

Let's Talk Informatics

Advancing Nursing Data Standards in Canada

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Please be advised that we are currently in a controlled vendor environment for the One Person One Record project.

Please refrain from questions or discussion related to the One Person One Record project.

Informatics...

utilizes health information and health care technology to enable patients to receive best treatment and best outcome possible.

Clinical Informatics...

is the application of informatics and information technology to deliver health care.

AMIA. (2017, January 13). Retrieved from <https://www.amia.org/applications-infomatics/clinical-informatics>

Objectives

At the conclusion of this activity, participants will be able to...

- Identify what knowledge and skills health care providers will need to use information now and in the future.
- Prepare health care providers by introducing them to concepts and local experiences in Informatics.
- Acquire knowledge to remain current with new trends, terminology , studies, data and breaking news.
- Cooperate with a network of colleagues establishing connections and leaders that will provide assistance and advice for business issues, as well as for best-practice and knowledge sharing.

Objectives

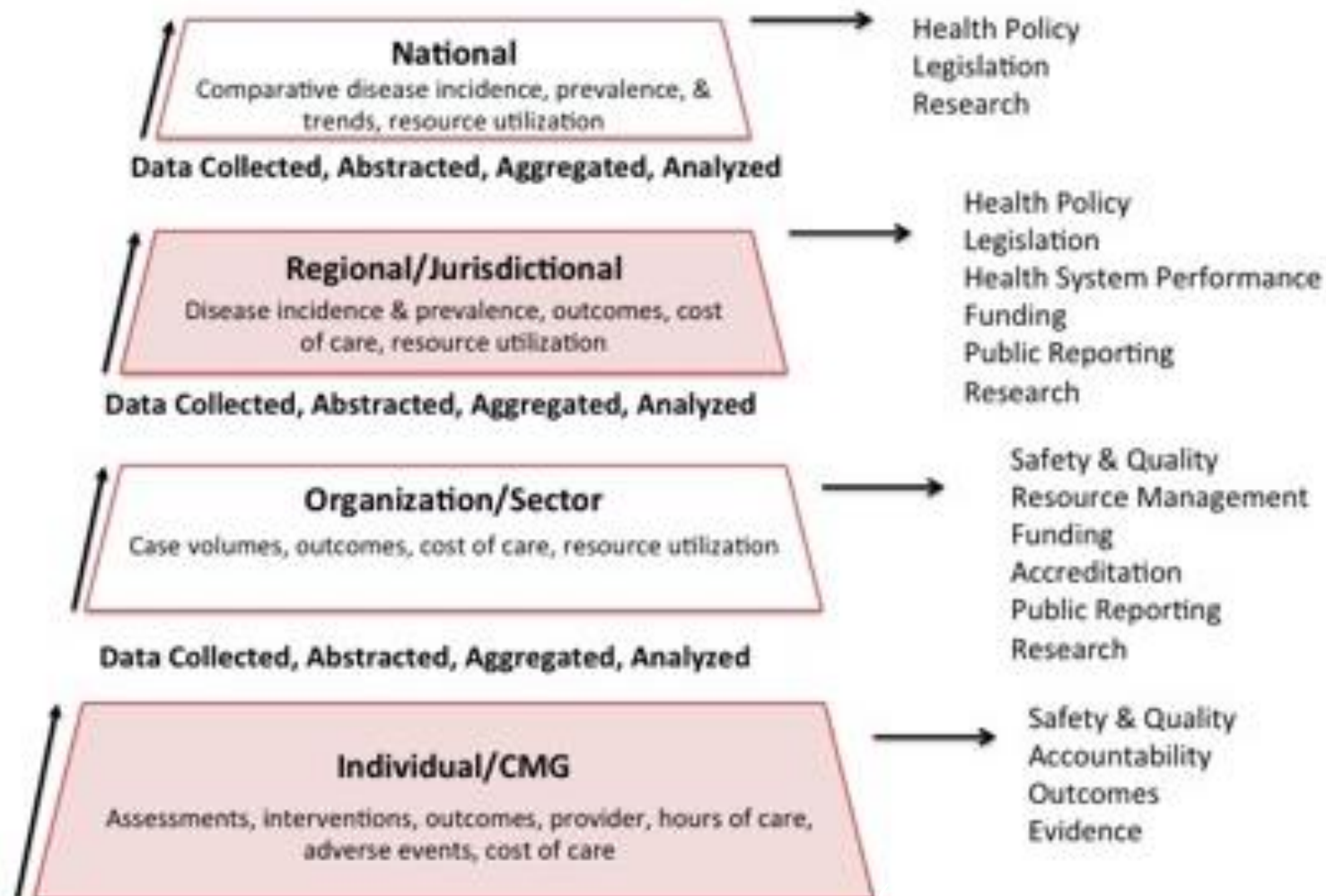
1. Understand the value of data standards for clinicians, healthcare decision-makers and consumers.
2. Discuss the efforts in Canada to advance the adoption of nursing data standards.
3. Provide an opportunity for attendees to participate in a dialogue about nursing data standards.

Conflict of Interest Declaration

- We do not have an affiliation (financial or otherwise) with a pharmaceutical, medical device, health care informatics organization, or other for-profit funder of this program.

National Nursing Data Standards - The Vision

Standardized Data – Collected Once, Used for Many Purposes



National Nursing Data Standards Symposium (NNDS)

- 1st symposium April 8-10, 2016 with over 60 nursing and health care leaders representing most jurisdictions and health care sectors across Canada, as well as selected national health care organizations.

Objectives



Develop a national strategy to promote the adoption of a core set of standardized nursing data. More specifically, identify:

- short-term objectives and action plans to promote adoption in clinical administration, clinical practice, education, research and policy domains.
- the stakeholders, accountability and sponsorship for advancing this work in Canada for each objective and related actions.

An Invitational Symposium was held on April 9 & 10, 2016 with 65 thought leaders from across Canada with the goal of developing an Action Plan for moving forward on the collection and use of standardized nursing data in Canada

<https://www.cna-aiic.ca/en/on-the-issues/best-nursing/nursing-informatics>

Clinical	Administration	Education	Research	Health Policy
<ul style="list-style-type: none"> ✓ Develop a “how to use outcomes data to inform clinical practice: A guideline for nurses at the point of care” ✓ Create a demonstration of alignment between nursing documentation and clinical outcomes across the continuum of care ✓ Identify opportunities for standards integration such as C-HOBIC, within existing and pending clinical implementations 	<ul style="list-style-type: none"> ✓ Develop a “how to use outcomes data to inform clinical practice and administrative decision-making: A guideline for nurse leaders” ✓ Identify core messaging on the value of nursing data standards ✓ Develop a nurse executive informatics competency framework that facilitates dialogue and informed decision making with senior executives, stakeholders and vendors by 2017 	<ul style="list-style-type: none"> ✓ Develop a “how to include nursing data standards in clinical practice education: A guideline for nurse educators” including teaching scenarios for nurse educators by 2017 ✓ Continue with Infoway-CASN sponsored Digital Health Faculty Peer Network efforts 	<ul style="list-style-type: none"> ✓ Establish national nursing data standards research consortium ✓ Identify priority areas for research to advance the adoption of data standards ✓ Secure funding for initial research initiatives by 2017 	<ul style="list-style-type: none"> ✓ Develop a targeted policy advocacy strategy to advance evidence-based nursing practice and quality care across the health system through standardized nursing data ✓ Advance a national resolution for the adoption of nursing data standards through CNA

Enablers	 <p>Nursing leadership</p> <p>Researchers use standardized nursing data to advance practice</p>	<p>Demonstration of the impact of nursing care on outcomes</p> <p>BScN & RPN/LPN programs include clinical documentation based on nursing data standards</p> <p>Electronic Health Records</p> <p>Perceived value by the interprofessional team</p>	<p>Consumer focused</p> <p>Real time outcome reports available at point of care</p> <p>National nursing practice reports</p> 

The adoption of a core set of standardized nursing data to inform Nursing Clinical Practice, Administration, Education, Research and Health Policy

Resolution to Canadian Nurses Association

Be it resolved that:

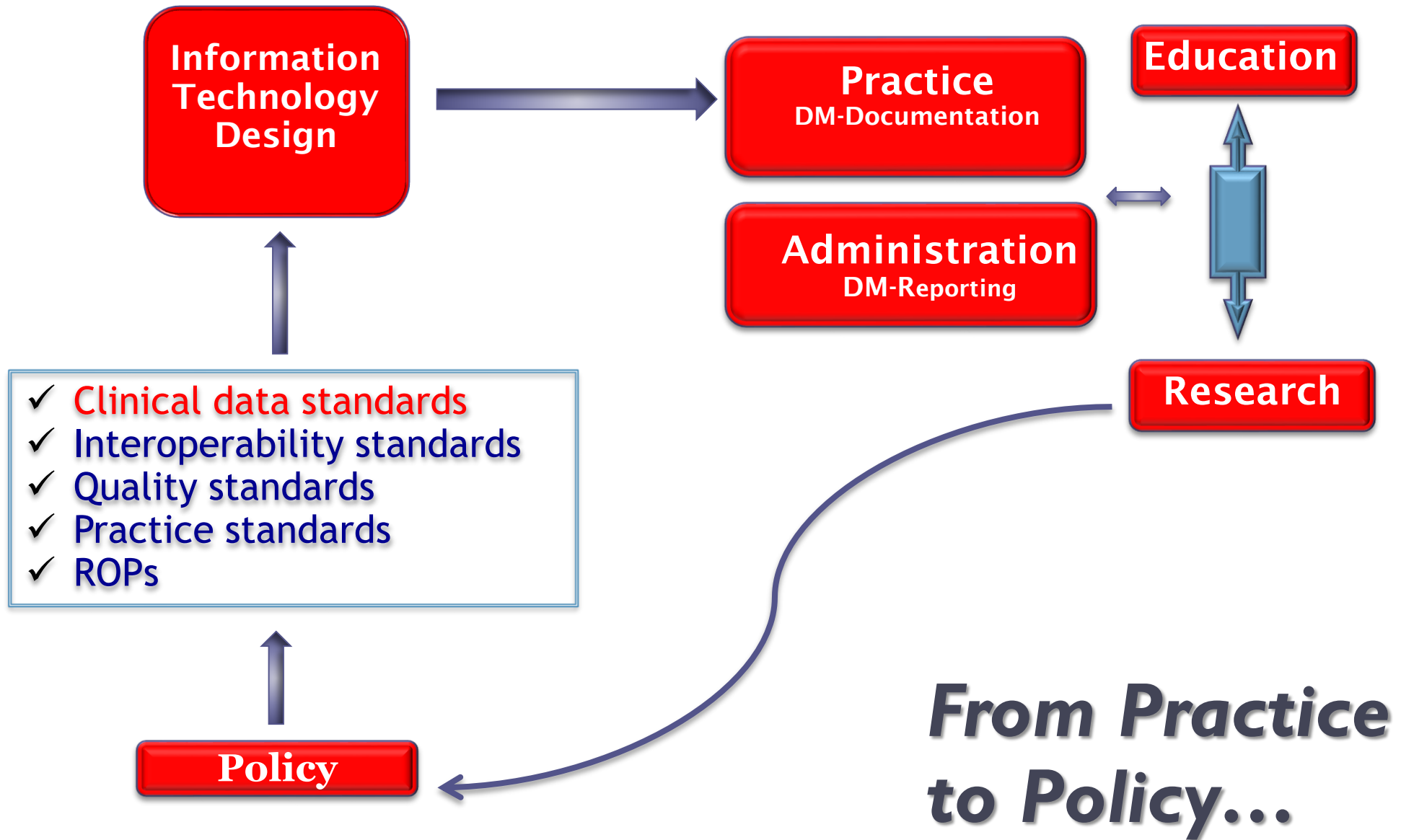
- The Canadian Nurses Association advocate for the adoption of two standardized clinical reference terminologies, specifically ICNP® and SNOMED-CT, as well as a standardized approach to nursing documentation in all clinical practice settings across Canada, specifically C-HOBIC and LOINC Nursing Physiologic Assessment Panel.
- Passed at CNA board meeting November 2016

Data Standards

Encompass methods, protocols, terminologies, and specifications for the collection, exchange, storage, and retrieval

For Example:

- ICNP
- SNOMED-CT
- LOINC
- C-HOBIC
- interRAI



Chronic Obstructive Lung Disease

13645005



Chronic
Obstructive
Pulmonary
Disease
(COPD)

Chronic
Obstructive
Lung Disease
(COLD)

Chronic
Airflow
Obstruction
(CAO)



13645005

Walking = 3

282097004

Dyspnea = 2

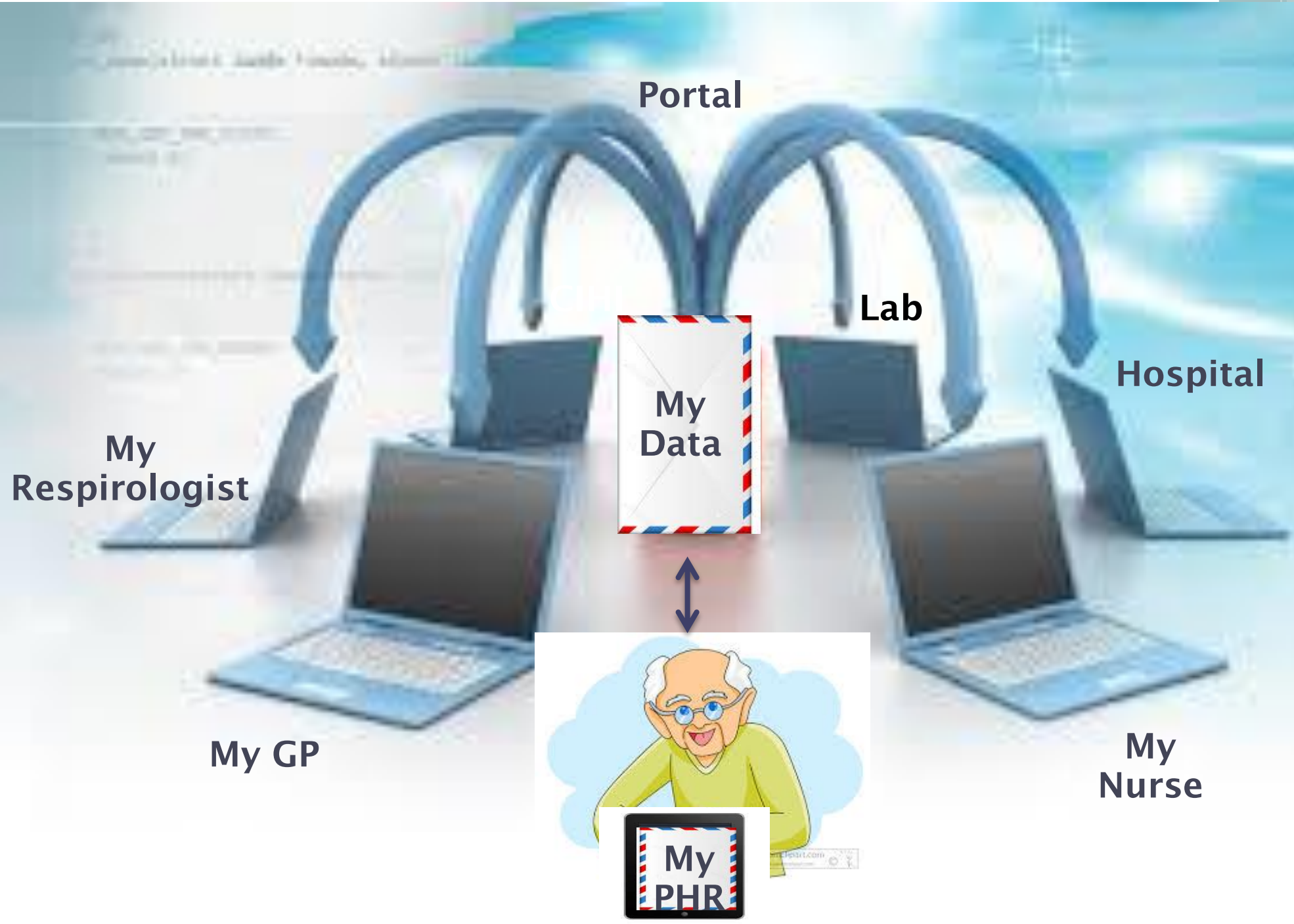
248546008

Fatigue = 1

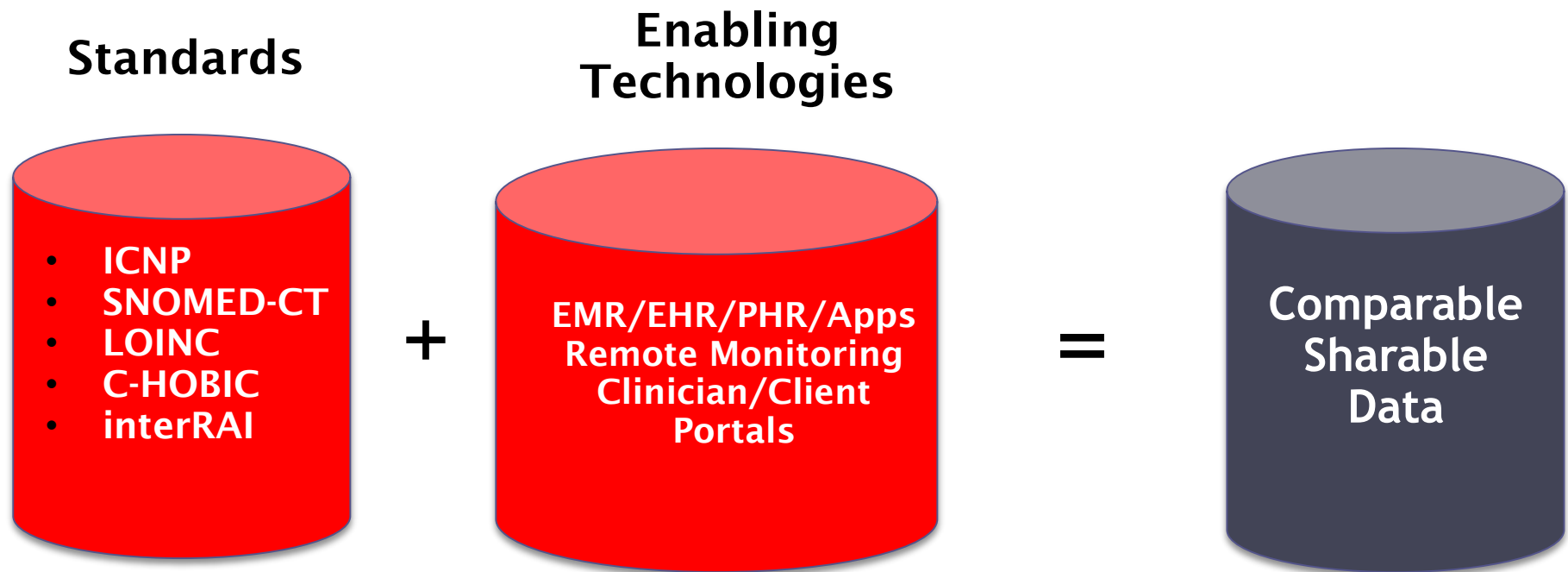
440398005

Medications = 4

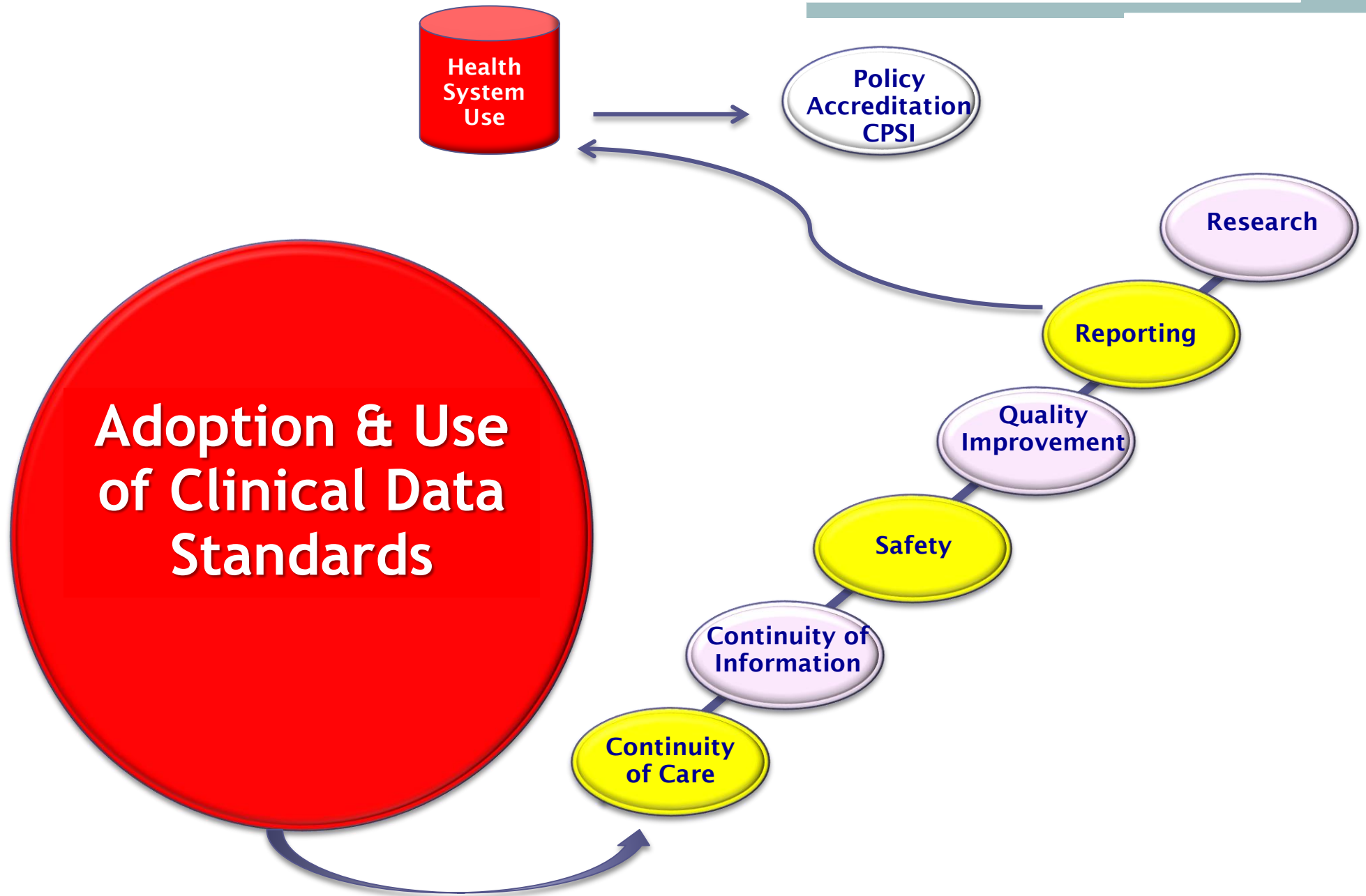
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Data collected once using...



...Imagine the value



Using Clinical Data Standards

C-HOBIC Dataset

A suite of evidence-based clinical concepts that can be collected systematically and standardized across the health care system

Acute Care and Home Care Measures

- **Functional Status:** ADL* & Bladder Continence* (IADL* for home care)
- **Symptom management:** Pain, Fatigue*, Dyspnea*, Nausea
- **Safety Outcomes:** Falls*, Pressure Ulcers*
- **Therapeutic Self-care**
- Collected on admission & discharge
- * interRAI measures

Long-term Care and Complex Continuing Care Measures

- **Functional Status:** ADL* & Bladder Continence*
- **Symptom management:** Pain*, Fatigue*, Dyspnea*, Nausea
- **Safety Outcomes:** Falls*, Pressure Ulcers*
- Collected on admission, & quarterly/client condition changes
- * interRAI measures

C-HOBIC Dataset

- C-HOBIC Dataset formally endorsed by the Canadian Nurses Association
- C-HOBIC Dataset formally endorsed by the Canadian Nursing Informatics Association
- In January 2012 the C-HOBIC Dataset was approved as a Canadian Approved Standard
- Approved for use by National Nursing Data Standards symposium 2017

C-HOBIC Implementation: Underlying Principles

- Emphasis on data for which there is empirical evidence that clinicians impact patient care (outcomes).
- Focus on consistent collection of data electronically at the point of care – to provide *real-time feedback* of information that clinicians can use in planning for and evaluating care
- Avoid duplication - Integrate C-HOBIC data capture with existing assessments
- Maximize electronic capture through existing systems – work to build these questions into existing assessments
- Provide **access** to information for nurses and other clinicians, healthcare managers, researchers and ministry planners
- Work with clinicians regarding the value of this data to their practice

Inclusion of C-HOBIC Dataset in the DAD

- Value in being able to link this dataset with other datasets such as the home care dataset and long-term care homes dataset to understand clinical outcomes across the continuum of care
- Currently piloting the submission of the C-HOBIC dataset by 2 acute care sites to special projects fields in the DAD in order to identify the resources required at the sites for the submission
- Once this work is completed, other sites that are collecting the C-HOBIC dataset will be able to include these data with their DAD special projects fields submission.
- Eventually the C-HOBIC dataset would be part of the DAD core submission and available on the CIHI portal to support:
 - Health System Use and benchmarking at a system level
 - Health policy related to “how well is the system doing in improving outcomes for people within the system?”
- **First time clinical data beyond physician data is included in the DAD**

Value: Analysis of Aggregated Standardized Data

Dr. Walter Wodchis et al. (2012)

- HOBIC data was linked to other datasets held at the ICES. Therapeutic self-care (TSC) scores showed a consistent and significant protective effect for readmission to acute care at 7, 30 and 90 days.
- TSC scores was associated with approximately a 10% reduction in the likelihood of readmission. Nausea was more strongly related to early readmissions (3, 7, and 30 days), while dyspnea was more strongly related to readmission at later stages (30 and 90 days).

Dr. Lianne Jeffs et al. (2013)

- Examined the HOBIC scores on admission as a predictor of ALC and LOS and found that higher fatigue and dyspnea scores on admission were significantly related to a longer length of stay.
- Patients with higher scores for fatigue and falls and ADL composite score on admission were more likely to be discharged to either complex continuing care, long-term care homes or rehabilitation facilities than discharged home.

Value: Analysis of Aggregated Standardized Data ...continued

Winnie Sun PhD et al. (2014)

- Analyzed TSC scores in relation to two types of adverse events:
 - the use of health care resources, including new emergency room visits /unplanned hospital readmissions;
 - safety outcomes, including client falls; unintended weight loss; new urinary tract infection; ADL decline; new pressure ulcer or ulcer deterioration; non-compliance/adherence with medication; and new caregiver decline
- Found that clients with high TSC ability experienced fewer adverse events
- Indicates that there is a need to focus on improving client self-care functioning, a domain frequently overlooked by all health care professionals

2017 National Nursing Data Standards Symposium

- Held April 6-8, 2017 with over 85 nursing and healthcare leaders representing every province and territory across Canada
 - Update on activities within each domain
 - Review and validation of core messaging re: *the value of standards*
 - Review and validation of case study approach for practice, administration & education
 - Identification of research areas of focus and funding possibilities
 - Review, validation and prioritization of policy directions

Clinical Action Plan

- Use clinical scenario and whiteboard animation to demonstrate value to clinicians
- Map standards across primary care (PC), acute care (AC), home care (HC), long-term care (LTC) & mental health; identify gaps (e.g., maternal-child, pediatrics)
- Create online community of practice with links to standards information, experts & relevant organizations (e.g., CNIA)
- Create demonstrations of the value of data standards in practice

Clinical Action Plan ...continued

- Advocate to vendors for systems that:
 - pull information together;
 - are not big box, so organizations do not have to spend time/resources removing fields;
 - support interprofessional documentation
- Consider forming groups around key areas such as transitions of care, continuity of care; include policy, practice, research, administration, and education perspectives in each
- Identify what we want out of the electronic health record.

Administration Action Plan

- Establish a nursing management minimum data set (based on the NNQR) and bring it to the next level (cross sector, etc.), ensuring a core set of structure, process, and outcome measures.
- Measures need to advance professional accountability and the delivery of safe, efficient care.
- Ensure that that direct-care nurses are no longer seen as the default source of data collection.
- Establish guiding principles (e.g., keep it simple, document once, leverage many times, ensure relevance to clinical care)

Administration Action Plan...continued

- Identify opportunities to use plain language so the EHR is shareable among professions, patients, and organizations.
- Shorten case studies demonstrating the value of data standards; include resources such as the standards video, bibliography, etc.
- Continue the work of developing nursing leadership informatics competencies, particularly those relative to the adoption and use of nursing

Research Action Plan

Establish a research cluster to answer the following questions:

1. What is the current capacity of standardized terminologies to represent clinical practice?
2. What is the Canadian capacity for conducting nursing informatics research?
3. Who are the individuals/SoNs involved and what are their identified research interests? Who are the informatics graduate students and what is the current focus of their research?

Policy Action Plan

- Engage key nursing stakeholders, especially regulators and unions, in advancing the National Nursing Data Standards agenda.
- Develop a briefing note that clearly articulates the issues, background, assessment, and recommendation for use with regulators, unions, and others.
- Work to address the adoption of unique national identifiers for providers (all categories of nurse providers) so that care can be allocated to the appropriate provider.

Policy Action Plan....*continued*

- Follow up CCRNR (Canadian Council of RN Regulators), CCPNR (Canadian Council for Practical Nurse Regulators), and CFNU (Canadian Federation of Nurses Unions) regarding the unique identifier.
- Provide an update to the Provincial Nursing Advisory Task Force regarding NNDS efforts and the need for a unique nursing provider identifier.
- Create a working group that leverages Canada Health Infoway resources (e.g., change management framework, virtual community of practice).
- Accreditation Canada to recruit patient representation to the working group

Education Action Plan

- Work with Infoway to complete faculty/SoN survey of the integration and use of informatics in undergraduate education
- Work with CASN to identify nursing data standards curricular accreditation requirements for undergraduate SoN
- Develop tool for undergraduate nursing curricular assessment related to informatics and nursing data standards
- Develop additional teaching/learning strategies for SoN (e.g., case studies, documentation teaching tools, use of EHRs in simulation labs)
- Continue CASN-Infoway efforts to advance faculty development
- Identify opportunities for nursing practice and professional education

The adoption of National Data Standards will:

- Allow for consistent monitoring of outcomes across the continuum of care, thereby facilitating safe, quality care and continuity of care;
- Enable national, peer-group comparability, providing both macro and micro insights to guide decision-making and inform funding requirements and health human resource planning;
- Improve population health by enabling individuals to use consistently named, defined, and measured clinical outcomes data to understand and manage illness and improve their health.

The Value of Nursing-Sensitive Data Standards

- Creates visibility for nursing;
- Supports professional accountability;
- Informs opportunities for quality improvement and the delivery of safer care;
- Advances consistency in and alignment between nursing education and practice;
- Accelerates research capabilities, particularly practice-based research;
- Informs health human resource planning;
- Strengthens local, jurisdictional, and national decision-making.

Ongoing

- Planning is underway for 2018 symposium
- Working with the Canadian Nurses Association, Canada Health Infoway and the Canadian Institute for Health Information on a strategy document:
 - Identify where we can build into existing standards initiatives
 - Connect with senior Ministry leaders from across Canada
 - Continue to engage with nursing leaders

Continue to raise awareness through Presentations/Publications/Profile

- eHealth 2016, 2017
- Nursing Leadership Network 2017
- Ontario Nursing Informatics Group 2017
- Canadian Nurse, November 2016, May 2017
- Canadian Health Technology, April, May, September 2017
- Blog on Canada Health Infoway webpage
- E-proceedings from 2016 & 2017 symposium on CIHI and Infoway webpage
- Webpage on CNA website
- Canadian Nursing Informatics Association webinar 2017

Whiteboard on Value of Clinical Data Standards

[https://www.youtube.com/watch?v=vOhdism3j2Y
&t=11s](https://www.youtube.com/watch?v=vOhdism3j2Y&t=11s)

Let's Talk Informatics has been certified for continuing education credits by;

- College of Family Physicians of Canada and the Nova Scotia Chapter for 1 Mainpro+ credit.
- COACH for 1CE hour for each presentation attended. Attendees can track their continuing education hours through the HIMSS online tracking certification application, which is linked to their HIMSS account.

Thank you for attending this event.