Indicators of Quality and Safety in Canadian Nursing Homes

Anticipated release date: January 2013

Purpose: To begin an ongoing dialogue and establish a baseline for monitoring the quality of care for some of our citizens who are most at risk for adverse health outcomes—residents of Canadian nursing homes.

Description: The Continuing Care Reporting System (CCRS) was developed to collect information on facility-based continuing care in Canada. The information in CCRS can be used to measure and monitor the quality of care in Canadian nursing homes. Provinces and territories now use this information in funding, quality and accountability agreements. This report will provide comparable indicators of quality, adjusted for differences among residents and facilities across the country. The indicators span the domains of physical function, psychosocial function, safety and other clinical issues. Case studies from several nursing homes will illustrate the potential for performance improvement that occurs when organizations use their data to drive quality.

Data Source: Continuing Care Reporting System, 2011–2012

Level of Reporting: The document will report adjusted indicator rates at several levels:

- Provincial comparison of six jurisdictions (British Columbia, Manitoba, Ontario, Nova Scotia, Newfoundland and Labrador, and Yukon)
- Facility rate variation within each province/territory
- Facility rates over time for case study facilities

Additional Information: As a companion to the report, quality indicator information that has been adjusted within and among provinces will be released for the first time as part of the 2011–2012 CCRS Quick Stats.
How Canadian Jurisdictions Compare on International Health Indicators
Anticipated release date: January 2013

Purpose: To maintain a policy focus on international comparisons and how they can be used to support health system performance measurement, reporting and improvement.

Description: CIHI released Learning From the Best: Benchmarking Canada’s Health System in November 2011. That report highlighted Canada’s performance on a number of dimensions of health system performance, comparing results with those from other member countries of the Organisation for Economic Co-operation and Development (OECD). Feedback on the report was positive, and there was stakeholder interest in drilling down to the provincial level on a number of OECD indicators.

The new report will highlight areas where Canadian results have significantly changed (both positively and negatively) with the availability and reporting of more recent data to the OECD. It will focus on improvements in Canada’s performance on a number of mortality indicators, largely due to the availability of updated Canadian mortality data (from 2004 to 2009).

The report will also compare the performance of individual Canadian provinces with results reported by Canada and other OECD countries on several quality-of-care indicators. This will be the first time that many of these OECD indicators will have been calculated at the provincial/territorial level. Indicators will be presented individually, with Canadian provinces appearing on a bar graph to compare them with participating OECD countries, including Canada. Provinces will also be able to see, in a single figure, their performance on all of the quality-of-care indicators compared with that of Canada, the OECD average and the 25th and 75th percentiles.

Data Sources: To calculate quality-of-care indicators at the provincial level, data from CIHI’s Hospital Morbidity Database will be used. Provincial values will be compared with international values downloaded from the OECD’s health data website. The report will use data from 2009–2010.

Level of Reporting: The study will focus on provincial results, making comparisons with countries reported by the OECD, including Canada.
Hospital Care for Heart Attacks Among First Nations, Inuit and Métis

Anticipated release date: February 2013

Purpose: To examine rates of heart attacks and treatment-related factors and outcomes among First Nations, Inuit and Métis compared with others in Canada.

Description: Appropriate and timely health care following a heart attack can reduce mortality and improve a survivor’s quality of life, yet evidence suggests that socio-economically disadvantaged populations are less likely to undergo cardiac diagnostic and revascularization procedures. Given that First Nations, Inuit and Métis are disproportionately represented among socio-economically disadvantaged populations, this report examines whether this pattern of lower rates of cardiac procedure use also holds true for Canada’s First Nations, Inuit and Métis.

In Canada, little is known about the incidence of heart attacks among First Nations, Inuit and Métis or the care that they receive to treat a heart attack, as identification of First Nations, Inuit and Métis patients is limited in national hospitalization records. This report, using an area-based approach to identify areas where a relatively high proportion of residents self-identified as First Nations and Inuit (known as high–First Nations and high-Inuit areas, respectively), will therefore fill an important gap in our knowledge of whether disparities exist in cardiac care in high–First Nations and high-Inuit areas compared with other areas in Canada.

The study will answer the following questions:

- Do disparities exist in rates of hospitalized heart attacks, cardiac procedure use and hospital outcomes in high–First Nations and high-Inuit areas compared with other areas in Canada?
- Do patient characteristics such as age, sex, case complexity (as measured by the presence of comorbid conditions) and residence influence the type of treatment received and hospital outcomes, and do they account for some of the health gaps observed between high-Aboriginal and low-Aboriginal areas?
- What other viable methodologies exist for examining heart health among Métis, given that area-based approaches are not a valid method by which to identify Métis?
- What are some examples of effective and promising approaches to health service organization and delivery that support Aboriginal populations with chronic disease?

Data Sources: This study will use data from the Discharge Abstract Database and the National Ambulatory Care Reporting System for hospital admission information, with data pooled for 2004–2005 to 2010–2011. The Geozones Aboriginal file based on the 2006 Census will be used to classify patients as residents of high–First Nations, high-Inuit or low-Aboriginal areas. Analyses on the heart health of Métis will be based on studies from the Manitoba Centre for Health Policy and Ontario’s Institute for Clinical Evaluative Sciences.

Level of Reporting: This will be a national-level report on treatment and outcomes for heart attacks, using an area-based approach to identify the target population.

Additional Information: This project is the result of collaboration between the Canadian Population Health Initiative (CPHI) at CIHI and Statistics Canada.
End-Stage Renal Disease Among Aboriginal Peoples in Canada: Treatment and Outcomes

Anticipated release date: February 2013

Purpose: To investigate treatment therapies for and outcomes of end-stage renal disease (ESRD) among Aboriginal peoples.

Description: ESRD is the final stage of chronic kidney disease, with dialysis and transplantation the only treatment options. Studies have shown that the burden of ESRD is high among Aboriginal peoples in Canada. By providing pan-Canadian information on treatment therapies and outcomes for Aboriginal ESRD patients, this study will contribute to enhanced treatment, research and patient care. The study will answer the following questions:

- How do Aboriginal and non-Aboriginal ESRD patients compare socio-demographically?
- What are the most common pathways of care taken by Aboriginal and non-Aboriginal ESRD patients?
- Do survival rates following dialysis treatment and transplantation differ between Aboriginal and non-Aboriginal ESRD patients?
- What are some effective or promising approaches to health service organization and delivery that support Aboriginal peoples who have ESRD?

This information will inform policy-makers and health system managers at ministry and regional levels, as well as primary and specialized care practitioners across Canada who strive to meet the challenge of ensuring that high-quality nephrology care is available and accessible to this at-risk population.

Data Sources: This study will use data from CIHI’s Canadian Organ Replacement Register (CORR) for the calendar years 2001 to 2010. CORR is one of the few databases at CIHI that includes an ethnic identifier data element with “Aboriginal” as a reporting option.

Level of Reporting: This will be a national-level report on ESRD treatment and outcomes for Aboriginal and non-Aboriginal patients.

Additional Information: This project is the result of collaboration between the Canadian Population Health Initiative (CPHI) at CIHI and CORR.
**Wait Times in Canada—A Provincial Comparison, 2013**

**Anticipated release date: March 2013**

**Purpose:** To assess progress toward reducing waits and to try to answer the following questions:

- What wait can a patient expect for a priority procedure?
- Is that wait within a time frame that clinical evidence shows is appropriate?
- Are waits getting shorter or longer at the pan-Canadian and provincial levels?

**Description:** CIHI was mandated to collect wait time information and monitor provincial progress in meeting pan-Canadian benchmarks. Provinces have collaborated with CIHI to improve public wait time reporting for eight priority procedures—hip replacement, knee replacement, hip fracture repair, cataract surgery, coronary artery bypass graft (CABG), radiation therapy, magnetic resonance imaging (MRI) scans and computed tomography (CT) scans.

This report will provide three measures of waits for care: median wait times, 90th percentile wait times and the percentage of patients receiving care within benchmark time frames. These measures help to frame expectations of what the wait times are and whether the wait will be longer than is clinically appropriate.

As of 2013, the release will include five years of comparable data for most procedures. Trends will be identified for changes of at least 5 percentage points (up or down) in the proportion of hip, knee, cataract and radiation therapy patients receiving treatment within benchmark time frames.

**Data Sources:** Summary-level wait time data will be received directly from provincial representatives for elective hip replacement, knee replacement, cataract surgery, CABG, radiation therapy, MRI scans and CT scans. CIHI will calculate wait time information for hip fracture repair from its Discharge Abstract Database and National Ambulatory Care Reporting System (for Ontario and Alberta).

Provinces continue to work with CIHI to expand reporting within identified priority areas. This year, provinces and CIHI have developed a common definition for cancer surgery wait times by five body sites (breast, prostate, colorectal, lung and bladder). The objective is to incorporate this wait time information into future editions of the wait time report.

**Level of Reporting:** The report will provide provincial and national wait time information based on the first two quarters of 2012–2013 (April 1, 2012, to September 30, 2012).
Hospitalization Due to Adverse Drug Reactions Among Seniors, 2006 to 2011
Anticipated release date: March 2013

**Purpose:** To describe hospitalizations related to adverse drug reactions (ADRs) occurring in Canada and to identify risk factors associated with these hospitalizations.

**Description:** ADRs are defined by the World Health Organization as adverse effects of a drug that was properly administered in the correct dose for therapeutic or prophylactic use. Previous studies have estimated that between 1% and 25% of all hospital admissions and emergency room visits are drug-related. ADRs have been estimated to account for up to two-thirds of drug-related hospital admissions and emergency room visits.

This analysis will link hospital abstract data with public drug claims data to attempt to answer the following questions:

- How often do ADRs occur?
- Which drugs are most often associated with ADRs?
- Which factors affect the likelihood of an ADR?
- Does hospitalization for an ADR lead to changes in therapy?

**Data Sources:** Data will be linked from the following CIHI databases:

- Discharge Abstract Database
- Hospital Morbidity Database
- National Prescription Drug Utilization Information System Database

The study will use pooled data spanning five fiscal years (2006–2007 to 2010–2011).

**Level of Reporting:** The analysis based on data from the Discharge Abstract Database only will examine all Canadian provinces and territories, while the linked analysis will focus on Alberta, Manitoba and Prince Edward Island.
Giving Birth in Rural and Remote Canada  
**Anticipated release date: March 2013**

**Purpose:** To inform health system planners and managers about how giving birth in a hospital varies across Canada, focusing on factors important to women living in rural and remote areas, as these women often face unique challenges during pregnancy and childbirth.

**Description:** This report will provide an overview of the delivery of maternal and newborn care across Canada, including provincial/territorial and regional comparisons, where available. It will profile selected elements associated with providing safe, quality care to women living in rural and remote areas:

1. **Is rural Canada different?**
   - Urban/rural comparison of key factors, including age, material deprivation, geographic access and risk factors

2. **Who provides care?**
   - Geographic distribution and trends in types of providers involved in delivering babies

3. **Where is care provided?**
   - Geographic distribution of hospitals, profiling obstetrical volume and range of services

4. **Putting it all together**
   - Variations in outcomes, including induction rates, mode of delivery, and maternal and newborn morbidity rates

Where possible, CIHI’s data will be used to provide information at the national, provincial/territorial and regional levels. To provide context in selected areas where CIHI’s data is silent, narratives from our expert panel, as well as service providers and mothers in rural and remote areas, will be included. Also, summaries of and references to other national and/or provincial data sources that may be helpful will be provided.

**Data Sources:** Data from the following sources will be used:

- Postal Code Conversion File (PCCF+), vintage May 2011, Statistics Canada
- Material Deprivation Index, 2006, Institut national de santé publique du Québec
- MapQuest (licensed data)

**Level of Reporting:** This report will provide a pan-Canadian comparison at the provincial and territorial level. Where possible, health region results will be reported. Rural–urban comparisons of variation in outcome, geographic access and hospital services utilized will also be made at the national, provincial/territorial and health region levels.
Redistributive Effect of the Health System in Canada
Anticipated release date: April 2013

**Purpose:** To estimate the redistributive effect of the publicly financed health system in Canada by using both a cross-sectional approach and a longitudinal ("lifetime") approach.

**Description:** In industrialized countries, the health system redistributes wealth when the population pays various health care–related taxes that are used by the government to provide health care services to the population. Previous cross-sectional analyses (including Canadian studies) have demonstrated that the distribution of wealth is interpersonal, meaning that higher-income groups pay for services used by lower-income groups.

The lifetime approach can change the redistributive effect of the health system by accounting for varying life stages and the health care utilization and taxation patterns typical of those stages. This approach can change the redistributive effect from being interpersonal to intrapersonal (that is, redistribution within the same person at different stages of life).

To better understand the redistributive effect, CIHI will estimate and compare individuals’ contributions to the publicly funded health system with the benefits they receive through health system utilization/services. The study will answer the following questions:

- How redistributive is Canada’s health system if a cross-sectional approach is used?
- Does this redistributive effect of Canada’s health system change if a lifetime approach is used?

This study will employ micro-simulation modelling, where model inputs include costs of inpatient hospitalizations, day surgery procedures, emergency department (ED) visits, general practitioners and specialists, and drugs. Additional model inputs include federal and provincial income taxes, commodity taxes, health premiums and federal transfers to provinces.

**Data Sources:** The following data sets will be accessed as part of the model-building process:

- Costs of hospitals: Discharge Abstract Database/Hospital Morbidity Database, National Ambulatory Care Reporting System and cost per weighted case, 2010, CIHI
- Costs of physicians: Canadian Community Health Survey, 2009–2010, Statistics Canada; National Physician Database, CIHI
- Taxes: Canadian System of National Accounts and Social Policy Simulation Database and Model, Statistics Canada

**Level of Reporting:** This will be a national-level report on health care costs and taxes, using national income quintiles.

**Additional Information:** This project is the result of collaboration between the Canadian Population Health Initiative (CPHI) at CIHI and Statistics Canada.
End of Life Care for Cancer Patients Who Die in-Hospital
Anticipated release: April 2013

**Purpose:** Quality end of life care is a key component of services for cancer patients. Research suggests that patients and their families prefer settings such as home or hospice to receive end of life care. Yet in Canada, an estimated 50% to 90% of cancer deaths take place in-hospital. Further, many experts agree that significant variation in use of services across jurisdictions may help identify areas where there is room to improve quality of care. This study will examine the use of hospital services near end of life by cancer patients who die in acute care hospitals, highlighting variation in use of services across jurisdictions.

**Description:** This study will shed light on the following key policy questions:

1. Where do Canadian cancer patients receive final end of life care?
2. Is end of life care being provided in preferred settings for patients and their families?
3. Are there indications that primary health care and other community care services are not meeting the needs of Canadian cancer patients at end of life?
4. Are there indications of overuse or underuse for specific services or interventions at end of life for hospitalized Canadian cancer patients?

**Case selection and analysis:** The study cohort will be identified using a combination of malignant neoplasm diagnosis codes, significant diagnosis type, and palliative care coding. To address the policy questions above, the study will focus on the last 28 days of life for these patients. It will highlight potential measures of gaps in their community-based end of life care, using their inpatient admissions and ED visits. The analysis will also describe their use of ICU care, MRI and PET-scan imaging, and chemotherapy to demonstrate potential overutilization of services at end of life. Similarly, analysis on how many patients received in-hospital palliative care during the last 28 days of life will shed light on any potential underutilization of palliative care services.

**Data Sources:** The study uses data from CIHI’s Discharge Abstract Database and National Ambulatory Care Reporting system for FY2011-12. The source for Quebec data is Med-Echo database for FY2011-12.

**Level of Reporting:** The majority of the analyses will be presented at the national level, with some reporting at the provincial level including Quebec. The territories will likely be excluded from jurisdictional reporting due to small numbers. No regional or facility level reporting is planned.

**Additional Information:** This project is being carried out in collaboration with the Canadian Partnership Against Cancer.