Canadian Hospital Reporting Project (CHRP)

CIHI’s Tool to Measure and Improve Hospital Performance

ICES Cardiovascular Research Day – June 20th, 2012
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Canadian Institute for Health Information
Outline

1. Background ~ What is CHRP?
2. New Public Website
3. Using the Information
4. Cardiac Care Quality Indicators
5. Lessons Learned and Next Steps
Background
Vision for CHRP

Respond to a need…

- No standardized pan-Canadian measures existed for peer comparisons
- Need for accompanying tools and resources to track, measure and interpret indicator results

Support health system performance measurement…

- Provide comparative information about the quality of hospital care
- Foster learning and best practice sharing

Provide more than just indicators…

- Offer leading edge performance management tools
- Provide additional information necessary to understand indicator results
What is CHRP? An Overview

• A pan-Canadian quality improvement tool focused on clinical and financial performance indicators
• Facility-level indicators comparable across jurisdictions
• Hospital and community profile information included
• A tool for all hospitals
• Interactive web-based tool
• 10 participating jurisdictions in Year 1; all participating in Year 3!
CHRP prototype tool

> Results for 35 clinical and financial indicators
> 580 hospitals participating
> Access to information through a password protected online tool
> Hospitals assigned to 4 standard peer groups
> Hospital Profiles
CHRP Indicators

- Facility-level indicators comparable across jurisdictions
- Focused on clinical and financial performance
- Developed through involvement of experts, stakeholders, and hospital review

Indicator selection:
- Review of hospital performance frameworks and various dimensions of performance
- Actionable for all facilities from small community to large teaching
- Feasibility, scientific soundness, relevance, data quality
## Clinical performance indicators

<table>
<thead>
<tr>
<th>Domain</th>
<th>Indicator</th>
<th>Public eTool</th>
<th>Private eTool</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effectiveness</strong></td>
<td>5-Day In-hospital Mortality Following Major Surgery (rate per 1,000)</td>
<td>FY 07-10</td>
<td>FY 07-10</td>
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<tr>
<td></td>
<td>30-Day In-Hospital Mortality Following Acute Myocardial Infarction (AMI) (rate per 100)</td>
<td>FY 07-10</td>
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<tr>
<td></td>
<td>30-Day In-Hospital Mortality Following Stroke (rate per 100)</td>
<td>FY 07-10</td>
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<tr>
<td></td>
<td>28-Day Readmission After Acute Myocardial Infarction (AMI) (rate per 100)</td>
<td>FY 07-10</td>
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<tr>
<td></td>
<td>28-Day Readmission After Stroke (rate per 100)</td>
<td>FY 07-10</td>
<td>FY 07-10</td>
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<tr>
<td></td>
<td>28-Day Readmission After Hysterectomy (rate per 100)</td>
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<td>28-Day Readmission After Prostatectomy (rate per 100)</td>
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<tr>
<td></td>
<td>90-Day Readmission After Hip Replacement (rate per 100)</td>
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<td>FY 07-10</td>
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<td>90-Day Readmission After Knee Replacement (rate per 100)</td>
<td>FY 07-10</td>
<td>FY 07-10</td>
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<td>30-Day Overall Readmission (rate per 100)</td>
<td>FY 09</td>
<td>FY 09</td>
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<td></td>
<td>30-Day Obstetric Readmission (rate per 100)</td>
<td>FY 09</td>
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<td>30-Day Pediatric Readmission (rate per 100)</td>
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<td>30-Day Surgical Readmission (rate per 100)</td>
<td>FY 09</td>
<td>FY 09</td>
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<tr>
<td></td>
<td>30-Day Medical Readmission (rate per 100)</td>
<td>FY 09</td>
<td>FY 09</td>
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Indicators in red include Quebec data.
## Clinical performance indicators

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<th>Private eTool</th>
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<tr>
<td>Patient Safety</td>
<td>In-Hospital Hip Fracture in Elderly (65+) Patients (rate per 1,000)</td>
<td>FY 07-10</td>
<td>FY 07-10</td>
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<td>Nursing-Sensitive Adverse Events for Medical Conditions (All Medical CMGs) (rate per 1,000)</td>
<td>FY 09-10</td>
<td>FY 07-10</td>
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<tr>
<td></td>
<td>Nursing-Sensitive Adverse Events for Surgical Procedures (All Surgical CMGs) (rate per 1,000)</td>
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<td>FY 07-10</td>
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<td>Obstetrical Trauma - Vaginal Delivery with Instrument (rate per 100)</td>
<td>FY 09-10</td>
<td>FY 07-10</td>
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<td>Obstetrical Trauma - Vaginal Delivery without Instrument (rate per 100)</td>
<td>FY 09-10</td>
<td>FY 07-10</td>
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<td>Birth Trauma (rate per 100)</td>
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<td>Appropriateness</td>
<td>Caesarean Section Rate (rate per 100)</td>
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<td>FY 07-10</td>
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<td></td>
<td>Caesarean Section Rate: excluding pre-term and multiple gestations (rate per 100)</td>
<td>FY 07-10</td>
<td>FY 07-10</td>
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<td></td>
<td>Primary Caesarean Section Rate (rate per 100)</td>
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<td>Vaginal Birth After Caesarean Section (VBAC) (rate per 100)</td>
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<td>FY 07-10</td>
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<td></td>
<td>Use of Coronary Angiography Following Acute Myocardial Infarction (AMI) (rate per 100)</td>
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<td>Accessibility</td>
<td>Hip Fracture Surgeries Performed within 48 hours: Wait time within one facility (rate per 100)</td>
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<tr>
<td></td>
<td>Hip Fracture Surgeries Performed within 48 hours: Wait time across facilities (rate per 100)</td>
<td>FY 09-10</td>
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</tbody>
</table>

Indicators in red include Quebec data.
Public Release
Evolution

Year 1
- Release
  - Fall 2010

Year 2
- Release
  - Spring 2011

Year 3
- CHRP Public Release
  - 2012

Indicator and eTool Enhancements

Private Prototype Release
CHRP’s Public Web Tool

Interactive web-based tool…

- Six financial and 21 clinical indicators
- Hospital and Community Profile information
- Performance allocation for clinical effectiveness dimension
- In focus analysis on four indicators
- GIS/Mapping visualizations for facility-based indicators, community and hospital profile visualizations
- Product available in English and French
Features of CHRP’s Public Web Tool

Hospital Results
- Geographical display of Clinical & Financial Indicators
- Facility & Community Profiles
- Peer comparison report
- Facility snapshot (all indicators for a selected facility)

Key Findings
- Summary of results for two clinical and two financial indicators
- Highlights notable trends and interesting results

Performance Allocation
- Intended to help hospitals identify other others from whom they can learn
- Assignment of performance categories (above, within, below) to seven clinical indicators

Financial Trending
- Allows users to explore a selection of financial indicator results for a hospital, region or province,
- Examination of trends over time
Some Results
## Hospital Peer Group Variations in AMI Mortality Adjusted Rates

<table>
<thead>
<tr>
<th>Facility (select one)</th>
<th>Peer Comparison</th>
<th>Adjusted Rate</th>
<th>LCL</th>
<th>UCL</th>
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<tbody>
<tr>
<td>AB Chinook Regional Hospital</td>
<td></td>
<td>8.17</td>
<td>4.35</td>
<td>13.08</td>
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<tr>
<td>AB Covenant Health Grey Nuns Community Hospital</td>
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<td>4.91</td>
<td>2.12</td>
<td>9.68</td>
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<td>AB Covenant Health Misericordia Community Hospital</td>
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<td>4.43</td>
<td>1.63</td>
<td>9.64</td>
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<tr>
<td>AB Medicine Hat Regional Hospital</td>
<td></td>
<td>6.96</td>
<td>3.18</td>
<td>13.20</td>
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<tr>
<td>AB Peter Lougheed Centre</td>
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<td>8.71</td>
<td>4.88</td>
<td>14.37</td>
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<tr>
<td>AB Red Deer Regional Hospital Centre</td>
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<td>5.45</td>
<td>2.61</td>
<td>10.02</td>
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<tr>
<td>AB Rockyview General Hospital</td>
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<td>2.77</td>
<td>1.02</td>
<td>6.03</td>
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<tr>
<td>AB Sturgeon Community Hospital</td>
<td></td>
<td>4.24</td>
<td>1.38</td>
<td>9.88</td>
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<tr>
<td>BC Abbotsford Regional Hospital and Cancer Centre</td>
<td></td>
<td>8.18</td>
<td>4.93</td>
<td>12.78</td>
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<tr>
<td>BC Burnaby Hospital</td>
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<td>9.01</td>
<td>5.04</td>
<td>14.67</td>
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<td>BC Chilliwack General Hospital</td>
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<td>9.85</td>
<td>5.24</td>
<td>16.84</td>
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<tr>
<td>BC Kelowna General Hospital</td>
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<td>6.77</td>
<td>4.29</td>
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<td>BC Langley Memorial Hospital</td>
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<td>6.58</td>
<td>3.01</td>
<td>12.49</td>
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<tr>
<td>BC Lions Gate Hospital</td>
<td></td>
<td>4.99</td>
<td>2.15</td>
<td>9.83</td>
</tr>
</tbody>
</table>
Peer Group Variations over time – AMI Mortality
Using the Information
Ask questions

Be transparent

Start conversations
A Real-Life Example

> Medium-sized community hospital in southwestern Ontario had higher 5-Day Mortality after Major Surgery rate

> CEO asked the question: Why?

> Found that high rate linked to one particular procedure

> Working with nurses and surgeons to address the issue
What’s Next
Lessons Learned

> Ensure tool is available to key stakeholders prior to release.
> Ensure the right people within the hospitals have the information they need.
> Plan for high capacity from a technology standpoint.
> Develop supplementary material to help audience understand complex material.
> Ensure information is easy to find on website.
Next Steps

- Ongoing project evaluation
  - Feedback to guide improvements to both private and public tools
- Include other dimensions of performance
  - Patient Experience
- Integration of additional indicators such as Cardiac Care Quality Indicators
- Integration of Quebec data into additional indicators
Cardiac Care Quality Indicators
Cardiac Care Quality Indicators (CCQI)

What’s the Goal?

> To produce a relevant, well-defined and comparable set of standardized pan-Canadian cardiac quality indicators to support routine monitoring and quality improvement in cardiac care.

- Allows cardiac care centres to compare themselves with other centres across the country, as well as against national averages;
- Provides a platform for knowledge sharing, care process discussions and direction for quality improvement efforts; and
- Provides cardiac care centres with a more complete picture of patient care and outcomes that includes patient transfers or readmissions to other facilities.
CCQI: Project Evolution

2008
CIHI and CCN Collaboration Begins

2010
CIHI-CCN Pilot Project with Ontario and BC

2011
CIHI National Expansion (excl QC)

2012
CHRP Integration and QC inclusion
CCQI: Indicators

Cardiac intervention based groups:
- Diagnostic Cardiac Catheterization (CC)
- Percutaneous Coronary Intervention (PCI)
- Isolated Coronary Artery Bypass Graft (CABG)
- Combined CABG and Valve Surgery
- Isolated Valve Surgery

Outcomes examined:
- Acute renal failure within 14 days
- Stroke within 14 days (same episode of care for CC)
- 30-day in-hospital mortality
- CABG within 2 days of PCI
CCQI National Results: Overall Combined Rates, FY07-FY09

Note: For this release, only the stroke outcome was calculated for the CC intervention group

Data Source:
CCQI: Variation in Hospital Specific Results

Data Source:

Note:
- Risk-adjusted rates with an asterisk (*) are significantly different from the 3-year national average.
CCQI: What are some hospitals already doing?

> Patient chart reviews

> Multi-disciplinary meetings with cardiologists, interventionists, neurologists, hospital administrators, medical directors, decision support staff, etc.

> Protocol reviews

> Baseline creatinine level measurements

> Documentation improvements
Joint work between CIHI and CCS

> CIHI and CCS developing a Letter of Understanding so we can help each other in areas of indicator development, research and analysis and promotion of CCS Data Dictionary

> CIHI to post Data Dictionary on CIHI website in June/July 2012 to encourage research using linked registry and CIHI data.

> CIHI participation in CCS working groups:
  
  - Data Definitions Steering Committee and Core Elements and Demographics Data Dictionary WG
  
  - Heart Failure Data Dictionary WG, Cardiac Rehabilitation/Secondary Prevention Quality Indicators WG
  
  - Atrial Fibrillation and Heart Failure Quality Indicators WGs
Questions
Canadian Hospital Reporting Project (CHRP)

For more information, please send an email to: Hospitalreporting@cihi.ca

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