

Much More to Do —Reflections on CIHI



The Canadian health care system is struggling to meet the needs and expectations of Canadians. This struggle is not new, nor will it be decisively resolved in the near future. Better information can help in key ways.

Policy-makers need better insight to allocate investment dollars among competing demands? Do we have enough imaging machines? Do we need more doctors and nurses?

Managers need better information to direct finances and people in the most effective manner. Clinicians need better information to understand the myriad interactions of patients and disease. Patients need better and more information to understand their care choices and to participate in the management of their own health. The Roadmap Initiative is a promising start, as is the commitment of First Ministers to provide detailed indicators.

What are reasonable hopes for the future? I believe every citizen of Canada is entitled to high quality information about our health system. We deserve this information as taxpayers, as citizens and as patients and families of patients.

Four years ago I agreed to take on the challenge of Chair of the CIHI Board. At that time, I set three objectives for my term as Chair. These objectives were to:

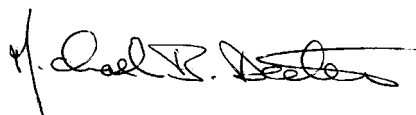
- strengthen the Board of CIHI and the profile of the organization;
- obtain new resources for CIHI and Statistics Canada to improve the quantity and quality of health information in Canada; and
- advance CIHI as a provider of relevant information to the public.

Great progress has been made on each of these objectives. The credit properly belongs to support from governments, particularly Health Canada under Federal Health Minister Allan Rock, and from the Canadian health care community. Our partnership with *Maclean's* magazine made data come alive for the public. Dynamic leadership by Richard Alvarez and a talented, determined CIHI staff also contributed greatly.

When I agreed to serve a second three-year term as Chair, I thought hard about relevant objectives. Here are my goals for the next three years:

- speed up the collection and dissemination of data and improve data quality—real-time data is an ambitious but achievable goal in many areas;
- secure further dollars to continue the work of CIHI and Statistics Canada in health information; and
- tackle the patient safety issue in partnership with many others in the health community.

I am proud of CIHI's achievements to date. There is much, much more to be done. I hope that CIHI is becoming a trusted partner to all those who make decisions about health care policy and management and particularly by those 750,000 magnificent Canadians who rise each morning to care for those in need.



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Reports and Analysis

Kidney Failure on the Rise, Seniors Constitute 50% of New Patients

The latest statistics from CIHI show that the number of Canadian seniors developing kidney failure has more than doubled over the past 10 years. According to CIHI, half of the new patients with kidney failure, or end-stage renal disease, were 65 years of age or older in 1999. At 577.2 per million population, this represented an increase of 132% from 1990.

These figures compare with an increase of 73% in the rate of new patients with end-stage renal disease for all age groups—up from 83 per million population in 1990 to 142 per million population in 1999.

The majority of new end-stage renal patients (99%) initiated dialysis treatment in 1999. Those patients receiving a transplant prior to starting dialysis remained low, at 1%. Among the 21,835 patients with end-stage renal disease alive on December 31, 1999, 62% were on dialysis and 38% had received a kidney transplant.

The figures are from the Canadian Organ Replacement Register (CORR), a national database managed by CIHI.

The 2001 report from this database is now available and can be ordered on-line for a nominal fee from: ecomm.cihi.ca/ec/.

Slight Rise in Canada's Physician Supply, More Specialists and Fewer Family Physicians

A report released by CIHI this summer showed an increase of 5.3% in the number of physicians in Canada over the past five years, from 54,918 in 1996 to 57,803 in 2000. This increase reflects the continued growth in the number of specialists in Canada (specialists now account for almost half of all physicians in the country).

From 1996 to 2000 the number of specialists increased by 7.4% while the national population rose by 3.5%. This resulted in an increase in the number of specialists per capita, from 90 physicians per 100,000 population in 1996 to 93 in 2000. Per capita rates for specialists varied widely among the provinces/territories, as many types of surgery are performed in larger regional centres across the country.

However, CIHI's report also noted that the number of family medicine physicians has not quite kept pace with the country's growing population. While the number of family medicine physicians rose by 3.2% between 1996 and 2000, the growth in population rose by 3.5% during the same time period. As a result, the ratio of family medicine physicians per 100,000 population dropped slightly, from 95 in 1996 to 94 in 2000.

The number of physicians per 100,000 population in Canada also increased from 184 per 100,000 population in 1996 to 187 in 2000.

CIHI's statistics also reflect the continued trend of an aging physician workforce. In 1996, physicians under the age of 40 represented 31.6% of the total physician supply. During the same period, the proportion of physicians aged 50–59 years rose from 20.4% to 23.5%.

The figures released in August are from CIHI's publication, *Supply, Distribution and Migration of Canadian Physicians, 2000*. The report is available for a nominal fee from CIHI's on-line order desk:

ecomm.cihi.ca/ec/.

CIHI's Commitment to Excellence Furthered through Data Quality Initiatives

With CIHI's diverse data holdings playing an increasingly important role in supporting public debate and decision-making about our health system, it is no surprise that Richard Alvarez, President and CEO of CIHI, places data quality high on the list of CIHI's corporate priorities.

"CIHI already has an established reputation for producing high-quality information," said CIHI President Richard Alvarez at a recent presentation to all staff. "The ongoing challenge is to build on that reputation by continually enhancing the quality of our incoming data."

CIHI's comprehensive data quality program involves two major initiatives. The first is a recently adopted data quality framework designed to ensure the quality of data by following appropriate processes and procedures. The other initiative is the measurement and evaluation of specific data quality issues through special data quality studies.

CIHI has developed a Data Quality Manual to serve as an internal working tool for CIHI database analysts and managers. The manual will allow CIHI staff to analyze and document the data quality dimensions (and their specific characteristics) of accuracy, timeliness, usability, relevance and comparability. Two-day data quality training workshops for staff are held on an ongoing annual basis. CIHI's approach to implementing its data quality framework will be presented in various forums at the Massachusetts Institute of Technology Information Quality Conference in November 2001.

While many elements of the data quality framework have been in place for some time, it is now being implemented systematically across all data systems. For example, the Registered Nurses Database and the Annual Hospital Survey have completed their implementation of the framework and will be initiating special studies to further improve accuracy. The implementation is

underway for the Southam Medical Database. For new databases, such as the National Rehabilitation Services and the National Ambulatory Care Reporting System, the framework is being applied in the development of the reporting systems. All CIHI data holdings are scheduled to complete the basic implementation of the data quality framework by July 1, 2002.

In 2000, CIHI began a special data quality study of the Discharge Abstract Database (DAD). This study is being conducted on an annual basis over three years. It is aimed at reliably measuring, for the overall DAD, the accuracy of approximately 50 data items. The findings of the first year of the study will be released this fall and may be accessed through CIHI's Web site at www.cihi.ca.

The data collection for the second year of the study will occur from September to November of 2001. Each of these studies features a sample design that focuses on a set of specific health indicators. A research paper on the methodology and the quality measurements, available in the first year of the study, was presented at the Statistics Sweden International Conference on Quality and Official Statistics, in May 2001. The results and the knowledge gained from the first year of the study will be discussed in a research paper to be presented in October 2001 at Statistics Canada's International Symposium on Achieving Data Quality Within a Statistical Agency.

CIHI is committed to ensuring quality data. This means that the data must be timely and accurate. Policy-makers, leaders in the health care sector and the public must be afforded the opportunity to make sound decisions based on sound available data. The ongoing development of initiatives to enhance data quality is an important part of CIHI's work.

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Canadian Joint Replacement Registry Improving Patient Outcomes

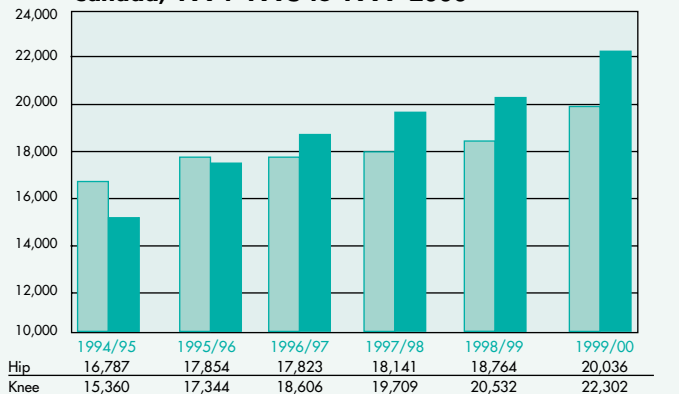
Since May 2001, surgeons from across the country have been submitting data to the Canadian Joint Replacement Registry (CJRR). The CJRR is a new national registry that captures information on total hip and knee replacement surgery performed in Canada.

The registry is designed to monitor patient outcomes following surgery, including revision rates. It is anticipated that outcomes will eventually be improved using data from the registry. CIHI manages the CJRR and partners with the orthopedic surgeons of Canada on the development and implementation of this project.

Once patient consent is obtained, data are collected by orthopedic surgeons and their staff (except in Ontario) and submitted directly to CIHI where data checks and data entry are completed. CIHI has been working closely with the Ontario Joint Replacement Registry (OJRR) to facilitate electronic submission of data directly for Ontario surgeons from the OJRR.

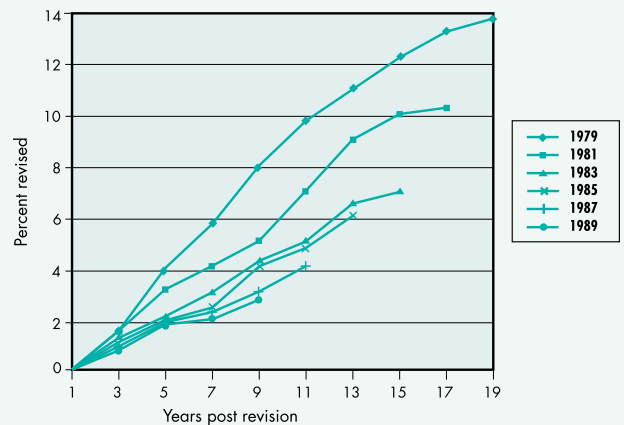
CIHI data reveal an increasing number of total hip and knee replacements since 1994–95. This is due to an aging population and a rising number of younger active Canadians who are receiving replacements. Estimates indicate that 10–12% of all total hip and knee replacement patients need subsequent replacements (i.e. revisions) due to implant wear and breakage. Summary CJRR data is shown in the figures below.

Number of total hip and knee replacements by year Canada, 1994–1995 to 1999–2000



The CJRR has started collecting detailed operative data on patient care and outcomes including the reasons for revisions and the actual revision rate, which cannot be determined from existing data.

Cumulative hip replacement revision frequency



Source: Swedish Hip Arthroplasty Register

As demonstrated in Sweden, joint replacement surgery can be improved to decrease revision rates through evidence-based practice. Sweden has one of the oldest national joint replacement registries in the world. The operative data elements of CJRR hold the key to improving outcomes for hip and knee replacement surgery patients. For example, CJRR data will be used to measure and compare the post-market performance of the implants used in these operations.

The first annual CJRR report will be produced in January 2002 and will focus on total hip and knee replacement procedures in Canada using data from CIHI's Discharge Abstract Database and Hospital Morbidity Database. Later in 2002, CIHI will also release its first report based on the operative data collected for CJRR.

The CJRR team is committed to ensuring that the registry is comprehensive and an important tool for evidence-based decision-making. The CJRR team is examining the feasibility of adding new data elements to CJRR, including wait-times, prioritization and illness severity, and patient functioning. Efforts are underway to leverage technology in the collection of all CJRR data. The registry holds enormous potential for revealing essential information that will impact on the future health of Canadians.

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CPHI Takes a Global Perspective

Although policy analysis and knowledge transfer have always been a fundamental element of the Canadian Population Health Initiative's mandate (CPHI), CPHI is now rising to the challenge of synthesizing population health research results from around the world. This bringing together of information is being accomplished by establishing links between researchers and policy makers and transforming new knowledge into forms that are useful to policy and decision-makers as well as informative to the Canadian public.

Since its inception in 1998, CPHI has distinguished itself by supporting innovative population health research and data infrastructure development. It has established a strong Canadian presence in population health knowledge generation through the commitment of more than \$6.1 million dollars on research on the determinants of health, and the support of 25 multidisciplinary teams of researchers in a pan-Canadian network.

In addition to creating a Policy Sub-Committee, the CPHI Council has established criteria to select issues for policy analysis and knowledge transfer that emerge from CPHI funded research and other research outside Canada. The criteria include:

- a strong evidence base;
- issues that touch more than one sector (e.g. environment, health, economic etc.), resonating with a variety of policy areas;
- problems that are amenable to change; and
- apparent potential for gains in health.

When CPHI applied these criteria to recent population health research findings and emerging policy issues, three priority themes surfaced: obesity, family poverty and Aboriginal health. All three involve issues that have strong resonance with policy and decision-makers. Yet despite mounting evidence, there seem to be more questions than answers about solutions to these problems.

As a knowledge broker, CPHI is tackling these issues by asking, "What is known about effective policies/solutions? What has worked? What hasn't worked? and Why?" These questions will be answered through synthesis of research findings and policy research that includes a review of policies and programs that have been tried around the world. The results will be published in discussion papers. Over the coming months, the papers will form the basis for round table discussions where key policy and decision-makers at all levels will have the opportunity to advance our understanding about the issues and identify policy options.

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New Approach to Promoting Use of CIHI National Trauma Registry Data

A new approach to promoting the use of CIHI's National Trauma Registry (NTR) was introduced this past summer. The specific goal was to increase the number of researchers using NTR data to develop abstracts for the 6th World Conference on Injury Prevention and Control, being held in May 2002, in Montreal. NTR Advisory

Committee members were sent notices of this offering.

The strategy allowed researchers who were intending to prepare abstracts for the conference, to obtain without charge, aggregate level data tables based on the National Trauma Registry databases. As always, only those data tables meeting CIHI's privacy and

confidentiality guidelines were considered.

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Call for Nominations – Joady Murray Award

To honour the life and work of Joady Murray, the Canadian Institute for Health Information (CIHI) and the Canadian Health Record Association (CHRA) established an award to recognize a CHRA member who is pursuing continuing studies in health information management. Nominations must be submitted to the CHRA by December 31st, 2001. More information about the award and the nomination form can be found at: www.chra.ca/download_doc/joady.doc

MIS Introductory Courses Available On-line

CIHI is entering the world of e-Learning. The first of what is expected to be several courses is now available through the CIHI Web site. Previously, clients were required to wait for a workshop or the release of a paper-based self-learning product. Now with the introduction of Web-based education, training products can be accessed on a 24/7 basis at work or at home.

Distance learning has long been a method for providing education and training for students who are unable to attend formal classes. Early distance courses used paper-based, disc or CD-ROM course material. These were accompanied by assignments and exams that were sent back and forth between the student and the learning institution. With the advent of the World Wide Web, education/training has become readily available to anyone with a computer and Web access allowing participants to have immediate interaction and feedback.

CIHI's first e-Learning courses were previously offered as paper-based self-learning packages. Now the Management Information System (MIS) Guidelines introductory courses (Acute Care and Community Health Service Organizations) are available as interactive Web-based products. The courses are asynchronous, meaning participants can work in their own time, according to their own schedule and from any computer with Web access.

These courses consist of an introduction to CIHI and seven modules in addition to a User Guide, a Course Map and References. Each module is followed by an exercise consisting of multiple-choice questions in order to confirm learning. Immediate feedback is provided for the end-of-module exercises. The course concludes with the participants completing the on-line final test. Upon completion participants are immediately presented with their score, the correct answers and an explanation for those answers. This provides further reinforcement of the principle teaching points. Having successfully achieved a passing grade on the test, a certificate of completion is issued.

Following the launch of CIHI's inaugural e-Learning initiative, work will begin on identifying other education products that lend themselves to conversion to the Web. Courses to support the National Ambulatory Care Reporting System, ICD-10-CA/CCI, Grouping Methodology and others will be carefully examined as to their feasibility for conversion to the e-Learning environment. Watch for them, as well as other learning initiatives,

to follow in the coming months.

Access to the on-line courses is through the CIHI Web site, www.cihi.ca. Click on e-Order/Registration Desk, then Education. Under Products click on Management Information System, then Introduction to the MIS Guidelines-E-Learning and follow the steps to register for the course.



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CIHI's Role in International Classification of Functioning, Disability and Health

The World Health Organization (WHO) released the International Classification of Impairments, Disability and Handicaps (ICIDH) in 1980. It then underwent extensive field trials, testing and comment throughout the world. As a member of the North American Collaborating Centre (NACC), CIHI coordinated the Canadian input into the mandatory WHO field trials and revision process. A number of centre-specific tests that were considered high priority for Canadian users and applications were also conducted with extensive input from stakeholder individuals and organizations.

In May 2001, WHO approved the successor of ICIDH, the International Classification of Functioning, Disability and Health (ICF). ICF is a classification that deals with functional states associated with health conditions at the body, individual and societal levels. It provides a standard language and framework for the description of human functioning and disability as components of health.

ICF complements the International Classification of Diseases ICD. While taking a neutral stand on etiology, ICF opens research opportunities to explore causal factors and outcomes. It is anticipated that ICF will advance new opportunities for rehabilitation, research, teaching and clinical work.

ICF includes the domains of Activities (execution of a task by an individual) and Participation (involvement in a life situation) under one list. There is the option within ICF to "split" the list of Activities (A) and Participation (P) according to needs and proposed uses. In May 2001, CIHI coordinated a project, with support from the National Center for Health Statistics, Center for Disease Control, MD, US, to develop a proposal for mutually exclusive lists of A and P in ICF to clarify the distinction and reduce overlap.

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NACRS – Expanding into Ontario and British Columbia

In July 2000, the Ontario Ministry of Health mandated the collection of National Ambulatory Care Reporting System (NACRS) data for all hospital emergency departments and urgent care centres in Ontario.

In June 2001, North Okanagan Region in British Columbia also agreed to begin data collection using NACRS, effective this fall, joining Prince Rupert Hospital that served as CIHI's first adopting facility of NACRS in British Columbia four years earlier. Further efforts towards encouraging a national adoption of NACRS have included information exchange sessions held in Vancouver and Nova Scotia (for all Atlantic Provinces).

Ambulatory medical care is increasingly becoming the predominant method of providing health care services in North America and occurs in a wide range of settings. Information on hospital emergency departments and outpatient care settings has been lacking for a number of years. Commitment to supporting the collection and analysis of ambulatory care information will in turn lead to more effective planning and decision-making in the delivery of services.

CIHI's National Ambulatory Care Reporting System is designed to collect all ambulatory activity in facilities regions and communities. It is capable of including emergency, day surgery and clinic encounters.

In Ontario, for the period of July 2000 to March 2001, a total of 3,029,898 records were submitted to NACRS. One hundred and fifty (90%) of the 167 hospital emergency departments and urgent care centres identified for inclusion in NACRS successfully submitted information. Over the nine-month period, 83% of the expected data was submitted to CIHI successfully by hospitals. Seventeen hospital sites (10%) or 13 corporations did not submit data for fiscal year 2001–02 although six sites did submit test data.

Following the application of CIHI's data quality framework, CIHI is working towards providing hospitals with comparative NACRS data for use by fall, 2001. These data are intended to help in the evaluation and planning of ambulatory care service delivery.

NACRS is an innovative project that reflects the information needs of policy and decision-makers and is responsive to the direction of health care delivery in Canada.

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The proposal offers three options to separate them and a valuable first step in defining a centre-specific version of ICF with distinct lists of A and P that Canada, the US and perhaps other centres will find useful.

This proposal was presented at a meeting sponsored by the WHO Collaborating Center for the Classification of Diseases for North America in New York, on June 7, 2001.

The next steps in Canada will include a review of this proposal by the CIHI National Expert Working Group and other key stakeholders to achieve consensus on a country-specific version of Activities and Participation that can be used for statistical data collection, policy development, and other aggregate needs.

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BETTER HEALTH INFORMATION FOR BETTER HEALTH

CIHI directions ICIS

CIHI directions ICIS is published quarterly by the Canadian Institute for Health Information (CIHI). Since 1994, this national, independent, not-for-profit organization has been working to improve the health of Canadians and the health care system by providing quality health information.

The Institute's mandate is to coordinate the development and maintenance of a comprehensive and integrated approach to health information for Canada. To this end, CIHI provides and coordinates accurate and timely data and information required to establish sound health policies, effectively manage the Canadian health system and generate public awareness about factors affecting good health.

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