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## 4 Benchmarking health care in federal systems: the Canadian experience\*

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### 4.1 Introduction

Benchmarking is broadly defined as the comparison of similar systems or organisations based on a recognised set of standard indicators (Wait and Nolte 2005). Distinctions are made between performance benchmarking and practice benchmarking; the former focuses on establishing performance standards while the latter is concerned with the underlying practices and search for best practices (Fenna, this volume). In the health sector, performance benchmarking is more prevalent, perhaps because health systems are complex and involve many institutions, sectors, payers and providers. The ongoing challenge has, therefore, been to link benchmarking to organisational change processes (Neely 2010).

Although international comparisons of health care systems date back to the 1930s, those early examples focused mainly on the structural characteristics of health care systems—such as the number of physicians and hospital utilisation data — or on a

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few specific outcomes, such as average life expectancy at birth and maternal and child mortality. More recently, organisations such as the World Bank (1993), the World Health Organization (WHO 2000), the Organisation for Economic Co-operation and Development (OECD 2001) and the Commonwealth Fund (2007) have developed snapshots on cross-national health systems performance measurement. These reports have put international health system performance comparisons on the political agenda, raised awareness of performance issues, and resulted in initiatives to guide policies for the improvement of health care in individual countries (Veillard *et al.* 2010; Wait and Nolte 2005).

Consistent with international developments, there has been a significant increase in health system performance benchmarking in Canada over the last fifteen years. This is largely attributable to intergovernmental events of the late 1990s and early 2000s and the awakening needs of policy makers, health system managers, health care professionals and others to make informed comparisons so as to improve the safety, quality, timeliness and effectiveness of the health care system while ensuring Canadians are getting value for their tax dollars. More generally, this is an expression of the growing influence of management science and of the medical culture of evidence-based decision-making on health policy development and health system management (Pfeffer and Sutton 2006).

Initially, Canadian provinces and territories were reluctant to engage in performance benchmarking due to the fear of being compared, the perceived cost and design of data collection systems, and the aggressive timetables and workloads proposed. However, this lack of enthusiasm was overcome through political commitments to benchmarking that reflected pressure from the public, the media, and health care providers to get on with the job together with an infusion of incremental federal funding into the health system. The consequence has been a more accountable, transparent and informed system. Today, Canadian provinces and territories are committed to publishing more and better comparable data and extending the analysis from performance to practice benchmarking.

This study addresses the issue of health sector benchmarking in Canada so as to draw broader conclusions about the challenges and opportunities created by federal contexts. It first discusses the complexities of the Canadian federal system as it applies to the health sector. Second, it outlines examples of health sector benchmarking exercises conducted across the country by governments and authorities as well as other organizations. Three pan-Canadian benchmarking exercises are then explored in detail to highlight the characteristics (processes, outcomes, challenges and opportunities) of benchmarking experiences to date. The final section includes a discussion of lessons learned and potential future directions for benchmarking in the Canadian health sector.

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## **The federal context in Canada**

Canada is one of the world's largest decentralised federations, both in terms of geography and fiscal arrangements. It is a constitutional federation in which the division of power is enforced by the courts. The Constitution Act divides the responsibilities of government between the federal and provincial governments; the three territories are creations of the federal government. The federal government was granted unlimited taxing powers, while the provinces were limited to direct taxes within their jurisdiction. Provinces are highly protective of their constitutionally assigned jurisdictions.

## **Constitutional framework**

With respect to health care, Section 92(7) of the Constitution Act gives the provinces exclusive jurisdiction over the 'establishment, maintenance, and management of hospitals, asylums, charities and eleemosynary institutions in and for the province, other than marine hospitals' and the federal government responsibility for marine hospitals and quarantine. The federal government also has jurisdiction over certain groups of individuals including Aboriginal peoples, veterans of the Canadian armed forces, the Royal Canadian Mounted Police, inmates of federal penitentiaries and refugee claimants. However, the different orders of government must coordinate their actions on health care as many issues cut across the jurisdictional boundaries originally defined under the Constitution Act (Simeon and Papillon 2006; McLean 2003).

A defining feature of Canadian health care is the Canada Health Act which was introduced by the federal government in 1984. It defines 'insured health services' to include hospital services, physician services and surgical-dental services provided to insured persons. Federal transfers for health care are conditional on the provinces and territories meeting the five principles or national standards of the Canada Health Act. Breach of these standards may result in a reduction or withholding of the federal cash contribution to the province in proportion to the gravity of the breach. The five principles of Canadian medicare are:

1. **Public administration:** a province's health plan must be administered on a not-for-profit basis by a public authority
2. **Comprehensiveness:** all medically necessary services rendered by a physician or surgeon must be covered
3. **Accessibility:** reasonable access to insured services by insured persons on uniform terms and conditions must be provided

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4. Universality: medicare must be available to all provincial residents on equal terms and conditions
  5. Portability: benefits outside of the insured resident's province but within Canada must be made available.

The Canadian health care system is a collection of ten provincial, three territorial and one federal system with a core set of common programs and services as defined by the Canada Health Act. While it is mandatory to provide publicly funded medically-necessary hospital and physician services, jurisdictions also provide a broad array of other services such as home and long term care; mental health and addictions programs; and prescription drugs for specific groups. Private insurance and out-of-pocket payments cover items such as prescription drugs provided in the community and dental and vision care for populations other than the low-income or the elderly (CHSRF 2005).

The system is largely publicly funded (70 per cent public and 30 per cent private) covering medically necessary hospital care and physician services. In 2011, total health care spending in Canada (public and private) reached \$200.5 billion, more than 60 per cent more than a decade ago in real terms and approximately 11.6 per cent of 2011 GDP, of which 29.1 per cent was spent on hospitals, 14.0 per cent on physicians, 16.0 per cent on drugs, 6.3 per cent on public health and 10.0 per cent on other institutions. The remaining 24.6 per cent was spent on other professionals, administration, research and other health care goods and services. At the provincial level, some provinces are spending over 40 per cent of their operating budgets on health care and spending continues to rise faster than revenues (CIHI 2011).

The planning and delivery of health care is generally the responsibility of regional health authorities in seven provinces; local health integrated networks in Ontario (purchasing and planning of care only); and centralised systems in Alberta and Prince Edward Island. Each of the Territories has its own health region. Regional health authorities are devolved entities, created by the jurisdictions to increase local engagement in decision-making and to ensure that health care planning and service delivery are responsive to community needs.

### **Fiscal transfer programs for health care**

Since 1919, the federal government has transferred funds to the provinces to finance portions of their health care systems and to ensure comparable standards of care. These transfers evolved from specific purpose cost-sharing grants in the 1930s and 1940s to broader cost-sharing mechanisms in the 1950s and 1960s and to a more

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mature system of formula-based, per-capita, unconditional grants in the latter part of the 1970s.

Federal transfer payments have often created tension between the federal and provincial governments. Federal concerns focused on the perceived absence of provincial transparency and accountability and the risk that funds would be used for non-health related initiatives. Provincial concerns related to the possibility that unilateral decisions could be made by the federal government without consultation. Provinces and territories generally do not welcome federal intrusions unless they come with financial resources with few or no strings attached.

## **4.2 Health system renewal and the introduction of benchmarking**

In the early 1990s most jurisdictions moved to reduce significantly or eliminate their fiscal deficits. Expenditure restraint initiatives throughout the country led to health care program restructuring. In 1995-96 the federal government reduced health care transfers in an effort to address its fiscal situation. By the late 1990s there was a marked improvement in the fiscal situation of most jurisdictions with many having balanced or surplus budgets. However, health care wait times had increased and the quality of care was perceived to have deteriorated, resulting in a national sense of urgency to improve the timeliness and quality of care.

In 2000 the Prime Minister and the provincial and territorial Premiers (collectively the First Ministers) reached agreement on a \$23.4 billion federally funded package of initiatives to strengthen and renew Canada's publicly funded health care services. Of particular note was a commitment to expand the sharing of information on best practices and to report regularly to Canadians on health status, health outcomes and the performance of publicly funded health services. Ministers of Health were charged with the responsibility to 'collaborate on the development of a comprehensive framework using jointly agreed comparable indicators such that each government will begin reporting by September, 2002.' Comparable indicators were to be developed in the following areas: health status; health outcomes; and quality of health care services (Health Canada 2000).

In late 2002, public reports were made available by each jurisdiction containing up to 67 indicators. However, not all indicators were directly comparable and data quality was suspect in many circumstances resulting in an inability to benchmark provincial and territorial health systems.

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In 2003, the federal, provincial and territorial governments signed the ‘First Ministers’ Accord on HealthCare Renewal’. The Accord provided \$36.8 billion over five years to the provinces and territories to improve the accessibility, quality and sustainability of the public health care system and to enhance transparency and accountability. A new federal transfer mechanism (the Canada Health Transfer), along with the creation of the independent Health Council of Canada (with a mandate to monitor and make annual public reports on the implementation of the Accord), were among the initiatives. In addition, the Accord established parameters for an enhanced accountability initiative, beyond that of the 2000 agreement, focused on the development and reporting of comparable indicators around four themes: access (13 indicators), quality (nine indicators), sustainability (nine indicators) and health status and wellness (five indicators). These indicators were to be reviewed and approved by stakeholder groups and external experts so as to ensure their validity (Health Canada 2003).

In 2004 the First Ministers signed the ‘Ten-Year Plan to Strengthen Health Care’ wherein the federal government committed \$41.3 billion in additional funding, including targeted dollars for wait times reduction. The Plan also included an agreement to expand the number of comparable indicators and to develop evidence-based benchmarks for medically acceptable wait times for cancer and heart surgeries; diagnostic imaging procedures; joint replacements; and sight restoration surgery. All governments agreed to report to their residents on health system performance including the elements outlined in the Plan (Finance, Government of Canada; Simeon and Papillon 2006).

The 2004 agreement also specifically recognised an asymmetrical federalism that would allow for the existence of specific agreements for any province. In this instance, the agreement specifically recognised the distinct needs of Quebec. Quebec was to apply its own wait times’ reduction plan; issue its own report to Quebecers; and use federal funding to implement its own plans for renewing Quebec’s health care system (Health Canada 2004).

### **4.3 Intergovernmental coordination**

Canada has developed a hierarchical structure of intergovernmental committees that usually include representation from all jurisdictions. These committees provide a forum for the constituent units of the federation to communicate; consult; harmonise their policies and programs; coordinate their activities; resolve conflict; and, in some instances, develop policy jointly. At the apex is the Conference of First Ministers. Within the health sector, the focal points are the Conference of Ministers of Health and the Conference of Deputy Ministers of Health which are supported by

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committees of officials. The two conferences are each co-chaired by the federal government and a province (usually rotating annually). Provincial and territorial Ministers and Deputy Ministers traditionally meet prior to engaging their federal counterparts in an effort to coordinate agendas and develop a common front. The value of these pre-meetings has been questioned but is strongly supported by Quebec and Alberta. Generally, there is an ongoing degree of tension as between the federal government and the provinces and territories.

Ad hoc intergovernmental committees are often established to address specific issues. For example, to implement the comparable indicator reporting requirements of the Accords, a collaborative steering group of Deputy Ministers of Health was formed along with a working group. Once sufficient progress had been made in terms of organising, collecting, analysing and reporting of the indicators, the steering and working groups were disbanded and the ongoing responsibilities were devolved to two existing agencies, Statistics Canada and the Canadian Institute for Health Information (CIHI).

Interprovincial cooperation is fostered through a number of formal processes and organisations. For example, the Ministers and Deputy Ministers of the four Atlantic provinces meet regularly to discuss issues while their counterparts in the Western provinces and territories meet on an ad hoc basis. Additionally, officials often convene collectively or bilaterally to address specific items such as health human resource issues and pharmaceutical purchasing arrangements. Governments, with the exception of Quebec, also jointly fund organisations such as the Canadian Agency for Drugs and Technologies in Health (CADTH — health technology assessments) and the Canadian Blood Services (CBS — collection and distribution of blood products).

Quebec is highly selective in its participation in intergovernmental forums, initiatives and organisations. Although Quebec officials attend most intergovernmental meetings, their contributions to the dialogue are selective. Equally, although Quebec chooses not to participate in many pan-Canadian initiatives and organisations, it is a data contributor and participant in benchmarking exercises. Quebec's isolationist approach has been an ongoing frustration for some jurisdictions that would prefer to see an active, pan-Canadian role for Quebec in developing common policy positions to take to the federal government and solutions to issues; the insight and expertise that Quebec officials can bring to the table are felt lost and economies of scale that might be obtained forgone.

The degree of intergovernmental cooperation is often driven not only by issues and politics but also by the personalities of officials and Ministers and fiscal circumstances. As governments, Ministers and Deputy Ministers of Health change

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overtime, the degree of cooperation can change as well; intergovernmental relations can be quite fluid.

#### **4.4 An overview of health system benchmarking initiatives in Canada**

Canada has made considerable strides in the development of comparable health care indicators at the institutional, regional, provincial, and pan-Canadian levels. This has led to a reasonably comprehensive array of performance based benchmarking initiatives, particularly within the acute care sector. However, practice benchmarking based on best practice or medical evidence is relatively new.

At the pan-Canadian level, health data collection, monitoring and reporting have moved from federal ministries and agencies to the Canadian Institute for Health Information (CIHI), an independent institution which, through collaborative processes with all governments, is the developer of quality performance indicators and the custodian and reporter of the data.

##### **Early days of data collection**

Since 1963 Health Canada has held the National Health Accounts and provided some data on health systems. Expenditures were initially compiled only for personal health care — including hospitals, prescribed drugs, physicians, dentists and other professionals. Data were also gathered from a number of sources, including an annual hospital survey (Statistics Canada); a retail drugstore survey on prescription drugs (jointly by Statistics Canada and the Canadian Pharmaceutical Association); and income tax statistics to estimate income of private-practice physicians, dentists and other professionals. Eventually nursing homes, non-prescription drugs, health appliances and other health expenditures (public health, capital expenditures, administration of insurance programs and research) were added to personal health care in the National Health Accounts.

##### **Canadian Institute for Health Information**

Recognising the importance of monitoring the performance of the health system across the country through the use of standardised indicators, the Canadian Ministers of Health established the Canadian Institute for Health Information in 1994. Its mandate is ‘to serve as the national mechanism to coordinate the development and maintenance of a comprehensive and integrated health

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information system in Canada’ and to be a ‘source of unbiased, credible and comparable health information’. Funded through five-year agreements with Health Canada (80 per cent of total funding) and bilateral agreements with the provinces (including Quebec) and territories (17 per cent of total funding), the Institute is an independent, not-for-profit organisation. Although it gives precedence to the priorities of all governments, CIHI determines to a large extent its own priorities. At the same time, it consults with jurisdictions to ensure their support and efforts in providing high quality data.

Through data provided by hospitals, regions, medical practitioners and governments, CIHI tracks activity and performance in many areas. Its annual and ad hoc reports cover health care services, health spending, health human resources and population health. It is the primary source of pan-Canadian health care indicators that are used for performance benchmarking analysis.

CIHI works with stakeholders in developing and promoting standardised, comparable indicators and reports. For example, in 2006 Canada Health Infoway, whose mandate is the development and acceleration of the use of electronic health records across Canada, and CIHI launched a pan-Canadian coordination function to support and sustain health information standards on a national scale. The collaborative has generated 20 standard-development projects that are either completed or underway (Canada Health Infoway).

## **The Canadian Health Information Roadmap Initiative**

The Canadian Health Information Roadmap Initiative, first launched in 1999 and renewed in subsequent years, was a collaboration between CIHI, Statistics Canada, Health Canada and other stakeholder groups at the national, regional and local levels. The initiative was federally funded following recommendations from the National Forum for Health in 1997 and was to assist later in implementing the work earmarked by the First Ministers’ Accords discussed above. It was to develop performance indicators that answered two fundamental questions: how healthy are Canadians; and how healthy is the Canadian health system? The Roadmap Initiative consisted of several projects dealing with reports and indicators; integrated health services; health resources management; info-structure and technical standards; and population health (CIHI 2004).

Part of the Roadmap Initiative was the Health Indicators Project. One of the products from the Health Indicators Project is the Health Indicators Framework, which is based on a population health model with four dimensions: health status; non-medical determinants of health; health system performance; and community

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and health system characteristics. Since 1998 the Roadmap Initiative, participants have collaborated to develop and implement the Framework (Arah et al. 2003). The Framework was recently endorsed by the International Organization for Standardization (ISO) as an international standard for performance measurement in the health sector (figure 4.1).

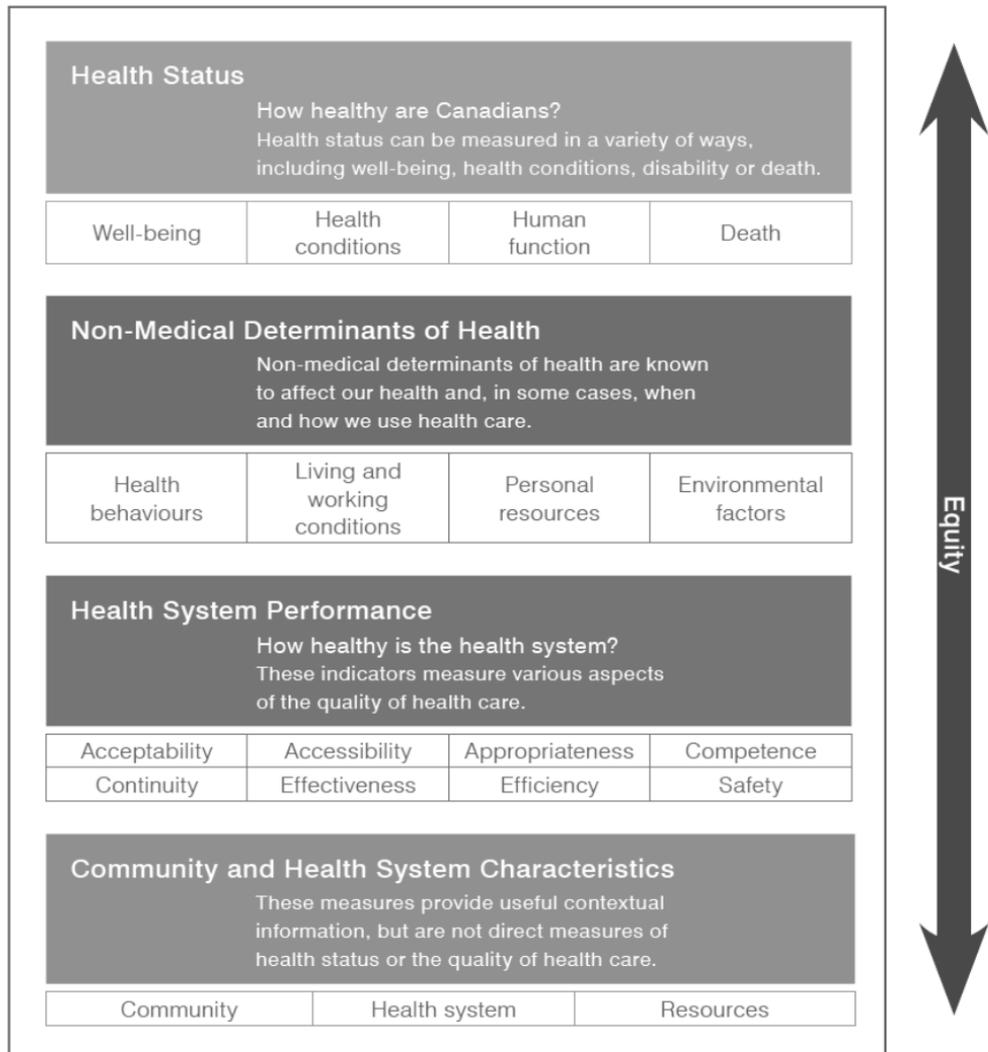
### **Other monitoring bodies**

Although CIHI is the major body reporting on pan-Canadian health system performance, there are a number of other bodies that also monitor and report on the performance of the health system. At the pan-Canadian level, the Health Council of Canada reports on progress in improving the quality, effectiveness and sustainability of the health care system to all Canadians. Many provinces also have independent health quality councils to report to their constituencies on health system performance. Further, at the provincial level, there are numerous efforts to improve care and measure performance for specific conditions, such as the Alberta Cardiac Access Collaborative, the Cancer Quality Council of Ontario, the Ontario Cardiac Care Network and the Saskatchewan Chronic Disease Management Collaborative.

There are a number of not-for-profit, independent public policy centres, institutes, projects and think tanks that produce reports on Canadian health care performance, such as the Conference Board of Canada, the Institute for Clinical Evaluative Sciences, the Frontier Centre for Public Policy, the Hospital Report Research Collaborative, the Institute for Research on Public Policy, the Fraser Institute and the Canadian Centre for Policy Alternatives. And, academic researchers using CIHI data and other information also conduct studies comparing Canadian health system performance.

Figure 4.1 Health indicators: a framework

## Health Indicator Framework



Sources: Canadian Institute for Health Information; Statistics Canada.

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## 4.5 Illustrations of benchmarking activities in Canada

By exploring the goals, processes, outcomes, and challenges associated with three pan-Canadian initiatives, the evolution from a performance benchmarking approach (Health Indicators Project) to practices more aligned with practice benchmarking (Canadian Hospital Reporting Project and Hospital Standardized Mortality Ratios Reports) becomes clear.

### The Health Indicators Project

As previously noted, the Health Indicators Project is a collaborative effort with a goal to provide reliable and comparable data on the health of Canadians, the health care system and the determinants of health. Over the period of the collaboration, the partners have held three National Consensus Conferences to develop a performance indicator framework and to determine a core set of indicators relevant to established health goals and strategic directions. These indicators are based on agreed upon benchmarks, guidelines and standards, collected using standardised data definitions and elements and available electronically across Canada to a national, provincial, regional or local level.

An intergovernmental advisory group was established to guide the project. Regional reference groups were created to provide expert advice on regional information needs, to ensure the quality and consistency of the indicator data and to provide guidance on the future development of the initiative. In addition, to extend the project reach and access to data, the Health Indicators e-publication was created.

Clinical data are obtained from data bases provided by all jurisdictions; from the Canadian Community Health Survey, which provides data at postal code levels; and from the Canadian Census. CIHI and Statistics Canada monitor these data; ensure data meet nationally agreed upon standards; and analyse the data. An annual report is released to policymakers, health system managers, researchers and the general public. Initially, the report was not made public to allow time for facilities and jurisdictions to validate their data and for CIHI to provide assistance to the regions on data interpretation and use. Everyone involved is expected and encouraged to explore and interpret their data in the context of local conditions, processes and experiences. Jurisdictions may also release their institutional, regional and provincial level-specific data on their websites.

The project depended on the collaboration and cooperation of governments, regional and local health organisations, key data custodians, and Canada's health research community. The incentive for participation was the support provided to

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jurisdictions and authorities through the provision of reliable, standardised data with which to monitor, improve and maintain the health of their populations and the functioning of their health systems.

The comparable indicators are used to inform health policy, manage the health care system, improve the understanding of the factors that influence health and identify gaps in health status and outcomes for specific populations. Some provinces have incorporated the data into accountability agreements with their regional health authorities. In addition, the data are utilised extensively by provincial health quality councils and others to highlight top and bottom performing institutions within their jurisdiction.

Regional health authorities employ the data to gain a better understanding of their operations and how they compare with other authorities. The information has been used, for example, to accelerate change by comparing acute-care length of stay and wait times for surgical procedures. It has encouraged improved efficiency and effectiveness of operations by drawing attention to underperforming areas and helped create awareness of substandard care. It has resulted in quality and patient safety improvement projects; assisted in establishing workload productivity targets; and helped to avoid policy shifts when the data did not support it. Of particular note, the reporting of benchmarking data through the media has significantly enhanced public awareness of the relative quality of local health care services — which in turn has led to calls for improvements.

For example, for three years in a row, data from this project showed that hip fracture patients in the Winnipeg Regional Health Authority were waiting longer for surgery than in most other Canadian health regions. As a consequence, the health authority initiated a work plan to reduce wait times. It held continuing education sessions for staff; changed its practice of easing patients off blood thinners prior to surgery; reorganised surgery slates; and implemented a real-time information system to provide information about hip fracture patients waiting at every facility across the region. The result has been shorter wait times and better patient care.

The provision of benchmarking indicators alone does not ensure the integration of these tools into ongoing policy, planning and operational activities. CIHI provides extensive education workshops, technical information and reporting tools for managers and analysts. In the future, CIHI will introduce better business intelligence tools (e-reporting) to enable jurisdictions to incorporate this information into their decision-making processes more effectively. CIHI will also continue to expand and revise the set of indicators to reflect the changing needs of jurisdictions.

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## **The Canadian Hospital Reporting Project (CHRP)**

The Canadian Hospital Reporting Project (CHRP) is one of CIHI's current strategic initiatives and is based on the work initiated by Baker and Pink in the 1990s (Baker and Pink 1995). It is a project initiated in 2009 to look at facility-level comparative performance in acute-care hospitals. Its goal is to provide information that hospitals can use to identify areas of needed improvement, allowing hospitals to compare themselves with other institutions on clinical effectiveness, including outcomes and patient safety, and financial performance. All provinces and territories voluntarily agreed to participate and all Canadian acute care hospitals (over 600) are participating. Since April 2012, the results for 30 indicators (21 clinical indicators and 9 financial performance indicators) are publicly available at [www.cihi.ca](http://www.cihi.ca).

Participating jurisdictions completed a survey to determine their needs. Indicators were chosen through a rigorous selection process with input and agreement from expert groups consisting of researchers; policy makers; administrators; representatives from provider associations; and other stakeholders. Ten to fifteen indicators were chosen for each of the two dimensions and a number of different clinical and financial databases enable CIHI to populate the indicators.

Results are provided through an interactive web-based tool. Based on hospital profile information, CIHI has created peer groupings whereby each hospital is assigned to one of four standard peer groups. Based on hospital capacity, patient complexity, operations and resources, hospitals may also create their own custom comparator group. As a result, hospitals can compare their results to their regional, provincial, and national peers. In the future, the project will be expanded to include other dimensions of performance, such as patient experience, system integration and change and other health care sectors will be covered such as rehabilitation, mental health, long term care and continuing care.

## **Hospital standardized mortality ratios (HSMRs) reports**

The publication of 'hospital standardized mortality ratios' (HSMRs) since 2007 by CIHI is associated with performance improvements at the facility level and adjustments to government policies and legislation requiring the indicator to be reported publicly. The HSMR is a summary measure adapted in Canada from the work of Sir Brian Jarman in the United Kingdom (Jarman *et al.* 1999). It is a ratio of the actual number of deaths in a hospital compared to the average Canadian experience, after adjusting for factors such as age, sex, diagnoses and admission status of patients. It provides hospitals with a starting point to assess mortality rates and to identify areas for improvement to reduce hospital deaths from adverse

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events. Although not all deaths are avoidable, this indicator provides useful information in cases where they are avoidable. When tracked over time, the ratio can be a motivator for change, by indicating how successful hospitals or health regions have been in reducing inpatient deaths.

The use of these data for improving the quality of hospital care is illustrated by the examination of a septicaemia incidence by a health centre in Ontario. Their assessment based on HSMR data confirmed a delay in identifying sepsis, as well as inconsistencies in practices. As a result, it developed best practices and standardised orders for use in wards and emergency rooms. A rapid response team was also introduced for early recognition and treatment of cases. The result has been a continuing decline of septicaemia mortality rates for the hospital.

The activities of this facility as well as those of other hospitals across Canada followed the publication of HSMR data. Because further scrutiny showed that sepsis was a major cause of potentially preventable deaths, CIHI undertook a more detailed analysis to demonstrate how the HSMR data could be used for monitoring and quality improvement in Canadian acute care facilities (CIHI 2009). Many provinces have now adopted the indicator in their accountability agreements with facilities or regional health authorities and results are available now for all facilities including Quebec.

## **4.6 Discussion and lessons learned**

Implementing meaningful benchmarking activities in the Canadian health system is complicated by the difficulty of comparing different health systems in a context of asymmetrical and at times strained relationships between orders of government. Nevertheless, this past decade has seen a significant expansion in the development, measurement and reporting of standardised indicators furthering performance benchmarking at all levels.

The size, complexity and cost of the tasks necessary to implement comparable indicator reporting as envisioned in the First Ministers' Accords was underestimated. Establishing data collection standards and methods, developing quality, comparative indicators and making the information broadly available have all required significant effort beyond that originally anticipated. Although there has been an ebb and flow over the last decade in the commitment to benchmarking reflecting changing health care priorities, all governments currently are committed to the process and regional health authorities even more so.

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Although performance benchmarking continues to serve a practical function, the linking of performance data to quality improvement in Canadian health care systems, because of jurisdictional powers, is largely left to the constituent units. As a result, improvement in health systems is dependent on the political and social contexts of jurisdictions and the desires, skills and priorities of management. Still, there is interest in moving towards practice benchmarking where facilities and jurisdictions can compare their performance with those of their peers and extract and apply policy lessons to their own systems and projects. One such example is a collaboration of Canadian academic health science centers, CIHI and others to establish quality and patient safety practice benchmarking in their acute-care institutions. A key component of this exercise is for the participants to share and learn from best practices in each facility. Similarly, provincial health quality councils have encouraged regional health authorities to learn from each other through the sharing of best practices.

### **Challenges related to benchmarking in the health sector in federal systems**

A number of challenges unique to the Canadian federal context will probably persist and place a limit on future health system benchmarking activities.

For example, the systems in each of the 14 jurisdictions are constantly evolving due to political agendas and efforts to control costs while improving quality, safety and access. Additionally, the past two decades have seen dramatic changes in the organisation and planning of health services, most notably in the creation and modification of regional bodies. These reforms have created difficulties in data aggregation and comparisons over time. To add to the complexity, these health care system changes are often on different time trajectories.

Privacy of health information has taken a key role on the policy stage and results in varying and sometimes unconnected pieces of legislation. Regional variations in determinants of health such as unemployment, education and poverty as well as different economic capacities can result in challenging comparisons across jurisdictions on health system functioning and outcomes. To mitigate this challenge, CIHI provides contextual information and support to jurisdictions to help them interpret their data. It also creates clear and accurate messages based on its findings for the media and the general public.

Data quality is an ongoing issue due to human error in coding; changes in coding practices; the lack of comparability of data sources; and issues related to the

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submission of data. Accordingly, CIHI devotes significant resources to data quality reviews and improvements.

The gaming of data is always a potential challenge. Upcoming shifts towards activity based funding initiatives in several provinces suggest that gaming could become an even greater concern. In addition, data are not always available for meaningful, relevant indicator development for some sectors of health care and/or for all jurisdictions. Although data and benchmarking exercises are largely focused on acute care presently, considerable efforts are ongoing for the development of indicators and databases in other care sectors.

Due to the delay in receiving data from jurisdictions, the timeliness of reports is a challenge with results based on data that are generally one year old or more (with the exception of HSMR results and Emergency Rooms indicators for which monthly and quarterly results are available). CIHI is currently moving towards within-year data availability to allow facilities and authorities to review their results at any time despite the fact that such data may not as yet have gone through the full cycle of quality checks.

Finally, linking information to improvement requires careful consideration. Mis-use in the adoption of best practices from other jurisdictions has been well documented and include the selection of information to further political goals; the importation of modes or practices without validation; and differing and potentially contradictory motivations (Klein 1997).

### **The way ahead for benchmarking in the health sector in Canada**

Developments in Canadian health care benchmarking are paving the way for future benchmarking practices. Overall, benchmarking in the health sector is expanding from performance benchmarking to practice benchmarking through the comparison of performance with peer groups and the learning from better performers.

The selection of benchmarks is becoming more focused and is increasingly driven by health systems' priorities and performance expectations. In line with international experience, performance measurement has become one basis for policy discussions concerning ways to improve health system performance (Veillard *et al.* 2010). From this perspective, a well-designed benchmarking system has the potential to guide policy development and can be used both prospectively and retrospectively. It can be used retrospectively and prospectively — supporting better understanding of past performance and the rationale behind certain performance patterns and helping to revise strategies for improving future performance (Nolte *et al.* 2006).

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A focus on performance improvement and the close linkage of performance measurement and strategy should guide future benchmarking systems. For meaningful change, these systems should have certain characteristics.

- A strategic focus linking the design of the benchmarking initiatives with health system strategies ensures that policy lessons will be drawn in a way conducive to performance improvement.
- Data standardisation efforts are required to facilitate credible comparisons at both the Canadian and international levels.
- A policy focus rather than research focus implies that benchmarking systems should be driven by policymakers and system managers supported by experts and researchers.
- Translating performance information in easy ways for policy makers and managers to comprehend the information is important.
- Finally, sensitivity to political and contextual issues implies that interpretation of indicator data should not lose sight of the policy context within which they are measured, of the players involved in formulating and implementing policy, of the time lag needed to assess the impact of different policies and of aspects of health care that remain unmeasured by available data (Veillard *et al.* 2010).

Pressure to constrain public health care spending and the necessity to allocate resources in a way that promotes better health and economic growth are increasingly pushing Canadian jurisdictions to make better use of high quality data to compare performance and learn from one another. Despite ongoing concerns about data collection costs and complications related to the federal context, there is willingness by Canadian jurisdictions to collaborate towards health system performance improvement and better health. In other words, the fear of comparison has given way to the need for improvement. This evolution will require further investments in health information, better bridging research and analysis using the data with reviews of the available scientific literature on options for performance improvement and careful consideration of the choice and modalities of the benchmarks. Perhaps most importantly, it will require a shift in the culture of health care managers at every level of the system to one where they value and manage more extensively by data.

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