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Canada's greying anatomy

It's not news that Canada's population is greying. But just how grey the Great White North is about to become was laid out in black and white recently with the release of the 2006 census data.

Statistics Canada's latest figures show that Canada now has a record number of seniors—4.3 million. Today, one in seven Canadians is 65 or older. What's more, those aged 55 to 64 are the fastest growing demographic, accounting for 3.7 million people—up 28% since the last census in 2001.

The 80-plus ranks are now 1.2 million strong—up 25%, making them the second-fastest growing demographic. Not about to be left behind, the over-100 crowd is keeping pace, having increased 22% since 2001.

Few facets of society will be unaffected by these shifting demographics, but perhaps no area will feel the impact more than health care. There will be questions raised about how Canada's health system can cope with these changes—questions that are best answered and supported by facts and evidence. In this issue, we take a look at some of the initiatives CIHI has undertaken to help bring clarity to this emerging "grey" area.

In this issue

Canadian Institute for Health Information
Institut canadien d'information sur la santé

From the president

The first baby boomers start to turn 60 this year and the latest census data indicate that Canadians are older than ever.

The impact an aging population will have on Canada's universal health care system continues to be hotly debated. While there are some who believe it is a grey tsunami that has the potential to drown the system, others insist the system is quite capable of withstanding the pressure.

Regardless of which side of the debate one falls on, decisions made to meet increasing demand must be based on sound and quality health information. Without it, there's no way to know how long patients are waiting for surgery after hip fractures, how their pain is being managed at the end of life or if seniors are being prescribed potentially harmful drugs. In collaboration with our health partners, providing this critical information is CIHI's role.

Much of the health care debate comes down to dollars, and our data show that Canadians aged 65 and over accounted for an estimated 44% of total provincial and territorial government health care spending in 2005. That proportion has not changed significantly since 1998.

As you will read in this issue, CIHI has also been building new databases to expand the understanding of what is happening with seniors and in our health care system. Data on home care, long-term care and pharmaceuticals will provide information to help inform and shape health care policy. Increasingly, we want and need to know more.

Recently, CIHI studied end-of-life care in Canada's four western provinces. The study presents some of the challenging issues of providing care in the last stages of life. The report clearly illustrates the variations that seniors encounter at the end of life and that there are no simple answers in health care. With a push toward increased home care, this is useful information for planners working to best allocate resources. It is also yet another example of how CIHI will help the system navigate the uncharted waters that lie ahead.

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As of November 2007

Facts-at-a-glance

Seniors and Emergency Departments in Ontario

Proportion of all emergency department (ED) visits made by seniors (65+ years) in Ontario in 2005–2006: 18%

28% of seniors visiting EDs were admitted to the hospital via the ED. This rate is:

- More than 2½ times higher than the proportion for all patients
- Almost seven times higher than the proportion for children (0–17 years)
- Almost four times higher than the proportion for adults (18–64 years)

Of those seniors not admitted to hospital:

- 64% were discharged home without support services
- 5% were discharged to a place of residence with support services
- 2% left before completing their ED visit

Proportion of seniors completing their ED visits in under six hours: 74%

Source: National Ambulatory Care Reporting System, 2005–2006, CIHI.

Transitions

Mimi Lepage, CIHI's new **chief privacy officer**, comes from the federal Department of Justice, where she specialized in access and privacy. Over her career, she has acted as director and general counsel of the legal services unit in the Canadian Forces' Ombudsman Office. She has also acted as deputy director and senior counsel at Elections Canada, and worked with the *Canadian Human Rights Act* Review Secretariat. Mimi holds a bachelor of arts degree from the University of Manitoba, a law degree from the Université de Moncton and a masters in law from Dalhousie University. She is a member of the New Brunswick Law Society.

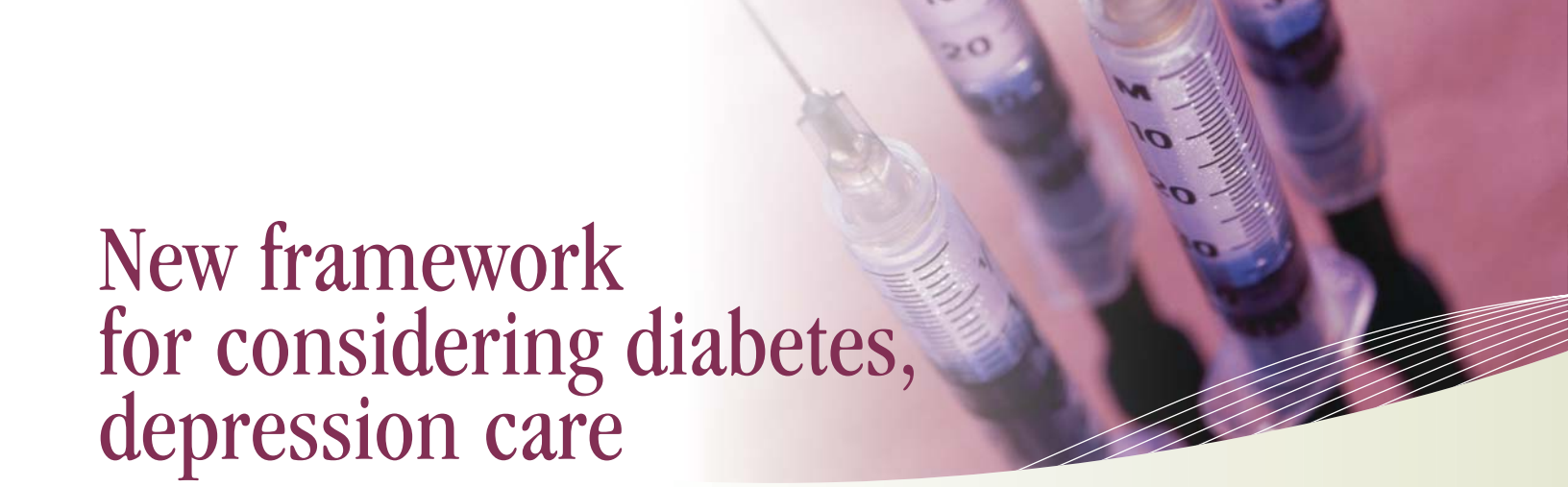
Anne Cochrane is CIHI's new **director of Communications and Outreach**. An award-winning communications professional, Anne has 25 years of experience in various industries—including public and private sector, agency and corporate. She started her career with CBC-TV and over the years has been the vice president, marketing and communications with a public relations agency; vice president, corporate marketing and communications with the lottery industry; and director general, communications, with the federal government. Anne also spent 10 years in technology. Anne was a founding member of the Women in Insurance Cancer Crusade.

HSMR report released

For the first time in Canada, hospital standardized mortality ratio results were released this month.

This new measurement tool is part of CIHI's work to provide information to support improved patient safety in the health system. It is the result of ground-breaking work that started with a 2004 study by researchers Ross Baker and Peter Norton, financially supported by CIHI, which showed that, on average, 7.5% of adults admitted to Canadian acute care hospitals in 2000 experienced adverse events.

The HSMR compares a hospital's mortality rate with the average national rate. The ratio compares observed versus expected deaths on a hospital-specific basis, adjusted for the age, sex, diagnoses and admission status of patients. It's been a motivator for change internationally, since, when tracked over time, it can indicate how successful facilities have been in reducing inpatient deaths.



New framework for considering diabetes, depression care

A new report on diabetes and depression looks at the relationship between health care and health outcomes. The joint project between CIHI and Statistics Canada proposes a new framework for analyzing health outcomes. The approach includes the health care system characteristics, health care services and patient characteristics. It then uses the framework to examine five different health outcomes related to diabetes and depression.

The report examines questions such as "What factors are associated with acute-care hospitalization among diabetics in Canada?" and "What factors are related to changes in depressive symptoms among long-stay complex continuing care patients in Ontario?"

It will also look at the number of individuals who regularly see a medical doctor, the survival rates of patients with and without diabetes undergoing kidney dialysis and readmission rates for patients. By examining the relationship between health care services and health outcomes, the effectiveness of the system can be improved. *A Framework for Health Outcomes Analysis: A Diabetes and Depression Case Study* will be available on CIHI's website in spring 2008.

Fewer seniors exposed to risky drugs

Canadian seniors in Alberta, Saskatchewan, Manitoba and New Brunswick are taking fewer drugs that can potentially increase the risk of unwanted side effects such as confusion and dizziness, says a recent CIHI report.

These drugs are on what's known as the *Beers List*—an internationally recognized list of medications identified as "potentially inappropriate" for seniors due to an elevated risk of adverse effects.

In 2000–2001, just over one-third of all seniors in Alberta, Saskatchewan, Manitoba and New Brunswick who participated in public drug claims programs were taking drugs on the list. That dropped to just over one-quarter in 2005–2006, according to *Drug Claims by Seniors: An Analysis Focusing on Utilization of Potentially Inappropriate Medications, 2000–2006*.

"As the Canadian population ages, a better understanding of any potentially inappropriate use of these drugs is essential," says Francine Anne Roy, Director of Health Resources Information at CIHI. "For the first time, we can track which drugs seniors are taking across several provinces, and monitor their use over time, which can help inform decisions about public drug plans and prescribing practices."

In all four provinces, chronic use of Beers drugs (a minimum of three prescriptions and 100 solid dosage units in a given year) was highest among women and seniors 85 and older. Among chronic users enrolled in public drug programs, the antidepressant amitriptyline was one of the fastest-growing Beers drugs, while estrogens were among the fastest declining.

Between 2000–2001 and 2005–2006, chronic use of Beers drugs considered to be high risk decreased in all four provinces. In 2005–2006, the use varied from 8.2% of seniors with drug claims in Alberta to 12.0% in New Brunswick.

The data used in this analysis come from CIHI's National Prescription Drug Utilization Information System database. For more information, please visit www.cihi.ca.

Yukon: Pioneers in home care information

Most home care clients in the Yukon Territory wait less than a week for home care and some don't wait at all. Only 7% wait three weeks or more for service.

This is one highlight that emerged from a recent CIHI analysis in brief that provided an early look at the territory's home care population. The report also looked at who is getting home care and the pathways they've taken through the health system.

Last February, the Yukon became the first jurisdiction to submit data to CIHI's Home Care Reporting System (HCRS). The HCRS was developed to provide comparable longitudinal information on publicly funded home care to support policy-makers, health planners and front-line providers in ensuring quality services.

The system covers the continuum of care from acute, rehabilitation and long-term to end-of-life care delivered through home care programs. Collaboration with interRAI supports the use of a standardized, internationally validated assessment instrument for collecting data on the long-term home care clients. This also provides real-time feedback to clinicians for care planning and quality monitoring.

"We're really just starting to realize the potential of this system," says Nancy White, Manager of Home and Continuing Care. "With more years of data, the Yukon will be in a position to track progress and monitor trends over time. And as more jurisdictions participate, we'll be able to provide Canada-wide comparisons of the outcomes and resources used to serve this growing and diverse population."

Majority of westerners die in hospital: new CIHI report

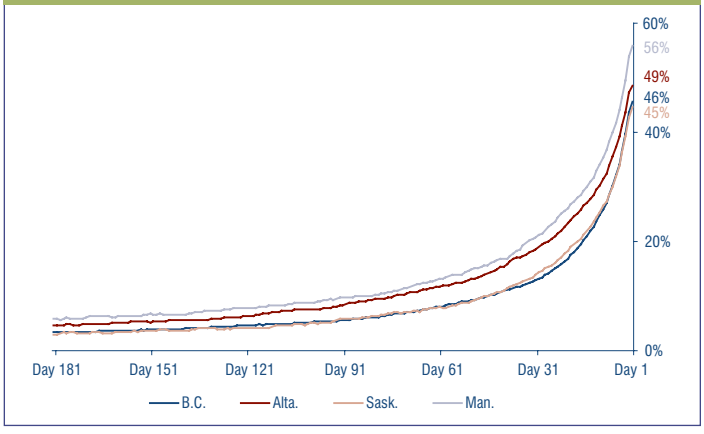
Although studies show many people prefer to die at home, a new CIHI report found that over half of the people who died in Western Canada in 2003–2004 died in hospital.

Released in September, *Health Care Use at the End of Life in Western Canada* found Manitobans and Albertans were more likely to die in hospital (68% and 65%, respectively). In British Columbia and Saskatchewan, just over half of all deaths occurred in hospital. Decedents from B.C. were among the least likely to be hospitalized in their last year, and on average they spent fewer days in hospital.

Terminal illness patients, which include those with cancer, were most likely to die in hospital (68%), compared to those with organ failure (62%), frail elders (50%) or those who died suddenly (29%). Approximately one-quarter of those who died in hospital received hospital-based palliative care.

Three-quarters of terminally ill patients were hospitalized in the last six months of life, compared to 57% of people with organ failure and 43% of frail elders. The terminally ill also had the highest use of prescription drugs (for pain and symptom management), especially in their last month.

Percentage of Decedents in Hospital Within the Last Six Months of Life, by Day and Province, 2003–2004 (Adjusted by Age and Sex)



Source: CIHI 2007, study data set based on pooled 2003–2004 provincial hospital discharge data from B.C., Alberta, Saskatchewan and Manitoba.

People living in northern rural health regions were more likely than those from southern urban regions to be hospitalized in their last year, and typically spent more days in hospital. "This could be because larger urban areas can often offer more kinds of services outside of hospitals," says Anne McFarlane, CIHI's Executive Director for Western Canada. To see the full report, visit www.cihi.ca.

Feeling the pressure

Cardiovascular diseases, including heart attack and strokes, are among the most common reasons for emergency admission to hospital in Canada, as well as the leading cause of death.

In 2001, CIHI began tracking how often patients die in hospital within 30 days of admission with a new heart attack. In 2002, CIHI began to track rates for stroke as well.

Often called a brain attack, stroke is the death of brain cells due to a sudden disruption in the blood flow by either a blockage (ischemic stroke) or a ruptured blood vessel in the brain (hemorrhagic stroke).

The risk of having a stroke rises with age—as does the risk of dying after having one. Analyses conducted for CIHI's *Health Care in Canada 2006* (HCIC 2006) found the risk of in-hospital death within 30 days of admission is two times higher for those aged 65 to 74 and four times for those 75 and older, compared to those under 50.

Between 2002–2003 and 2004–2005, 19.1% of people admitted to hospital with a new stroke died within 30 days (excluding British Columbia and Quebec). In 2004–2005, 50% of these deaths occurred within four days of admission. Dr. Antoine Hakim, head of the Canadian Stroke Network (CSN) and the neurology department at the University of Ottawa, says an estimated 60% of strokes are preventable and much of that can be attributed to blood pressure.

He says among Canadians aged 18 to 70, 22% have high blood pressure. Among those aged 65 to 74, 58% of women and 56% of men have it. However, 50% of people with it aren't even aware of it, and less than 20% have it under control. Yet, high blood pressure is the biggest risk factor for stroke. Seniors are at particular risk, as a person's risk doubles every decade after 55.

"If nothing else is changing, just the fact that we age increases our blood pressure," Hakim says. "Our vessels become more rigid. And just because it was normal last year doesn't mean this year it won't be high. Nobody's blood pressure remains normal."

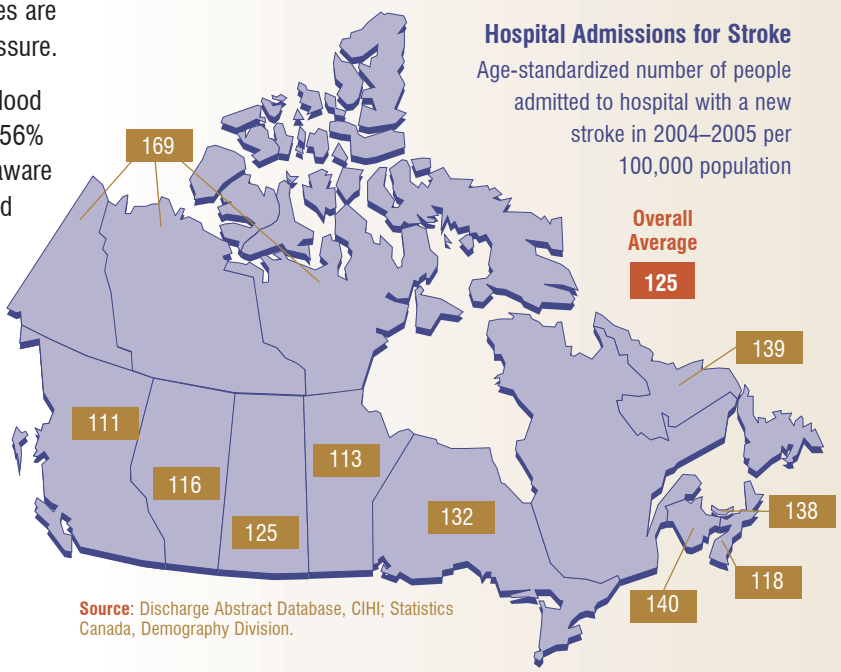
Of the 19,197 hospital admissions for new strokes in 2004–2005, HCIC 2006 analyses showed the average male stroke patient was 71 years old, compared to 75 for females. Women were 11% more likely to die in hospital within 30 days of admission with a new stroke than men. Older patients were also more likely to have multiple pre-existing conditions when admitted with a stroke, which can increase the risk of dying.

A 2006 study based on 1999–2000 CIHI and Statistics Canada data found stroke patients averaged 21 days in hospital. Within one year of the first hospital admission, 10% of those who survived returned with a recurrent stroke. In all, 37% were readmitted for any reason, including stroke.

According to the 2003 Canadian Community Health Survey, close to 270,000 people were suffering from the effects of a stroke. Of those, 81% had difficulty hearing, seeing, walking and learning, and 23% needed help with personal care.

In collaboration with the Heart and Stroke Foundation, CSN has been working to raise awareness and has established best practices around stroke prevention, treatment and recovery.

"Stroke increasingly is showing up as the biggest problem we have to deal with as a society in term of medical approach and prevention strategy," Hakim says.



Source: Discharge Abstract Database, CIHI; Statistics Canada, Demography Division.

Where you'll see CIHI next!

December 2007

2–4 Canadian Home Care Association 17th Annual National Conference, Victoria

4–6 Health Human Resources 2007: Connecting Issues and People, Ottawa

January 2008

21 Health Care 2008 Westin Harbour Castle, Toronto

April 2008

3–5 Trauma Association of Canada 2008 Annual Meeting, Westin Whistler Resort & Spa, Whistler

Waiting longer for hip surgery associated with increased risk of dying

A recent CIHI report found that almost two-thirds of hip fracture patients over 65 had surgery on the day they were admitted to hospital or the next day in 2005–2006. However, *Health Indicators 2007* found that when patients waited longer for surgery, there was an increased likelihood of dying in hospital within a month. The report, co-produced with Statistics Canada, also revealed that seniors outside of Quebec who waited longer than a day for hip surgery had a 22% higher risk of dying within 30 days of being admitted to hospital with a fractured hip.

Those having surgery at low-volume facilities (where fewer than 137 hip fracture procedures were done in 2005–2006) had a 16% increased risk of dying. The 30-day in-hospital mortality risk rose 111% for people who had "comorbid" conditions (that needed to be stabilized before surgery) at admission, compared to people without them. Men were also 133% more likely to die than women—a risk that increased with age.

"This report provides us with a much-needed framework upon which to design and implement strategies that will reduce the number of hip fractures, and to understand the importance of providing timely repair when a fracture does occur," says Margaret Keresteci, Manager of Clinical Registries at CIHI.

Data in Action: Stroke Rehabilitation

A rehabilitation project used CIHI data to come up with recommendations on how to improve community-based rehabilitation for stroke patients while using resources more effectively.

The Stroke Rehabilitation Project of Southeastern Ontario found that intense and timely professional rehabilitation played a critical part in stroke recovery after patients were discharged from inpatient rehabilitation. Patients recovered function faster in the first two months when they had shorter waits and more intense community rehabilitation.

Care costs also decreased, as patients were 50% less likely to be readmitted to hospital, and those who were had shorter stays than those receiving regular community care.

CIHI played a key part in providing data and data-collection tools for the 2004 project, which was funded by Ontario's Ministry of Health and Long-Term Care. With patient consent, the team used inpatient data (admission, discharge and follow-up) from CIHI's National Rehabilitation Reporting System, and then tracked how well patients were functioning at 3, 6 and 12 months after hospital discharge.

"The CIHI data were critical to assessing client functional outcomes as a part of this study," says Cally Martin, regional stroke program manager for southeastern Ontario.

The results inspired the Community Care Access Centre of Southeastern Ontario to consider continuing the new type of care for similar patients. These results and those of five similar projects across Ontario were also considered by a provincial panel led by the Heart and Stroke Foundation and the Ontario Stroke System in the development of a provincial set of standards for stroke rehabilitation services.

Ottawa conference examined gaps facing the HHR community

December 4 to 6, *Health Human Resources 2007: Connecting Issues and People* brought together health professionals, planners and researchers from across the country.

This unique conference highlighted the connections between health human resource (HHR) initiatives at the national, provincial, regional and local levels. Together, conference attendees examined the diverse issues and common gaps facing the HHR community, and learned more about current HHR research, planning, policies and programs in Canada. Conference themes included:

- Developing a platform to strengthen relationships with key groups who have a vested interest in HHR research, management and planning
- Showcasing initiatives on HHR planning "in the trenches" at the national, provincial, regional and local levels
- Highlighting the state of HHR data—"where it's at" and future directions—and identifying gaps, common issues and challenges

For the second year in a row, CIHI has been named one of Ottawa's top 20 employers!

The good news was announced October 17 in a profile of the winners in the *Ottawa Citizen*. CIHI was also short-listed for Canada's Top 100 employers.

It's important to note that the entire organization is being recognized as a great place to work. The nation's capital just happens to be where head office is located, which is why it's been singled out.

"It is an honour to once again be a part of this influential list of organizations that are striving to achieve excellence by remaining true to themselves and their employees," says Louise Ogilvie, vice-president of Corporate Services. "I think this recognition speaks volumes, as our growth and evolution have not changed the fact that this is a great place to work."

Credits

CIHI Directions ICIS is published by the Canadian Institute for Health Information (CIHI). CIHI collects and analyzes information on health and health care in Canada and makes it publicly available. For comments, suggestions or additional copies of this publication, in English or French, please contact the editor, at:

Editor, *CIHI Directions ICIS*
495 Richmond Road, Suite 600
Ottawa, ON K2A 4H6

Phone: 613-241-7860
Fax: 613-241-8120

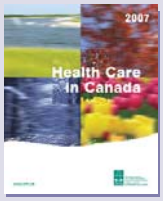
Email: communications@cihi.ca
Website: www.cihi.ca

Cette publication est également disponible en français.

Recently Published Reports

Improving the Health of Canadians: Mental Health and Homelessness
For the first time, a report presents data on hospital use by homeless Canadians.

Health Care Use at the End of Life in Western Canada
A first-of-its-kind look at health care services at the end of life, which found more than half of all deaths occur in a hospital.



Health Care in Canada 2007
An overview of key analytic work at CIHI and elsewhere as it relates to CIHI priority research areas.

Understanding Emergency Department Wait Times: Access to Inpatient Beds and Patient Flow
Part three of a series, this report examines the number and type of patients accessing EDs and how long they're waiting for care.

Summary Report: Distribution and Migration of Canada's Health Care Workforce
The first report to use census data to examine the supply and migration of health care workers.

Highlights from the Regulated Nursing Workforce in Canada, 2006

Offers a comprehensive look at the workforce trends of the largest group of regulated health care providers in the country. Released at the same time as *Workforce Trends of Licensed Practical Nurses in Canada, 2006*; *Workforce Trends of Registered Nurses in Canada, 2006*; and *Workforce Trends of Registered Psychiatric Nurses in Canada, 2006*.