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Are We Doing Enough?

Executive Summary

In 2017, Porter Research conducted a survey about the theft of narcotics by US healthcare workers. One-hundred fifty health care professionals, representing over one-hundred forty health care systems, were asked about drug diversion in their organizations. Most respondents were either Directors of Pharmacy or Drug Diversion Investigators, with a smaller percentage comprised of Nursing and Hospital Executives. Because the respondents were close to the problem, they recognized the impact of drug diversion and the resulting fallout on the safety of patients, healthcare workers, and hospitals.

The survey assessed the consistency, effectiveness and efficiency of drug diversion prevention programs across the United States. It explores the various investigation processes and technology employed by Health Care Systems to track narcotics and prevent diversion.

The results of the survey highlighted (1) clear recognition of the wide-spread prevalence of drug diversion in U.S. health systems, and its risks to patient safety, but with (2) significant variation in approaches and committed resources devoted to prevent, detect, and reduce diversion. While most respondents believe their diversion prevention programs compared well to other organizations, they also state current approaches are not enough to detect a vast majority of diversion—efforts to combat the problem are understaffed, ineffective and time-consuming. Respondents also agreed that more could be done to strengthen their programs, particularly the application of more intelligent analytics leveraging existing data to track medications across the drug supply chain.

Background: The Costs and Damage Caused by Drug Diversion

Approximately 10% to 15% of all healthcare professionals will misuse drugs or alcohol at some time during their career (National Council of State Boards of Nursing 2016). Although the rates of substance abuse and dependence are similar to those of the general population, the prevalence is disturbing as healthcare professionals are the caregivers responsible for the general health and well-being of the population (Baldisseri, 2007). The estimated cost of controlled substance drug diversion to public and private medical insurers is $72.5 billion a year, much of which is passed on to consumers through higher health insurance premiums (National Drug Intelligence Center, 2009).

Drug diversion by healthcare workers also jeopardizes patient safety. The Centers for Disease Control published a chronological summary of severe patient harm linked to drug diversion. The summary revealed gaps in prevention, detection and response to drug diversion in the U.S. healthcare facilities, and they called for stronger security measures (CDC, 2014) (New, 2014).

Finally, drug diversion can lead to addiction that destroys the careers of healthcare workers, and all too often leads to their death in overdose. It is important to emphasize the seriousness of addiction and the cascading damages it causes to the health care workers, their patients, and the hospitals where they work. (Eisler, 2014). Healthcare employees work in stressful environments, and it is often recognized that the diverter is a trusted colleague and respected friend who let a one-time mistake spiral out of control. Diverters are often caught late in the disease progression, through severe behavior changes and/or medication errors when patient harm is at its greatest risk. To emphasize the complexity of the problem, Dr. Keith Berge, Anesthesiologist, Mayo Clinic, stated it best: Addicts are smart, we are smart. They are desperate. We are not. Therefore: They are going to outsmart us every time. (Berge, 2009)

Questions

Is Drug Diversion a Significant Problem?

Are Drug Diversion Programs in place and staffed correctly?

Can hospitals keep up, effectively and efficiently detecting diversion when it occurs?

Survey Results

The following sections highlight the survey results, covering the extent of the problem, approaches to detection and prevention, and effectiveness and efficiency of current approaches.
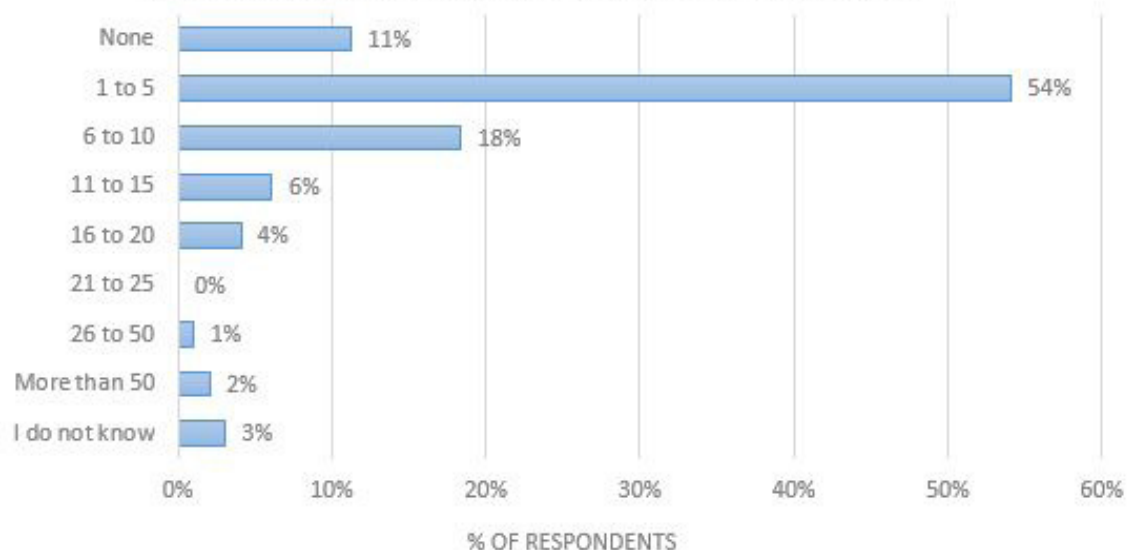
Nearly all participants in the survey (96%) acknowledged that drug diversion is occurring in health care, with the majority (65%) stating that most diversion goes undetected. Ninety-eight percent believed that drug diversion negatively impacts patient care and compliance, and 83% believed it also impacts patient billing. Thirty-two percent felt their organization was at risk for fines, bad press or lawsuits due to drug diversion.

Surprisingly, 22% of survey respondents reported their healthcare facility had no established diversion prevention program in place. Of the organizations that had an established program, 65% reported their facility had less that a single full-time employee (FTE) focused on diversion, with 25% reporting less than 0.25 FTE. In sharp contrast, a small number (>5%) of responding organizations had 4 or more FTEs devoted to diversion detection and monitoring. The survey showed no correlation between the size of a healthcare facility and the number of FTEs dedicated to diversion prevention.

For the respondents with a drug diversion program, 66% felt their program was neither efficient nor effective. When it comes to effectiveness, the survey was designed to assess two potential problems:

1. Failing to detect drug diversion when it occurs, also known as "false negatives." The responses showed a majority of drug diversion is going undetected. As stated above, the majority (65%) or respondents stated that most diversion goes undetected. Their reporting of the frequency with which diversion is detected and investigated confirmed this conclusion: For a typical, mid-size, 500 bed hospital, national estimates would anticipate that roughly 25-75 people to be at risk for diverting at any time (Baldisseri, 2007). However, 65% of hospitals surveyed investigated five or fewer diversion cases annually. **This means for a majority of hospitals, somewhere between 80% to 93% of diversion is going undetected.**

How Many Cases of Drug Diversion Has Your Organization Investigated Within the Last Year?

Category	% of Respondents
None	11%
1 to 5	54%
6 to 10	18%
11 to 15	6%
16 to 20	4%
21 to 25	0%
26 to 50	1%
More than 50	2%
I do not know	3%

% OF RESPONDENTS

Questions

What appraoches are being used to detect diversion, and what is working and not working?

Survey Results

2.   The second problem is wasting time investigating healthcare workers who are not diverting drugs, also known as "false positives." Despite the lower than expected investigation rates, survey respondents reported that most of their investigations were "false positives" and sites were unable to confirm diversion occurred. When asked "what percentage of your drug diversion investigations result in confirmed diversion?", a majority (66%) reported false positives for over 50% of their investigations. That is, even when hospitals infrequently investigate diversion, their investigations tends to find that diversion has not occurred. As the table below shows, the majority of investigations result in false positives creating significant work without achieving any results.

When asked about the efficiency of drug diversion investigations, the average organization devotes 7.8 hours to each drug diversion investigation, with 35% reporting that each investigation took over 10 hours.

Despite the lack of confidence in the effectiveness and efficiency of their drug diversion programs, 90% of respondents believe their organization's drug diversion program is on par, or better, than their peers. The conclusion: wide-spread acknowledgement that most (90%) of health systems feel they are no worse than their peers when it comes to drug diversion

The table below highlights how respondents detect or prevent diversion. The most common methods are the use of Automated Dispensing Cabinets (ADC) (91%), internal audits (90%), soliciting tips from other health care workers (83%), use of Anomalous Usage Reports from ADC data to focus on higher utilizers (68%), and diversion awareness training (68%).

Only 28% of respondents report using random drug screening to detection diversion.

Which of the following does your organization utilize to identify and/or prevent Drug Diversion (Select all that apply)?

Method	% of Respondents
Random Drug Screening	28%
Machine Learning (AI learns patterns of diversion)	31%
Advanced Analytics (Combines EMR and ADC data with Alerts)	55%
Diversion awareness training	68%
Anomalous Usage Reports	68%
Tips from Health Care Workers	83%
Internal Audits	90%
Automated Dispensing Cabinets (ADC)	91%
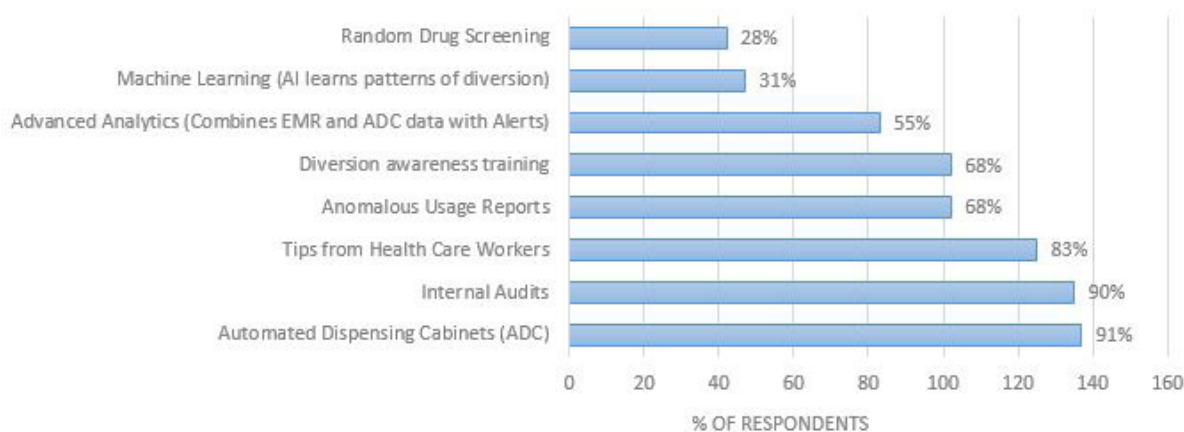
% OF RESPONDENTS

While these multiple approaches were widely used, the survey showed that the majority of drug diversion is initially detected reactively, typically after the diversion has been going on for some time, using "low-tech" methods. Respondents cited anomalous usage reports (29%), tips and behavior changes (25%), discovery of missing drugs (19%), and automated detection systems (18%) as the most common forms of initial detection.

A small number of respondents reported encouraging results using more advanced technology for diversion detection. These included some hospitals experimenting with advanced analytics that combine ADC data with data from other health IT systems such as Electronic Medical Records (EMR), timekeeping, wholesaler purchasing, and internal inventory systems. A few hospitals also reported developing machine-learning methods of artificial intelligence to detect diversion.

Conclusions and Recommendations

Despite the established estimates that roughly 10% of healthcare workers are diverting drugs in US healthcare systems (National Council of State Boards of Nursing 2016), Porter Research's survey of 150 health care professionals concluded:

- Drug diversion harms patients, healthcare workers, and their employers

- Most diversion goes undetected

- When diversion is investigated, approaches are inefficient and typically conclude diversion did not occur

- Most respondents feel their organizations are no worse at preventing drug diversion than their peers

For these reasons, we conclude that organizations are not doing enough overall to detect and prevent diversion. For those that have programs in place, modeling their peers in drug diversion detection is not sufficient yet we also understand the constraints in human resource to make a program work. To truly address these challenges, we believe organizations need to take the following actions to protect patients, employees and their own reputations:

- Create broad, cross functional executive awareness of the issues and potential negative impacts on patient and employee safety.

- Establish a Drug Diversion Council or similar committee that is empowered to move the organization forward through both policy and education.

- Based on organizational size, add human resources to monitor drug diversion and educate professionals across the organization.

- Investment in more intelligent and evolving technology to address issues proactively and uncover diversion before employees do irreparable damage to themselves or their patients.

Using the above approach, organizations are able to detect diversion proactively and focus human resources on educational efforts that assure the safest environment within their Health Care Systems. Organizations that have experienced issues are beginning to make these investments and are seeing results. These technologies need to fully address the complexity of the drug supply chain in near real-time, while providing the alert and analysis tools that grow with the complexity of the problem. By focusing on improving the intelligence and compliance across the complex supply chain, these technologies have other benefits that can offset costs, such as monitoring all expensive drugs, and assuring charges are handled correctly. In this way, organizations can create the most efficient and effective programs that get ahead of the problem, using existing managerial and investigative resources.

While drug diversion will never be eliminated, an achievable goal is to create an effective program for your organization where employees feel empowered to seek help when needed, recognize their role in being part of a solution that impacts patient care, and become recognized by diverters as a place where the investigation processes and technology are in place to prevent diversion.

To learn more about our Hospital Drug Diversion & Reporting solution, call Invistics at 1-800-601-3456 or visit us online:

Website ➔   **Contact Us** ➔

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