Enhancing Opioid Medication System Safety: The Alberta Experience

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On behalf of the Alberta Regional Pharmacy Directors and ISMP Canada*

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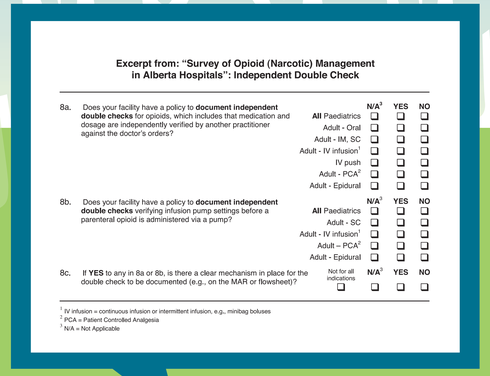
Project Purpose:

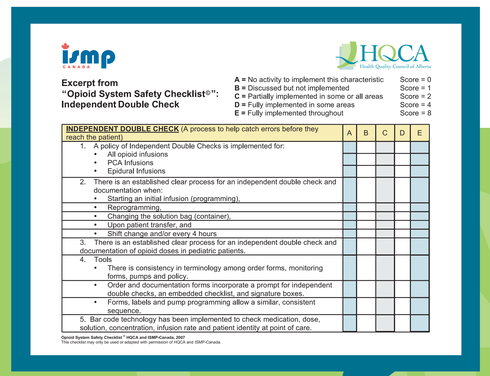
- To establish a baseline of opioid management practices in Alberta acute care facilities.
- To identify common issues relating to opioid storage and management that could potentially lead to design of collaborative projects for medication system enhancements.
- To gain support and interest for collaborative projects among the health regions in Alberta.



Excerpt from: "Survey of Opioid (Narcotic) Management in Alberta Hospitals": Independent Double Check

		N/A[3]	YES	NO
8a. Does your facility have a policy to **document independent double checks** for opioids, which includes that medication and dosage are independently verified by another practitioner against the doctor's orders?	**All** Paediatrics	☐	☐	☐
	Adult - Oral	☐	☐	☐
	Adult - IM, SC	☐	☐	☐
	Adult - IV infusion[1]	☐	☐	☐
	IV push	☐	☐	☐
	Adult - PCA[2]	☐	☐	☐
	Adult - Epidural	☐	☐	☐
8b. Does your facility have a policy to **document independent double checks** verifying infusion pump settings before a parenteral opioid is administered via a pump?	**All** Paediatrics	☐	☐	☐
	Adult - SC	☐	☐	☐
	Adult - IV infusion[1]	☐	☐	☐
	Adult – PCA[2]	☐	☐	☐
	Adult - Epidural	☐	☐	☐
8c. If **YES** to any in 8a or 8b, is there a clear mechanism in place for the double check to be documented (e.g., on the MAR or flowsheet)?	Not for all indications ☐	N/A[3] ☐	YES ☐	NO ☐

[1] IV infusion = continuous infusion or intermittent infusion, e.g., minibag boluses
[2] PCA = Patient Controlled Analgesia
[3] N/A = Not Applicable



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Excerpt from "Opioid System Safety Checklist©": Independent Double Check

A = No activity to implement this characteristic — Score = 0
B = Discussed but not implemented — Score = 1
C = Partially implemented in some or all areas — Score = 2
D = Fully implemented in some areas — Score = 4
E = Fully implemented throughout — Score = 8

INDEPENDENT DOUBLE CHECK (A process to help catch errors before they reach the patient)	A	B	C	D	E
1. A policy of Independent Double Checks is implemented for: • All opioid infusions • PCA Infusions • Epidural Infusions					
2. There is an established clear process for an independent double check and documentation when: • Starting an initial infusion (programming), • Reprogramming, • Changing the solution bag (container), • Upon patient transfer, and • Shift change and/or every 4 hours					
3. There is an established clear process for an independent double check and documentation of opioid doses in pediatric patients.					
4. Tools • There is consistency in terminology among order forms, monitoring forms, pumps and policy, • Order and documentation forms incorporate a prompt for independent double checks, an embedded checklist, and signature boxes, • Forms, labels and pump programming allow a similar, consistent sequence.					
5. Bar code technology has been implemented to check medication, dose, solution, concentration, infusion rate and patient identity at point of care.					

Opioid System Safety Checklist ©HQCA and ISMP-Canada, 2007
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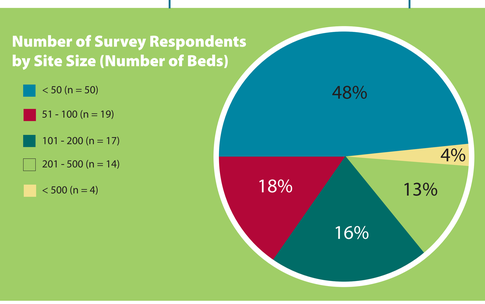
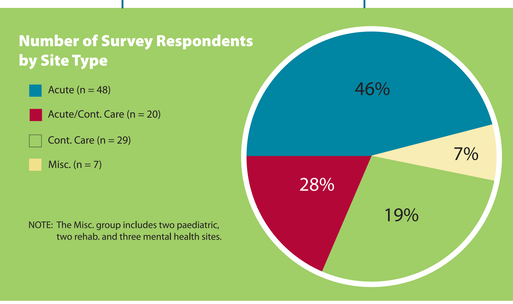
Timeline:

June 2004	January 2005	May 2005	June 2005	September 2005	November 2005	January 2006	February 2006 – present	June – July 2007	September 2007
Hydromorphone error in ER results in a patient death	Alberta Medication Safety Collaborative (AMSC) formed	Priority projects for collaboration included "Develop and implement best practices for the safe handling of narcotics in Alberta's acute care facilities"	**ISMP Canada's "Survey of Opioid (Narcotic) Management in Hospitals" customized for use in Alberta**	Surveys/online data entry completed by 104 facilities (48 acute, 20 acute/LTC, 29 LTC, 7 other)	Data analyzed by ISMP-Canada and local data presented to each health region	**Summary recommendations, resource binder presented to AMSC**	Health regions prioritized local initiatives, began change process, shared results with colleagues	**Opioid Checklist created to assess progress**	Progress documented with reports and Checklist (baseline)

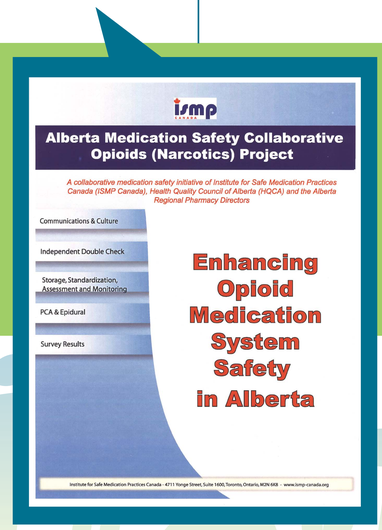
Number of Survey Respondents by Site Size (Number of Beds)

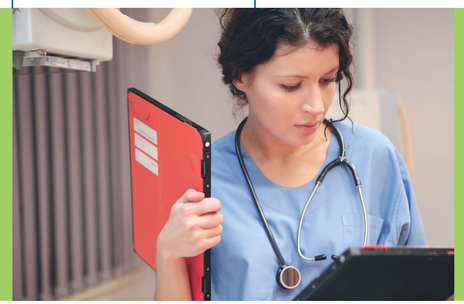


Number of Survey Respondents by Site Type

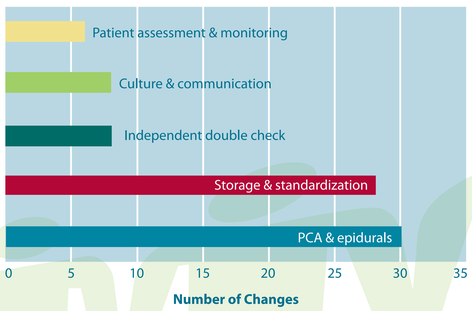


NOTE: The Misc. group includes two paediatric, two rehab. and three mental health sites.





Opioid System Changes Reported by Regional Health Authorities (5)



Outcomes:

- No single issue was identified that the group wanted to address through a collaborative province-wide project.
- All regional departments of pharmacy set priorities for local action and made some system changes. Initial priorities for most regions were improving safety of PCA and epidural narcotics, as well as narcotic storage in patient care areas, including differentiation of look-alike/sound-alike products.
- The Opioid Checklist will be a useful tool to help assess ongoing progress with opioid medication system improvements.
- The AMSC has evolved into an important networking and planning group for leaders of hospital pharmacy departments in Alberta.

Lessons Learned:

- Networks are an important means of creating an impetus for change and sustain the momentum for ongoing medication system improvements.
- Opioid medication system improvement is an ongoing process that can be aided with tools such as the ISMP Canada Survey and the Opioid Checklist.

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