CANADIAN NURSES ASSOCIATION
ASSOCIATION DES INFIRMIÈRES ET INFIRMIERS DU CANADA
ACEN ACDSI

THE NATIONAL NURSING QUALITY REPORT IN CANADA: DRIVING QUALITY IMPROVEMENT IN HEALTH CARE

Presenters:

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Canada Health Infoway Inforoute Santé du Canada
cpsi icsp Canadian Patient Safety Institute Institut canadien pour la sécurité des patients
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Presentation Objectives

- Provide overview of the NNQR-C pilot project
  - Background & Purpose
  - Methodology
  - Results and Early benefits
  - Lessons learned
- Highlight next phase of the NNQR-C
- Invite questions and comments

NNQR-C Vision & Scope

NNQR-C envisioned as a minimum set of input, process and outcome indicators that can be:

- Collected nationally across the continuum of care
- Be available through dashboard applications
- Be benchmarked and used to influence policy directions to improve client outcomes

Background

- Knowledge synthesis report: *Toward a National Report Card in Nursing: A Knowledge Synthesis* (Doran, Mildon & Clarke, 2011)
- "Think Tank" meeting February 2011
- Recommendations for indicators – structure, process, outcome
- Canada Health Infoway *Health System Use Demonstration Project* – March 2012 to May 2014
- Health Canada project (March 2012 – March 2013) *The Canadian National Nursing Quality Report Initiative: Consensus on Quality Indicators and Development of Dashboard Template*

Objectives of NNQR-C Research Project

- Pilot and evaluate a new outcomes monitoring system focusing on nurse sensitive indicators, using existing databases (HOBIC/C-HOBIC, RAI, DAD, MIS).
    - Implement a national nursing quality report that will generate a dashboard of nurse sensitive indicators,
    - Evaluate the feasibility and costs associated with producing the indicators for health care organizations,
    - Evaluate the potential of the indicators to positively impact quality improvement and outcomes.

Participating NNQR-C units

Eight pilot sites across three provinces representing acute care, long-term care/complex continuing care and mental health

- Manitoba – 3 Long-Term Care facilities
- Ontario – 5 Acute Care units, 7 Mental Health units, 4 LTC/CCC units
- New Brunswick – 4 Acute Care units, 2 LTC units

NNQR-C Implementation: Indicator data

Indicator data collected through Canadian Patient Safety Institute (CPSI) Metrics system

- Unit level data collected quarterly for one year three sites (10 units) continued past one year
- Sites selected indicators for collection (e.g. C-HOBIC/HOBIC, DAD, RAI, MIS)
- Dedicated portal created by CPSI to enter data
- CPSI Metrics Measurement team provided dashboard reports to sites

NNQR-C Implementation: Nurse Survey data

- Nurse survey conducted online from CNA website from April to July 2013 to measure nurse satisfaction
- *Practice Environment Scale of the Nursing Work Index* (PES-NWI) and *Global Job Satisfaction Questionnaire*
- Nurse survey report summary findings sent to individual pilot sites

Nurse Survey: Practice Environment scale & Job Satisfaction

(Scores standardized out of 100)

Subscale/Sector	Acute Care (N=42)	LTC/CCC (N=66)	Mental Health (N=45)	Total (N=153)
Nurse participation in organizational affairs	67.0%	73.0%	60.5%	67.8%
Nursing foundations for Quality of care	76.0%	78.5%	69.0%	75.0%
Nurse manager ability, leadership & support of nurses	74.3%	79.5%	67.8%	74.5%
Staffing and resource adequacy	**62.3%**	**73.0%**	**58.0%**	**65.5%**
Collegial Nurse-physician relationships	74.0%	79.8%	74.5%	76.5%
Nurse surveillance capacity	70.8%	76.8%	66.0%	72.0%
Nurse Job satisfaction	70.1%	73.4%	57.6%	67.9%

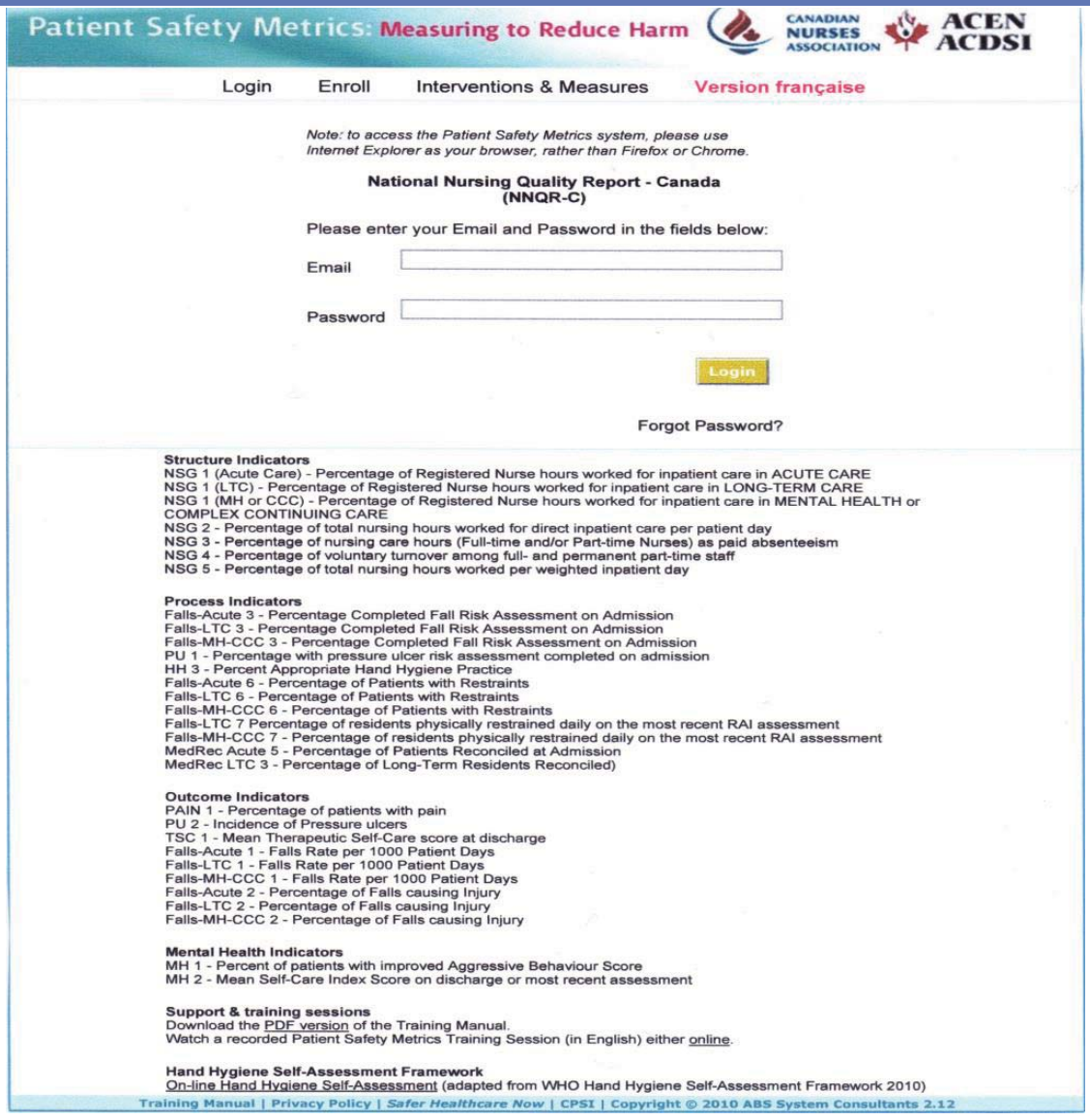
Staffing and Resource Adequacy received the lowest scores overall.

Data Entry Trends

Clinical Indicators:

- **Structure**
- **Process**
- **Outcome**

Login Page


Patient Safety Metrics: Measuring to Reduce Harm
CANADIAN NURSES ASSOCIATION
ACEN ACDSI
Login
Enroll
Interventions & Measures
Version française
Note: to access the Patient Safety Metrics system, please use Internet Explorer as your browser, rather than Firefox or Chrome.
National Nursing Quality Report - Canada (NNQR-C)
Please enter your Email and Password in the fields below:
Email
Password
Login
Forgot Password?
Structure Indicators
NSG 1 (Acute Care) - Percentage of Registered Nurse hours worked for inpatient care in ACUTE CARE
NSG 1 (LTC) - Percentage of Registered Nurse hours worked for inpatient care in LONG-TERM CARE
NSG 1 (MH or CCC) - Percentage of Registered Nurse hours worked for inpatient care in MENTAL HEALTH or COMPLEX CONTINUING CARE
NSG 2 - Percentage of total nursing hours worked for direct inpatient care per patient day
NSG 3 - Percentage of nursing care hours (Full-time and/or Part-time Nurses) as paid absenteeism
NSG 4 - Percentage of voluntary turnover among full- and permanent part-time staff
NSG 5 - Percentage of total nursing hours worked per weighted inpatient day
Process Indicators
Falls-Acute 3 - Percentage Completed Fall Risk Assessment on Admission
Falls-LTC 3 - Percentage Completed Fall Risk Assessment on Admission
Falls-MH-CCC 3 - Percentage Completed Fall Risk Assessment on Admission
PU 1 - Percentage with pressure ulcer risk assessment completed on admission
HH 3 - Percent Appropriate Hand Hygiene Practice
Falls-Acute 6 - Percentage of Patients with Restraints
Falls-LTC 6 - Percentage of Patients with Restraints
Falls-MH-CCC 6 - Percentage of Patients with Restraints
Falls-LTC 7 Percentage of residents physically restrained daily on the most recent RAI assessment
Falls-MH-CCC 7 - Percentage of residents physically restrained daily on the most recent RAI assessment
MedRec Acute 5 - Percentage of Patients Reconciled at Admission
MedRec LTC 3 - Percentage of Long-Term Residents Reconciled)
Outcome Indicators
PAIN 1 - Percentage of patients with pain
PU 2 - Incidence of Pressure ulcers
TSC 1 - Mean Therapeutic Self-Care score at discharge
Falls-Acute 1 - Falls Rate per 1000 Patient Days
Falls-LTC 1 - Falls Rate per 1000 Patient Days
Falls-MH-CCC 1 - Falls Rate per 1000 Patient Days
Falls-Acute 2 - Percentage of Falls causing Injury
Falls-LTC 2 - Percentage of Falls causing Injury
Falls-MH-CCC 2 - Percentage of Falls causing Injury
Mental Health Indicators
MH 1 - Percent of patients with improved Aggressive Behaviour Score
MH 2 - Mean Self-Care Index Score on discharge or most recent assessment
Support & training sessions
Download the PDF version of the Training Manual.
Watch a recorded Patient Safety Metrics Training Session (in English) either online.
Hand Hygiene Self-Assessment Framework
On-line Hand Hygiene Self-Assessment (adapted from WHO Hand Hygiene Self-Assessment Framework 2010)
Training Manual | Privacy Policy | Safer Healthcare Now | CPSI | Copyright © 2010 ABS System Consultants 2.12

Indicators submitted into PSM system

Indicator		Number of Units
Percentage of Registered Nurse hours worked for inpatient care	S	20
Falls Rate per 1000 Patient/Client/Resident Days	O	20
Percentage of nursing care hours (Full-time and/or Part-time Nurses ONLY) as paid absenteeism	S	17
Percentage of total nursing hours worked for direct inpatient care per patient day	S	14
Percentage of voluntary turnover among full- and permanent part-time staff	S	11
Percentage of Falls causing Injury	O	10

Blue shading – structure indicators (S)
Gray shading – outcome indicators (O)

Indicators submitted into PSM system

Indicator		Number of Units
Percent Appropriate Hand Hygiene Practice	P	8
Percentage of patients with pain	O	8
Medication Reconciliation – Percentage of Patients Reconciled at Admission	P	7
Percentage with pressure ulcer risk assessment completed on admission	P	6
Percentage of residents physically restrained daily on the most recent RAI assessment	P	6
Incidence of Pressure ulcers	O	6
Mean Self-Care Index Score on discharge or most recent assessment (Mental Health – are 7 MH units)	O	6

Blue shading – structure indicators (S)
Light red shading – process indicator (P)
Gray shading – outcome indicators (O)

Indicators submitted into PSM system

Indicator		Number of Units
Total nursing hours worked per weighted inpatient day	S	5
Percentage Completed Fall Risk Assessment on Admission	P	5
Percent of patients with improved Aggressive Behaviour Score (Mental Health – are 7 MH units)	O	4
Percentage of Patients with Restraints	P	1
Mean Therapeutic Self-Care score at discharge	O	1

Blue shading – structure indicators (S)
Light red shading – process indicator (P)
Gray shading – outcome indicators (O)

Example of a unit level run chart in PS Metric system (de-identified)

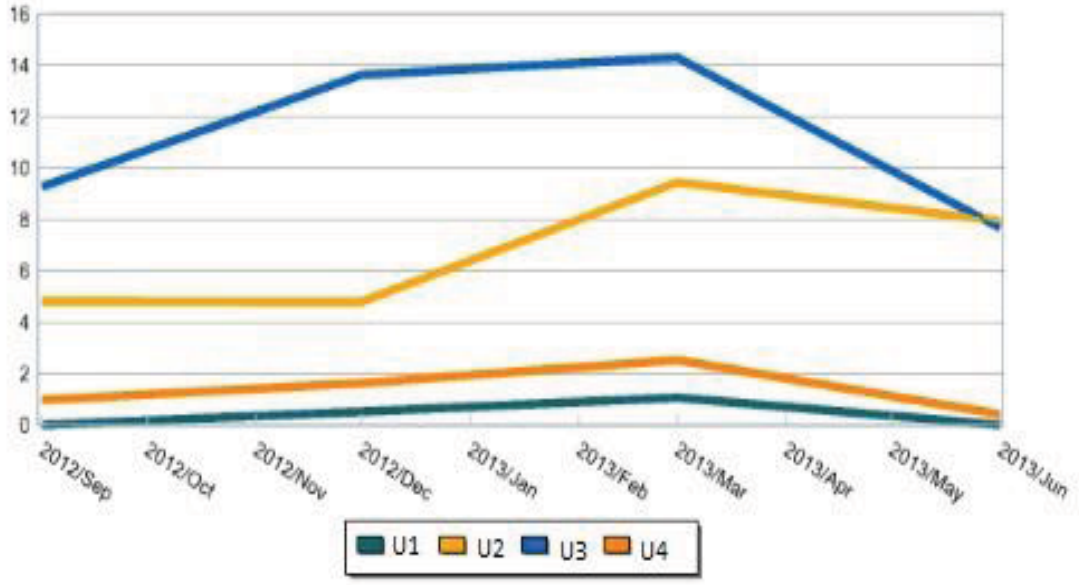
Mean Performance - Organization by Unit

Change Report Parameters

Export To CSV

Note: Exports data table only.

Selection Criteria:
Node **Ontario**
Province **Ontario**
Region Your Region
Organization Your Organization
Worksheet **Falls-MH-CCC 1 - Falls Rate per 1000 Patient Days**



Run chart example (de-identified): Organizational and National

4 record(s) returned.

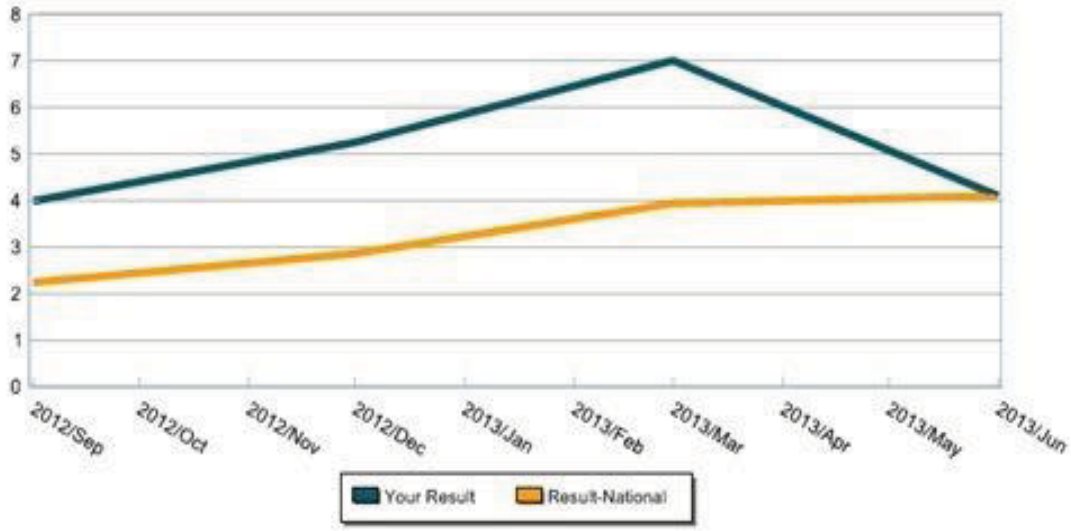
Mean Performance - Organization and National

Change Report Parameters

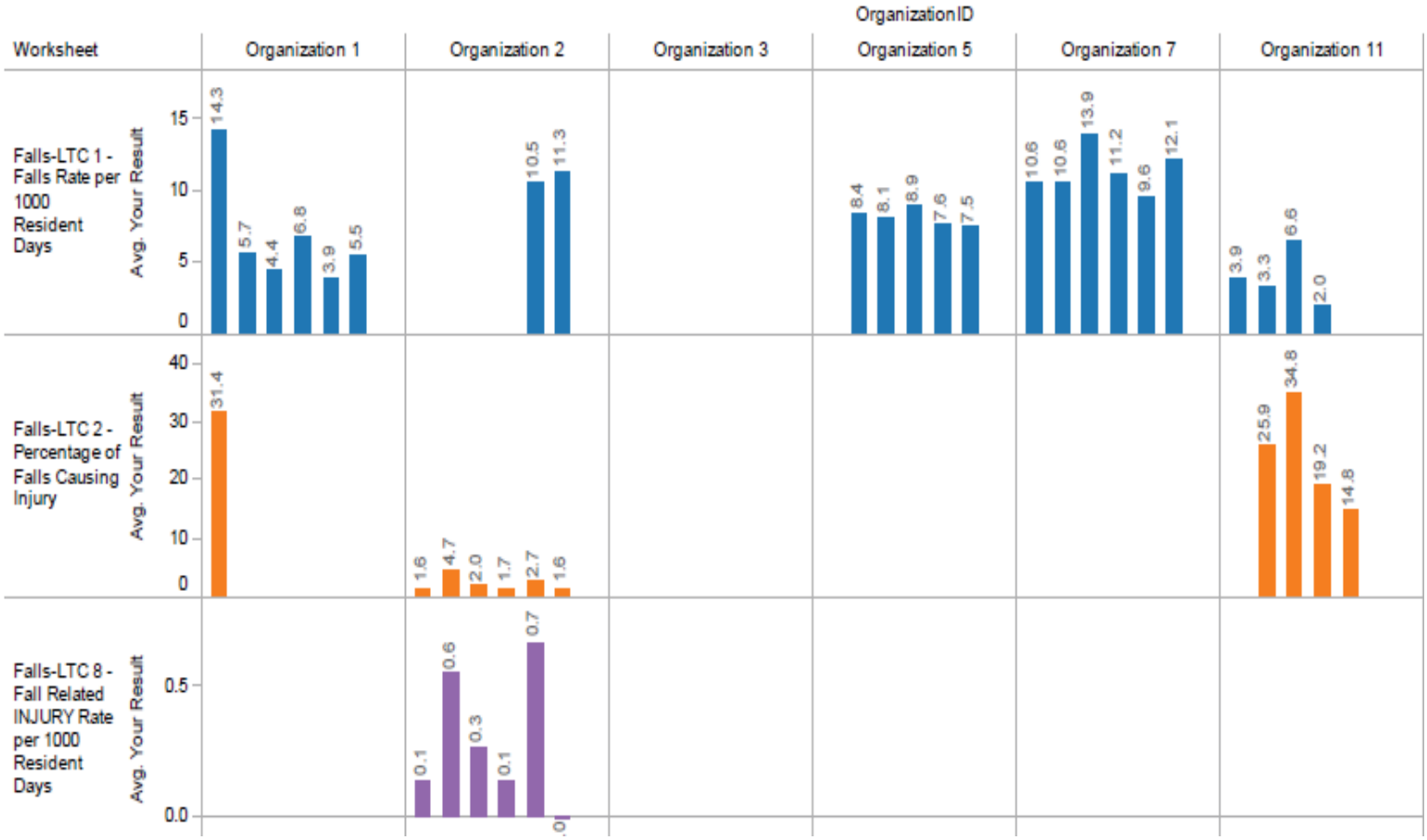
Export To CSV
Note: Exports data table only.

Selection Criteria:
CPSI-SHN Region **Ontario**
Province **Ontario**
Health Region Your region
Organization Your organization
Measure **Falls-MH-CCC - Falls-MH-CCC 1 - Falls Rate per 1000 Patient Days**

Run Chart



Example of preliminary dashboard report (partial) – organizational level



Evaluation of Participants (January – May 2014)

User Satisfaction survey:

- Assess level of satisfaction with online data collection system/utilization of data

Interviews:

- Assess feasibility of collecting indicator data
- Explore utility and benefits of data reports

Longitudinal analysis of indicator data:

- Assess potential relationships between structure, process and outcome data
- Assess benefits of NNQR-C for health system improvement

NNQR-C Evaluation Survey

Participants' comments (n=20) easy to enter data, clear data display, easy to navigate system, easy to create reports showing trends

Participants:

- used the system primarily to access information.

- had positive comments about the potential of the NNQR-C data to inform quality improvement

- would recommend the system to other users

Evaluation Interviews

Theme categories:

- Data collection barriers
- Data collection enablers
- Patient Safety Metrics system
- Data utilization (actual and potential)

Theme: Data Collection Barriers

- Access to data not always feasible

"… we don't have access to all of these databases"

- Challenging data reporting structures

"We had to go across the organization to get some of the data..."

- HR Resource issues: inadequate staff; staff turnover

"*People worked it into their already existing workload* "

"……. it involved a lot of people, work and explanation of what we were trying to obtain."

Theme: Data Collection Barriers (cont'd)

- Clarification of indicator definitions

"An interesting challenge, at the beginning of the project, was in defining the indicators…having a clear definition of the indicator to ensure that, across the nation, we're collecting the same data."

- Transforming data to fit indicator

"…we might collect it at a different level, like the falls rate per 1000 inpatient days,…. we were looking at monthly and project collects it quarterly, so they're still having to re-cut the data for us."

Theme: Data Collection Enablers

- Access to data is enabled by an electronic record
- Data collection process easy after initial phase
- Freedom to choose indicators was positive aspect
- HR Resources – adequate staff support was enabler
- Organizational commitment

"…feasibility became less of an issue because we linked the NNQR project to our staff-mix project…"

Theme: Patient Safety Metric System

- Challenges to user interface – necessary to sift through list of organization's indicators, rather than separate screen for NNQR indicators

- Data system is user friendly

- Graphs showing unit level data trends are easy to read

- Would like the ability to compare with other organizations need more need organizations/units submitting data

- PSM support team was helpful and supportive

Theme: Data utilization (actual and potential)

- Unit managers/nurses/ senior administrators appreciated data reports
- Value and potential for clinical decision-making recognized
- Use of data requires more information

"…there isn't enough of a trend line to really have enough confidence that this is solid ground and that it's a good basis"

- Early use has informed quality improvement planning

"…we're just in the initial discussion phases of identifying a quality improvement project based on the NNQR data"

Longitudinal analysis of indicator data

- Early evidence of potential correlations between structure, process and outcome indicators. For example:
  - Negative correlation between falls rate and nurse hours
  - Positive correlation between hand hygiene and nurse hours
  - Negative correlation between pain scores and nurse hours
  - Positive correlation between pain and percent of patients restrained
- Important to note this does not imply causation. Goal is to continue observations as organizations make changes in structure or processes of care
- Require longer period of time and more data to be confident in data trends

NNQR-C Sustainability

A staged plan is proposed to sustain the NNQR-C beyond May 2014.

- In the short-term, the *Knowledge Translation Project* will engage the sites in the next steps in using the data

- In the long-term the goal is to increase number of sites to support the collection/extraction, reporting, and knowledge translation activities associated with the NNQR-C.

- Discussions with C-HOBIC and CIHI to determine collaboration in data collection, analysis and reporting on a provincial and eventually national level

Short-term NNQR-C sustainability plan

- Strategic alignment with the *Knowledge Translation (KT) of Performance Data for Frontline Nurses and Leaders* Project (project lead: Dr. Lianne Jeffs)

  - Sites invited to continue entering data with opportunity for KT, including development of a quality improvement toolkit.

  - Learning modules (KT) developed to assist staff in using the indicator data;

  - Begin to transition in new NNQR-C sites and expand number of units in current sites

Long-term plan for NNQR-C sustainability

- Create more efficient ways for organizations to collect and submit data

- Align with C-HOBIC – a consolidated NNQR-C/ C-HOBIC/ Knowledge Translation planning framework

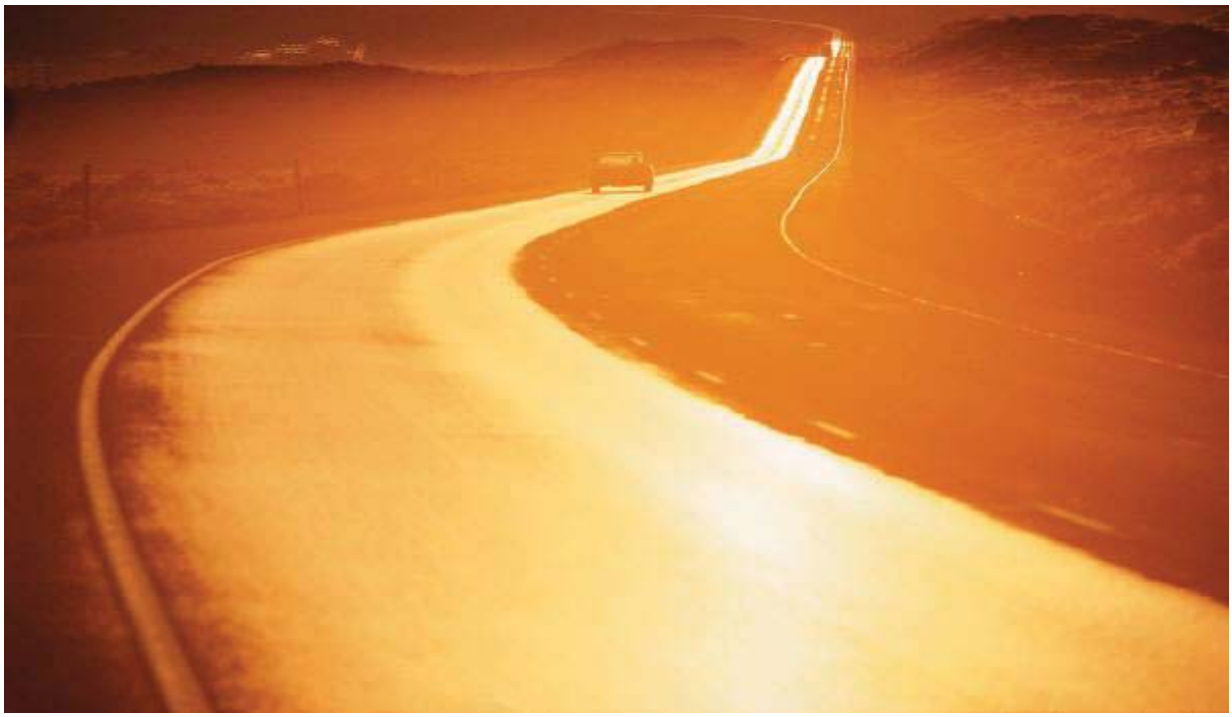
- Continue to partner with CPSI to create portals at additional sites

- Explore the feasibility of partnering with CIHI to report on nurse sensitive indicators already in the CIHI data base

Conclusions

- NNQR pilot project enabled participating organizations to capture and integrate unit level process, structure, outcome indicators that was presented on a dashboard, and compared across units, and other organizations.
- NNQR project aimed at providing unit-level structure, process, outcomes information that potentially resulted in improvement in care delivery, on the unit, and organizational level.
- The ongoing vision is create a national set of input, process and outcome indicators, that can be benchmarked across acute, community, mental health and long term care sectors.

Thank you for listening



Questions?