

Canadian - Health Outcomes for Better Information and Care

Agenda

- Goals of C-HOBIC
- Implementation the Collection and Reporting of Standardized Information in Participating Provinces
- Mapping to ICNP®
- Evaluation
- Sustainability - Communication strategy
- Questions

Participants

- Canadian Nurses Association
- Ontario: Ministry of Health and Long Term Care - Health System Information Management Division, Health Outcomes for Better Information and Care; Health Human Resources Division, Nursing Secretariat; and e-health office
- Saskatchewan: Saskatchewan Health - Health Information Solutions Centre and Health Human Resource Planning Branch
- Prince Edward Island: Ministry of Health – Community Hospitals and Continuing Care Division, Provincial Acute Care Division and CIS Project

Objectives of the C-HOBIC Project

- Standardize the language concepts used by HOBIC (Health Outcomes for Better Information and Care – Ontario Ministry of Health and Long-Term Care [MOHLTC]) to the standardized clinical reference terminology of nursing, the International Classification for Nursing Practice (ICNP®)
- Capture nurse-sensitive, patient-centred, clinical outcomes data across 4 sectors (acute care, complex continuing care, long-term care and home care) sectors of the health system: in Ontario – all 4 sectors, in PEI – 2 acute care settings, in Saskatchewan – 35% of long-term care facilities
- Store the captured and standardized data in relevant secure jurisdictional data repositories/databases in preparation for entry into provincial databases/electronic health records

C-HOBIC Measures

- A set of clinical outcomes that can be collected systematically and standardized across the health care system
 - Function – RAI measure for ADL , IADL, and continence
 - Therapeutic self-care (Doran & Sidani)
 - Symptoms
 - **Pain:** 0-10 scale in acute care & RAI scale in other sectors
 - **Fatigue:** RAI scale
 - **Dyspnea:** RAI scale
 - **Nausea:** MOH nausea scale
 - Safety outcomes: Falls & pressure ulcers – RAI measures
- Concept definition, valid and reliable measure and evidence linking them to some aspect of nursing (deployment, intervention)
- Collected on admission and discharge in acute care and admission, quarterly and if condition changes in other sectors


C-HOBIC MEASURES

Category	Sector			
	AC	CCC	LTC	HC
Functional Status (ADL & IADL)				
- Bathing	√	√	√	√
- Personal	√	√	√	√
-Walking	√	√	√	√
- Toilet Transfer	√	√	√	√
- Toilet Use	√	√	√	√
- Bed Mobility	√	√	√	√
- Locomotion on unit	√	√	√	√
- Locomotion off unit	√	√	√	√
- Locomotion in home				√
- Locomotion outside of home				√
- Dressing				√
- Eating	√	√	√	√
- Bladder Continence	√	√	√	√
- Meal preparation				√
- Ordinary Housework				√
- Managing				
Pain - Frequency	√	√	√	√
Pain - Intensity	√	√	√	√
Fatigue	√	√	√	√
Dyspnea	√	√	√	√
Nausea	√	√	√	√
Falls	√	√	√	√
Pressure Ulcer	√	√	√	√

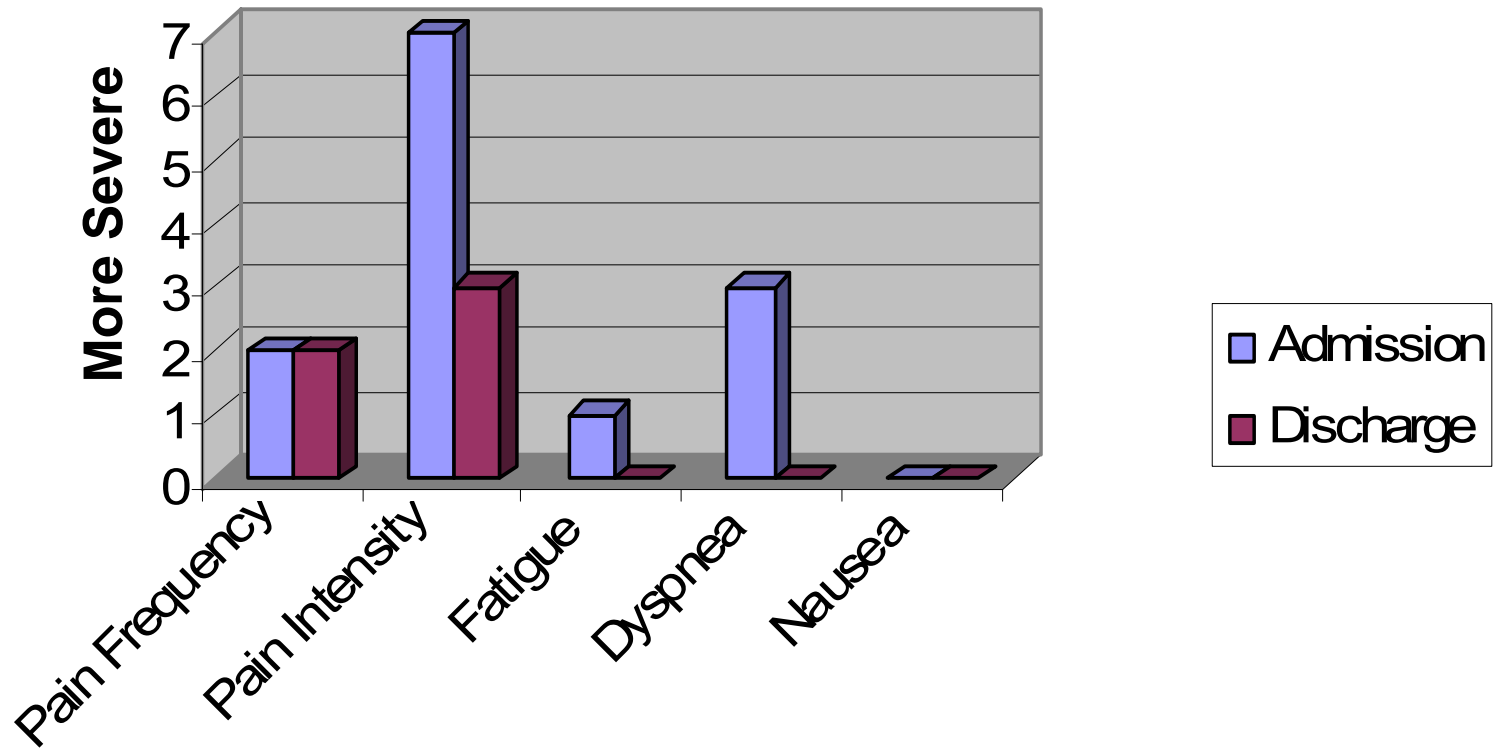
C-HOBIC MEASURES

Category	Sector			
	AC	CCC	LTC	HC
Therapeutic Self-Care				
Knowledge of medications	√			√
Knowledge of what they are for	√			√
Ability to take medications	√			√
Recognition of changes in body symptoms	√			√
Understanding why they occur	√			√
Knowledge of what to do related to symptoms	√			√
Ability to carry out treatments to managing symptoms	√			√
Ability to look after self and maintain general health	√			√
Knowledge of who to contact if help is needed in managing daily activities	√			√
Knowledge of who to contact if there is an emergency	√			√
Ability to perform activities such as shopping	√			√
Ability to adjust regular activities when you are not well	√			√

ACUTE CARE ...continued

Adm	D/C	
PAIN		(interRAI AC: J5a &b)
Code: 2	2	PAIN SYMPTOMS – Assess for last 24 hours Frequency with which person complains or show evidence of pain (including grimacing, teeth clenching, moaning, withdrawal when touched, other non-verbal signs suggesting pain)
Code: 7	3	Intensity of highest level of pain present No Pain Worst Possible Pain  0 1 2 3 4 5 6 7 8 9 10
FATIGUE		(interRAI AC: J4)
Code: 1	0	FATIGUE – Assess for last 24 hours Inability to complete normal daily activities – e.g., ADLs, IADLs
DYSPNEA		(interRAI AC: J3)
Code: 3	0	DYSPNEA – Assess for last 24 hours
NAUSEA		(HOBIC Scale)
Code: 0	0	NAUSEA - Assess for last 24 hours

Symptom Management



Implementation

- Ontario

- Implementation in 3 sectors: acute care, complex continuing care & long-term care
- As of March 31, 2008 49 sites submitting data to database

- Saskatchewan

- Implementation of the C-HOBIC measures for the current Momentum LTC MDS application for 25% of the LTC facilities – Saskatoon Health Region
- Initially a subset of C-HOBIC measures with a strategy for moving forward on a complete set as provincial EHR is implemented

- Prince Edward Island

- Supportive of C-HOBIC and interested with working with the university on the educational strategy
- Recognized value of link to nursing practice
- Implementation of CIS in acute care hospitals delayed

Creating and Sustaining the Change

- Focus on collecting outcomes electronically at the point of care and providing 'real time' information to nurses and nurse managers
- Educational strategy focuses on:
 - **Conducting standardized assessments**
 - **Using outcomes information to plan for and evaluate care**
 - **Value of this information to the nursing profession**
- Working with colleges and universities to incorporate HOBIC into nursing curricula
- Wide dissemination in the professional literature and presentations

Implementation - Challenges & Opportunities

- Opportunities
 - Standardized information that is patient-centred and can follow the patient over sectors and be available over time
- Challenges
 - Current clinical information systems do not provide outcomes information to clinicians in 'real time'
 - Information is focused on one sector and does not follow the patient across the system

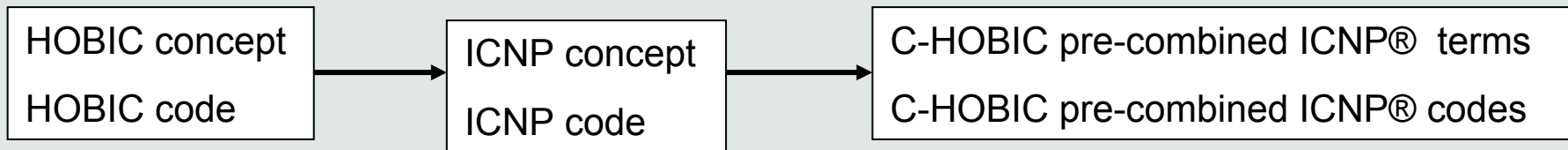
Mapping to ICNP®

- Goals of Mapping
 - Standardize the concepts to the standardized clinical reference terminology of nursing - International Classification for Nursing Practice (ICNP®).
 - Demonstrate the value of mapping current information, and position nursing sensitive outcomes for inclusion in the pan-Canadian health record.
 - Provide an approach for coding nursing information that will support interoperability, consistency, and comparability of clinical information that is reflective of nursing practice across health care system(s) and facilitate future mapping of these concepts to SNOMED-CT.

Process for Terminology Mapping

- Draft report on mapping of concepts by Kennedy & Associates completed September 11, 2007
- Workshop to validate the mapping and initiate consensus building - September 30, 2007
- Interim report provided to workshop attendees for review
- Consultation with ICNP® representatives re: process
- Final report entitled - **Mapping Canadian Clinical Outcomes in ICNP®** available May 2008

Mapping Process



Functional status – ADL Terms for Mapping for Acute Care

Item	HOBIC Concept	HOBIC Code	C-HOBIC Pre-Combined ICNPØ Term	C-HOBIC Pre-Combined ICNPØ Code
Functional Status/ADL interRAI AC:GI	AC	0- Independent	Dependent/Never	10005778/10013173
	ADL SELF-PERFORMANCE Š Assess for performance over full 24 hours, considering all occurrences of activity	1- Set up help Only	Dependent/Minimal	10005778/(new term)
		2- Supervision	Dependent/Minimal	10005778/(as above)
		3- Limited Assistance	Dependent/Minimal	10005778/(as above)
		4- Extensive Assistance	Dependent/Partial	10005778/(new term)
		5- Maximal Assistance	Dependent/Extensive	10005778/(new term)
		6- Total Dependence	Dependent/Complete	10005778/(new term)
	Bathing		Ability To Bath	10000121
	Personal hygiene		Ability to Groom Self	10000178
	Walking		Ability To Walk	10000258
Transfer toilet		Ability To Transfer	10000204	
Toilet use		Ability To Toilet Self	10000197	
Bed mobility		Bed Mobility	10003181	
Eating		Ability To Feed Self	10000166	

Mapping - Forum Outcomes

- **96** terms were addressed in this project
 - 58 HOBIC concepts were matched and validated as C-HOBIC terms
 - 13 HOBIC concepts were partially mapped and required a new term for completion as C-HOBIC terms
 - 24 new C-HOBIC terms were proposed for inclusion in ICNP®,
 - 1 HOBIC concept (“Activity did not occur”) could not be mapped to ICNP®
 - 2 HOBIC ordinal scales were retained for use in C-HOBIC, including the pain scale and the number of falls.

Evaluation

As part of Canada Health Infoway's *End User Acceptance Strategy*, the evaluation will:

- Examine the value of C-HOBIC information to nurses in planning for and evaluating patient care
- Explore how C-HOBIC information is integrated into the work flow of nurses' daily activities
- Consider how the aggregated data is used by managers and policy makers
- Identify parameters that need to be implemented within four types of settings (acute care, complex continuing care, long-term care and home care) to ensure conditions for success and nursing uptake of technology.

Evaluation - Timelines and Deliverables

- Project Charter and Workplan - January 31, 2008
- Confirmed study questions & develop Evaluation Plan -
April 3, 2008
- Prepare evaluation tools - May 31, 2008
- Present interim findings - October 31, 2008
- Final report – March 2009

Sustainability - Communications Strategy

- **Communication to stakeholders**
 - Announcement about C-HOBIC mailed to 45 stakeholders
 - Email to International Medical Informatics Association-Nursing Informatics- received interest from US, Norway and Holland
- **Articles in journals**
 - ICNP® bulletin – ICN webpage
 - C-HOBIC project highlighted in *EHR news at Infoway*
 - *Interchange - News from the Infoway Standards Collaborative and Solution Architecture Group*
 - *Canadian Nurse Journal*
 - *Invited paper in the Journal of American Medical Informatics Association (JAMIA)*
- **Presentations**
 - Plenary session at CNIA Conference (Canadian Nursing Informatics Association) –
 - Keynote by Dr. Kathryn Hannah at the CAUSN (Canadian Association of University Schools of Nursing) annual conference on Technology and Innovation
 - Canada Health Infoway Showcase
- **Webpage:** www.cna-aicc.ca/c-hobic

Transforming Health Data into Information Based Action

Detailed Clinical Data (CPR)

Compiled Historical Detailed Data (EHR)

Comparable Aggregate Data

Comparison to Indicators and Accountability Measures

Plans, Policy, Issues

Data

Information

Decision

Action

Clinical Data Capture, Data Quality Assurance

Information Quality Assurance

Information Analysis, Information Interpretation, Decision Support

Clinical Information Requirements

Population Health and Program Management Information Requirements

Administrative and Management Information Requirements

Questions