Diversion Inattention: Time for Action!

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Drug diversion, defined as the "unlawful channeling of regulated pharmaceuticals from legal sources to the illicit marketplace", is a problem that is neither new nor rare.[1] Opioids are commonly diverted, but benzodiazepines, anabolic steroids, and other noncontrolled agents such as propofol and erythropoietin are also potential targets. Yet the issue of diversion is not discussed openly in most institutions, and was termed "health care's dirty little secret" in a recent exposé on *W5*,[2] a long-running Canadian documentary television show.

In the era of an ongoing and unabating opioid epidemic, in which diversion of opioids from legal sources such as hospitals is one contributing factor (albeit among many others), it is somewhat counterintuitive that pharmacy team members, recognized as guardians of the medication system, are not paying much attention. In fact, a news report from another broadcaster, which was based on data compiled from access to information requests spanning 2010 to 2017, determined that 5689 reports had been filed with Health Canada for various quantities of opioids missing from hospitals.[3] What is even more disturbing is that for 4375 (77%) of these reports, the reason for the loss was "unknown".[3] These alarming statistics are more than just numbers or scare tactics; they have real clinical, humanistic, and financial consequences. For example, in December 2013, a nurse and a physician were found unconscious in hospital bathrooms at the University of Michigan Health System.[4] Both had overdosed on diverted opioids; although the physician was successfully resuscitated, the nurse died. The ensuing investigations revealed that diversion had been going on for years, with up to 16 000 tablets of oxycodone being diverted within this health system.[4] The University of Michigan eventually agreed to pay US$4.3 million as part of the settlement on this investigation.[5] The degree to which diversion is occurring in Canada, the United States, and internationally is unknown, because of lack of reporting. Although there may be differences in incidence among different jurisdictions, the problem is most likely occurring around the world and requires attention.

The reluctance to openly discuss the topic of drug diversion has many causes, not least the fact that drugs can be diverted by any member of the multiple health disciplines with drug access, approved or otherwise, many of whom have extensive knowledge of the systems and its gaps. Diversion can occur anywhere in the medication system, from procurement to storage to dispensing and administration, and may occur even in facilities with advanced automation and control mechanisms.[6] This was indeed the case at University of Michigan, where more than 100 automated dispensing cabinets (ADCs) were deployed. The diversion was not a failure of the ADCs per se, but represents the reality of a medication system that must balance access control with urgent patient needs, in an environment characterized by complex processes and multiple hand-offs by many staff who know the strengths and, unfortunately, the deficiencies of the system set-up. Common means of diversion range from signing out opioids but not administering (or only partially administering) them to the intended patient or signing out drugs in the operating room for patients whose operations are already completed to the more drastic means of retrieving partially used fentanyl patches from the waste bin and syringing out the remaining contents. The gaps in access control are especially apparent in facilities that use a manual paper system, as is still the case in many Canadian institutions. Furthermore, drug-use symptoms are often subtle, and diversion may involve team members who are personable and seemingly helpful (e.g., offering to administer medications while covering a colleague's break). The lack of systematic tracking and data-gathering further contribute to the cloud of secrecy, and the notion of "snitching" on a colleague may also be unpalatable.

However, all of these considerations must be weighed against the consequences for patients, who may be receiving care from staff who are intoxicated, or who may have suboptimal

pain control because of diversion by staff. Harm can also come to the diverter, who has a medical condition (addiction) and may not be receiving proper treatment by qualified personnel. In addition, the diverter is likely engaged in illegal and unprofessional activities, such as falsifying medical records. On a larger and more serious scale, transmission of infection via syringes used by diverters (which are subsequently refilled with saline and used to inject patients) has significant consequences. In fact, a systematic review of the literature from 2004 to 2014 identified 6 reported outbreaks (2 involving gram-negative bacteremia and 4 involving hepatitis C) that could be attributed to drug diversion, with exposure of more than 30 000 patients, of whom at least 128 became infected![7] These preventable transmissions to innocent patients should be unacceptable to health care workers, whose main goal is to care for patients, not harm them.

To systematically tackle the issue of diversion, each hospital must have an interdisciplinary group, pursuing parallel work streams (education, detection, response/investigation, prevention), with endorsement from the organization's executives. The work should ideally involve not just front-line clinicians and pharmacy team members, but also human resources, informatics, decision support, security, corporate health, and risk/legal staff as needed, with centralized oversight by a corporate steering committee with dedicated resources. As with any large-scale effort, this work cannot be done all at once, especially within health care systems that are constantly dealing with resource allocation dilemmas. But starting small, for example, by promoting awareness and education, can be a reasonable first step. Alternatively, this work could be part of a larger institutional opioid stewardship program. Fortunately, our US colleagues have published a comprehensive guideline on this topic, which should be a "must read" for all pharmacy team members with responsibilities for safeguarding controlled substances.[8] The Canadian Society of Hospital Pharmacists has also developed diversion guidelines,[9] which were published in early 2019, with accompanying educational events and toolkits.

It is time to start examining your own practices related to diversion, as Videau and others[10] have done, describing their experiences elsewhere in this issue. Although the adherence rates reported in that article are not stellar, this work can be framed as a quality improvement exercise that may garner further acceptance by hospitals' C-suites. In fact, which would you prefer: a long, drawn-out investigation by government employees involving subpoenas, staff interviews, and large-scale audits, or a self-directed quality improvement plan that will result in better patient safety and outcomes, and even potentially financial savings?

Let's start paying attention to diversion!

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