CIHI directions ICIS
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Data Quality is Top Priority

An ongoing challenge for any organization producing statistical information is to ensure that the quality of the information it produces is suited for its intended uses, and that data users are provided with good information about data quality. To this end, the Canadian Institute for Health Information (CIHI) has established a comprehensive and systematic data quality program that applies to all data holdings and includes the implementation and ongoing monitoring of a corporate Data Quality Framework, as well as conducting special studies that focus on data quality issues.

Within this context and given the size, coverage and importance of the Discharge Abstract Database (DAD), CIHI has begun to roll out a comprehensive approach to addressing data quality in the DAD. We are circulating a summary of activities all geared toward enhancing the "fitness for use" (CIHI's definition of data quality) of the DAD in an effort to solicit input and feedback from both data users and data suppliers. It is our intent to be as transparent as possible in our approach to Data Quality and to provide regular progress reports on our activities.

In summary, between now and 2004, a number of activities will have been completed and the related information posted on our Web site at www. cihi.ca. Below are listed a few of the initiatives accomplished already (not an exhaustive list):

- DAD data edits have been re-engineered and re-development activities for CIHI's Case Mix Groups, Resource Intensity Weights and Complexity Overlay following nation-wide data submissions in ICD-10-CA/CCI are underway;
- Publication of a description of Quality Assurance processes in our inpatient database has occurred;
- Publication of the combined Year 1 and 2 of a pan-Canadian re-abstraction study assessing coding practices in acute care hospitals has occurred;
- Publication of the results of the application of CIHI's Data Quality framework to our inpatient database will occur (Jan 2003); and
- Studies of variations in coding practices and resulting recommendations toward standardization will be published in early 2003.

New Edits

New enhanced edits resulting from a re-engineering of DAD in FY 2000/2001 have already been implemented in the first series of submissions from Provinces that adopted ICD-10-CA/CCI in 2001. The adoption of ICD-10-CA/CCI will result in changes to CIHI's value-added products such as Case Mix Groups (CMG™), Resource Intensity Weights (RIW™) and Complexity Overlay (PLx™). These products are scheduled to undergo a major re-engineering, starting in 2003. The details of these planned changes will be published in the spring 2003.

Re-abstraction Study

Over the last two years, CIHI has been conducting a re-abstraction study that has identified high levels of inter-rater reliability in coding practices for the majority of data elements in the DAD. A handful of elements were identified for improvement and action is already underway to improve the consistency of coding practices for these elements. Phase II of the re-abstraction study with a focus on additional data elements and the effect on Complexity Overlay is currently underway—the results will be available in 2003. The study represents an important step towards making improvements to health information by identifying enhancements to the DAD and CIHI's coding guidelines/standards. A document describing these results is currently posted in a downloadable document on CIHI's Web site. *(continued on page 4)*

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*As of January 2003

Message from the President and CEO

Health Information a necessity as we build for the future

Over the past two years, Canadians have had the benefit of several commissioned reports on the future of health care in Canada. These have served to stimulate the debate on how to sustain and improve our health care system.

> **Should the private sector play a larger role?**
> **Should we inject more money?**
> **If we inject more money where should it go:**
> **Rural and remote access?**
> **Diagnostic services?**
> **Primary care?**
> **Home Care?**
> **Prescription drugs? (more specifically to prevent “catastrophic costs”?)**

These are some of the questions being contemplated. The next few months will bring clarity and determine the common ground for moving forward.

However, some things are imminently clear. Additional dollars invested must buy change and health information will be increasingly critical if the health care system is to address Canadians’ concerns such as wait times, access and quality of care.

As we continue to strengthen our health care system, CIHI will continue to engage stakeholders in vital dialogues and work on producing the data and analysis required to answer key questions. Key questions for which answers are required by clinicians, decision and policy makers as they develop the strategies and approaches to move forward.

In that context, we will increase our emphasis on the collection and dissemination of relevant and timely data to enable informed decision-making. This, of course, will be done in accordance with rigorous privacy standards practices. As well, as we move forward we will pay particular attention to the quality of the data…the raw material required for analysis and evidence.

To this end, we look forward to continuing to expand and enhance our role as the nucleus of health care information in Canada and as a valued and trusted resource that the health care system and Canadians can rely on with confidence.

Richard C. Alvarez, President and CEO

Board of Directors Honoured by Conference Board of Canada

At a gala black-tie event in Toronto on January 29, CIHI was the recipient of the Conference Board of Canada/Spencer Stuart 2003 National Awards in Governance—Not-for-Profit Sector. Created in 2001, this annual national award is granted to an organization in recognition of demonstrated innovation and excellence in governance.

"It is with great pleasure and pride that I accept this special award on behalf of CIHI's Board of Directors," said Board Chair Michael Decter. "We are extremely proud of what we have been able to accomplish in a relatively short period of time. It demonstrates the importance of listening to our stakeholders and working together with staff to respond to their needs."

In announcing its award, The Conference Board of Canada writes: "the not-for-profit winner, the Canadian Institute for Health Information, is a unique example of a governance model and board that has successfully integrated multiple stakeholder needs and created respected results in a critical sector that is facing enormous challenges. Established in 1994 by Canada's Health Ministers, the balanced and diverse board provides a firm guiding hand to an organization whose role in the country continues to grow."

"In the last few years, with strong strategic guidance from our Board of Governors under the extraordinary leadership of Michael Decter, and partnership with Statistics Canada, significant progress has been achieved on several fronts", noted Richard Alvarez, President and CEO of CIHI. "This progress would not have been possible without the on-going collaboration of our many stakeholders and tireless contribution of our staff".

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Health Expenditures in Canada Forecast to Surpass $110 Billion in 2002

In December, CIHI released its annual comprehensive report on Canadian health expenditures, "National Health Expenditure Trends, 1975 to 2002". This report includes an overview of health expenditure trends by source of finance and by use of funds; a new analysis comparing selected measures for Canada and 11 OECD countries with similar boundaries in their health accounts; and an analytic focus on hospital expenditure trends in Canada by function and type from 1976 to 1999.

In 2000, $97.4 billion was spent on health care in Canada. Total health expenditure is forecast to grow by 8.4% in 2001, reaching $105.6 billion and by 6.6% in 2001 reaching $112.2 billion in 2002. Total health expenditure per capita is estimated to have been $3,164 in 2000 and is expected to have been $3,395 in 2001 and $3,572 in 2002. Total health care spending is expected to account for 9.8% of Canada's gross domestic product in 2002.

The public sector represented an estimated 70.8% ($69 billion) of total health expenditures in 2000 with the other 29.2% ($28.4 billion) financed by the private sector. These proportions are forecast to remain fairly steady for 2001 and 2002.

In 2000, 32.1% of total health expenditure in Canada ($31.2 billion) was spent on hospitals. The second largest category of expenditure was on prescribed and non-prescribed drugs. The share of total spending accounted for by drugs grew from a low of 8.4% in the late 1970s to 15.4% in 2000. In 2002, drugs are expected to reach $18.1 billion and account for 16.2% of total health expenditure.

Expenditure on physician services in 2002 is forecast to reach $15 billion, an increase of 7.1% over 2001.

The analytical focus on hospital expenditure trends combines data from Statistics Canada's Annual Return of Health Facilities—Hospitals, the Canadian MIS Database (CMDB) survey and hospital expenditures reported in the National Health Expenditure Database. These data sources are used to derive estimates of expenditure by functional centre and by type of expense from 1976 to 1999. The analysis reveals that there has been a substantial reduction in the shares of hospital expenditure accounted for by support services and nursing inpatient services. The share allocated to administration has increased during the late 1990s. Shares for ambulatory care and emergency care have increased steadily since the early 1980s. Expenditures for operating rooms and diagnostic and therapeutic services have maintained a fairly steady share of hospital budgets.

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Data Quality is Top Priority *(continued from page 1)*

Data Quality Framework Application

The application of CIHI's Data Quality framework to the DAD was completed in 2002 and the findings were shared with our national DAD/Morbidity Steering Committee. An action plan to address the recommendations of the evaluation will be implemented and relevant data quality information will be widely disseminated to data users.

One data quality issue that has been identified in recent months is Discharge Abstract coding. Evidence from a special study combined with findings from the DAD re-abstraction study indicate that there are variations in coding practices. In October 2002, CIHI announced a temporary suspension of Complexity Overlay—a tool used to differentiate patient complexity in our inpatient-database because coding variations had rendered this tool unreliable for use with efficiency indicators (e.g., ELOS and RIW). CIHI is completing a thorough study of coding issues, including a re-abstraction project focused on complexity levels, and is collaborating with Provincial/Territorial Ministries of Health to identify next steps.

CIHI's National DAD/Morbidity Steering Committee, hospitals and abstracting system vendors were consulted in December 2002 on re-work plans for Complexity Overlay. A committee comprising national and international experts in the area of case mix grouping methodologies was formed. The committee will offer advice to improve quality assurance practices in inpatient data and for Complexity Overlay's re-development. Mr. Tom Closson, President and CEO of Toronto's University Health Network, chairs the committee.

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More detailed information on DAD data quality can be found on CIHI's Web site at www.cihi.ca.

National Prescription Drug Utilization System

In September 2001, Federal/Provincial/Territorial (F/P/T) Ministers of Health announced agreement on a multi-faceted approach to better pharmaceuticals management, including the establishment of the National Prescription Drug Utilization Information System (NPDUIS). The purpose of the NPDUIS is "to provide critical analyses of price, utilization and cost trends so that Canada's health system has more comprehensive, accurate information on how prescription drugs are being used and sources of cost increases. In addition, doctors and pharmacists would have better information from which to provide care to patients."[1]

In February 2002, the federal budget allocated funding to the Canadian Institute for Health Information (CIHI) to enable the Institute to continue its efforts to provide improved information on health and health care throughout the country. The available funding will enable CIHI to carry out its responsibilities under the NPDUIS, including the development and implementation of a prescription claims level drug database capable of incorporating data from publicly-funded drug plans, and the production of analytical and statistical outputs and reports. In addition, Health Canada has provided the funding required by the Patented Medicine Prices Review Board (PMPRB) to continue its role in producing analytical studies focusing on the information needs of federal, provincial and territorial drug programs.

CIHI and PMPRB are working collaboratively to develop and to maintain the NPDUIS:

- CIHI is the custodian of the NPDUIS, responsible for developing and maintaining standards, collecting, scrubbing and processing data, producing standardized reports (including web-based outputs), completing ad hoc requests for information, and conducting analytical studies.
- PMPRB is responsible for conducting analytical studies.
- In some cases, both organizations will collaborate in the development of reports and analytical studies.

The NPDUIS Steering Committee will provide sound advice to CIHI and PMPRB regarding the development, the analytical direction and priorities, and the strategic direction of the NPDUIS. The Steering Committee also constitutes a mechanism to allow stakeholders and users to make suggestions for improvement and to raise issues related to the NPDUIS for consideration and resolution in order to ensure that the system continues to be relevant to the information needs of stakeholders and users.

All provinces (with the exception of Québec), the Yukon, and some federal drug benefit programs are presently associated with the project.

An information system housing data from public plans across Canada will be a major first step in developing a national data repository for prescription drug data in Canada.

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[1] Federal/Provincial/Territorial Health Ministers' Meeting, September 26, 2001.

The NACRS Database Continues to Expand

The Canadian Institute for Health Information's National Ambulatory Care Reporting System (NACRS) closed its database for Fiscal Year 2001/02 in July 2002.

At the time of closing, approximately 4.8 million records representing Ontario's emergency activity with the addition of some data from Nova Scotia and British Columbia populated the database. The FY 2001/02 database is the first complete year of information received for NACRS. These data populated CIHI's first ambulatory care web-based comparative reports which were released in October and November 2002.

e-NACRS reports are accessible to all facilities who have signed a service agreement. These reports allow clients the flexibility to choose their own comparative group of facilities. The reports are extremely robust and very informative and demonstrations have been provided to emergency nursing administrative personnel in Ontario. The response has been extremely positive about the data available to them and there is recognition of how these data can be used towards operational changes and improvements in their emergency departments. CIHI will be releasing the next set of e-NACRS web-based reports in February 2003 and it will contain data for the first six months of FY 2002/03.

In November 2002, the Ontario Ministry of Health and Long Term Care mandated that their hospitals shift day surgery reporting from the Discharge Abstract Database (DAD) to NACRS commencing April 1, 2003. In addition, they have also mandated that all cancer, renal dialysis and cardiac catheterization ambulatory visits will be reported in NACRS commencing April 1, 2003. From this mandate CIHI will be receiving over 9 million records into the FY 2003/04 database.

CIHI is working with other facilities and provinces that are interested in starting data collection using NACRS; currently CIHI is receiving data from a new regional facility in British Columbia as well as assisting one region in Prince Edward Island as they prepare to submit their data on April 1, 2003.

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For more information, contact nacrs@cihi.ca. CIHI will release the 2003 PDF and HTML NACRS manual in February 2003. Specifications for the 2003 product was released to vendors in December 2002. It is important to note that changes for 2003 have been kept to a minimum to ensure data continuity for CIHI's NACRS clients.

Improving the Health of Canadians
Canadian Population Health Initiative Flagship Report

In December 2003 the Canadian Population Health Initiative (CPHI) will launch a major national report, *Improving the Health of Canadians*.

This past fall CPHI Council approved a Public Affairs Communications Strategy marking the beginning of work associated with CPHI's fourth function—contributing to the development of reports on the determinants of health. Central to the communications strategy is the production and launch of a major national report every two years. This CPHI report will compliment the reports produced by CIHI on health system performance and Statistics Canada on the health status of Canadians.

The focus of *Improving the Health of Canadians* will be reporting key trends related to population health, analyzing the policy implications of these trends, and identifying options for action that could lead to health improvements. Evidence, specifically about what works, what doesn't work, and where more work could be done to improve the available evidence will drive the report.

To provide CPHI with expert advice on the development of *Improving the Health of Canadians*, an Expert Advisory Group has been formed. Group members are experts in population health drawn from policy and research organizations, public/community health centres and departments, non-government organizations and federal/provincial/territorial government departments. The first meeting of the Expert Advisory Group will be in Toronto in January 2003.

A number of priority issue areas have been suggested for the report. Over the past year the CPHI Policy Analysis program has been working on the following themes: poverty, aboriginal peoples' health, and obesity. Income distribution, children and early child development are other issues that have been identified.

As part of a multi-pronged strategy, a publications series and on-going media and external relations will support the *Improving the Health of Canadians* report. Over the longer term, an interactive web site will be developed to support a population health network.

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Canadian Coding Standards for ICD-10-CA and CCI—*How they came to be*

The Pan-Canadian adoption of ICD-10-CA and CCI, as the classification standards for health-care morbidity data submission to the DAD, provided the impetus for the development of Canadian coding standards and guidelines. To guide this process, CIHI established a National Coding Advisory Committee.

CIHI hosted the first meeting of the National Coding Advisory Committee in Toronto in March 2001. According to the Terms of Reference, the purpose of this committee is "to advise CIHI on the development and ongoing enhancement of ICD-10-CA and CCI coding rules and guidelines" and, the membership "should include one representative from each province and territory, to be determined by the respective Provincial/Territorial Coding Quality Committee or Ministry of Health." Currently, all three territories and nine provinces participate on this committee.

Canadian coding standards build upon the World Health Organization's rules and guidelines for mortality and morbidity coding for use with the International Statistical Classification of Disease and Related Health Problems, Tenth Revision, 1993. Canadian coding standards only address the practices for coding data that contributes to the reporting of aggregated Canadian data and inter-provincial/territorial data.

The first edition of the Canadian Coding Standards for ICD-10-CA and CCI (formerly ICD-10-CA and CCI Coding Guidelines, Volume 5) was published to coincide with the release and adoption of ICD-10-CA/CCI, Version 2001 for fiscal 2001/2002. This first edition was comprised of a general section and then ICD-10-CA Chapter specific sections. The general section incorporates the international rules, the long-standing Canadian standard for Diagnosis Typing and the use and selection of CCI codes. The ICD-10-CA chapter specific sections provide case-based scenarios demonstrating the application of the standards for code selection.

To ensure ongoing relevance, The Canadian Coding Standards for ICD-10-CA and CCI are updated annually. Throughout the year sections requiring further development or enhancement are identified from the submissions to CIHI's Coding Query Service and from data quality initiatives within the provinces and territories. Draft standards are prepared by the CIHI team and submitted to the Committee members for distribution and review within their respective constituencies. Only standards that have achieved 100% approval of the participating provinces and territories are deemed to be Canadian and included in this document. The third edition, encompassing 193 entries, will be available in English and French in March 2003 for application in fiscal 2003/2004.

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CIHI directions ICIS

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The Institute's mandate is to coordinate the development and maintenance of Canada's comprehensive and integrated health information system. To this end, CIHI provides accurate and timely information that is needed to establish sound health policies, manage the Canadian health system effectively and create public awareness of factors affecting good health.

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