databases for storing investigation-related information, are necessary to ensure all information is available and all necessary steps in the process are completed. Diversion prevention programs also provide opportunities to identify risky practices that may not align with organizational policies and could allow for diversion to happen more easily.

Historically, many diversion monitoring programs were run by the pharmacy department; however, compliance departments can play a key role in diversion programs. Compliance teams can assist with monitoring, partnering with clinical staff on education and increasing awareness, leading or supporting investigations, and ensuring appropriate reporting is completed. Compliance teams have a clear understanding of the legal and regulatory implications of drug diversion and typically have oversight responsibilities for all areas of the organization. The expertise of compliance team members makes them natural partners in drug diversion prevention. Assisting with or leading diversion prevention initiatives can be an ideal role for clinical staff who work with a healthcare compliance program. Choosing to have a clinical team member with a nursing or pharmacy background to oversee the program is often recommended. Nurses or pharmacists have knowledge of appropriate indications, dosing, and administration patterns for medications as well as awareness about clinical workflows that can be helpful in diversion monitoring, detection, and investigations.

Once a program is established, it is crucial that the organization also defines how diversion cases will be reported. Reporting drug diversion is required by the Drug Enforcement Administration, Food and Drug Administration (if tampering occurs), and state professional licensing boards. Oftentimes state health departments have

requirements for reporting as well, and some organizations also report to and collaborate with local law enforcement agencies. Sometimes an individual leaves the organization before an investigation or interview is completed, so some states and agencies require reporting suspected cases where others require just reports of confirmed cases. A person leaving a position in lieu of drug testing is required to report in some states but not in others. It is imperative that organizations understand reporting requirements and establish standards for how, when, and who reports diversion. Timely reporting is crucial for stopping the activity, preventing the individual from being able to move to and divert from another facility, and for determining the scope of the diversion, including potential harm that may have occurred.

Implementation and interventions

At one free-standing, suburban academic children's hospital, the drug diversion prevention specialist position was created in 2016 with the hiring of a clinical nurse specialist (CNS) in this role. Having a strong clinical background and the history of working in the organization, this CNS was able to quickly identify several risks across the system. Within the first six months, analytical software aided in identifying a suspected case of diversion by a nurse, which was investigated and reported to the state board of nursing and other agencies. In addition to identifying statistical outliers, software was used to show additional risky practices with controlled substances, including opioids. Software was also beneficial in calculating time savings after implementing changes to nursing workflows around controlled substances.

At this organization, education has been a primary tool in helping employees recognize the risks of diversion and has increased awareness about the likelihood of it happening. Education on drug diversion and addiction among healthcare workers is provided for every group of newly hired employees who work in clinical roles. Additionally, annual drug diversion education is provided via a computer-based module for nursing, pharmacy, and anesthesia staff. In-depth training is given to nursing leaders about their role in addressing discrepancies and risky practices. New graduate nurses also receive diversion prevention education as part of their residency programs. The drug diversion prevention officer, a nurse, provides all of the education for clinical staff. The opportunities for education on this topic are vast and can help to correct misunderstandings about risk and the often have thought that diversion does not happen in one's own facility.

Diversion risks and gaps

Some known gaps in diversion prevention in healthcare settings include lack of awareness of the prevalence of the problem, being a noncompliant witness (e.g., signing for the waste of unused medication when the waste is not actually visually witnessed), trusting others without speaking up about concerning practices, not signing out of automated medication dispensing machines, overriding medication orders from automated medication dispensing machines, cancelling medication transactions, leaving medications unsecured in clinical areas, and practicing with less-than-stringent security and handling of controlled substances.

All healthcare staff should understand the risks associated with drug diversion and know their responsibility to help prevent diversion through safe medication practices and proper reporting. It is often not easy to detect a colleague who is diverting. Healthcare employees who divert often do not appear disheveled or sloppy in their practice. Employees who divert tend to be the ones least likely suspected by their peers. They work hard, are helpful, pick up extra shifts, and are often well liked in their departments. Individuals who divert need to perform well at work to fly under the radar of their colleagues and leaders to continue having access to the drugs necessary to support their addiction. Concerning behaviors are often absent until the addiction worsens and the person becomes unable to obtain enough medication to avoid withdrawal symptoms. That is typically when colleagues or supervisors begin to see more obvious signs of the problem, such as lack of attention to detail, sloppy practice, late arrivals or increased absences, frequent or extended breaks, mistakes, and sometimes

physical symptoms of withdrawal or impairment.

Organizational leaders have a responsibility for ensuring safe medical care delivery in their facilities. With the opioid epidemic, it is crucial that diversion awareness, prevention, and monitoring programs are a key strategy for promoting safety in our healthcare systems. Creating a culture of speaking up is so important for a successful diversion prevention program. Hospital employees are expected to report unsafe practices.^[13] If someone sees something concerning or hears about something concerning, they need to speak up and say something. Employees should be coached to tell leadership, report concerns anonymously through the compliance department hotline, or follow the specific organizational policies for reporting. Speaking up may help save someone's life.

Takeaways

- Opioid misuse and addiction are a problem among healthcare workers and put organizations and patients at risk.
- Drug diversion is the theft of prescription medications for use by someone other than the person they are prescribed for.
- Compliance departments can play a key role in drug diversion prevention programs and may be the best place for these initiatives.
- Drug diversion prevention requires collaboration among interdisciplinary teams and across many areas of the healthcare settings.
- Reporting drug diversion is a crucial step in ensuring safety and preventing future diversion.

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3 National Institute on Drug Abuse (NIDA). "Principles of drug addiction treatment: A research-based guide (3rd edition)" <http://bit.ly/2NnY4Ad>

4 Ethan O. Bryson and Jeffrey H. Silverstein, "Addiction and substance abuse in anesthesiology" *Anesthesiology* 109,(2008): 905 – 917. <https://bit.ly/2kH7dto>

5 Lisa G. Lefebvre and I. Michael Kaufmann, "The identification and management of substance use disorders in anesthesiologists." *Canadian Journal of Anesthesia* 2017 Feb;64(2):211 – 218. <https://bit.ly/2mnfKSD>

6 Peter Eisler, "Doctors, medical staff on drugs put patients at risk." *USA Today*. April 17, 2014. <https://bit.ly/2xMzOhF>

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8 Keith H. Berge, Kevin R. Dillon, Karen M. Sikkink, et al., "Diversion of drugs within health care facilities, a multiple-victim crime: patterns of diversion, scope, consequences, detection, and prevention." *Mayo Clinic Proceedings* 87,(2012): 674–682. <https://mayocl.in/2kmctlo>

9 CDC, "Health Care Related Hepatitis B and C Outbreaks Reported to the CDC" <https://bit.ly/2krtaMQ>

10 CDC, "Hepatitis C Virus Potentially Transmitted by Opioid Drug Diversion from a Nurse — Washington, August 2017–March 2018." *MMWR Weekly*, April 26, 2019. <https://bit.ly/2kT6x3U>

11 CDC, "Injection Safety: Drug Diversion" <https://bit.ly/2kT77P8>

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13 Kim New, “We have confirmed diversion: Now what? Options and reporting requirements when diversion happens.” Association of Healthcare Internal Auditors, (Fall 2016): 18–23. <https://bit.ly/2kQMenT>

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