Medication Safety & Quality Newsletter

Issue 6 – Winter 2019

NH Medication Safety & Quality Committee

In This Issue

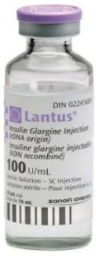
UPDATE – Insulin Glargine Products

As of August 21, 2018, Pharmacare stopped LANTUS® brand coverage and is funding the biosimilar insulin glargine, BASAGLAR®, for all NEW start type 1 diabetes patients and type 2 patients 17 years of age and older in the community. Patients currently on LANTUS® will continue to be covered at this time.

Acute Care Impact: BASAGLAR® only comes in a prefilled KWIKPEN for administration.This differs from current acute care insulin products that are provided as VIALS for administration. Staff will be receiving education on insulin pens; however, you may see this product before education can be implemented. See page 2 for a quick comparison of the two products. For further details on this change, see the NH Insulin Update Poster

Medication Safety Message

Never share insulin pens between patients, even with a new needle, as a ***backflow of blood*** into the insulin pen puts other patients at risk of blood-borne pathogens. Changing the needle does not change this risk.

CURRENT PRODUCT	NEW PRODUCT
LANTUS® (insulin glargine)	**BASAGLAR®** (biosimilar insulin glargine)
100 units/mL	100 units/mL
VIAL	**KWIKPEN**
	
Stock Status: Will continue to be stocked in NH until further notice.	**Stock Status:** Available only as Patients Own Medication at this time. Will be brought forward for provincial review.
Not automatically interchangeable. A prescribers order is required and switching between brands should be limited.	

Medical Cannabis

A new Clinical Practice Standard for Medical Cannabis 1-20-6-2-020 has been created for Northern Health (NH). The content in this policy may be adjusted in the near future given the ever changing enviroment and laws surrounding cannabis province wide and nationwide. Policy responds to changes in federal/provincial laws. As such, staff need to be informed on the proper processes when encountering medical cannabis in NH facilities.

To comply with current policy the following mountable/fridge mountable items are available to order via eRex:

5700505 or 5700506

5700435

5700504

Note: 5700505 and 5700506 are the same type of lockbox but 2 different sizes.

Updates to the Neonatal Drug Administration Manual

Monograph Update – fentaNYL

- Smaller volume to mix for intubation (10 mL instead of 30 mL)
- Differentiated intubation vs. infusion mixing volumes in table
- Minor grammar changes and alignment with BC Children's hospital monograph

Safe Medication Order Writing (SMOW)

Safe medication order writing is an Accreditation Requirement for all health authorities, nationwide. Staff can find the following SMOW courses on the Learning Hub:

- **NHA – PHAR – Safe Medication Order Writing for Prescribers**
- **NHA – PHAR – Safe Medication Order Writing for Non-Prescribers**

Using unacceptable abbreviations when writing orders in the chart is known to have a high risk of causing harm or death to patients nationally. Below is a list of these unnacceptable abbreviations:

Unacceptable Abbreviations: ISMP Canada and Accreditation Canada	
Unacceptable	***Correct Term or Method***
Drug Name Abbreviations	Print drug name fully Abbreviations are acceptable only if used in a Health Canada approved drug monograph
U or IU	Unit
QD or QOD or OD	Daily
OS, OD, OU	Left eye, Right Eye, Both Eyes
D/C (for use as "Discharge")	***Write*** "Discharge Patient" instead of D/C D/C for Discontinuation of a ***medication order*** is acceptable
Cc or cc	mL or millilitre or milliliter
µg	mcg or microgram
@	At
> or < or =	Greater than, Less than, Equal to
Trailing Zero	X mg (**not** X.0 mg)
Lack of Leading Zero	0.X mg (**not** .X mg)

Further details on safe medication orders can be found in the Clinical Practice Standard – 1-20-6-4-010 safe medication order writing available on the OurNH website.
For more information please contact Nicole.Dahlen@northernhealth.ca

Order Set Update

Once again the Medication Safety and Quality team wants to **celebrate** everyone who has been involved in any and all of the order set review teams. Your considerable efforts and the improved difference you have made in updating the Order Set pool is made clear in the comparison charts below:

Chart A Feb 2018

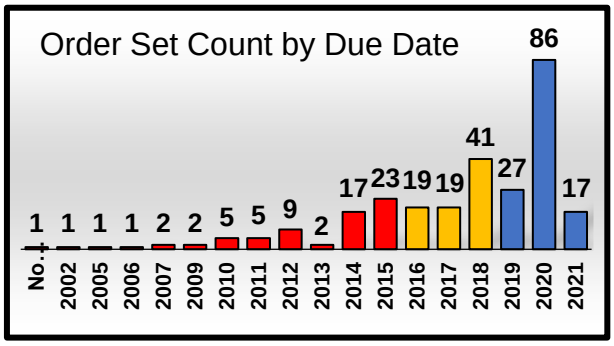
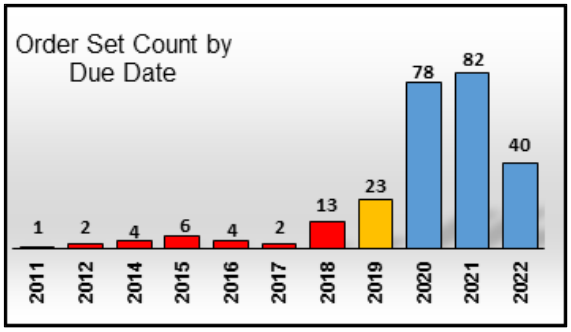


Chart B March 2019



PSLS Highlights

Top Three Drugs Involved in PSLS reports AND Causing Harm this Quarter (Oct through Dec 2018)

1. HYDROmorphone **2. nitroglycerin** **3. metoporolol**

The above three medications are high offenders and warrant close attention when ordering, dispensing, and administering.

Independent Double Checks ***must*** be completed for all medications on the NH High Risk/High Alert list. When done correctly, they have prevented errors and harm to our patients. Please review 1-20-6-3-260 High Risk/High Alert Medications Requiring an Independent Double Check and ensure *proper* independent double checks are embedded within your day to day practice.

Hoarding Horrors

Storing medications outside the medication-use system **has led to patient harm**.

Read ISMP's - **Don't be a Borrower or Lender** article for more information on the danger workarounds hoarding or borrowing presents. See below for key extracts.

Table 1 Found that almost half of the 1,296 staff who participated in the most recent survey still borrowed medications when doses for their patients appeared to be missing on the unit.

Table 1. Percent of nurses who borrow "missing medications"[1]

Extent of Borrowing	2008 Survey	2002 Survey
Always borrow	5%	10%
Sometimes borrow	43%	10%
Never borrow	52%	29%

Examples of dangerous hoards discovered in various NH locations:
1. Multiple bags from a unit – grouped under classifications like "stomach" and "psychiatry". Unfortunately, the medications did not match the classifications (e.g. domperidone under Psychiatry"), including a patient's own narcotic cough syrup that was not in the narcotic count.
2. Medications stored under the lid of a paper towel dispenser.
3. Medications stored inside of a "Feel Better Buddy" teddy bear.
4. Large plastic tote sorted alphabetically with very nearly every drug that would be in a pharmacy.

Table 2 Next page describes just a few of the many errors that have been reported to ISMP as a result of borrowing medications (which can be similar to errors associated with removing medications from floor stock or automated dispensing cabinets before pharmacy reviews the orders).

Table 2. Examples of errors associated with borrowing medications
A patient received two doses of SEROQUEL (QUEtiapine) 100 mg instead of the prescribed 200 mg dose of SERZONE (nefazodone). When the nurse could not find the patient's dose of Serzone, she thought pharmacy had forgotten to dispense it. Instead of calling the pharmacy, she asked another nurse to borrow the medication from a close-by unit. This nurse misheard the request for Serzone as SEROquel and borrowed two 100 mg doses of the wrong medication. The patient experienced significant somnolence and sedation after receiving 200 mg of SEROquel.
A physician prescribed IV ZOSYN (piperacillin and tazobactam) for a patient with pneumonia. The nurse wanted to start the antibiotic right away, so instead of waiting for pharmacy to dispense the drug, she borrow an unused dose from a patient who had recently expired. The patient who received Zosyn had a known penicillin allergy and developed an anaphylactic reaction to the drug. Fortunately, the patient survived. The pharmacy had not dispensed the medication because they were awaiting clarification of the order.
When a nurse found that she could not obtain a dose of TORADOL (ketorolac) from the unit's ADC via the override feature, she borrowed a dose from another patient and administered it to an aspirin-allergic patient. Fortunately, the patient did not experience a life-threatening reaction. The pharmacy had not released the medication in the profiles ADC because they were awaiting clarification of the order.
In a labor and delivery unit, a healthy young woman became hypotensive after starting epidural anesthesia. A nurse called an obstetrics resident known to be "difficult" at times, who snapped at the nurse and gave an order for ePHEDrine 10 mg slow IV push. The nurse, who was anxious because of the physician's behavior, made a mental slip and thought of "EPINEPHrine". With only a few ampuls of EPINEPHrine 1 mg on the unit, she decide to borrow more from the nursery. She found a 30 mL vial of EPINEPHrine 1:1,000 (1 mg per mL), withdrew 10 mL, and administered that amount to the patient. The patient immediately developed tachycardia, severe hypertension, and pulmonary edema. Fortunately, anesthesia staff responded and recognized the problem immediately. The patient was treated successfully and the baby was delivered safely.
A woman with atrial fibrillation, hypertension, lethargy, and constipation died while receiving enoxaparin and heparin concurrently. A cardiologist initially prescribed enoxaparin and warfarin. When a gastroenterologist recommended a colonoscopy, warfarin was discontinued and a heparin infusion was ordered. Enoxaparin administration continued every 12 hours and the heparin order was never faxed to the pharmacy. To administer the bolus and being the infusion, the nurse borrowed a vial of heparin and a premixed solution that the pharmacy had dispensed for another patient. Several hours later, the patient's aPTT was greater than 90 seconds. The heparin infusion was decreased, but by morning the patient exhibited signs of internal bleeding and her aPTT was still elevated. Heparin and enoxaparin were discontinued, but the patient died despite aggressive treatment.

Medication Reconciliation

Medication reconciliation increases patient safety and is a key priority for Northern Health. The evidence is overwhelming that it reduces adverse events and reduces patient harm. It is a formal process to systematically and comprehensively review of all the medications a patient is taking using the Best Possible Medication History (BPMH). It takes a little time, but it saves time in the long run, and it enables prescribers to make the most appropriate prescribing decisions for the patient.

Sometimes changes are unintentionally introduced in patients' medications due to incomplete or inaccurate medication information. Some recent examples at our sites across Northern Health are as follows (patient specifics have been modified/omitted to preserve confidentiality):

- A patient with cancer was admitted with neutropenia secondary to unknown cause. She continued to be neutropenic for several days with still an unknown cause. Eventually she underwent a comprehensive BPMH, and it was found that she had continued to take her alternative medicines while an inpatient. Once stopped the neutropenia resolved.
- 69 y/o female admitted for decreased level of consciousness. Her past medical history was significant for CKD with renal transplant. On admission the Pharmanet (Medinet) print out was used to assess and reorder home medications. Tacrolimus was reordered appropriately, however prednisone and mycophenolate were not re-ordered as the Pharmanet print-out did not list the medications as "active." This patient was accumulating a small stockpile of extra medications at home over the past year. The patient went without mycophenolate and prednisone for 5 days. Luckily, her renal function remained stable. During the subsequent Med Rec performed on the ward the discrepancies were found and the attending physician was alerted. The missing transplant medications were subsequently re-ordered.
- A patient with history of multiple myeloma admitted with confusion, dizzy spells, and muscle spasms for several days. He was on stable methadone dose for many years for pain control. The original plan was to decrease methadone dose. The BMPH was performed and patient had been taking oral fluconazole for esophageal candidiasis. This actually caused the methadone serum levels to increase. Thankfully, after completing the BPMH the oral fluconazole was stopped and symptoms were resolved without compromising pain control.
- A patient was admitted for acute kidney injury. The BPMH was completed, revealing he was using over-the-counter ibuprofen recently to manage osteoarthritic pain. His use of ibuprofen coincided with the worsening of his previously stable renal function. The ibuprofen was stopped and his renal function returned to baseline.

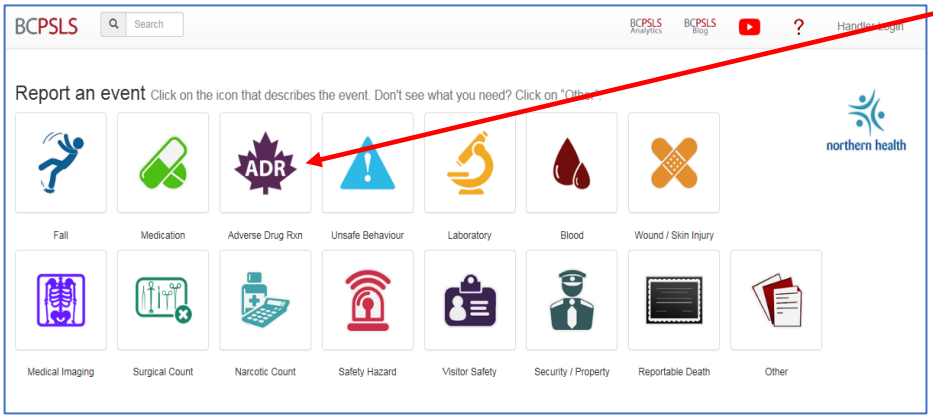
Hopefully these highlight the importance of creating a BPMH on admission, or soon after admission, and soon after transitions of care. It should also highlight the importance of gathering collateral information regarding patients' home medications ideally through patient interview, or utilizing other resources such as the BC Renal Agency's PROMIS database. We care about our patients and they deserve the best chance at safety.

Adverse Drug Reaction (ADR) vs Medication Events

What is an ADR?
An undesirable or unexpected response to any medication, including vaccines. ALL people are susceptible to experiencing an ADR.

ADRs are not the same as Medication Events: An **ADR** is an undesirable unexpected outcome that happens while a patient is taking a medication, vaccine or contrast media despite being administrated as intended. *For example,* a patient has a serious bleed suspected to be related to taking a medication. A **Medication Event** is a problem, often involving an error or system breakdown, where the medication was not used or administrated as intended. *For example*, a patient receives an unintended double dose of a medication in error.

How do I report an ADR?
Go to the **BC PSLS Landing Page** shown below and look for the **purple maple leaf ADR icon**:



Why is reporting an ADR important?
To improve safety for everyone! Our goal is to protect patients, clients, residents and others from undue harm and quickly learn more about new, rare or serious ADRs so similar situations can be prevented from happening again in BC, and elsewhere in Canada.

HOW?

- Data collected in BC PSLS will be analyzed by **Health Canada's Vigilance Program** who may issue public warnings, direct label changes or remove harmful medications from the market to ensure all patients have access to safe medications.
- New legislation to protect Canadians from unsafe drugs called ***Bill C-17 (Vanessa's Law)*** received Royal Assent in November 2014 and requires healthcare organizations to report serious ADRs.
- The new ADR reporting process aligns with **Accreditation Canada's Medication Management Standards**, a collaborative approach to ADR reporting across the country to improve safety for all Canadians.

Where can I find more information?
If you have questions or need help, please contact
Nicole Dahlen nicole.dahlen@northernhealth.ca or
Arlene Crawford arlene.crawford@northernhealth.ca or
Shawn Smith shawn.smith@northernhealth.ca, or
refer to the following websites: Canada Vigilance Program, Canada Vigilance Adverse Reaction Reporting Form, New standards for hospitals on reporting adverse drug reactions, Protecting Canadians from Unsafe Drugs Act (Vanessa's Law)

The Medication Safety and Quality Team

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DID YOU KNOW?

An estimated 37% of seniors in nine provinces received a prescription for a drug that should not be taken by this population.