October 2016

**87%**
**of incidents**
are reported by nurses

**Providing feedback**
to the reporter is key to meaningful incident reporting

**Did you know?**
**Text field descriptions provide important context for interpreting an incident report**

National System for Incident Reporting

# NSIR

Canadian Institute for Health Information
Institut canadien d'information sur la santé

## Collect. Analyze. Share. Learn.

Welcome to the electronic bulletin for the National System for Incident Reporting (NSIR). In our efforts to keep you informed, we highlight recent program developments, preview ongoing projects and feature key topics to support data quality and continuous learning from incident data.

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## Inside this issue



## Highlights

### NSIR-RT pilot update

There are 22 cancer centres from 6 jurisdictions participating in the NSIR — Radiation Treatment (RT) pilot. The number of radiation therapy incidents being submitted has been steadily increasing and the NSIR-RT database currently contains more than 970 RT incidents.

The NSIR-RT pilot survey closed on October 14, 2016. Thanks to everyone who took the time to participate!

All the data entered by the end of September will be included in the NSIR-RT pilot report, which will help us measure the functionality and usability of the system, determine the validity and utility of the minimum data set, and inform future enhancements to the NSIR system. The Canadian Partnership for Quality Radiotherapy (CPQR) and the Canadian Institute for Health Information (CIHI) will work together to analyze incident trends and refine the structure to improve the system for all users. If you have feedback, send it to nsir@cihi.ca.

In the meantime, please keep submitting your RT incident data to NSIR-RT!

Back to top

# Reporting and learning

## Who reports medication incidents?

Nurses report the majority of medication incidents in health care facilities. NSIR data shows that nurses are most often (87%) the health care provider involved in the discovery of the incident.

**Table** Incidents reported in NSIR, by provider group

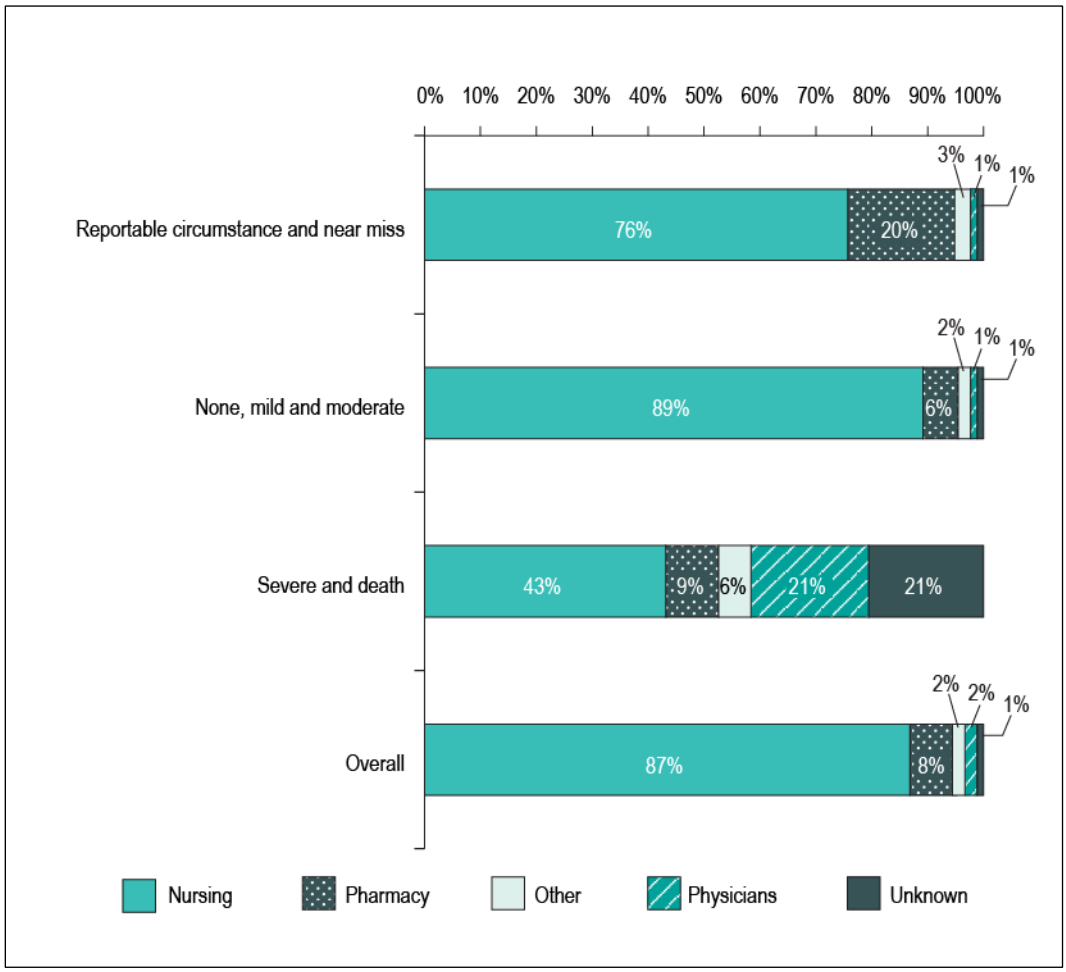
| Health care provider group | Count | Percentage |
|---|---|---|
| Nursing | 33,103 | 87% |
| Pharmacy | 3,211 | 8% |
| Other | 885 | 2% |
| Physicians | 582 | 2% |
| Unknown | 359 | 1% |
| Total | 38,140 | 100% |

**Note**
Multiple health care providers may be associated with a single incident; however, 96% of incidents report only 1 health care provider involved in the discovery of the incident.

### Do reporters change depending on the level of harm?

Looking across the levels of harm, NSIR data shows that pharmacy staff report a higher proportion (20%) of reportable circumstances or near miss events (incidents that don't involve a patient or that do not reach the patient, respectively) than other types of incidents. On the other end of the harm spectrum, 21% of critical incidents (severe harm and death) are reported by physicians. Of note, an additional 21% of critical incident reports do not specify the health care provider who was involved in the discovery of the error.

**Figure 1** Incidents reported in NSIR, by level of harm and provider group




## Who reports when?

Medication use in health care facilities involves a series of processes. Each process typically involves a combination of health care providers. Incident reports in NSIR identify the point in the process of the medication-use system that is most responsible for the incident, which may be different from the point in the process where the incident was discovered.

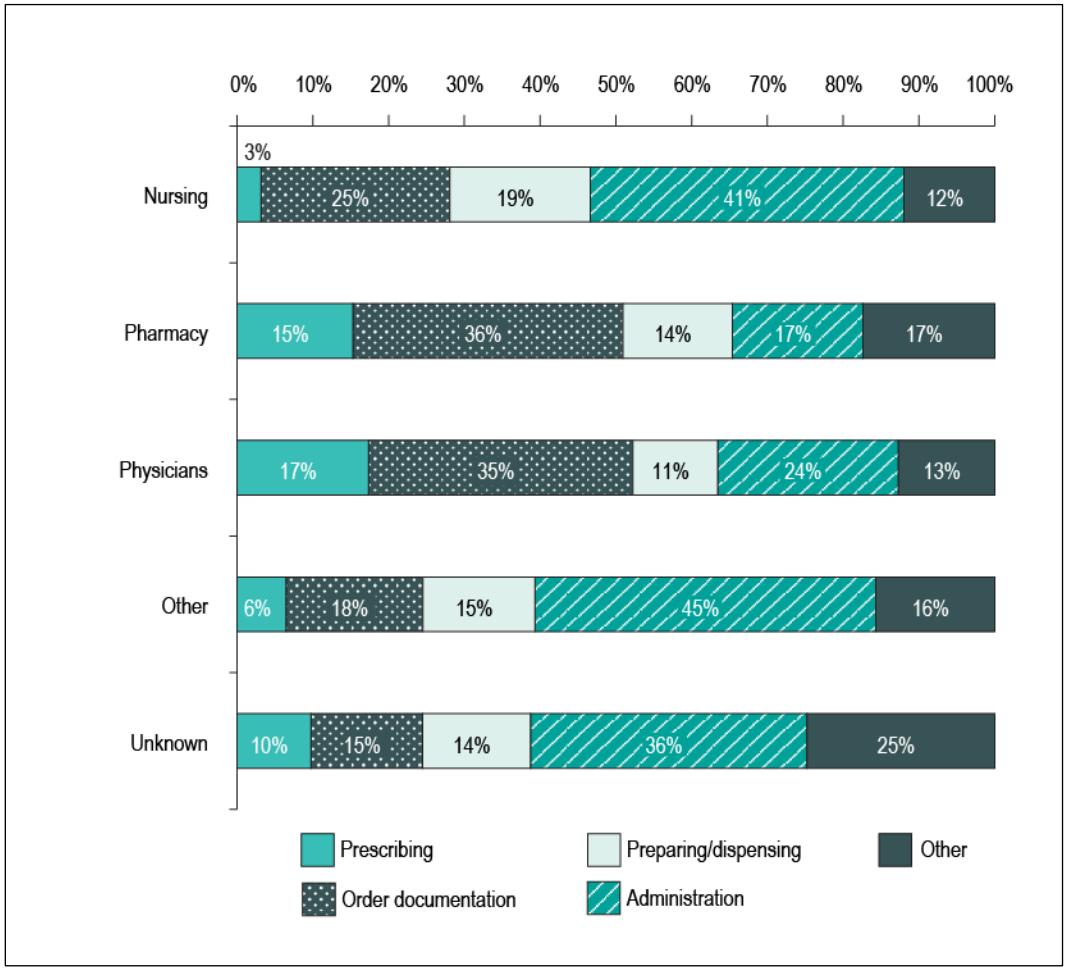
41% of incidents reported by nursing staff occur during the administration phase. This is perhaps not surprising, given that nurses are typically responsible for giving or applying a therapeutic product, as well as for writing up the clinical documentation related to the administration of the therapeutic product.

Incidents occurring during the order documentation phase account for the highest proportion of incidents reported by pharmacy staff (36%) and physicians (35%), and for the second-highest proportion of nursing-reported incidents (25%). These incidents involve a problem with the transcription or transfer of order information (e.g., a problem occurred while entering an order into a pharmacy system, updating the medication administration record or performing medication reconciliation activities).

Incidents that occur while preparing and dispensing account for 19% of incidents reported by nurses, compared with 14% for pharmacy staff and 11% for physicians. These processes are most often completed by pharmacy staff or nurses on the ward and include the provision, selection, compounding and/or release of the therapeutic product.

Incidents that occur at the prescribing phase accounted for 17% of incidents reported by physicians and 15% reported by pharmacy staff, compared with only 3% for nurses (although nurses still reported 60% of the incidents occurring during this phase). These incidents involve a problem with a verbal, written or electronic directive by an authorized health care provider for the preparation and administration of a therapeutic product.

**Figure 2** Incidents reported in NSIR, by process step and provider group



### How do we encourage more reporting?

A recent review of incident reporting systems outlines the following 3 strategies to make reporting more meaningful to the reporter:

1. **The *person who reports an event* should receive timely feedback.**
   - Thank the reporter and let him or her know that the event is being investigated.
   - Validate understanding of the report and communicate that somebody is listening and cares about the event.
   - Communicate a response that makes reporters feel that *reporting is worth their time*.

2. ***Managers* should share reports with staff.**
   - Educate staff about risks in their environment.
   - Provide a forum to solicit their ideas on how to further reduce risk, and inform staff that action is occurring as a result of their reporting efforts.
   - Share lessons learned at the local, regional, national and international levels.

3. ***Leaders* should devote institutional resources not just to collecting the data, but also to analyzing the events and mediating risk.**
   - Take action. In the end, this is the ultimate value of the system. When staff observe that the institution is willing to change based upon their feedback, real changes in safety culture start to occur.

Back to top

## Incident description

Sharing information to help others learn from incidents is the fundamental idea behind NSIR. Part of that information is the text description — or story — that provides the context enabling us to interpret and relate to the codified information. The text description is a critical component of the data submitted and, therefore, correct and complete descriptions communicate the story best.

But what makes a good story? Writing like our favourite author is not a prerequisite. More important is to write a succinct tale with all the relevant details. Missing details can lead a reader to an incorrect assumption. Read the following text descriptions about the same event:

> *Ibuprofen 200 mg was ordered for patient at 1:00 p.m. Patient was administered ibuprofen 400 mg.*
>
> *Ibuprofen 200 mg was ordered for patient at 13:00. Patient was administered ibuprofen 200 mg at 13:00; however, the nurse did not record the administration on the medication administration record before going for lunch. A colleague saw the new order at 13:30 and noted that the MAR showed no record of administration. He proceeded with administering ibuprofen 200 mg again at 13:30.*

While each description informs us that the patient received more ibuprofen than was prescribed, based on the first story, a reader might assume that the nurse gave too much all at once — a wrong quantity error. Reviewing the additional details provided in the second description tells us that the patient was given an additional dose at a later time and that the most responsible problem is extra dose.

Is there a formula for writing a good story? Unfortunately, it's not that easy; however, using simple questions such as the following to guide you might be a reasonable strategy:

- What happened? Include details about time and sequence, if relevant.
- Who was involved? Consider the patient, family members and other staff who may have played a part.
- Where did the events occur? This is particularly relevant if an error was initiated in an area outside of where it was caught or where it affected the patient.

We examined NSIR records and found that text fields tend to be more detailed when the degree of harm is more severe. This is not surprising since more investigative attention is usually given to an incident that causes serious harm or death. We also know that similar sets of circumstances can produce different harm outcomes. For this reason, near miss and no harm events can provide excellent learning opportunities, making fuller descriptions for these events important.

Back to top

### ISMP Canada's recent alerts and safety bulletins

- Summary of 2015 Critical Incident Reporting Analysis — Ontario Critical Incident Learning Bulletin
- Beat the Heat: How to Prevent, Recognize and Manage Heat-Related Illnesses
- Accidental Intravenous Infusion of a Heparinized Irrigation in the Operating Room
- Understanding Human Over-Reliance on Technology
- Information for Patients and Families About Opioid Pain Medicines
- Improved Labelling and Packaging Will Minimize the Risk of Confusion and Harmful Medication Mistakes

Back to top

## Additional information

### CIHI's new Learning Centre is now live!

Here are 6 ways CIHI's new Learning Centre provides a richer educational experience:

1. **Single sign on.** With a single CIHI profile, you have access to the Learning Centre and to other CIHI services like eQuery, eReports and eStore. No more remembering multiple passwords!

2. **A more intuitive course catalogue**, organized by health care topic, so you can easily find the course that's best for you.

3. **One-stop registration and payment processing** for all of CIHI's courses *and* conferences. Now you'll spend less time filling out registration forms and more time learning.

4. **Improved notifications.** You'll receive personalized emails with detailed information to help you manage your learning opportunities. No more logging in to look up course details — we'll send them directly to you.

5. **New accessibility features.** CIHI is committed to ensuring that our products and services are as accessible as possible to people with disabilities.

6. **A new look and feel**, with simpler menus, more informative screens and time-saving navigational aids that start you on your learning path more quickly.

Back to top

## Conferences of interest

HealthAchieve
Toronto, Ontario, November 7 to 9, 2016

Canadian Society of Hospital Pharmacists (CSHP) Professional Practice Conference (PPC) 2017
Toronto, Ontario, February 4 to 8, 2017

# Contact us

Unless otherwise stated, NSIR findings reported in this eBulletin are based on the voluntary reporting of medication incidents at participating health care facilities across Canada from 2008 to the present.

Thank you for taking the time to read the eBulletin for the National System for Incident Reporting (NSIR). The NSIR eBulletin is distributed quarterly. If there is anything you would like to see featured in an upcoming edition, please contact us at nsir@cihi.ca.

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Back to top