Making a Difference in the Health of Canadians: CIHI's Health Data and Information

Breakfast with the Chiefs
March 22, 2006
Glenda Yeates, President and CEO
Vision

- CIHI improves the health of Canadians and strengthens their health system by:
  - developing, integrating and disseminating timely and relevant health and health services information, and
  - by facilitating informed discussion and evidenced-based decision-making
Our Mandate

• To serve as a national coordination mechanism for health information in Canada

• To provide accurate and timely information that is required for:
  - Sound health policy
  - Effective management of health care system
  - Public awareness of health determinants

• Through the work carried out by the Canadian Population Health Initiative (CPHI), CIHI aims to:
  - Foster a better understanding of factors that affect the health of individuals and communities; and
  - Contribute to developing policies that reduce inequities and improve the health and well being of Canadians
Governance

- 16-member Board, proportionally constituted to:
  - Create a balance among health sectors and regions of Canada
  - Link F/P/T governments with non-government health related groups
  - Provide strategic guidance to CIHI and Health Statistics Division of Statistics Canada
  - Advise the Conference of Deputy Ministers of Health.
Our Offices

Over 500 employees across Canada
Regional offices in Western Canada and in Montreal
To be opening an office in the Atlantic region
From Vision to Action

1. CIHI will be a premier Canadian source of unbiased, credible and comparable health information.
2. CIHI will enhance its data holdings.
3. CIHI will produce vital information to improve the health of Canadians and of their health systems.
4. CIHI will enhance information quality.
5. CIHI will improve access to data, and will do so
6. CIHI will provide leadership to ensure that future data and information needs are met.
7. CIHI will continue to be a dynamic organization with a highly motivated workforce.
Premier Source of Information – Collaboration is key

- CIHI facilitates the collaboration of many different groups of stakeholders, who collectively join to form Canada’s health information infrastructure.
Who we serve –
Our Target Audiences

• Policy-makers
• Health System Managers
• Members of the Public
Where we have made progress

- More Databases
- More analyses
- Timeliness
- Data Quality
Data Holdings - 1994

• Health Services
  ▪ DAD
  ▪ Hospital Morbidity
  ▪ Hospital Mental Health
  ▪ Therapeutic Abortions
  ▪ Organ Registry (CORR)
  ▪ Trauma Registry (OTR)

• Health Professionals
  ▪ Physician
    – NPDB
    – SMDB
  ▪ Nursing
    – RNDB
  ▪ Health Personnel

• Health Expenditures
  ▪ Provincial, regional, and local (CMDB)
  ▪ National (NHEX)
  ▪ International (OECD)
Data Holdings - 2005

Health Services
- Discharge Abstract Database (DAD)
- Hospital Morbidity
- Ambulatory Care (NACRS)
- Hospital Mental Health
- Therapeutic Abortions
- Organ Registry (CORR)
- Trauma Registry (NTR/OTR)
- Joint Replacement Registry (CJRR)
- Continuing Care (CCRS)
- Rehabilitation (NRS)
- Ontario Mental Health Reporting System (OMHRS)
- Medical Imaging Technology (MIT)

UNDER DEVELOPMENT
- Home Care Reporting System
- Pharmaceutical (NPDUIS)
- Medication Incident Reporting (CMIRPS)

Health Professionals
- Physician
  - NPDB, SMDB
- Nursing
  - RNDB, LPNDB
  - RPNDB
- Health Personnel
- Five new HHR databases under development e.g. Pharmacists and O.T.

Health Expenditures
- Provincial, regional, and local (CMDB)
- National (NHEX)
- International (OECD)
Publications

2000-2001:

• Total number of analytical reports released = 18
• CIHI released its first Annual *Health Care in Canada* Report.

2005-2006:

• Total number of analytical reports planned/released = 48
Journal Citations

- 2000-01: 60 citations
- 2002-03: 80 citations
- 2003-04: 90 citations
- 2004-05: 100 citations
Supporting Policy-makers

- Support for Income Testing (e.g. in Fair Pharmacare Program)
  - Inter-provincial comparison data presented in *Health Care in Canada* used to plan changes related to the structure of Pharmacare
Supporting Health Care Management

- Ministry of Health and RHA Performance Agreements
  - Data based on CIHI data standards are used to populate performance agreements between the MOH and the RHAs

- Reference Based Drug Pricing in BC
  - CIHI data were used to evaluate the use of Reference Drug Program (RDP). The evaluation indicated that the use of RDP did not negatively affect health and saved money
Looking Forward

• Enhanced analytical products
• Continued database development
• Increased emphasis on data quality
• New tools for better access to information
• Regional connections
Enhanced Analytical Products

- Access to care/Wait times
- Quality/Outcomes of health services
- Health Human Resources
- Population Health activities
- Costs/expenditures
New Indicator Development

• Safer Healthcare Now!
• Hospital Standardized Mortality Rates (HSMR)
• Primary Health Care Indicators
Continued Database Development

- Drug Utilization Database
- Medication Incident Reporting
- Health Human Resources
- Focus on adding new jurisdictions to existing databases e.g.
  - Ambulatory Care/E.R.
  - Home Care Reporting System
Addressing Data Quality

- Timeliness
- Data Quality Strategy including re-abstraction studies
- Data Quality Progress Reports to Deputy Ministers of Health
CIHI’s Evolving External Electronic Data Access & Analytical Sophistication

QuickStats (2002)

eReports (2001)

Public View

Aggregate, Static Reports for Health Care Stakeholders

Detailed, ad hoc reports for authorized Health Care Stakeholders

CIHI Portal (2005)
Portal Features

• Secure access to pan-Canadian CIHI data
• Powerful web-based analytical tools
• Custom facility comparisons
• Patient de-identified analysis
• Standardized templates
• Peer collaboration
• User-specific e-Learning
On Quality and Outcomes - Health Care in Canada

- This report was released in June 2005 and focused on volumes and outcomes.
Low Volumes
What Are The Odds?

- No procedure
- Unruptured AAA repair
- Bypass surgery
- Carotid endarterectomy
- Colon/rectal surgery
- Lobectomy/pneumonectomy

Higher Volumes — Higher Death Rate

No Statistically Significant Difference

Higher Volumes — Lower Death Rate

- Angioplasty (PTCA) (1% lower)
- Esophagectomy (44% lower)
- Whipple operations (46% lower)
Mortality by Hospital Volume Quintile: Abdominal Aortic Aneurysm Repair

Adjusted 30-Day In-Hospital Mortality

- Lowest: 3.0%
- Hospital Volume: 2.2%
- Highest: 1.8%
On Access to Care/Wait times
Waiting for Health Care in Canada

- *Waiting for Health Care in Canada: What We Know and What We Don’t Know* is the first report of this kind
- Released on March 7, 2006
Leading Reasons Cited for Access Problems Differ

- Routine/on-going care
  - Difficulties getting an appointment
- Pap smear/mammography
  - Didn’t think it was necessary
- Specialist care for new health problem & selected non-emergency tests (MRI, CT, angio)
  - Waited too long for an appointment
- Non-emergency surgery
  - Waited too long
# What Type of Care you Need

<table>
<thead>
<tr>
<th>Type of Surgery</th>
<th>Median Wait</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip Fracture</td>
<td>next day (day after admission)</td>
</tr>
<tr>
<td>Cardiac</td>
<td>days to weeks</td>
</tr>
<tr>
<td>Cataract</td>
<td>a few months</td>
</tr>
<tr>
<td>Joint Replacement</td>
<td>Months (with knees &gt; hips)</td>
</tr>
</tbody>
</table>
Waits for Angioplasty or Bypass Surgery Following a New Heart Attack

<table>
<thead>
<tr>
<th></th>
<th>Angioplasty</th>
<th>CABG</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% of patients</td>
<td>Waited 0 days</td>
<td>Waited 6 days or less</td>
</tr>
<tr>
<td>Median</td>
<td>Waited 4 days or less</td>
<td>Waited 18 days or less</td>
</tr>
<tr>
<td>90% of patients</td>
<td>Waited 23 days or less</td>
<td>Waited 137 days or less</td>
</tr>
</tbody>
</table>
Medical Imaging in Canada, 2005

- Third annual report
- Information on supply, distribution, utilization, costs and personnel
- New this year was the information on utilization
Number of MRI Exams per 1,000 Population, by Jurisdiction and Canada, 2003–2004 and 2004–2005
### Average Number of MRI and CT Exams per 1,000 Population, Per Scanner, US, England & Canada, 2004-2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Exams per 1,000 Population</th>
<th>Exams per Scanner</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MRI</td>
<td>CT</td>
</tr>
<tr>
<td>United States</td>
<td>83.2</td>
<td>172.5</td>
</tr>
<tr>
<td>England</td>
<td>19.0</td>
<td>43.0</td>
</tr>
<tr>
<td>Canada</td>
<td>25.5</td>
<td>87.3</td>
</tr>
</tbody>
</table>
Facility-Based Continuing Care in Canada

- Report is being released today
- First report that sheds some light on a sector of the health care system that until now, we have known very little about.
# Five Most Common Disease Categories/Diagnoses on Admission, Residential Continuing Care

<table>
<thead>
<tr>
<th>Disease Categories/Diagnoses</th>
<th>% of residents with MDS Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neurological</td>
<td>77%</td>
</tr>
<tr>
<td>Heart/Circulation</td>
<td>65%</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>40%</td>
</tr>
<tr>
<td>Endocrine/Metabolic/Nutritional</td>
<td>34%</td>
</tr>
<tr>
<td>Psychiatric/Mood</td>
<td>19%</td>
</tr>
</tbody>
</table>
On Health Human Resources

Geographic Distribution of Physicians in Canada

• Report co-authored by Roger Pitblado and Ray Pong, Centre for Rural and Northern Health Research, Laurentian University

• 1999 report described the distribution of Canada’s physicians in 1991 and 1996

• New in this report is an examination of the types of services family doctors provide in urban and rural settings
Urban-Rural Distribution of Family Physician and Specialist Physicians, Canada, 2004

<table>
<thead>
<tr>
<th></th>
<th>Family Physicians</th>
<th>Specialist Physicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>16.0%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Urban</td>
<td>84.0%</td>
<td>97.6%</td>
</tr>
</tbody>
</table>

Note: Comparisons with families <10,000 may not be valid.
Percent of Large City and Small Town Family Physicians Who Provide Various Types of Health Care Service, Canada, 2004

- Emergency Medicine: Large City 15.3%, Small Town 73.9%
- Cancer Care & Oncology: Large City 19.5%, Small Town 41.8%
- Hospitalist Care: Large City 12.1%, Small Town 40.4%
- Delivering Babies: Large City 8.5%, Small Town 32.9%

Note: “Large cities” are cities with one million or more people, “Small towns” have populations of less than 10,000 people.
Average Distance to Physicians for Residents of Large Cities and Small Towns, Canada, 2004

- **Family Physician**
  - Large Cities: 0.7 kilometers
  - Small Towns: 10.5 kilometers

- **OB/GYN**
  - Large Cities: 3.2 kilometers
  - Small Towns: 100.5 kilometers

- **Pediatrician**
  - Large Cities: 2.5 kilometers
  - Small Towns: 103.3 kilometers

- **Psychiatrist**
  - Large Cities: 2.1 kilometers
  - Small Towns: 91.9 kilometers

**Note:** “Large cities” are cities with one million or more people. “Small towns” have populations of less than 10,000 people.
Number of Physicians Moving Abroad and Returning From Abroad, Canada, 1969-2004

Source: Southam Medical Database, CIHI
On Population Health

Improving the Health of Canadians: Promoting Healthy Weights

• Focus: how where we live, learn, work and play can make it easier – or harder – to make choices that promote healthy weights.

• Reviews research and presents analyses

• Reviews relevant programs and policies

• Presents information on the Canadian public’s views on options to promote healthy weights
Adults Living in the Urban Core Report
Lower BMIs (< 25)

* Significantly different from Urban Core, p < 0.05
Physical Inactivity and Income (% Adults age 18+)

On Costs and Expenditures

Exploring the 70/30 Split: How Canada's Health Care System Is Financed

• Today, about 70% of total Canadian health expenditures comes from the public purse. The remainder (about 30%) comes from private sources.

• This report, which was released in September 2005 looks at trends in financing and at variations in this 70/30 split across provinces.
Total Health Expenditure Per Capita, 15 Selected Countries, 2003

United States: $5,635
Switzerland (e): $5,041
Norway (e): $4,976
Germany: $3,204
Denmark: $3,534
Netherlands: $3,088
France (e): $2,967
CANADA (e): $2,669
Japan (e): $2,450
United Kingdom (a): $2,031
Australia (a): $1,960
Spain: $1,535
South Korea: $705
Hungary (e): $684

OECD Average - $2349

Source: OECD Health Data 2005
Total Health Expenditure as a Percent of GDP, 2003

Selected Countries, 2003

- United States: 15.0%
- Switzerland (e): 11.5%
- Germany: 11.1%
- Norway (e): 10.3%
- France (e): 10.1%
- CANADA (e): 9.9%
- Netherlands: 9.8%
- Australia (a): 9.3%
- Denmark: 9.0%
- Hungary (e): 8.4%
- Japan (e): 7.9%
- United Kingdom (a): 7.7%
- Spain: 7.7%
- Mexico: 6.2%
- Korea: 5.6%

OECD Average – 8.7%

Source: OECD Health Data 2005
Sources of Health Spending in Canada 2003

- Public: 70%
- Out-of-Pocket: 14%
- Private Insurance: 12%
- All Other Private Funds: 3%
Public Spending in 2003

Percentage of Services Covered by Public Funds

Source: OECD Health Data 2005
# Per Capita Health Spending

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<thead>
<tr>
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<tbody>
<tr>
<td><strong>Canada</strong></td>
<td>$3,001</td>
<td>$2,098</td>
<td>$448</td>
</tr>
<tr>
<td><strong>U.S.</strong></td>
<td>$5,635</td>
<td>$2,503</td>
<td>$793</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>$2,996</td>
<td>$2,343</td>
<td>$312</td>
</tr>
<tr>
<td><strong>France</strong></td>
<td>$2,903</td>
<td>$2,214</td>
<td>$291</td>
</tr>
</tbody>
</table>

**Note:** All numbers represent 2003 data unless otherwise noted. Spending per capita was converted to U.S. dollars using purchasing power parities for GDP.

**Source:** *Health at a Glance—OECD Indicators 2005.*
Where we need your help

• Identifying priority information needs

• Timeliness of our data
  ▪ reliance on providers to supply timely data

• Data Quality
  ▪ Support with our data quality strategies
The Road Ahead...