Hospital Report

2003

ACUTE CARE

A joint initiative of the Ontario Hospital Association
and the Government of Ontario

Canadian Institute
for Health Information

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About the Canadian Institute for Health Information

Since 1994, the Canadian Institute for Health Information (CIHI), a pan-Canadian, independent, not-for-profit organization, has been working to improve the health of Canadians and the health system by providing quality, reliable health information. The Institute's mandate, as established by Canada's health ministers, is to develop and maintain a common approach to health information in this country. To this end, CIHI provides information to advance Canada's health policies, improve the health of the population, strengthen our health care system, and assist leaders in our health sector to make informed decisions.

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- **Dr. Tom Ward**, Deputy Minister, Nova Scotia Department of Health
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About the Hospital Report Research Collaborative

Since 1997, members of the Department of Health Policy, Management and Evaluation, based at the University of Toronto have led a research collaborative, that has included faculty from Wilfrid Laurier University, the University of Western Ontario, and the University of North Carolina at Chapel Hill to develop the balanced scorecard framework and the methodological foundation for the *Hospital Report* series. The research resulted in the development of a comprehensive balanced scorecard on the performance of Ontario's acute care hospitals. In both 2001 and 2002, the same core team of investigators has supported CIHI to produce this acute care report, based on methods previously developed by the research team.

Since 2001, the Department of Health Policy, Management and Evaluation has partnered with experts affiliated with several other organizations to enhance both the scope and methods for the *Hospital Report* project. This year's research collaborative includes CIHI, the Institute for Clinical Evaluative Sciences (ICES), the Graduate Department of Rehabilitation Sciences and the Faculty of Nursing at the University of Toronto, the University Health Network Research Institute, Toronto Rehabilitation Institute, Wilfrid Laurier University, the University of Western Ontario, the Centre for Addiction and Mental Health, and the University of North Carolina at Chapel Hill. In the fall of 2001, the research collaborative produced system-level balanced scorecards for emergency care and complex continuing care, feasibility studies in mental health and rehabilitation, and reports focusing on nursing care, women's health, and population health. This year the collaborative is developing hospital-specific reports on emergency department care and complex continuing care, and a system level report on rehabilitation. The goals of the research team are to support quality improvement efforts, enhance the accountability of Ontario's health system and to support original research into the measurement and determinants of hospital performance.

A Foreword from the Government of Ontario

I'm very pleased to present the Acute Care component of Ontario's 2003 Hospital Report series. The series also includes reports on Emergency Care, Complex Continuing Care and Rehabilitation Care.

The Hospital Reports have proven to be an important resource both within the healthcare system and with the general public. They show our hospital sector's performance and commitment to accountability. The Reports are also valuable for bringing together health planners, healthcare providers and the research community. Most important of all, the Reports support our government's belief that Ontarians have a right to know how their health system is doing.

This particular Hospital Report highlights the achievements of Ontario's acute care hospitals. The Report shows us the areas of healthcare not only where there is excellence in the provision of acute care services, but also where improvement is needed. This fits in well with our government's views on the importance of accountability and transparency in the public health system. As well, the Acute Care Hospital Report shows trends about how performance is changing from year to year.

My thanks go to the Ontario Hospital Association (OHA) for its commitment to quality patient care. Those commitments are evident in the OHA's partnership with the research community—including the Canadian Institute for Health Information and the University of Toronto—that produced the Hospital Report series. My thanks also go to those who have provided their expertise in designing the Series indicators. These and many other dedicated individuals contribute greatly to our common goal of improved acute-care services across the province.

Medicare is the best expression of our values. To ensure public confidence in our healthcare system, our government is determined to make accountability a central principle of Medicare in Ontario. This and the other Hospital Reports in the series are an important tool in building a stronger healthcare system; one that responds best to the needs of Ontarians.

George Smitherman
Minister of Health and Long-Term Care

A Foreword from the OHA

At some time in their lives, most individuals will enter a hospital to seek health care services—either for themselves or their loved ones. Whether it's for acute care or emergency department care, all Ontarians have come to expect and deserve timely access to health care services.

As leaders in accountability and with a commitment to improving patient care in the province, Ontario hospitals and the Ontario Hospital Association (OHA) launched reports on the hospital sector's performance, starting with the release of the first *Hospital Report: Acute Care* in 1998. The reports provide citizens of Ontario with information about their hospitals and shows hospitals opportunities for quality improvements in patient care and hospital management.

In 2000, we were pleased to welcome the Government of Ontario as a co-sponsor of *Hospital Reports*, supported in research by the Hospital Report Research Collaborative and the Canadian Institute for Health Information (CIHI).

Over the years, the Hospital Report initiative has evolved to cover other areas that provide insights into the performance of Ontario's hospitals. Other *Hospital Reports* examine emergency department care, complex continuing care, rehabilitation, mental health, nursing and women's health.

We commend CIHI and the Hospital Report Research Collaborative for the dedication, professionalism and scientific acumen that went into the production of *Hospital Report Acute Care: 2003*.

We also would like to acknowledge researchers from the University of Toronto for their leadership in producing *Hospital Reports* on Emergency Department Care, Complex Continuing Care and Rehabilitation, which are being released as part of the *Hospital Report 2003* series.

Finally, without the commitment and voluntary participation of hospitals, we could not have pushed the expansion of the project each year to new heights by including additional areas of study. This substantive body of research represents one of the largest and most comprehensive hospital-level reviews and public accountability processes in the country, generating interest around the world.

Hilary Short
President and CEO,
Ontario Hospital Association

Contents

Acknowledgements

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Project management and coordination was done by Jack Bingham and Sarah Lenz. The four balanced scorecard quadrants were prepared by: Ian Button, Linda Choy, Nita Dharwarkar, Anyk Glussich, Jeff Green, Nicole Howe, Erik Markhauser, Mary Neill, Amy Ramos, Marc Tallentire, Jaya Weerasooriya and Greg Zinck. Other members of the CIHI project team included Geoff Ballinger, Gary Bellamy, Steve Brierley, Steve Buick, Jeremy Chrystman, Lynne Duncan, Patricia Finlay, Lise Gagnon, Glenda Gagnon, Sandra Kopmann, Francis Law, Marcus Loreti, Anick Losier, Eugene Wen, Scott Young, and Andrew Zuravels.

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We would also like to acknowledge the support of the Ontario Hospital Association, Ontario hospitals, and the Government of Ontario in funding this initiative and to thank the Ontario Hospital Association for their leadership in initiating this effort.

This report also benefited from the generous assistance of Ontario's hospitals, the Ontario Hospital Association's Report Card Strategic Advisory Committee, and the Joint OHA/Ministry of Health and Long-Term Care Report Card Steering Committee. More than 200 experts from across the province also participated in a range of advisory groups. Many of their names are listed in *Hospital Report '98* or Appendix 4 of *Hospital Report '99*. A list of advisory group members who contributed directly to the development of *Hospital Report 2003: Acute Care* appears in Appendix C of this report.

The methodologies used as a foundation for this year's report have been adapted from those published in 1999 by the university-based researchers responsible for developing the first volumes in the *Hospital Report* series. The team included GR Baker, PhD (Dept. of Health Policy, Management & Evaluation, University of Toronto), GM Anderson, PhD, (Dept of Health Policy, Management & Evaluation, University of Toronto); AD Brown, D Phil, (Dept. of Health Policy, Management & Evaluation, University of Toronto), I McKillop, PhD (School of Business and Economics, Wilfrid Laurier University), MM Murray, PhD (Dept. of Health Policy, Management & Evaluation, University of Toronto), and GH Pink, PhD (Dept. of Health Policy & Administration, University of North Carolina at Chapel Hill).

This year's report builds on concepts and methodologies developed by the researchers noted above. We have continued to benefit from their extensive experience and invaluable advice. Advice for this year's report was also provided by Miin Alikhan, Project Manager, Hospital Report Project, University of Toronto; Imtiaz Daniel, Consultant, Hospital Report Project, University of Toronto; Diane Doran, Associate Dean of Research and International Relations in the Faculty of Nursing, University of Toronto; Frank Markel, Assistant Professor, University of Toronto; Heather K. Spence Laschinger, Professor, Associate Director Nursing Research at the University of Western Ontario, School of Nursing, and Faculty of Health Sciences; and Linda McGillis Hall, Assistant Professor, Faculty of Nursing, University of Toronto.

Introduction

The Hospital Report Series

In 1997, the Ontario Hospital Association (OHA) made a public commitment to report on hospital performance. Also in that year, the *Hospital Report* series was introduced by investigators affiliated with the Department of Health Policy, Management & Evaluation at the University of Toronto. Significant funding and support for the initial research activities were provided by the OHA.

In 2000, the Government of Ontario joined the OHA in supporting the research initiative and the Hospital Report Research Collaborative was established. The Collaborative is based at the Department of Health Policy, Management & Evaluation and includes the Canadian Institute for Health Information (CIHI), the Graduate Department of Rehabilitation Sciences and the Faculty of Nursing at the University of Toronto, the Institute for Clinical Evaluative Sciences (ICES), Wilfrid Laurier University, Toronto Rehabilitation Institute, the University Health Network Research Institute, the Centre for Addiction and Mental Health, the University of Western Ontario, and the University of North Carolina at Chapel Hill. The Collaborative promotes research into advancing the science of performance measurement in the health sector.

In 2000, CIHI assumed responsibility for producing the Acute Care volume of the *Hospital Report* series. CIHI is an independent, not-for-profit health information organization that has worked closely with researchers from the Collaborative to develop and refine the methodologies used in previous volumes. CIHI's analytical, data management, and communication capabilities have benefited the project greatly.

The generous support of the OHA and the Government of Ontario allowed the Collaborative to expand the series beyond acute care, and in 2001 several new reports and studies were published. For the first time this year, hospital-specific reports are available for Emergency Department Care and Complex Continuing Care. A system-level report for rehabilitation will also be available.

Hospital Report 2003: Acute Care is not intended to serve as a guide to help patients choose a hospital when needing care. Its three main objectives, shared by all the reports in the *Hospital Report* series, are to support:

- Original research into the measurement and determinants of hospital performance;
- Quality improvement efforts within hospitals; and,
- Accountability of the hospital system.

Rolling Redevelopment

Each year, one quadrant of *Hospital Report: Acute Care* will be the focus of extensive redevelopment. This balances the need for consistency, which allows comparisons over time, with the need to ensure relevance. The Clinical Utilization and Outcomes quadrant was identified as the 2003 priority for redevelopment. Results will be available in *Hospital Report 2004: Acute Care*. For 2004, the Patient Satisfaction quadrant will be redeveloped, as a new Patient Satisfaction Survey tool will be available.

A Balanced Scorecard

Providing care in a hospital is a complicated activity involving a multitude of skills, experiences, and technologies. No one person or discipline is responsible for poor or excellent hospital performance. For this reason, experts increasingly recognize that performance-measurement activities must include a basket of measures that, taken together, provide insights into the *overall* performance of a hospital. This approach better supports the goals of good management and stewardship than many of the narrowly focused performance-measurement tools of the past. Kaplan and Norton [1992][1] advocated such an approach when they proposed that organizations should develop a "balanced scorecard" of indicators.

In 1998, the *Hospital Report* project began by looking at the work of Baker and Pink [1995][2], which explored how the Kaplan and Norton "balanced scorecard" approach could be adapted for Canadian hospital settings. It became apparent that such an adaptation was well suited to Ontario hospitals. This approach describes performance across four dimensions or "quadrants" critical to the strategic success of any health care organization. These quadrants are: System Integration and Change, Clinical Utilization and Outcomes, Patient Satisfaction, and Financial Performance and Condition.

Understanding the Four Quadrants

Hospital Report 2003: Acute Care measures hospital performance across four different dimensions or "quadrants".

System Integration and Change: Describes a hospital's ability to adapt to its changing health care environment. More specifically, it examines how clinical information technologies, work processes, and hospital and community relationships function within the hospital system.

Clinical Utilization and Outcomes: Describes the clinical performance of hospitals with reference to access to hospital services, clinical efficiency, and quality of care.

Patient Satisfaction: Examines patients' perceptions of their hospital experience, including their perceptions of overall quality of care, outcomes of care, and unit-based care.

Financial Performance and Condition: Describes how hospitals manage their financial and human resources. It is concerned with a hospital's financial health, efficiency, management practices, and human resources allocations.

Selecting Indicators

Each of the quadrants includes several measures of hospital performance. In developing the methodology for *Hospital Report '99*, these performance measures, or "indicators," were selected based on their scientific soundness, relevance, and feasibility. Researchers restricted the number of indicators to a manageable level, balancing the wide scope of the study with the need for conciseness. Final selections were based on current scientific literature, feedback from advisory groups comprised of experts from the hospital and community sectors, and a series of validating tests. The same indicator selection process was applied in *Hospital Report 2003: Acute Care*.

To calculate these indicators, a variety of data was used. Sources, methods of collection, and time periods vary across the quadrants. Relevant adjustment factors have been used for each indicator to reflect the wide variations in the complexity of patients' problems, patient demographics, and characteristics of different hospital types. To ensure the most meaningful comparisons possible, the Clinical Utilization and Outcomes quadrant includes age- and sex-standardized results when presenting data for the four reported fiscal years.

TABLE 1.1: QUADRANT SUMMARY

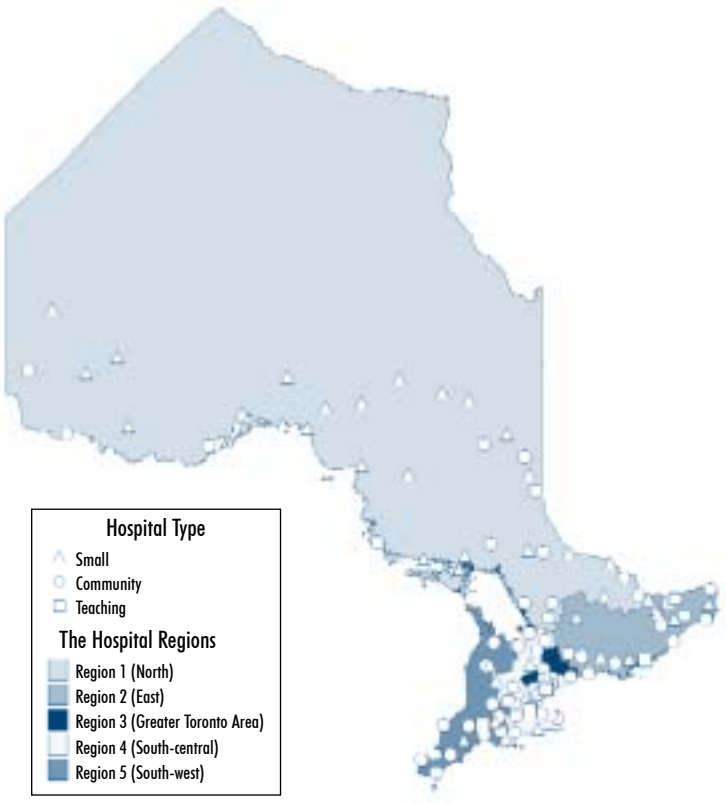
Quadrant	System Integration and Change	Clinical Utilization and Outcomes	Patient Satisfaction	Financial Performance and Condition
Data Source	Hospital Report Acute Care and Corporate System Integration and Change Surveys	CIHI Discharge Abstract Database (DAD)	Standardized Hospital Patient Satisfaction Survey (SHoPSS)	Ontario Hospital Reporting System (OHRS)
Data Period	FY 2001–2002	FY 2001–2002	January–March 2002	FY 2001–2002
Number of Indicators	10	12 at the provincial level; 8 at the hospital-specific level	8	9

Hospital Participation in 2003

Hospital Report 2003: Acute Care includes summary findings across all participating hospitals as well as hospital-by-hospital results. Overall, 120 acute care organizations, representing 185 hospital sites, voluntarily agreed to participate in the province-wide analysis (Appendix A). Thirty-eight are small hospitals, as defined by the Joint Policy and Planning Committee (JPPC). These are facilities that generally had less than 3,500 weighted cases, have a referral population of less than 20,000 people, and are the only hospitals in their communities. Another 13 are acute or paediatric teaching hospitals, although one teaching hospital reports one of their sites separately. The remaining 68 are community hospitals.

FIGURE 1.1: ONTARIO'S ACUTE CARE HOSPITAL CORPORATIONS

The map below illustrates the location of the 120 small, community, and teaching acute care hospitals in Ontario. For hospital partnerships or corporations with more than one site, only the main site is shown.



Ninety-two of these 120 organizations elected to participate in the hospital-specific portion of this report, representing 99% of all acute care hospitalizations in Ontario. Most of the remaining hospitals were not eligible to participate because they did not take part in the Standardized Hospital Patient Satisfaction Survey (SHoPSS). One facility was eligible but chose not to participate in the hospital-specific report. Therefore, 99% of eligible hospitals participated in the hospital-specific portion of the report.

Measuring Hospital Performance

Since 1999, when the first hospital-specific acute care report was published, the report has used stars as symbols to visually represent performance allocations of hospitals. It was felt at the time that these symbols would clearly illustrate differences among hospitals and be easily understood by the general public. At the same time, the star system was non-specific enough to preclude possible misinterpretations about the precision of the indicator methodology. Consequently, for the last few years, the project team converted hospital-specific numeric scores into stars for inclusion in the final report. Five-stars represented the highest possible level of performance, one-star the lowest.

However, for the first time this year, for each indicator, and for each participating hospital, we report a numeric range that includes the hospital's numeric score.

There are a number of reasons for this shift, including:

1. Concerns about how the star system was perceived and understood by the public, which thought that a five-star hospital was five times better than a one-star hospital.
2. The star system did not provide sufficient information to patients and consumers about the quality of care provided in hospitals.
3. Problems in differentiating visually among groups of stars.

The numeric ranges for each indicator vary across indicators and across quadrants.

Also included is a symbol that indicates whether the hospital's score on that indicator was "above average", "provincial average" or "below average". For the Patient Satisfaction and Clinical Utilization and Outcomes quadrants, "above average" and "below average" scores mean that the hospital's score was statistically different from the average score for all participating hospitals in the Province. For the System Integration and Change quadrant, "above average" and "below average" mean that the hospital's score was statistically different from the average score for all hospitals in the relevant peer group (either teaching/community or small hospitals). For the Financial Performance and Condition quadrant, there are no symbols, the methodology is being developed for future years. The performance symbols are assigned as follows:

●: The hospital's score was statistically above the provincial average;

◑: The hospital's score was statistically around the provincial average;

◯: The hospital's score was statistically below the provincial average; and,

NR: Means non-reportable (some results were not shown to protect patient or physician confidentiality, or because there was incomplete data).

Where to Find Hospital-Specific Results

Hospital-by-hospital results for 92 hospital corporations are available in the insert that accompanies this report.

More About This Report

Hospital Report 2003: Acute Care provides a "snapshot" of Ontario's acute care hospital system. It was designed specifically for hospital trustees, administrators, and others who want detailed information about the relative performance of hospitals across the province.

The report is composed of an introduction and four balanced scorecard chapters that provide province-wide results for System Integration and Change, Clinical Utilization and Outcomes, Patient Satisfaction, and Financial Performance and Condition. Again this year, women's health, as well as several nursing-specific indicators, have been integrated into the quadrant chapters. The report also includes an insert with hospital-specific indicator results. A companion document, *Hospital Report 2003: Acute Care Technical Summary*, provides a more in-depth understanding of the methodologies used to calculate indicator values. In addition, a shorter overview of the findings described in this report has been prepared for wide distribution.

Each quadrant of *Hospital Report 2003: Acute Care* includes all of the relevant methodologies with findings. Each chapter will therefore include sections outlining:

- Background material;
- How the research was conducted;
- Quadrant specific methodologies;
- Guidance regarding interpretation of finding;
- Detailed discussion of the indicator findings and results; and,
- Summary of findings.

These sections permit the users of the report to read sections out of sequence if they so desire. All of these reports are available free of charge on the Web sites of the partners and sponsors of the *Hospital Report* series. For a list of Web sites see the back cover of this report. To order a copy by mail, please call the Ontario Ministry of Health and Long-Term Care's Infoline at 1-877-234-4343 (or TTY 1-800-387-5559).

We welcome your suggestions for future reports. To provide us with comments and ideas, please complete the feedback form on the Web or at the back of this report.

Next Steps

Hospital Report 2003: Acute Care provides, for the first time, hospital-specific numeric ranges. Future acute care reports will explore the possibility of including some benchmarking analysis, and will expand upon featured topics from province-wide and hospital-by-hospital perspectives.

Research into establishing Ontario-specific benchmarks in all quadrants will further support assessment of performance and improvement initiatives focusing on patient care and access to services in Ontario hospitals. The development strategy for each benchmark will be based upon a set of principles that define what constitutes a good benchmark, and will involve three steps:

- Analysis of available data to establish the benchmark, including identification of the actual range of performance, hospital-specific variation and perceived appropriateness;
- Consensus panel or focus group adjudication of the benchmark to define acceptable and achievable levels or ranges of performance; and,
- Validation of the benchmark with data from the scientific literature, health information organizations and other sources.

Hospital Report 2003: Acute Care provides citizens of Ontario with information about their hospitals and the system in which they operate. If the full benefits of the report are to be realized, it is hoped that hospitals, communities, stakeholders and researchers will find ways to integrate the results into ongoing improvement plans and other initiatives.

Other reports and studies in the *Hospital Report* series, including reports on emergency department care, complex continuing care, rehabilitation and mental health provide further useful insights into the performance of Ontario's hospitals.

This Year's Report

The clinical and supportive care provided by nursing staff in a hospital setting is fundamental to hospital-based acute care. The recent SARS outbreaks have only served to highlight this reality to all Ontarians.

To provide context to the importance of nursing services in acute care hospitals, it can be noted that for 2001–2002 inpatient nursing and ambulatory care services represented 46% of total hospital expenditures. This figure is almost unchanged from 1999–2000.

As portrayed by Figure 1.3, there has been a shift in spending for nursing care from inpatient to ambulatory care activities such as same-day surgery and outpatient clinics. This shift reflects changes in clinical practice; for example, same-day surgery volumes and ambulatory visits have each increased more than 6%, and emergency center visits increased by more than 3%. Conversely, inpatient admissions declined by over 1% (as shown in Figure 1.4).

FIGURE 1.2: WHERE DO HOSPITALS SPEND MONEY?

This graph shows how hospitals in Ontario divided their funds between different expenses in 2001–2002. Nursing inpatient services and ambulatory care services represent almost half of Ontario hospitals' expenses.

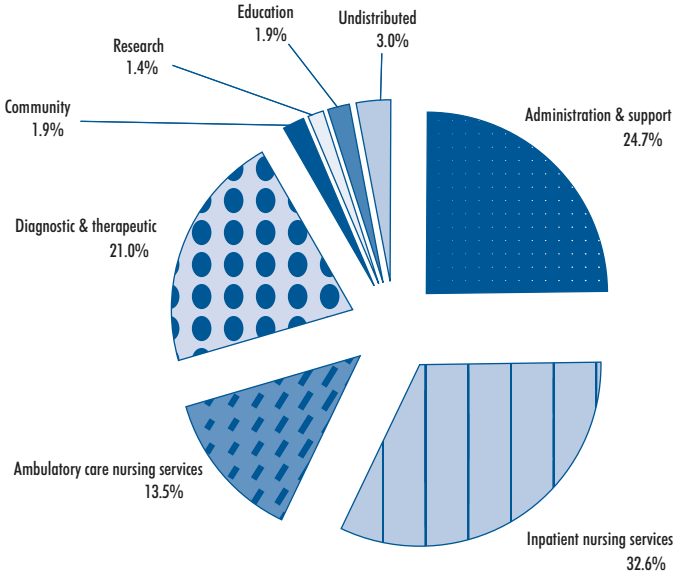


FIGURE 1.3: CHANGES IN HOSPITAL SPENDING

Nursing inpatient services and ambulatory care services represent a large part of total hospital expenses, however the percentage change over three years is very small.

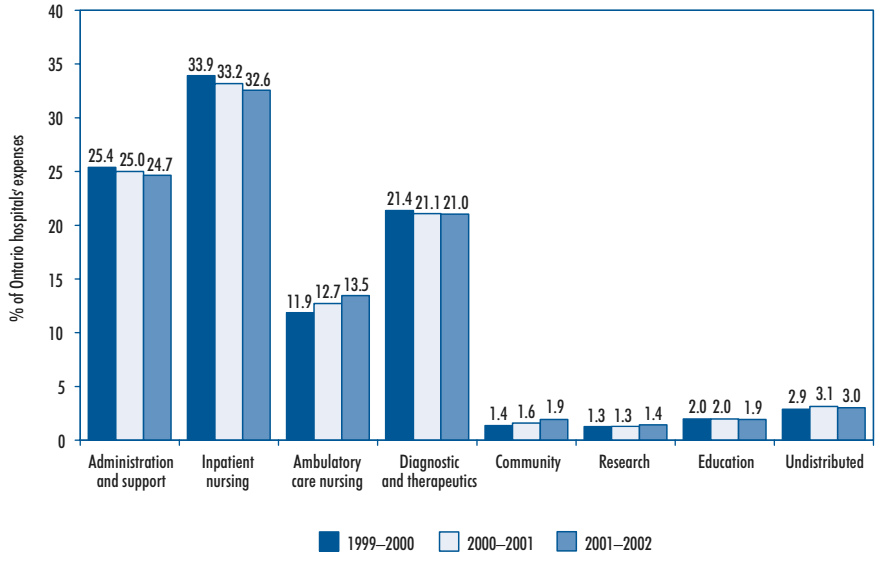
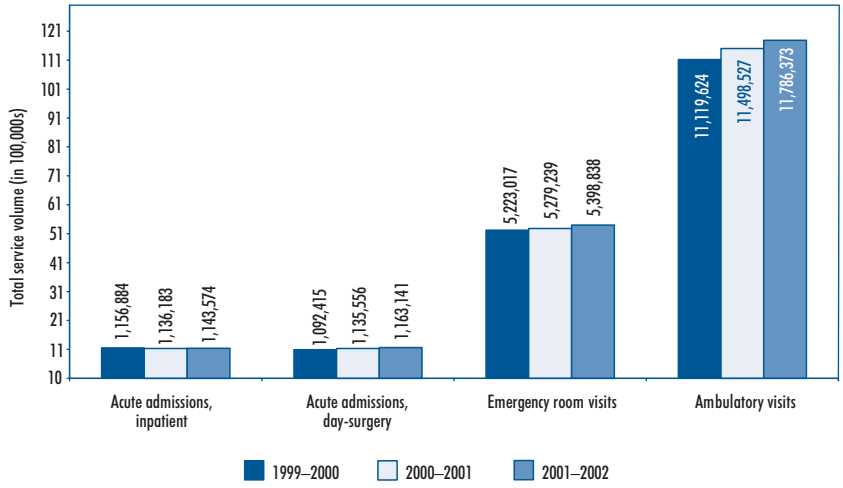


FIGURE 1.4: TRENDS IN KEY ACUTE CARE HOSPITAL SERVICE VOLUMES

During the period between 1999–2000 and 2001–2002 service volumes for inpatient care remained relatively constant while ambulatory-oriented service areas continued to expand.



In this year's *Hospital Report: Acute Care*, new measures were developed to evaluate performance. This work is a continuation of the Research Team's efforts to better understand the impact of the essential role nurses play in patient care, and is a further attempt to provide informed measures of this aspect of the clinical team.

There are three new nursing service indicators in the Financial Performance and Condition quadrant of this report. These new indicators—Nursing Hours per Weighted Case, Registered Nursing Staff Hours, and Direct Patient Care—are introduced system-wide this year to provide much-needed information about the efforts of registered nurses, and to increase understanding of how nursing resources are used within the hospital.

For more information

[1] Kaplan RS and DP Norton (1992). The Balanced Scorecard—measures that drive performance. *Harvard Business Review*. 70(1): 71–80.

[2] Baker GR and GH Pink (1995). A Balanced Scorecard for Canadian Hospitals. *Healthcare Management Forum*. 8(4): 7–13.

System Integration and Change



System Integration and Change

Today's rapidly changing health care system presents hospitals in Ontario with many challenges. Some examples of ways that hospitals are keeping pace with their changing environment include: improving the collection and use of information within and outside their facilities, fostering new partnerships with other health care providers, developing relationships within their communities, and enhancing the skills of and support for professionals and other staff.

As in previous years, the indicators in the System Integration and Change (SIC) quadrant were used to capture the extent to which Ontario hospitals were implementing these and other strategies. Two of these indicators are based on patients' ratings of their care as reported in the Standardized Hospital Patient Satisfaction Survey (SHoPSS). The remaining eight are based on survey results from hospitals. These can be broken down into three broad groups:

- **Information use and clinical practices in the hospital:** For example, do clinicians have access to e-mail, real-time monitoring data (e.g. electrocardiograms), and medical imaging (e.g. x-rays, computerized axial tomography scans)? Have hospitals developed and implemented standardized protocols to identify the best timing and combination of services for patients suffering from specific conditions? To what extent are hospitals using data on clinical outcomes and appropriateness measures to compare their results with those of their peers and/or to benchmark best practices? Do hospitals track their use of data—such as employee and patient surveys—to plan and manage hospital activities?
- **Hospital relationships with community partners and with the community-at-large:** These indicators examine how hospitals work with organizations that facilitate home care, community mental health, and other services (e.g. community care access centres (CCACs), long-term care (LTC) facilities, and public health departments). Many hospitals reported contributions made by volunteers, and relationships with their communities. Hospitals also reported using a variety of strategies to reduce the number of patients waiting in a hospital bed for home care, complex continuing care, rehabilitation, or other non-acute services.
- **Human resource issues:** This indicator includes how hospitals provide support for staff through professional development activities, new staff roles in hospitals, and a variety of health human resource practices.

Overall, Ontario hospitals are working to enhance the coordination with community partners, to improve management through information utilization, and to implement new clinical and health human resource practices. Activities vary, however, from hospital to hospital. This suggests that there are still opportunities to improve system integration and adopt changes that will improve performance.

What's New for 2003

Highlights for this year's SIC quadrant include:

- The development of a Corporate SIC Survey as well as a specific Acute Care Survey;
- New data on physician recruitment and retention strategies;
- New strategies for identifying emotional support mechanisms for hospital staff;
- New sections on Ethical Considerations; and,
- Numeric ranges which include a hospital's numeric score.

How was the Research Done?

The Data Sources

Eight of the ten SIC indicators are derived from two instruments: the Corporate SIC and the Acute Care SIC surveys. The former was developed as a result of feedback from hospitals participating in the *Hospital Report* series. In previous years, there was a separate survey for each of the following program areas: emergency department care, complex continuing care, and rehabilitation. Hospitals felt that questions in the different SIC surveys they received overlapped. Therefore, to minimize respondents' burden and maintain consistency and quality of the data for those questions that were the same across the different program areas of a hospital corporation, the Corporate SIC survey instrument was developed by the SIC research team. Sections from the Acute Care SIC 2002 survey seen as corporate in nature (e.g. Human Resources) were re-organized into the Corporate SIC survey, while sections that were program-specific remained in the Acute Care SIC 2003 survey (e.g. Collection and Use of Clinical Data).

The 2003 Corporate SIC survey comprised 33 questions divided into seven sections relating to hospital practices between April 1, 2001 and March 31, 2002. The 2003 Acute Care SIC survey for the same time period was smaller than last year's, consisting of only 43 questions divided into eight sections.

Both surveys, distributed to 120 acute care hospitals/corporations/partnerships in early January 2003, were completed by February 2003. All Ontario hospitals were asked to complete both surveys for their hospital corporation so that it would be possible to obtain a picture of system integration and change activity for the province as a whole. Overall, 108 acute care hospital corporations returned completed surveys, a 90% response rate. All 92 hospitals participating in the hospital-specific portion of this report returned their surveys.

As in 2002, *Hospital Report 2003: Acute Care* includes indicators of coordination and continuity of care derived from the SHoPSS. (For details about the SHoPSS survey and patients' perspectives of their care while in hospital, please see the Patient Satisfaction chapter of this report).

Selecting the Indicators

Selecting SIC indicators which are feasible, relevant, verifiable, and scientifically sound is a challenge. For example, while some hospitals collect data on employee skills and training, few measures relating to human capital and organizational learning are available through existing standardized databases. Where standardized mechanisms do exist, they are often unusable because variations in data coding create difficulties in comparing performance across organizations.

The SIC indicators were based on the methodology used in *Hospital Report 2002: Acute Care*. While the majority of the indicators remain the same, there were minor methodological updates to four out of the ten indicators following changes in survey questions and the development of the Corporate SIC survey.

For further information on the construction of the questionnaires, and derivation of the indicators, see the *Hospital Report 2003: Acute Care Technical Summary*.

Nursing Content in the System Integration and Change Indicators

Questions from last year's survey regarding nursing were incorporated this year into both the Corporate and Acute Care SIC Surveys. The following list indicates the areas in which the nursing dimension has been specifically captured.

Clinical Information Technology

- Percentage of clinical workstations with access to nursing note applications.
- Availability of internal/external e-mail and online access to monitoring data and medical images for nurses.
- Online library resources for clinical staff.

Intensity of Information Use

- Strategies for disseminating patient satisfaction findings, employee satisfaction findings, and the results of *Hospital Report 2002: Acute Care*, to nurses.
- External benchmarking of satisfaction results of nurses.

Strategies for Managing Alternate Level of Care (ALC) Patients

- Nurse education and involvement in care planning.
- In-service education for nurses with specific regard to their role in early identification of patients with discharge challenges and early estimation of day/time of discharge.

Supporting Hospital Staff

- Existence of nursing-staff support roles: Nurse Practitioner, Clinical Nurse Specialist, and Nurse Educator.
- Investment in formal in-service programs, courses and off-site conferences for nurses;
- Emotional support mechanisms for staff.
- Existence of performance-enhancement practices for nurses (e.g. formal performance evaluations).
- Support for nurses for continuing education and professional development (e.g. reimbursement for education tuition, on-site courses, formal in-service programs).
- Existence of specific formal practices in the hospital for nurses (e.g. flexible job design, self-scheduling, staff nurses involved in internal governance).
- Recruitment and retention strategies for nurses (e.g. employee referral bonuses, staff-recognition programs, general cost of living increases).
- Aspects of formal orientation programs for nurses (e.g. education in a clinical setting, preceptor program, etc.);
- Number of formal disputes, grievances, or complaints filed by nurses, other patient-care staff, and other hospital staff; and,
- Established strategies to deal with nursing shortages (e.g. voluntary overtime, agency nurses, float pools).

The Data Quality Process

The eight SIC indicators are inevitably subject to a "social desirability bias". That is, consciously or unconsciously, respondents may answer questions in ways that raise hospital scores. To counteract this potential bias, researchers made an effort to construct survey questions that focused on specific behaviours, rather than attitudes. Nevertheless, a degree of interpretation may still be reflected in answers to many questions.

To ensure the data were accurate and reliable a number of measures were applied in the data quality process. All responses were entered into two secure databases. Questions were examined for missing responses. When questions from which the indicators are derived were left blank or ambiguous, hospitals were prompted for answers. Questions with more than a small percentage of missing answers (which might indicate problems in interpretation) were not included in the construction of the indicators. Preliminary raw scores were then provided to hospitals for their review. This year, changes to the actual survey data were not permitted. Changes to the dataset were only made in cases where missing information was identified; where issues arose concerning indicator calculations; or where a data quality issue could be supported by a certain degree of documentation.

For more detailed information on the data quality process and other methodologies used in this report please refer to the *Hospital Report 2003: Acute Care Technical Summary*, available free on *Hospital Report* series partners' and sponsors' Web sites. For a list of Web sites please see the back cover of this report.

How Performance is Allocated

In previous reports, hospitals have been designated a performance allocation of "above average", "somewhat above average", "provincial average", "somewhat below average", or "below average" for the SIC indicators using a star system. This year, a hospital's numeric range that includes a hospital's numeric score will be presented in the Hospital-Specific Insert that accompanies this report. There are a number of reasons behind the shift to numeric reporting of indicator values, including:

1. Concerns about how the star system was perceived and understood by the public, which thought that a five-star hospital was five times better than a one-star hospital.
2. The star system did not provide enough information to patients and consumers about the quality of care provided in hospitals.
3. Problems in differentiating visually among groups of stars.

To help provide context for the results, hospital values are compared to the provincial average of their peer group. If the performance allocation is either "above average" or "below average" that means that the hospital's score was statistically different from the average score for all hospitals in the relevant peer group. A hospital is considered "average" if their indicator value was within 1.645 standard deviations (or a 90% confidence interval) of the province's overall average indicator value for all hospitals in their peer group.

The performance of each hospital will be shown using symbols and assigned as follows:

●: The hospital's score was statistically above the provincial average;
◑: The hospital's score was statistically around the provincial average;
◯: The hospital's score was statistically below the provincial average; and,
NR: Means non-reportable.

As in previous reports, hospital-relative ratings of the eight System Integration and Change indicators derived from the Corporate and Acute Care SIC surveys will be calculated separately by "peer group". Small hospitals will be compared with other small hospitals. Since the scores of teaching and community hospitals were generally not significantly different, their results will be combined and reported together. For some of the indicators in the system-wide results, the total number of hospitals does not add up to 108 (the total number of hospitals that returned surveys) because of hospitals with non-reportable scores.

Provincial results for the System Integration and Change quadrant chapter are reported here. In addition, hospital-by-hospital results for 92 Ontario hospital corporations are available in the insert at the back of this report. Hospital performance scores for the Coordination and Continuity of Care indicators were calculated in the same way as for other indicators based on the SHoPSS. For details, please refer to the Patient Satisfaction quadrant chapter of this report.

Indicators of System Integration and Change

Clinical Information Technology

Information technology is an increasingly important tool in the enhancement of patient-care activities. Information systems have the potential to improve internal and external hospital communication, refine the quality of patient records, reduce the time it takes to receive diagnostic reports and order supplies, decrease the number of medication errors, facilitate timely patient follow-up, and improve access to educational materials.

Across all hospitals, the middle 50% (hospitals whose scores fell between the 25th percentile and the 75th percentile) scored between 30.0 and 53.7 out of 100 versus last year when they scored between 23.4 and 51.6.

The median for the teaching/community hospitals was 47.7, a slight increase from the median value of 45.6 in 2000–2001. This suggests that these hospitals have shown some improvements in accessing electronic information both within and outside their organizations.

Small hospitals made less use of clinical information technology than did teaching and community hospitals. However, the number of small hospitals making use of information technology has improved over the past year. For 2001–2002 the median was 27.2, compared to 21.6 in 2000–2001—an overall increase of nearly six percentage points. This indicates that small hospitals have increased their usage of information technology throughout the hospital.

What You Will Find in This Section

Each of the SIC eight indicators derived from the two survey instruments were based on a number of different questions. The two Patient Satisfaction indicators are based on questions derived from the SHoPSS. For each indicator, the overall results are presented. As well, we highlight some of the interesting questions from the surveys to provide more context to the indicator as a whole.

What Makes Up the Clinical Information Technology Indicator?

The Clinical Information Technology indicator was derived from five questions addressing the following areas:

- Availability and use of electronic records/data in specific areas (e.g. Admissions, Discharge, and Transfers (ADT), pharmacy, medical images);
- Access to specific functions or components of an electronic health record system (e.g. clinical workstations with the ability to support order-entry, results reporting, and decision support);
- Availability of internal/external e-mail and online access to monitoring data and medical images;
- Access to specific computerized patient information functions by clinical staff providing care; and,
- Availability of desktop computers or workstations to full-time staff.

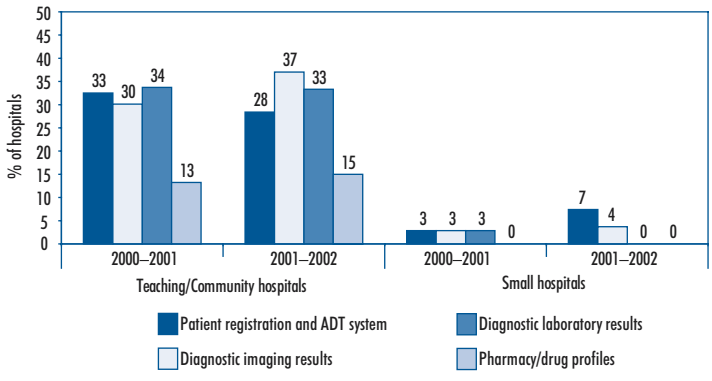
For 2001–2002, 47% of hospitals reported that greater than 50% of physicians had an internal e-mail address, while 38% of hospitals reported that greater than 50% of physicians had an external e-mail address compared to 33% and 27% respectively in 2000–2001. An increase of approximately 14 percentage points for internal e-mail address and 11 percentage points for external e-mail address. Electronic communication usage by nurses also increased: 54% of hospitals reported greater than 50% of nurses had an internal e-mail address while 31% of hospitals reported that over 50% of nurses had an external e-mail address. Online access to "real-time" monitoring and medical images remained low but there were slight differences. For example, hospitals reporting online access to "real-time" monitoring by greater than 50% of physicians had decreased slightly from 12% in 2000–2001 to 10% in 2001–2002, but in 2001–2002 more hospitals (13%) reported that over 50% of physicians had online access to medical images than in 2000–2001 (8%).

Access to specific electronic information resources for patient-care staff also increased over the past year. Slightly more than half of hospitals reported patient-care staff in all areas of the hospital were able to access clinical data from previous visits of a patient (54% in 2001–2002 compared to 41% in 2000–2001), conduct literature searches on medical databases (51% versus 36%) and access other library resources/education materials (51% versus 34%) online and in "real-time".

These indicator scores suggest that hospitals have increased their usage of information technology throughout the organization over the last fiscal year. However, hospitals may not be using information systems to their full potential, perhaps because of costs associated with developing effective clinical systems or lack of technical support capabilities.

FIGURE 2.1: USE OF ELECTRONIC DATA AS A PRIMARY SOURCE IN THE HOSPITAL

Various departments and clinical areas use electronic records and data for clinical and administrative purposes. The graph shows the percentage of hospitals that reported using electronic records/data as the primary source throughout the hospital over the past two years, organized by peer group. The data was grouped in this manner to account for changes in sample size during this time period. Over the past two years, teaching/community hospitals have increased their usage of electronic records/data as the primary source in the area of pharmacy/drug profiles and diagnostic imaging.



Information Technology

Overall it appears that there has been an increase in information technology usage among all hospital groups in the past year. This may reflect an *actual* increase and/or may reflect changes in the way questions were asked. In the previous year's survey, hospitals were asked in certain questions to provide information about nurses, other patient-care staff and other hospital staff. This year, in the Corporate and Acute Care SIC surveys, hospitals were asked to report on other regulated health professionals and unregulated patient-care staff, breaking up the previous year's "other patient-care staff" grouping. The inclusion of these more specific staff groups may have affected the increase in indicator scores. For example, when hospitals were asked in this year's report to indicate the percentage of staff with an internal e-mail address, 74% reported having them for most (>50%) other regulated health professionals, and 52% for most unregulated patient-care staff. In 2000–2001, 54% reported having them for greater than 50% of other patient-care staff.

Clinical Data: Collection, Dissemination, and Benchmarking

Data on clinical outcomes and appropriateness of care can help identify variations in outcomes among practitioners, medical services and hospitals. This information source can be important for assessing clinical performance and opportunities for improvement.

The median Clinical Data indicator score for all hospitals was 60.4 out of 100. This means that hospitals with scores around the median engage in about 60% of the activities related to the collection, dissemination, and benchmarking of clinical data. The middle 50% of hospitals scored between 40.6 and 73.4. Scores for teaching/community hospitals and small hospitals differed: the median for teaching/community hospitals was 64.1 versus 60.9 in 2000–2001, while the median for small hospitals was 35.0 versus 39.6.

Among all three hospital groups, teaching hospitals collected data and compared it internally across specialties at least once per quarter more than community and small hospitals. For example, 92% of teaching hospitals shared data relating to in-hospital mortality internally across specialties at least one per quarter, compared with 74% of community hospitals and 44% of small hospitals. Also, 92% of teaching hospitals compared data relating to unplanned readmissions to the same hospital internally across specialities at least one per quarter, while only 65% of community hospitals and 30% of small hospitals did so.

These differences among hospital groups may be a result of available resources. Large hospitals have more advanced information systems and more staff resources to collect, analyze, and use clinical data. In addition, some clinical measures may be less meaningful to hospitals that don't have the kind of patients to whom the measures would apply. That is to say, small hospitals might not benchmark performance for clinical areas in which they have few patients. However, the more intimate setting of a small hospital may allow for other methods of discussing clinical performance.

What Makes Up the Clinical Data Indicator?

This indicator is derived from responses by hospitals to questions about their collection, dissemination, and benchmarking practices for 16 different clinical measures (including nine measures of clinical outcomes such as in-hospital mortality and seven measures of appropriateness of care, such as unplanned readmission to the same hospital). For each of these 16 measures, points were allocated based on the following collection, dissemination, and benchmarking strategies:

- Collection: data must have been collected in over 50% of the applicable cases;
- Dissemination: data must have been shared with a senior medical staff group or the group responsible for quality of care;
- Internal benchmarking: data must have been compared internally either across specialties and/or to past performance at least once per quarter; and,
- External benchmarking: data must have been compared externally with other organizations.

FIGURE 2.2: EXTERNAL BENCHMARKING OF CLINICAL MEASURES

Hospitals tend to compare clinical measures with those of other similar-sized organizations. Some of the clinical measures used to calculate the Clinical Data: Collection, Dissemination, and Benchmarking indicator are the same as those for the last four *Hospital Report: Acute Care* reports. The table shows the percentage of Ontario hospitals, by peer group, that compared various clinical measures externally with other organizations. The data was organized by peer group this year to allow for a more accurate representation of trends over the four years of information from the four reports. Data shared with respect to unplanned readmission to the same hospital and in-hospital mortality showed steady increases over this period for Teaching/Community hospitals. In the past year, all hospital types have increased the amount of information shared regarding hospital-acquired injuries.

	Teaching/Community Hospitals				Small Hospitals			
Report Year	1999	2001	2002	2003	1999	2001	2002	2003
Hospital-acquired infection or sepsis	29%	30%	45%	56%	8%	19%	29%	15%
Adverse drug reaction	12%	18%	16%	22%	4%	6%	6%	7%
Unplanned readmission to the same hospital	25%	34%	45%	53%	8%	9%	11%	19%
In-hospital mortality	20%	25%	27%	40%	6%	19%	6%	19%
Hospital-acquired injury (e.g. falls)	27%	29%	31%	41%	9%	8%	6%	19%
In-hospital complication rates	15%	24%	22%	35%	2%	6%	6%	4%

Intensity of Information Use

It is difficult to manage what you cannot measure, but measurement alone is not enough. Data about patients, physicians, and employees are increasingly being used to plan and manage hospital activities. For example, data on patient care can help in the allocation of resources, the planning of new programs, and assessments of patient care. Likewise, understanding the views of physicians and employees may help a hospital recruit and retain competent staff and design strategies for change. The Intensity of Information Use indicator was designed to reflect the extent to which hospitals are reporting and using (as opposed to just collecting) these and other types of information.

For the middle 50% of all Ontario hospitals, scores for the Intensity of Information Use indicator ranged from 41.8 to 72.1 out of 100, compared to last year's results of 35.6 to 65.1. The teaching/community median increased to 60.5, a difference of 6.1 percentage points from the previous year's value of 54.4.

Teaching/community hospitals with scores around this median value are carrying out more than half of the information sharing and benchmarking activities captured in this indicator. Small hospitals tend to make less use of these information tools than do teaching/community hospitals and this year, their median value decreased to 30.6 from 38.3 in 2000–2001.

Internal and external benchmarking practices are commonly used in hospitals to assess quality of care. In 2001–2002, approximately 65% of hospitals engaged in internal benchmarking practices such as comparisons of variations in physician-specific clinical practices and outcomes. An additional 7% reported being in the process of implementing these internal benchmarking practices.

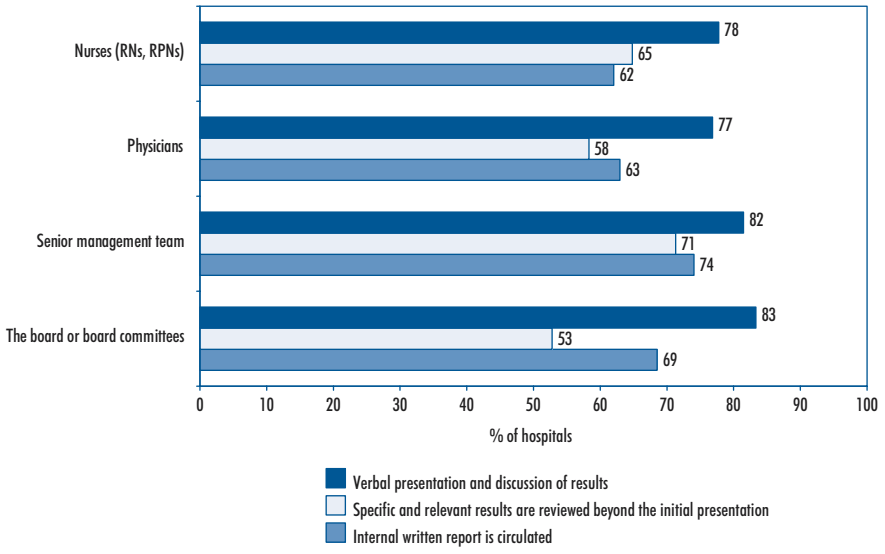
What Makes Up the Intensity of Information Use Indicator?

The Intensity of Information Use indicator was based on a hospital's answers to questions in the following key areas:

- Dissemination of information about patient satisfaction data to physicians, staff (including nurses), and the hospital board;
- Extent to which hospitals engaged in internal benchmarking of variations in physician-specific clinical practices and outcomes; and,
- Dissemination of results of *Hospital Report 2002: Acute Care* throughout the hospital (e.g. to physicians, nurses and hospital board members);
- Staff roles within the organization that relate to information use;
- External benchmarking of physician and employee (e.g. nurse) satisfaction data; and,
- Dissemination of information about employee satisfaction data to physicians, staff (including nurses), and hospitals' boards.

FIGURE 2.3: DISSEMINATION OF PATIENT SATISFACTION RESULTS

Over 75% of hospitals shared patient satisfaction results with the senior management team, the board or board committees, nurses and physicians through a verbal presentation and discussion of results. More than 60% of hospitals shared these results using an internal written report, while slightly over 50% continued to review results after the initial presentation. The graph shows the percentage of hospitals in 2001–2002 that shared patient satisfaction results, obtained from patients via a formal quantitative survey, with the groups listed.



More than two-thirds of hospitals (69%) reported that they did not engage in the external benchmarking practice of comparing employee and physician satisfaction data across two or more organizations in 2001–2002. Of the 31% of hospitals who did engage in external benchmarking practices concerning physician and hospital staff, only 24% reported sharing nursing satisfaction data with two or more organizations. In addition, 18% of hospitals reported sharing data related to the satisfaction of other regulated health professionals and other hospital staff with other organizations.

The majority of Ontario hospitals (83%) shared patient satisfaction data and results from *Hospital Report 2002: Acute Care* in some way within their organizations, while 77% of hospitals did the same with employee satisfaction data.

In more than half (56%) of hospitals, the position of "utilization review analyst" was permanent. Approximately 40% of hospitals reported having a permanent multi-skilled patient information worker and decision-support coordinator. These kinds of staff were more common among teaching/community hospitals: 49% had a decision support coordinator, and 42% had a multi-skilled patient information worker. This compares to only 4% and 37%, respectively for small hospitals.

These differences among hospital groups may be due in part to the availability of financial and human resources. For example, small hospitals may not have enough employees to allow for the creation of information staff roles.

It may also be difficult for some hospitals to find staff with the appropriate information analysis skills. Notwithstanding these potential limitations, the median values and the range of scores for this indicator suggest that there continues to be room for hospitals to do more to capture and make use of feedback from a variety of sources and to take advantage of benchmarking opportunities.

Development and Use of Standardized Protocols

Standardized clinical protocols are practical tools used to help inform decisions regarding the clinical and administrative management of patients. These protocols (also known as "care plans") are typically developed by a multi-disciplinary group of health professionals using the most current medical evidence. Examples of standardized protocols include pre-printed orders, clinical practice guidelines, and care pathways. They identify and outline comprehensive plans and procedures for patients with specific health conditions. Standardized clinical protocols can lead to better identification of patient needs and better coordination of activities among members of the care team.

The median value for all hospitals for the Development and Use of Standardized Protocols indicator increased from 43.8 in 2000–2001 to 47.4 in 2001–2002. Scores for teaching/community hospitals were higher than for small hospitals. That being said, scores for the middle 50% of small hospitals increased slightly to a range of 15.3 to 41.7 for 2001–2002, versus 10.3 to 40.3 for 2000–2001. The middle 50% of teaching/community hospitals scored between 42.5 and 56.5, compared to 36.9 and 57.0 in 2000–2001.

What Makes Up the Development and Use of Standardized Protocols Indicator?

The Development and Use of Standardized Protocols indicator was based on questions addressing the:

- Extent to which standardized protocols for selected medical and surgical conditions/procedures were developed and used in the hospital;
- Strategies for developing and/or updating standardized protocols; and,
- Extent to which standardized protocols included aspects of care provided by other health care organizations.

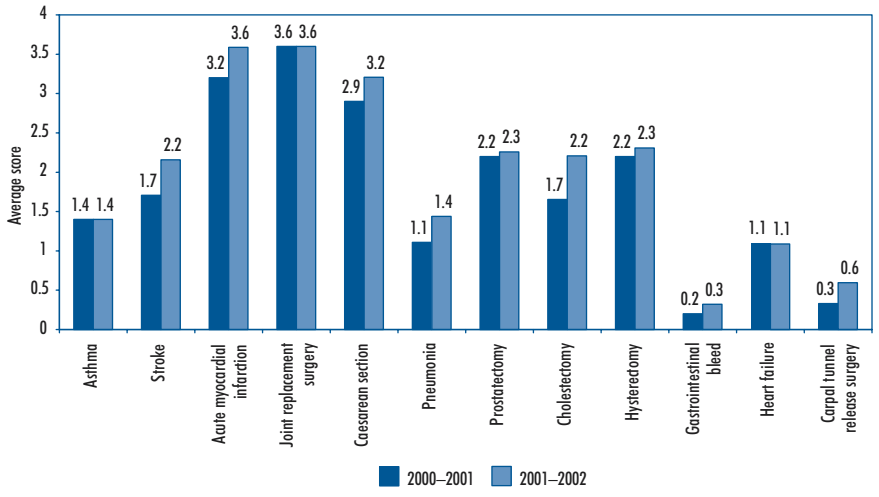
The Development and Use of Standardized Protocols indicator reflects the degree to which hospitals developed and used standardized protocols within their organization. The following shows the percentage of hospitals that had a protocol in place for each of the 12 common conditions included in the Acute Care SIC survey between April 1, 2001 and March 31, 2002:

- Asthma: 39%
- Stroke: 60%
- Acute myocardial infarction (AMI), otherwise known as heart attack: 92%
- Joint replacement surgery: 91%
- Caesarean section: 81%
- Pneumonia: 41%
- Prostatectomy: 58%
- Cholecystectomy: 58%
- Hysterectomy: 60%
- Gastrointestinal bleed: 11%
- Heart failure: 29%
- Carpal tunnel release surgery: 15%

Together, these twelve patient groups accounted for about 10% of acute hospitalizations in Ontario in 2001–2002.

FIGURE 2.4: USE OF STANDARDIZED PROTOCOLS

Hospitals were asked to indicate the extent to which standardized protocols were developed and in use in the hospital between April 1, 2001 and March 31, 2002. Protocol development for a given clinical condition among those hospitals that qualified (had 12 or more cases/procedures in a particular clinical area in 2001–2002) varied. The graph shows a comparison of the average (mean) score for the 12 common conditions and procedures for all hospitals over the past two years. Use of standardized protocols has increased for all clinical conditions/procedures since *Hospital Report 2002: Acute Care*, except for asthma, heart failure and joint replacement surgery which have remained the same.



In the past year, hospitals have reported working more closely with other acute care hospitals in developing standardized protocols. For example, 30% of qualifying hospitals reported working with other acute care hospitals in the development of AMI standardized protocols, compared to 24% in 2000–2001—an increase of six percentage points.

In addition to developing standardized protocols with other acute care hospitals, the hospitals have also been trying to extend their standardized protocols to include aspects of care provided by other health care organizations such

Women's Health and Standardized Protocols

Hospitals varied in their development of protocols for women-specific procedures. As was true last year, the average score for the utilization of caesarean section protocols was higher for teaching/community hospitals (3.4 out of 4.0 versus 3.0 out of 4.0 in 2000–2001) than for small hospitals (2.5 versus 2.4 in 2000–2001). Unlike last year, the mean for hysterectomy protocols was higher for teaching/community hospitals (2.4 versus 2.2 in 2000–2001) than for small hospitals (1.6 versus 2.3 in 2000–2001). Note, however, that to qualify for a given clinical area, a hospital must have had 12 or more cases/procedures in 2001–2002. With regard to hysterectomies, fewer small hospitals than teaching/community hospitals qualified. In contrast, the average scores among teaching/community hospitals for prostatectomy and hysterectomy protocols within the hospital were the same (2.2 for both in 2000–2001 and 2001–2002).

as LTC facilities, rehabilitation hospitals and complex continuing care facilities. This year, 23% of qualifying hospitals reported working with rehabilitation hospitals in the development of standardized stroke protocols.

Overall, 79% of hospitals reported having a formal process in place for developing and/or updating standardized protocols such as a multidisciplinary team that reviews protocols and policies regularly.

Coordination of Care

During their stay in hospital, patients encounter a variety of physicians, nurses, other health care professionals, and other hospital employees. Efforts by hospitals to plan patient care and improve communication among caregivers may contribute to greater patient satisfaction. The Coordination of Care indicator reflects the extent to which hospitals are successful, in the eyes of patients, in ensuring that information is transferred among caregivers and that care is provided in a timely manner.

In the SHoPSS results for *Hospital Report 2003: Acute Care*, about 67% of Ontario patients rated the coordination of their care as excellent. Patients' satisfaction with the coordination of their care seems to be related to age: of patients aged 65 to 84 years, 73% rated their coordination of care as excellent, compared with 63% of patients under age 65.

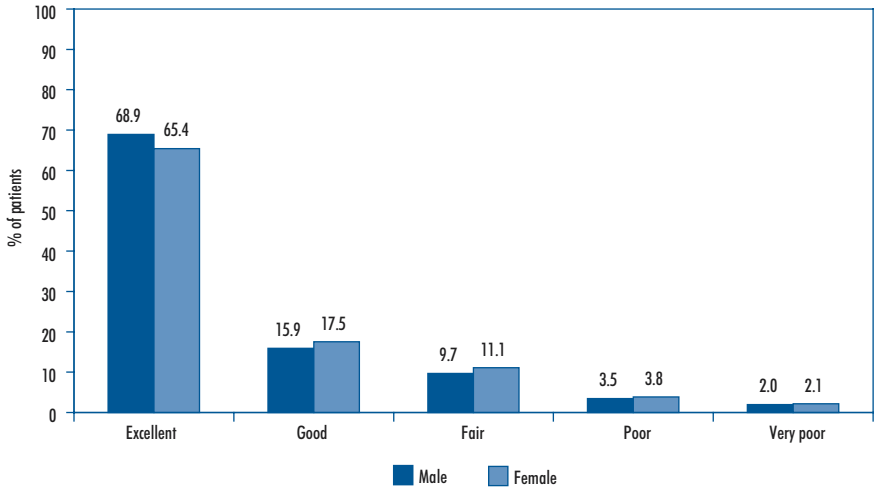
What Makes Up the Coordination of Care Indicator?

The Coordination of Care indicator is based on answers to four questions in the SHoPSS:

1. What is your overall opinion of the coordination of your care?
2. Did you feel there was adequate communication among all your caregivers concerning your care?
3. If you stayed on more than one nursing unit, was the transfer between units handled well?
4. Were things done in the hospital within a reasonable amount of time?

FIGURE 2.5: PATIENTS' PERCEPTIONS OF COORDINATION OF CARE

Patient satisfaction ratings, by sex, on the Coordination of Care indicator (based on four questions) from the SHoPSS results, show that males are more likely to report the coordination of their care as excellent while females are more likely to report it as good.



Hospitals in the Community

Hospitals are an integral component of any community. A positive hospital-community relationship is based on strong interactions and community involvement, including hospital volunteer programs, fundraising initiatives, dissemination of patient satisfaction results to the community, availability of multilingual staff, and existence of community-driven staff roles. The Hospitals in the Community indicator captures the strength of the hospital-community relationship through these types of initiatives.

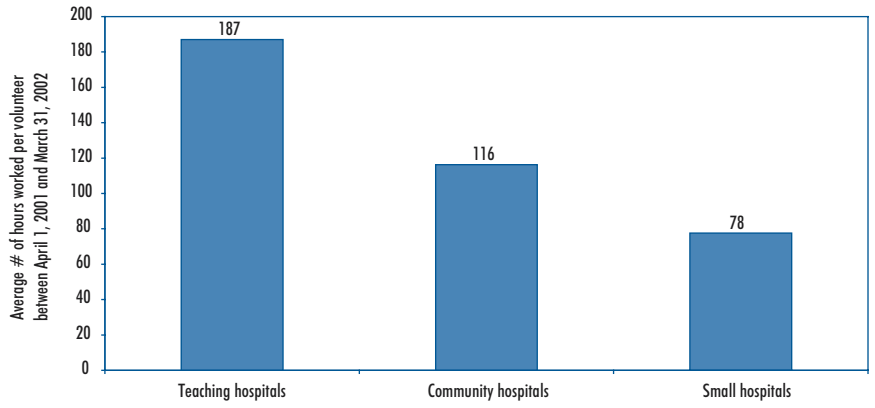
What Makes Up the Hospitals in the Community Indicator?

To calculate the Hospitals in the Community indicator, hospitals were asked about a number of key areas, including:

- Whether they had a Web site accessible to the community;
- Staff roles relating to the community;
- Dissemination of information about patient satisfaction data to the community;
- Accessibility of services to patients with special communication needs;
- Dissemination of results of *Hospital Report 2002: Acute Care* to volunteers and the community;
- Total number of volunteers;
- Total number of volunteer hours contributed; and,
- Existence of joint-fundraising campaigns with other health care organizations.

FIGURE 2.6: AVERAGE NUMBER OF VOLUNTEER HOURS WORKED PER VOLUNTEER

Volunteers are an important resource for hospitals. This graph shows the average number of volunteer hours worked per volunteer in a year between April 1, 2001 and March 31, 2002. For teaching hospitals, this number is equivalent to a volunteer working about four hours a week. For community and small hospitals, these numbers are equivalent to a volunteer working approximately two hours a week.



Across hospitals, the median value for the Hospitals in the Community indicator was 41.0 out of 100. In general, small hospitals (the middle 50% ranged from 19.7 to 39.8) scored lower than teaching/community hospitals (35.3 to 46.5).

The median number of volunteers in the organization per patient day was 6.3 and the median number of volunteer hours per patient day contributed between April 1, 2001 and March 31, 2002 was 0.63. In general, small hospitals had more volunteers (a median of 17.2) who worked more hours (median of 1.0 hours) than teaching/community hospitals (5.6 volunteers who worked 0.60 hours per patient day).

More than 30% of the hospitals indicated that they had disseminated information to patients and their families regarding the nature of changes resulting from patient satisfaction feedback in the form of newsletters/e-mail (32%), presentation/discussion of results (23%), or hospital bulletin boards (27%).

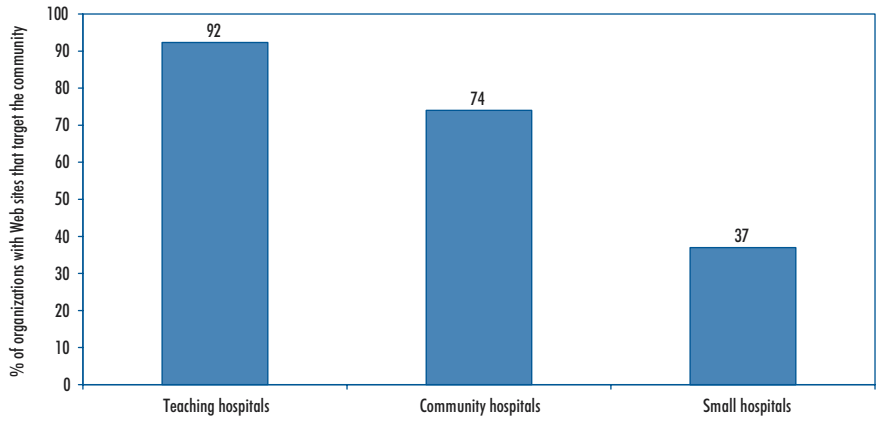
Eighty-one percent of hospitals indicated that they had or planned to disseminate last year's *Hospital Report 2002: Acute Care* to volunteers, an increase from 78% in 2000–2001; 66% reported disseminating the report results to the community at large, an increase of 9 percentage points from 57%. The most common methods of disseminating the report to volunteers

were internal newsletters (67%) and hospital bulletin boards (54%), while the least common were dissemination of specific and relevant results after the initial presentation (30%) and e-mail (25%).

Community-related staff roles are common among Ontario hospitals. Most hospitals (79%) had a volunteer co-ordinator in a permanent role between April 1, 2001 and March 31, 2002. Similarly, many hospitals (77%) indicated they had employed a fundraising co-ordinator during the specified time period. A further 4% indicated that they had established a fundraiser co-ordinator role since March 31, 2002, or were currently developing such a role. Thirty-four percent of staff indicated that there was a staff member designated to address equity issues, and 21% reported that a staff member in a permanent role had been designated as a contact person for all patients and families.

FIGURE 2.7: HOSPITAL WEB SITES TARGETING THE COMMUNITY

Hospitals use a number of methods to communicate with the public and the community at large. One method of communicating with the community is through a hospital Web site. Hospitals use their Web site to inform the public about community health information and upcoming community events and programs. The graph shows the percentage of hospitals that have a Web site which specifically targets the community.



The two most common mechanisms used to communicate with patients with special communication needs were:

1. A hospital database identifying languages spoken by hospital staff or volunteers (73%) and;
2. Interpreters employed or contracted by the hospital (57%).

Both of these strategies were more common among teaching/community hospitals (63% and 78%) than among small hospitals (41% and 59%).

Although the scores for this indicator have increased slightly since last year, hospitals could be doing more to integrate into the community and reach out to their neighbours. Future SIC surveys will continue to be revised to help identify potential outreach activities.

Working with Other Health Care Partners

Ontario's health care system is large and complex, involving many kinds of health care facilities and organizations—pharmacies, hospitals, public health units, community care access centres (CCACs), nursing homes, and others. Ideally, they work together to provide a continuum of high quality care. Within the province a variety of joint ventures, strategic alliances, corporate strategies, and other working relationships have emerged to improve links between acute care services and other health care partners. The Working with Other Health Care Partners indicator explores the extent to which hospitals are working with other health care providers to improve common approaches to patient care.

The Ontario hospital median value for the Working with Other Health Care Partners indicator was 49.5 in 2001–2002 versus 53.9 in 2000–2001. However, the scores differed for teaching/community hospitals and small hospitals. The median for teaching/community hospitals was 52.0, down from 57.2, while the median for small hospitals stayed relatively constant at 41.2. Slight decreases in hospital values may be attributed to changes in the indicator questions. For example, this year we are reporting on the proportion of senior management staff who were on the board of directors of health organizations per total number of senior management staff. Last year, we reported on the number of organizations for which senior management were members on the board of directors. Such changes may result in some variation between the two years.

What Makes Up the Working with Other Health Care Partners Indicator?

The Working with Other Health Care Partners indicator is based on a number of questions addressing six different areas of interest from the Hospital Report Acute Care SIC survey. It measures:

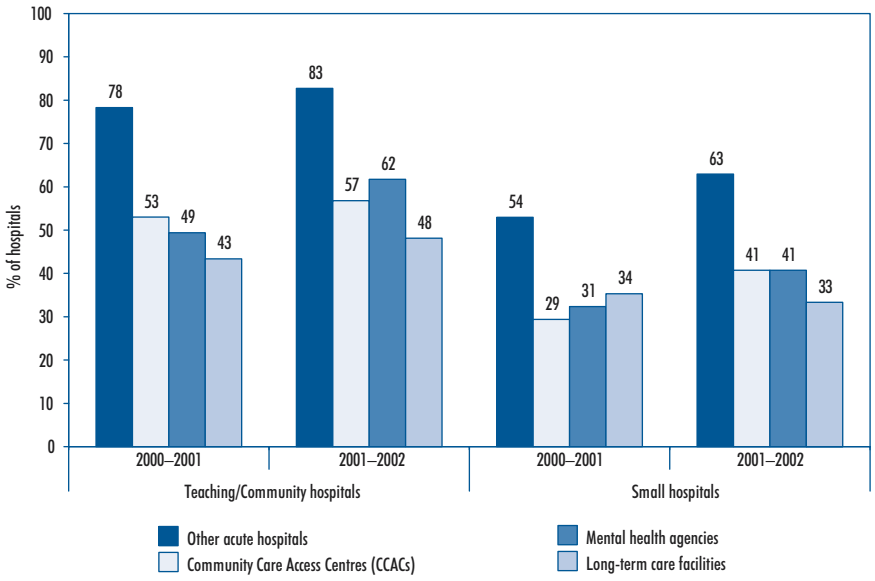
- Specific partnership arrangements, including strategic alliances and joint ventures;
- Senior management board representation on health-related organizations;
- Participation in regional programs with other hospitals;
- Extent to which management in hospitals and health care organizations met to discuss issues related to their relationship;
- Corporate strategies in which hospital and health care organization staff were engaged; and
- The presence of hospital staff dedicated to promoting hospital-community integration.

With respect to working with other health care organizations, 70% of hospitals indicated that they had participated in one or more regional programs, compared to 91% in 2000–2001. This difference may again be attributed to changes in the question. Last year, hospitals were specifically asked to indicate whether they had participated in a regional program either designated or funded by the Ministry of Health and Long-Term Care (MOHLTC), or independent of the MOHLTC. This year, we asked whether organizations participated in at least one regional program which may or may not have been designated by the MOHLTC.

Of all Ontario acute care hospitals, 64% reported having strategic alliances and/or joint ventures with other acute care hospitals. More than half of the hospitals (around 59%) reported having strategic alliances with CCACs, public health departments and mental health agencies. Only a quarter of hospitals indicated having a joint venture with a complex continuing care hospital.

FIGURE 2.8: JOINT VENTURES WITH OTHER HEALTH CARE AGENCIES

One way in which hospitals work with health care agencies is through joint ventures. In a joint venture, two or more organizations have a formal agreement/contract to undertake or deliver a specific initiative or program. The graph shows the percentage of hospitals that have developed relationships with other organizations through joint ventures over the past two years organized by peer group. These results show that more hospitals have developed relationships with other acute hospitals, CCACs and mental health agencies over this period.



Hospitals most commonly reported having participated in corporate strategies with CCACs. The top strategies included:

- Providing community partner staff with desk/office space, computer, phone, and/or e-mail space on your organization's property (89%);
- Looking at care planning in the hospital and determining appropriate patient discharge criteria (82%);
- Having community staff representatives on a hospital standing committee on patient care and/or discharge planning (79%);
- Evaluating the appropriateness of discharge (75%); and,
- Looking at utilization management issues at the hospital (73%).

Hospitals also reported working closely with other acute care hospitals on corporate strategies. The top two strategies were:

- Planning and carrying out education sessions for community partner staff and hospital staff (76%); and,
- Looking at utilization management issues at the hospital (74%).

Community and teaching hospitals reported working with CCACs more than did small hospitals. This may be partly due to differences in the way health services are organized in urban and rural settings. For example, rural centers may not have as many health care facilities/services, while hospitals in urban centers have access to a wide array of health care services and partners with whom they can develop relationships.

The scores for this indicator suggest hospitals are maintaining relationships with other health care organizations. However there are still opportunities for hospitals to expand and develop their relationships with these organizations in other capacities.

Continuity of Care

Patients' care needs often extend beyond their discharge from hospital. Because of the increasing use of day-surgery and shorter hospital stays, communication between hospitals and community agencies is particularly important to ensure smooth transitions for patients. The Continuity of Care indicator measures how patients feel about their preparation for discharge, follow-up care, and the transition to home following a stay in hospital.

Overall, most patients who responded to the SHoPSS for *Hospital Report 2003: Acute Care* said that they were satisfied with the continuity of their care. The findings were consistent with those of *Hospital Report 2002: Acute Care* and *Hospital Report 2001: Acute Care*, approximately 70% of patients rated it as excellent. More specifically, 82% of patients felt their discharge from hospital had been handled smoothly and 78% stated that they were ready to go home when they were discharged. Among patients who required follow-up care at the hospital, 86% reported receiving the necessary care. Conversely, almost one in three patients said that they or their caregivers had not been prepared by hospital staff (or prepared only to some extent) to manage care at home.

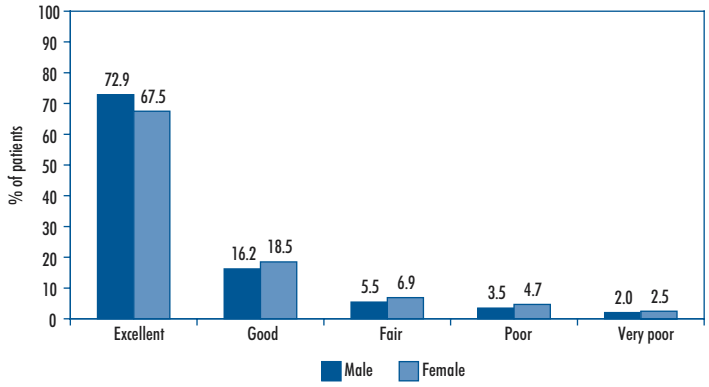
What Makes Up the Continuity of Care Indicator?

The Continuity of Care indicator, derived from the SHoPSS, is based on patients' answers to four questions:

1. Before you were discharged, did the hospital staff prepare you or your caregiver for managing your care at home?
2. Was your discharge from the hospital handled smoothly?
3. If follow-up care was needed at the hospital, was it provided?
4. Were you sent home from the hospital before you felt ready?

FIGURE 2.9: PATIENTS' PERCEPTIONS OF CONTINUITY OF CARE

Patient satisfaction ratings, by sex, on the Continuity of Care indicator from the SHoPSS results show that males are more likely to report their continuity of care as excellent, while females are more inclined to report their care as good.



These results are similar to those of previous years and indicate that there are still opportunities for hospitals and health care workers to enhance coordination of patient care among providers, inform and engage patients and families regarding the course of clinical management, and educate patients and families on necessary support activities upon discharge.

Strategies for Managing Alternate Level of Care Patients

Patients' care needs change through the course of their illness. The appropriate settings for receiving the care that they need may therefore also change. For instance, certain services are only provided in acute care hospitals, but other services are available in other settings. In 2001–2002, Ontario hospitals reported that patients awaiting an alternate level of care (ALC) accounted for 9.1% of all inpatient days. This means that patients still needed some type of care, but not necessarily in an acute care hospital. For example, they might have needed home care or care in a nursing home, or rehabilitation centre or complex continuing care facility, but these services or beds were not immediately available.

The Strategies for Managing ALC Patients indicator measures the extent to which hospitals have implemented strategies to reduce the number of acute care patients awaiting these types of alternate services.

In general, small hospitals appear to have engaged in fewer strategies to manage ALC days than teaching/community hospitals. However, there was a range of activity among small hospitals. The middle 50% of small hospitals' scores ranged from 17.9 to 45.3 points, a wider spread than that

What Makes Up the ALC Indicator?

This indicator was derived from hospital responses to questions about their strategies to decrease the number of ALC days, including:

- Strategies for managing ALC patients in the organization (e.g. focusing on deferring admissions from the emergency room, creation of specialized units for ALC patients); and,
- Strategies for transferring patients into the appropriate setting more quickly (e.g. developing partnerships with community health agencies and retirement homes).

FIGURE 2.10: TOP STRATEGIES FOR MANAGING ALC PATIENTS

Hospitals across Ontario are engaging in a wide range of strategies designed to help reduce the number of ALC days. The table below shows only the five most common strategies used by teaching, community, and small hospitals in the 2001, 2002 and 2003 *Hospital Reports*.

Strategies for Managing ALC Patients	Teaching Hospitals			Community Hospitals			Small Hospitals		
	2001	2002	2003	2001	2002	2003	2001	2002	2003
Conducting a daily utilization review to determine appropriateness of admission and readiness of discharge				✓	✓	✓	✓		✓
Developing closer working relationships with community agencies	✓	✓	✓	✓	✓	✓	✓	✓	✓
Focusing on deferring admissions from the emergency room	✓		✓		✓	✓			
Having a policy where patients must choose multiple LTC facilities and they must go to the first available facility from that list	✓	✓	✓	✓	✓	✓	✓	✓	✓
Increased family education and involvement in care planning		✓	✓	✓	✓		✓	✓	✓
Increased nurse education and involvement in care planning		✓				✓		✓*	
Increased physician education and involvement in care planning	✓	✓	✓	✓				✓*	
Providing in-service education for nurses specifically regarding their role in early identification of patients with discharge challenges and early estimation of day/time of discharge	✓								
Providing temporary passes and in-home assessments							✓	✓	
Providing reactivation services appropriate for ALC patients									✓

* For small hospitals, the number of hospitals engaged in the strategies "increased nurse education and involvement in care planning" and "increased physician education and involvement in care planning" was the same, so both are noted.

of 2000–2001, which was 23.5 to 45.1. In contrast, indicator values remained relatively stable for the middle 50% of teaching/community hospitals where the range was from 44.2 to 65.2 points compared to 44.6 to 66.4 in 2000–2001. ALC days may not be distributed evenly across hospital types and small hospitals may have fewer strategies in place because they have to deal with fewer ALC days than teaching/community hospitals.

Supporting Hospital Staff

Hospital staff are the backbone of the hospital system. The recruitment and retention of physicians as well as the recruitment, development, and training of hospital employees is key to an organization's ability to deliver quality services while addressing future challenges. As a result, many hospitals offer professional development and social support mechanisms for staff, employ innovative human resource practices and related strategies, provide formal performance evaluations, and track employee turnover rates. The Supporting Hospital Staff indicator is designed to measure the practices organizations are implementing to support hospital staff.

The overall median score for the Supporting Hospital Staff indicator was 54.3 out of 100. This means that just over half of the organizations have implemented some type of training or development strategy for hospital staff. Similar to trends in previous years, teaching/community hospitals scored higher than small hospitals in this indicator. Teaching/community hospitals had a median value of 58.8 and small hospitals had a median of 43.5.

In terms of succession planning for leadership positions, 75% of hospitals reported having a formal interviewing process for physician leadership positions. Some of these processes included the implementation of a multi-disciplinary selection committee consisting of medical directors, chiefs of staff and deputy chiefs. In addition, 60% of hospitals reported having formal succession plans in place for the Board of Directors' Chair, and 44% for chairs for standing committees of the board. Only 27% of hospitals had succession plans for senior management positions.

Hospitals also used a variety of staff recruitment and retention strategies for nurses, other regulated health professionals, unregulated patient care staff and other hospital staff. With respect to retaining their employees, more than 78% of hospitals offered opportunities for advanced education supported by the hospital; 81% reported offering competitive salaries to staff, and 69% had established recognition programs such as special awards for excellence or accomplishments.

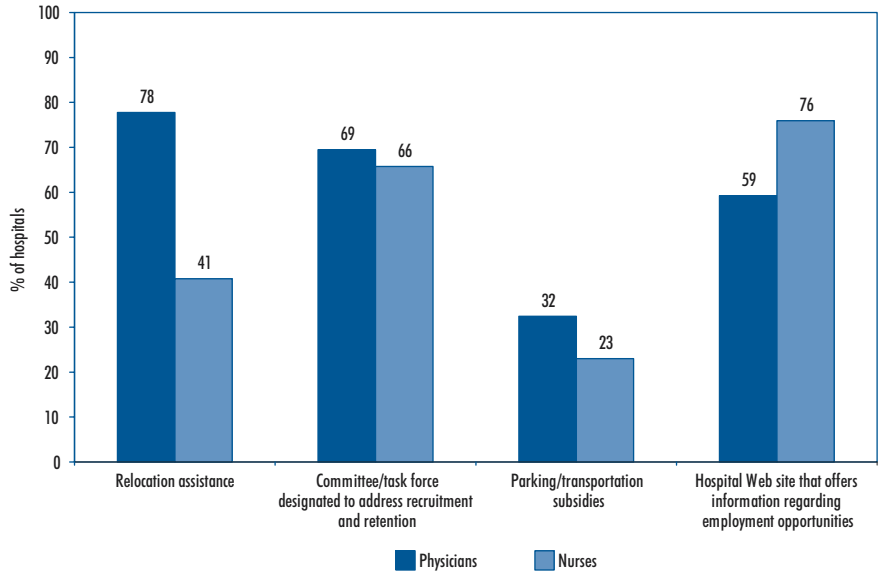
What Makes Up the Supporting Hospital Staff Indicator?

The Supporting Hospital Staff indicator was based on the following areas of focus:

- Strategies for recruitment and retention of staff;
- Recruitment and retention strategies for physicians;
- Tracking hospital staff turnover rates;
- Innovative staff roles in the hospital;
- Implementation of emotional support mechanisms for employees;
- Support for continuing education and professional development;
- Provision of continuing education activities for staff (including attendance at formal in-service programs, courses and off-site conferences);
- Tracking and conducting performance evaluations (including face-to-face meetings and written feedback) of physicians and other staff;
- Workplace Safety and Insurance Board (WSIB) claim submissions made by non-managerial staff;
- Strategies to deal with nursing shortages;
- Expenditures by organizations for in-service and professional education;
- Specific formal practices in the hospital for non-managerial employees, including self-scheduling and flexible job design for nurses;
- Formal orientation program;
- Formal interviewing process for physician leadership positions;
- Formal succession planning; and,
- Number of formal disputes, grievances, or complaints filed by non-managerial staff (including nurses, other regulated health professionals, unregulated patient-care staff, and other hospital staff).

FIGURE 2.11: RECRUITMENT AND RETENTION STRATEGIES FOR NURSES AND PHYSICIANS

Hospitals use a variety of recruitment and retention strategies for nurses and physicians. This graph compares different strategies.



A variety of innovative staff roles aimed at improving both patient care and operational efficiency have emerged. For example, 35% of hospitals reported having a permanent physician-recruitment coordinator in 2001–2002, compared to 31% in the previous year. In addition, 34% of hospitals indicated that they had a nurse practitioner, down from 36% in 2000–2001. This year, 45% of hospitals also reported having a clinical nurse specialist, versus 44% in 2000–2001. More hospitals (77%) indicated that a nurse educator was a permanent role in their organization compared to last year (68%). A higher percentage of teaching/community hospitals than small hospitals had these staff roles: 84% of teaching/community hospitals versus 56% of small hospitals reported having a nurse educator as a permanent role.

Among all hospitals, 12% did not report any nursing shortages. Small hospitals comprised the majority of this group. In contrast, all teaching hospitals and 91% of community hospitals reported nursing shortages. Common strategies used to address these shortages included voluntary overtime (83%), greater use of casual nurses (part-time) than in the previous fiscal year (39%), float pools (35%) and use of agency nurses (24%).

Performance evaluations are used in many organizations to assess individual staff performance and to determine work resource allocation. The majority of hospitals (90%) tracked formal performance evaluations that were conducted with physicians and other staff between April 1, 2001 and March 31, 2002. Of that total, 31% of hospitals conducted yearly evaluations, 45% conducted evaluations every two years and 13% of hospitals conducted performance evaluations every three years or less frequently. In addition, 75% of hospitals reported tracking staff turnover rates between April 1, 2001 and March 31, 2002, down from 88% last fiscal year.

Investment in Continuing Education Activities for Nurses

The number of nurses who participated in continuing education activities, such as formal in-service programs, courses and off-site conferences, varied over the past year. Twenty-six percent of hospitals reported that some (25–75%) of their nurses attended conflict management programs/courses. Thirty-six percent of hospitals participated in team building activities, while 31% of hospitals reported that some (25–75%) of their nurses attended a formal course on ethical issues. Nurses spent less time attending leadership development courses/activities: 52% of hospitals reported that less than 25% of nurses attended these types of activities.

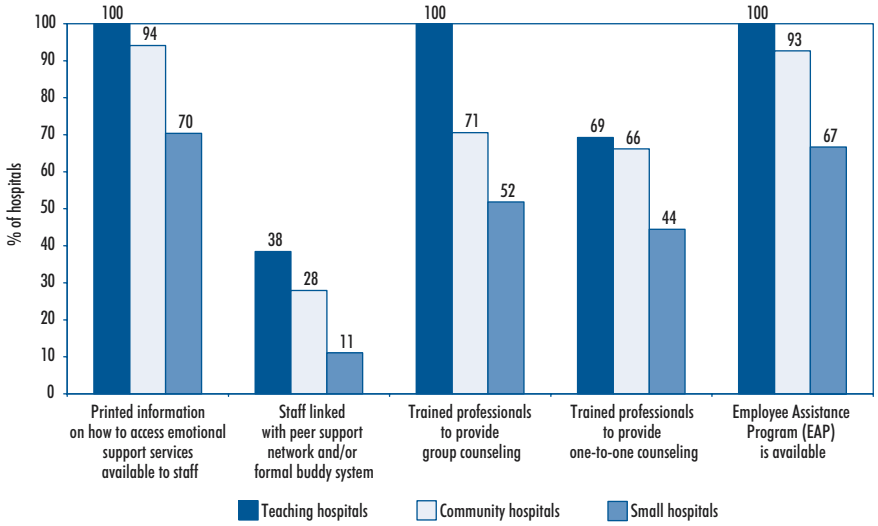
The median number of WSIB claims filed by hospital staff was 0.10 per non-managerial staff (last year's value was 0.03 but it included only lost-time claims) and the median number of formal written disputes, grievances, or complaints that were filed by hospitals was 0.04 per non-managerial staff compared to 0.05 in 2000–2001.

In the survey, hospital expenditures for in-service and professional education, which included tuition fees, training material and trainers' salaries had remained relatively constant since *Hospital Report 2002: Acute Care*. For 2001–2002 these expenditures were 6.6 per 1000 operating dollars (less than one percent of total operating expenses) versus 6.3 in last year's report.

The most common kinds of professional development offered to physicians included on-site courses provided by external organizations (57%) and on-site courses provided by hospital staff (55%). Sixty-one percent of hospitals reported that nurses were reimbursed for continuing education courses and 37% reported that nurses were provided with bursaries/scholarships towards continuing education or professional development support.

FIGURE 2.12: STAFF DEVELOPMENT AND TRAINING

Access by staff to emotional support mechanisms to deal with work and personal issues are important in maintaining a good quality of work life. The graph shows different kinds of mechanisms implemented by hospitals, organized by hospital type.



Ethical Considerations in the Workplace

Hospitals face ethical issues concerning the treatment and management of patients everyday. To capture the strategies hospitals have established to deal with these issues we have included a new section in the Corporate SIC survey called Ethical Considerations. Based on survey findings, almost all hospitals have some structure in place for addressing ethical issues: 74% reported having an ethics committee, while more than 68% reported having an ad hoc ethics consultation team to deal with ethical dilemmas. The majority of hospitals provided some type of ethics training for staff. Ninety-two percent of hospitals reported nurses had access to written materials regarding ethics, while 86% reported physicians had this access and 62% reported social work staff also had access. Another type of training provided by hospitals was an off-site course in ethics. Sixty-two percent of hospitals reported nursing staff took a course in ethics and 56% reported physicians took a course, while only 45% reported that social work staff took an ethics course off-site. The least-used type of ethics training provided to staff was access to in-house training provided by an ethicist; less than half of the hospitals reported using this method.

Summary

In this section, we presented data based on indicators calculated from the Corporate and Acute SIC surveys including:

- Hospitals indicated that their patient-care staff in all areas/programs of the hospital had electronic access to literature searches on medical databases (51%) and other library resources/education materials (51%).
- 92% of teaching hospitals shared data relating to in-hospital mortality with other organizations compared to 74% of community hospitals and 44% of small hospitals. More than 30% of hospitals indicated that they had disseminated information regarding the changes made as a result of patient satisfaction feedback, to patients and their families in the form of newsletters/e-mail (32%), presentation/discussion of results (23%), or hospital bulletin boards (27%).
- 65% of hospitals engaged in internal benchmarking practices such as comparisons of variations in physician-specific clinical practices and outcomes.
- Approximately 67% of Ontario patients rated the coordination of their care as excellent.
- 90% of hospitals reported tracking formal performance evaluations that are conducted with physicians and other staff.
- 79% of hospitals reported having a formal process in place for developing and/or updating standardized protocols.
- Across the province, over 73% of hospitals provided professional development support for nurses and other regulated health professionals through such mechanisms as unpaid time off to take courses, on-site courses provided by hospital staff and on-site courses provided by external organizations.

Overall, hospitals showed improvement in the areas of Clinical Information Technology, Collection of Clinical Data, and Intensity of Information Use. On the other hand, hospitals showed less improvement in the Working with Other Health Care Partners indicator, Hospitals in the Community indicator, and Supporting Hospital Staff but this change may be due to modifications to the indicators. For Strategies for Managing Alternative Level of Care, Coordination of Care, and Continuity of Care, the indicator scores remained the same over the past two years.

Next Steps

The SIC quadrant examines various strategies and initiatives hospitals have in place to improve information technology, maintain relationships with community agencies, disseminate information both within and outside the hospital for decision-making, and enhance the skills of health professionals. These strategies vary from hospital to hospital across the province. For example, a strategy for managing ALC patients that may be in place in a teaching hospital may not be applicable to a small hospital. It is for this reason and others addressed by hospitals in the regional sessions that the SIC surveys will be modified again next year. The modification will include the revision and addition of new questions to reflect ongoing changes in the hospitals. Also, in the future, we hope to provide a technical document to assist hospitals with the interpretation of questions, thereby providing consistency across hospitals and more accurately reflecting hospital practices.

Clinical Utilization and Outcomes



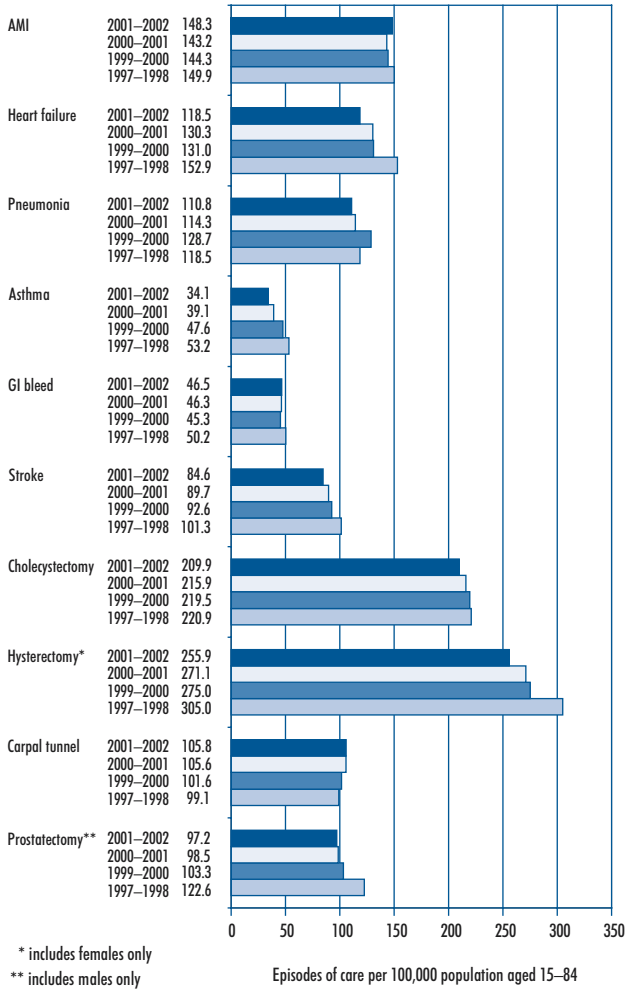
Clinical Utilization and Outcomes

Each year Ontario hospitals provide care to over two million patients on a day-patient or inpatient basis. Hospitals compare their own performance levels in providing this care with those of other hospitals in an effort to learn from each other's experience.

The aim of the Clinical Utilization and Outcomes (CUO) quadrant of *Hospital Report 2003: Acute Care* is to help hospitals evaluate the clinical services they provide and to determine how they compare to similar hospitals within Ontario. Like its predecessors—*Hospital Report '99*, *Hospital Report 2001: Acute Care*, and *Hospital Report 2002: Acute Care*—this year's report uses hospital data to describe clinical utilization and outcomes in Ontario hospitals. While the indicators have remained basically unchanged (although two new nursing-related indicators have been added), the methodology is refined on an ongoing basis to ensure that results are relevant and appropriate from year to year. For details on methodological changes between last year's report and this year's, please refer to the *Hospital Report 2003: Acute Care Technical Summary*.

FIGURE 3.1: HOSPITALIZATION RATES ACROSS PATIENT GROUPS

Between 1997–1998 and 2001–2002, the number of episodes of care in acute care hospitals per 100,000 Ontarians between the ages of 15 and 84 decreased for most of the patient groups examined in this report.



Source: Discharge Abstract Database, 1997–1998, 1999–2000, 2000–2001, and 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

What's New in 2003?

New elements and features in the CUO quadrant this year include:

- Presentation, across hospitals, of age- and sex-standardized women's-health focused indicators;
- Two new indicators that focus on nursing-related outcomes: post-admission pressure ulcers, and fractures following admission to hospital;
- Enhanced methodologies for calculating some of the core Clinical Utilization and Outcomes indicators. For further detail on these enhancements, please refer to the *Hospital Report 2003: Acute Care Technical Summary*;
- Presentation of hospitals' numeric ranges in the Hospital-Specific Insert that accompanies this report, and a symbol indicating whether the hospital's score on that indicator is "above average", "provincial average", or "below average"; and,
- Consistent with last year, studies of the hospital discharge data that form the basis of the Clinical Utilization and Outcome measures indicate problems with the consistency and quality of coding for complications and co-morbidities. Analysis suggests that these data quality issues likely have an important impact on the comparability of complication rates for each hospital. For this reason, hospital-level results for the four complication indicators have been removed from this report. For more information on this issue, refer to the "Coding Variations and Data Quality" sidebar in this chapter.

A Snapshot of Ontario Hospitals

In Ontario, as in all Canadian jurisdictions, there has been a gradual decrease in inpatient hospitalization rates and an increase in day-surgery use over the last several years. Over the four reported years in this chapter, the percentage of day-surgery patients as a proportion of all acute care patients in Ontario has increased from less than 47% to about 50%. Similar patterns are evident in the specific patient groups covered in the report. These groups represent ten common medical and surgical conditions that are treated in most Ontario hospitals. For seven of the ten patient groups, hospitalization rates generally decreased over the four reported years. The three exceptions were carpal tunnel release surgery patients and gastrointestinal (GI) bleeding patients, for whom hospitalization rates increased from 1999–2000 to 2001–2002, and acute myocardial infarction (AMI) cases, for whom rates decreased in 2000–2001 but increased again in 2001–2002. Carpal tunnel release surgery is primarily performed in day-surgery settings. Over the past four years the proportion of surgeries performed in these settings has remained high (about 98%). In next year's report, this patient group will likely not be included because of the consistent occurrence of carpal tunnel surgeries in day-procedure settings.

The Medical and Surgical Patient Groups

Acute Myocardial Infarction (AMI) commonly known as a heart attack, is a condition that results from decreased or blocked blood flow to the heart.

Heart Failure is a disorder where damage to the heart limits its ability to pump sufficient blood through the body.

Community Acquired Pneumonia is an infection of the lungs acquired before the patient is admitted to hospital.

Asthma is a disease of the lungs characterized by swelling and narrowing of the airways. It may lead to wheezing, shortness of breath, and other symptoms.

Gastrointestinal (GI) Bleeding refers to bleeding into any part of the digestive system. It can occur as a result of a number of different conditions, such as ulcers.

Strokes (sometimes referred to as "brain attacks"), result either from blood clots that decrease or stop blood flow to the brain or from bleeding following the hemorrhage (or bleeding) of a blood vessel in the brain. Both types can lead to brain damage and paralysis.

Cholecystectomy is an operation to remove the gall bladder, often performed because gallstones are causing pain and other symptoms. The laparoscopic, or "closed", method (using small incisions in the abdomen) is most common. The gall bladder may also be removed through a larger incision in the upper abdomen (an "open" cholecystectomy).

Hysterectomy is the removal of the uterus and sometimes also the ovaries and fallopian tubes. It can be performed using an abdominal incision or through the vagina.

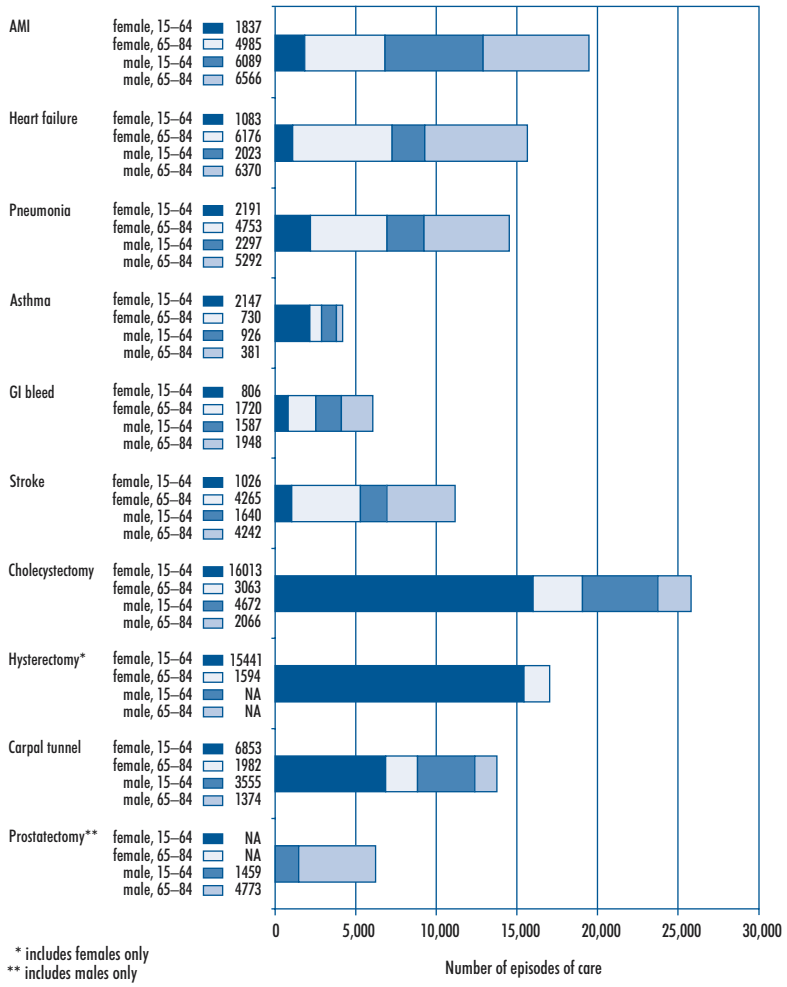
Prostatectomy is the removal of all or a portion of the prostate gland. The procedure can be done using a device called a cystoscope that is inserted through the urethra or through an incision in the lower abdomen.

Carpal Tunnel Release (CTR) is a surgical procedure on the wrist that relieves pressure on a nerve for the purpose of relieving pain, numbness, or loss of function in the hand.

Although Ontario's population has increased by about 5.8% between 1997–1998 and 2001–2002,[1] hospitalization rates in general continue to decline, even after standardizing for age and sex. Several factors may be responsible. For example, the total number of patients admitted to hospital has fallen, which may be attributable in part to the fact that outpatient care has displaced inpatient care among certain medical and surgical groups.

FIGURE 3.2: WHO WAS HOSPITALIZED IN 2001–2002?

The demographic characteristics of patients differ across the patient groups.



Source: Discharge Abstract Database, 2001–2002.

Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

Even though fewer people are being admitted to hospitals for overnight stays, the demographics of patients in the medical and surgical groups included in this report have remained relatively stable. For example, women continue to account for nearly two-thirds of carpal tunnel episodes of care and about 69% of asthma episodes of care, while men continue to account for nearly two-thirds of AMI episodes of care.

How was the Research Done?

The Data Source

Every time a patient is discharged from, or dies in, an Ontario acute care hospital, the hospital captures summary information about the hospitalization.[2] This information, called a "discharge abstract", is then sent to CIHI for compilation and analysis. Hospital discharge abstracts contain coded information about hospital stays and are protected by CIHI's Privacy and Confidentiality policies. CIHI publishes data only in aggregate formats, which preclude the identification of individual patients or caregivers.

Coding Variations and Data Quality

The CUO quadrant analysis is dependent on the consistent coding of data about patient health status across all Ontario hospitals. Numerous studies have identified some inconsistencies in the coding of these data. In addition, studies conducted jointly by the Canadian Institute for Health Information (CIHI), the Joint Policy and Planning Committee (JPPC), and the Ministry of Health and Long-Term Care (MOHLTC) have identified differences in the way that patients' co-morbidiites are coded at certain Ontario hospitals. These differences in coding practices reduce the comparability of indicator calculations among hospitals. Analysis by CIHI and the Hospital Report Research Collaborative has indicated that these variations in coding are unlikely to have major implications for hospital-level comparisons of average lengths of stay, readmission rates, or access to day-surgery or angiography. However, coding variations are likely to have a large impact on hospital-level comparisons of complication rate indicators for AMI, Pneumonia, Cholecystectomy, and Hysterectomy patients. It is important to note that the decision to exclude the hospital-specific complication indicators from this report is based on concerns over the consistency of data submitted, and not with the methodologies used to calculate the indicator values. Hospitals that are confident that their data are accurate should be able to use the complication indicators measures for their quality improvement efforts. The provincial complication rates that are reported here provide some comparative standards for these hospitals.

Data used in the CUO quadrant of this report are derived from discharge abstracts from the 2001–2002 fiscal year. These contain data that serve as a window into clinical services provided by Ontario hospitals. For comparison purposes, abstract data from the 1997–1998, 1999–2000 and 2000–2001 fiscal years were also used in most cases. Trained personnel ("abstractors") in all acute care hospitals in Ontario collect the discharge abstracts using CIHI guidelines as a framework. CIHI performs rigorous data quality checks on the abstracts and hospitals are asked to correct any errors found. That being said, some inconsistencies continue to exist.

DAD Data Submission and Verification Timeline

The following indicates the timeline from DAD data submission through to when the data are available for analysis. The dates presented are based on a processing year involving ICD-9 data. The transition to ICD-10 has delayed this processing time.

March
March 31:
End of fiscal year

April May June
April–June: Continued coding and abstracting of data by hospitals

July
July 1–15: Corrections and edits made to data
July 31:
Discharge Abstract Database closed for data processing

August September
August–September: Quarterly/annual results generated for hospitals; provincial datasets compiled for Ministries of Health; data quality review

September 30: Discharge Abstract Database ready for analysis

Selecting Patient Groups and Indicators

For quality improvement and public reporting, it helps to focus on specific, well-defined patient groups. This year's report builds on the same CUO measures used in *Hospital Report '99*, *Hospital Report 2001: Acute Care*, and *Hospital Report 2002: Acute Care*. The six medical and four surgical groups chosen represent common conditions that are treated in most Ontario hospitals. The patient groups were selected by researchers from the University of Toronto and by advisory panels comprised of physicians, nurses, therapists, and health information experts nominated by hospitals.

Once the patient groups were selected, researchers defined 29 indicators of access to technologies, clinical efficiency, and outcomes of care for province-wide analysis. These indicators were selected on the basis of a comprehensive literature review and on the advice of advisory panels.

A subset of the indicators was then calculated for each hospital. How were these indicators chosen? First, an advisory panel suggested that the community was most strongly interested in length of stay, access to technologies, and outcomes. Second, statistical analyses identified those indicators whose properties were most conducive for performance assessment. Third, preference was given to two clinical areas—AMI and hysterectomy—which were the focus of on-going educational activities at a select group of hospitals. Based on these criteria, eight measures were used in the hospital-specific comparisons and twelve measures are included at the provincial level. These twelve measures, based on seven of the ten patient groups used for the province-wide analysis, are identified in the table to the right.

Patient Group	QUALITY		EFFICIENCY	ACCESS
	Complications	Readmissions	Length of Stay	Technology/Day-Surgery
AMI	●	● H		● H
Stroke			● H	
Asthma		● H		
Pneumonia	●			
Cholecystectomy	●			● H
Hysterectomy	●	● H	● H	
Prostatectomy		● H		

● Indicates provincial level H Indicates hospital-specific

Results for these indicators are reported for each participating hospital. In order to protect patient and physician confidentiality, data are not reported for hospitals that had a small number of patients or a small number of physicians providing care in 2001–2002.

In addition, this year the CUO quadrant integrates expanded analysis and additional indicators that focus on nursing-related care and women's health. These new indicators were calculated at a provincial or hospital-specific level.

For 2003, four nursing-related care indicators—urinary tract infections following surgical procedures, hospital-acquired pneumonia, hospital-acquired pressure ulcers, and patient fractures following hospitalization—are presented at a provincial level. These four clinical indicators were selected for integration into the acute care report this year because of the availability of routinely collected province-wide data from CIHI.

The process of developing the women's health indicators mirrored that of the nursing-related care indicators. A list of indicators was developed using a literature review and consensus panel. A subset of these indicators was then selected on the basis of whether or not they could be feasibly calculated. The indicators are:

- Ratio of risk-adjusted rates for women compared to men for core CUO indicators;
- Primary caesarean section (c-section) rates across hospitals; and,
- Vaginal to abdominal hysterectomy ratio across hospitals.

The Methods

The methodology used in this report is described in detail in the *Hospital Report 2003: Acute Care Technical Summary*. It is available free of charge on *Hospital Report* series partners' and sponsors' Web sites. For a list of Web sites, see the back cover of this report. Important features of the methodology include the following:

- The analysis includes all residents of Ontario between the ages of 15 and 84 who were discharged from, or died in, acute care hospitals in the province between April 1, 2001 and March 31, 2002.
- The unit of analysis is an "episode of care". Each episode can involve more than one hospital if a patient is transferred from one acute care hospital to another. When this occurs, data are attributed to individual hospitals as follows:
  - Complications → the hospital that was treating the patient when the complication occurred
  - Readmissions → the last hospital in the episode of care prior to the readmission
  - Length of stay → the hospital that accounted for the largest proportion of a patient's total length of stay
  - Technology use → the hospital to which the patient was admitted at the beginning of the episode of care
- Patients with some clinical conditions or characteristics have consistently longer lengths of stay or higher rates of complications or readmissions. To maximize comparability, all patients with a diagnosis of cancer, human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS), or violent trauma are excluded from the analysis. In addition, there are unique exclusions for specific indicators and patient groups.
- Hospitals were sent preliminary, unadjusted raw indicator data for the 12 core CUO indicators in the summer of 2003. Hospitals verified these data, and no changes were made to the data as a result of this process.

Interpreting the Results

This quadrant reports quantitative results for clinical utilization and outcomes. To arrive at the final results, the data went through a multi-staged process involving case selection, episode-of-care building, and risk-adjustment. Some aspects of this process that should be taken into account when interpreting the results include:

- A hospital's clinical utilization and outcomes are affected by many factors, including the characteristics of the patients served. Because different hospitals serve different populations, it can be difficult to compare these outcomes. In order to provide a more appropriate basis for comparison, a combination of statistical techniques was used to risk-adjust the comparisons of length of stay and outcomes for differences in the health status of patients treated by each hospital. There are limits, however, to any risk-adjustment strategy. Risk-adjustments reduce the effect of differences in the patient populations served by different institutions, but cannot eliminate these differences. Some hospitals care for patients who are very ill or have very rare conditions. It is difficult to capture accurately the complexity of these patient groups with statistical techniques. As a consequence, the performance of some hospitals, particularly some teaching and large community hospitals, may appear to be below average, although these hospitals provided good care.
- When considering the results presented in this report, the measures of clinical performance should be thought of as screening tests. Screening tests—such as Pap smears or mammograms—are often used in medicine. Screening tests can produce both false positives (individuals with positive test results who do not have cancer) and false negatives (individuals with cancer whose test results are negative). The same is true for measures of comparative hospital performance. An effort has been made to minimize false positives, but they cannot be totally eliminated. In medicine, screening tests do not provide a final diagnosis, but can help to identify cases that need follow-up. Likewise, the measures of clinical performance in this report should not be taken as a definitive assessment of access, clinical efficiency, or quality. Rather, they are a first step in a quality assessment and improvement process that should involve more detailed analysis.
- Trends over time are presented for all core indicators. To ensure comparability, values from 1997–1998, 1999–2000, and 2000–2001 have been recalculated to reflect updated methodologies. Further, the results have been age- or age- and sex-standardized where appropriate. This standardization allows for more meaningful comparisons of results across multiple years by creating a "standard" population and applying the age- and/or sex-specific rates from the comparison years to this standard population. The results for 1997–1998, 1999–2000, and 2000–2001 data presented in this report will therefore differ slightly from those reported in previous *Hospital Reports*.

How Performance is Allocated

In this chapter, participating Ontario acute care hospitals are compared on eight indicators of access, efficiency, and outcomes. For the first time, ranges of hospitals' actual numeric indicator values are presented, instead of stars, in the hospital-specific insert that accompanies this report. These values will give the reader a more accurate indication of each hospital's actual performance than in previous years. There are a number of reasons it was decided to shift to the reporting of ranges of indicator values, including:

1. The star system did not provide enough information to support quality improvement exercises within hospitals.
2. Concerns that the star system could be misinterpreted by the public, who might conclude that a five-star hospital was five times better than a one-star hospital.
3. Problems in differentiating visually among groups of stars.

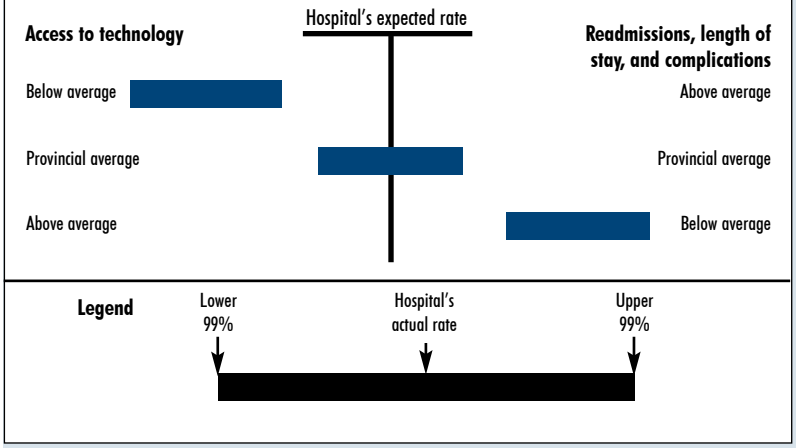
In most cases, multiple ranges were created to show the distribution of scores across hospitals. Depending on the indicator, there may be five, three, or one range(s) under which a hospital's score could be presented.

To provide some context to these numeric scores, the hospital-specific indicator values are also assigned an allocation of "above average", "provincial average", or "below average" using standard statistical techniques. These three performance levels are indicated by three symbols in the hospital-specific insert. The performance symbols are assigned as follows:

●: The hospital's score was statistically above the provincial average;
◑: The hospital's score was statistically around the provincial average;
◯: The hospital's score was statistically below the provincial average; and,
NR: Means non-reportable (some results were not shown to protect patient or physician confidentiality, or because there was incomplete data).

Hospital performance scores were assigned using a 99% confidence interval. This interval identifies the range of values within which the hospitals' results would fall due to chance alone 99 times out of 100. This interval was then compared to the expected performance of each hospital, based on provincial averages. The goal was to identify differences that were unlikely to occur by chance. For example, if the 99% confidence interval falls above the expected performance level then an above average performance level is assigned. Because hospitals with larger patient volumes have narrower confidence intervals, estimates of expected performance are more precise and thereby lead to greater certainty. As a result, differences between actual and expected rates are more likely to be found among larger hospitals. Figure 3.3 provides a graphic illustration of how the performance scores were allocated.

FIGURE 3.3: HOW CLINICAL UTILIZATION AND OUTCOMES PERFORMANCE IS ASSIGNED



Based on how performance allocations are assigned, the majority of hospitals fall into the "provincial average" category of performance allocations while fewer hospitals are below or above. This distribution is common across the indicators in all four quadrants. The Clinical Utilization and Outcomes quadrant chapter focuses on province-wide results, whereas performance allocations presented in the report insert are specific to a hospital. Performance allocations for each indicator are summarized in Appendix B. In addition, hospital-by-hospital results for 92 Ontario hospital corporations are available in the insert at the back of this report.

In order to make comparisons between hospitals as fair as possible, a combination of statistical techniques was used to risk-adjust the lengths of stay and outcomes for differences in the health status of patients treated by each hospital. There are limits, however, to any risk-adjustment strategy; while risk-adjustments reduce the effect of differences in the patient populations served by different institutions, they cannot eliminate them entirely.

To protect patient and physician confidentiality, no results are reported where a hospital treated a small number of cases or a limited number of physicians provided care. A hospital may also receive a Non-Reportable (NR) score if there were data quality problems or if the number of eligible cases was small enough that one or two occurrences of a readmission, complication, or use of technology could have had a large impact on observed performance.

Indicators of Clinical Utilization and Outcomes

Use of Technologies for AMI Patients

Health care is provided in very different ways today than in the past. Innovative drug therapies, new diagnostic and therapeutic devices, and advanced techniques and treatments are all changing how patients receive care. At the same time, however, not all patients may benefit from these changes—diagnostic and treatment options must be assessed on an individual basis.

In this section, the report focuses on how often AMI patients received certain advanced diagnostic and therapeutic technologies:

- **Coronary angiography** is often used to assess blood flow for AMI patients. In this procedure, radio-opaque dyes are injected, allowing physicians to observe the flow of blood through the heart.
- **Revascularization surgeries**—such as coronary artery bypass graft surgery (CABG) and percutaneous transluminal coronary angioplasty (PTCA)—are therapeutic procedures used to increase blood flow to the heart muscle for some AMI patients.

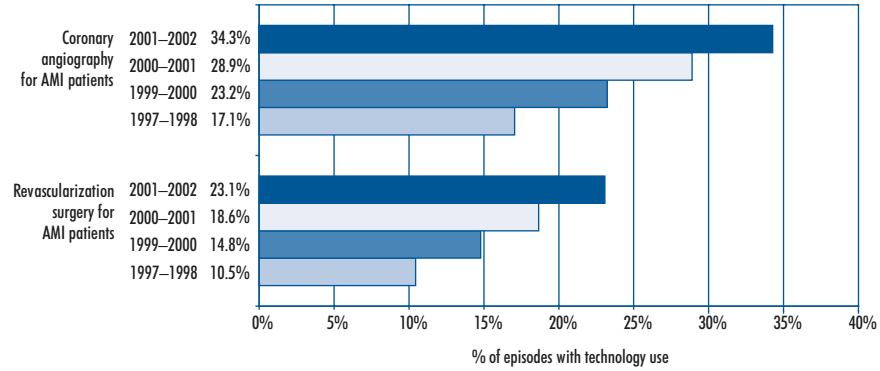
We measured the use of these technologies during a patient's hospitalization episode. Hospitals are asked to record on the discharge abstract whether a patient received these services. We counted services received in the first hospital where the patient was admitted, as well as those in other hospitals to which the patient was transferred. Patients who received a procedure at other times (e.g. a month following discharge from hospital) were not included.

Although not all patients suffering from heart attacks require these technologies, their use has generally increased over the four reported years. Almost 35% of AMI patients in 2001–2002 received coronary angiography during their episode of hospital care. This is up from approximately 17% in 1997–1998. Likewise, about 23% of AMI patients received a revascularization procedure (CABG or PTCA) in 2001–2002, up from just over 10% in 1997–1998.

There are variations in the use of these technologies across the province. For example, patients admitted to teaching hospitals were more likely to receive a coronary angiography or revascularization surgery than those in most small or community hospitals. Differences also exist between males and females. After standardizing for age, males in teaching hospitals were about 26% more likely than females in teaching hospitals to receive coronary angiography and about 45% more likely to receive revascularization surgery such as coronary artery bypass graft surgery and coronary angioplasty. There is greater equity between male and female AMI patients, in use of technology, when initially admitted to

FIGURE 3.4: USE OF TECHNOLOGY FOR AMI PATIENTS

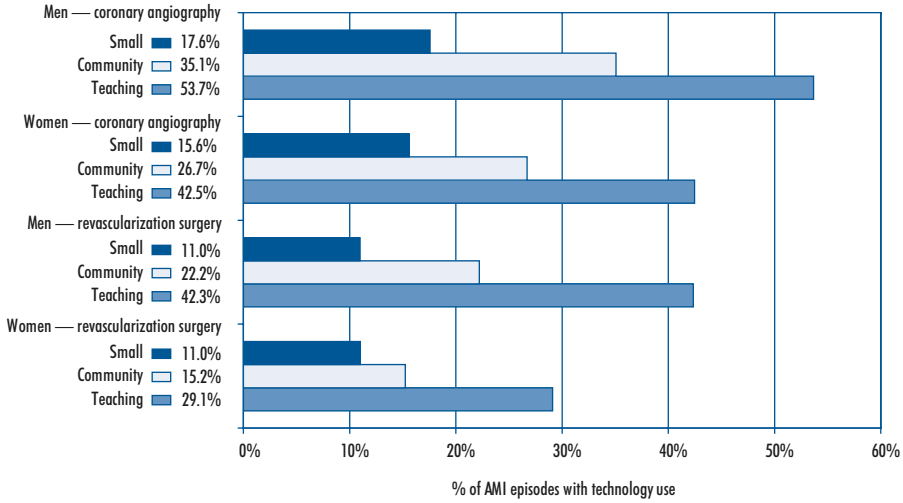
Over the four reported years, use of medical technologies for AMI patients has progressively increased. The graph below shows the percentage of AMI patients who had revascularization (CABG and PTCA) surgery and coronary angiography during their hospital stay.



Source: Discharge Abstract Database, 1997–1998, 1999–2000, 2000–2001, and 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

FIGURE 3.5: USE OF TECHNOLOGY FOR AMI PATIENTS BY SEX ACROSS HOSPITAL TYPE

The graph below shows variation in technology use for AMI patients between hospital type and sex. Men are more likely to receive an angiography or revascularization surgery than women. There is greater equity between male and female AMI patients, in use of technology, when initially admitted to small hospitals compared to when initially admitted to community or teaching hospitals.



Source: Discharge Abstract Database, 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

small hospitals, than to community or teaching hospitals. This difference may be a result of differences in severity of cases; for example, men admitted to community and teaching hospitals may be more ill and therefore more eligible to receive an angiography or revascularization surgery.

Revascularization surgery and coronary angiography rates have increased over the four reported years across all hospital types and for both sexes. For example, between 1997–1998 and 2001–2002, the number of males and females receiving coronary angiography in community hospitals increased by 20 percentage points and 12 percentage points respectively. An exception to this general increase is revascularization surgery for males admitted to small hospitals, where rates have decreased by 1.6 percentage points between 2000–2001 and 2001–2002. In addition, angiography rates for females in teaching hospitals have decreased by four percentage points between 2000–2001 and 2001–2002.

Access to Coronary Angiography Varies Across Province

Some hospitals have the capability to provide coronary angiographies on site during a patient's hospitalization. Others, particularly smaller hospitals, need to transfer patients to other facilities to access this technology. For example, roughly 92% of teaching hospitals have cardiac catheterization labs compared to less than 15% of community hospitals. No small hospitals have cardiac catheterization labs. This difference may be, in part, because many small hospitals do not have the clinical volumes to support the necessary physician and technical staff as well as the expensive equipment to perform coronary angiographies.

For the access to AMI technology indicators, values are attributed to the initial hospital that a patient visits in an episode of care. For example, if a patient is first admitted to a small hospital in rural Ontario with a suspected heart attack, and is then transferred to a larger hospital to receive a coronary angiography, this report gives credit to the small rural hospital for recognizing the need for the angiography. However, there are substantial differences in the rates of access to coronary angiography across hospitals in Ontario. In 2001–2002, AMI patients in hospitals that had cardiac catheterization laboratories were more than 75% more likely to receive a coronary angiography than similar patients in hospitals without catheterization labs.

Clinical Efficiency

The length of time that patients stay in hospital is one measure of clinical efficiency. Length of stay (LOS) is calculated as the number of days from admission to when the patient is discharged, dies, or could be appropriately treated in an alternate level of care (e.g. rehabilitation or long-term care). Hospital performance may be affected by the availability of these alternative levels of care in the community. As the "appropriate" length of stay for different types of patients is unclear, it is difficult to create benchmarks towards which hospitals should work. In particular, the shortest length of stay is not necessarily the "best" if in consequence of being discharged too early the patient is readmitted for complications related to the same condition.

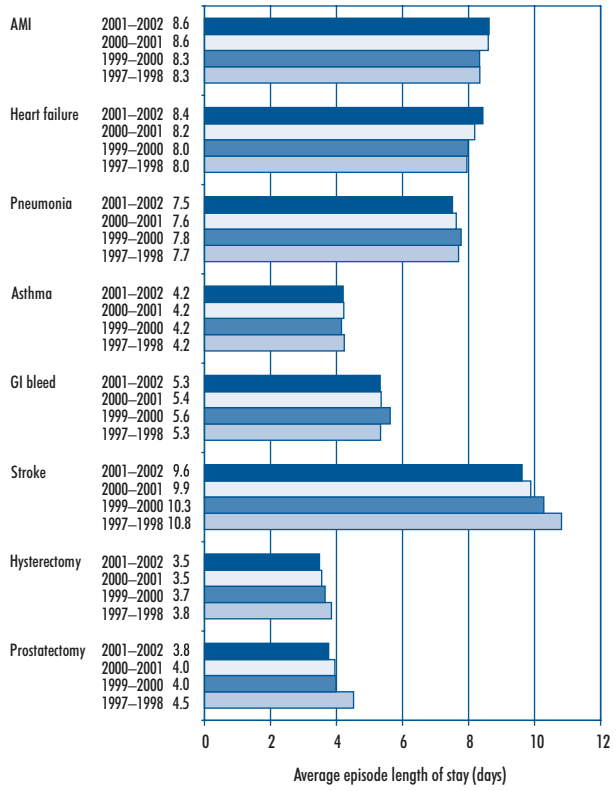
At just under ten days, stroke patients continue to have the longest average length of stay of all the patient groups included in this quadrant. AMI, heart failure, and pneumonia patients also have relatively long lengths of stay—ranging from 7.5 to 8.6 days in 2001–2002.

Average lengths of stay for most patient groups were relatively stable across the reported years. All changes from one year to the next were half a day or less. Both surgical groups—hysterectomy and prostatectomy—had progressively shorter average lengths of stay over the four reported years. This may be a result of the use of less invasive surgical techniques. The average length of stay for most medical patients also decreased. For patients with heart failure, however, there was a slight increase (0.4 days) during 1997–1998 to 2001–2002, while for AMI patients the average length of stay increased from 1997–1998 to 2001–2002 by 0.3 days, with no change between 2000–2001 and 2001–2002. Asthma patients' length of stay remained steady at 4.2 days from 1997–1998 to 2001–2002.

Across the different hospital types there was some variation in average lengths of stay. For example, the average length of stay for stroke patients was 11.6 days in small hospitals, 10.5 days in teaching hospitals, and 9.7 days in community hospitals. These rates have been risk-adjusted to account for differences in health status of patients at the different hospitals. There were much smaller differences in average length of stay for hysterectomy patients: 3.6 days in teaching hospitals, 3.5 days in community hospitals, and 3.4 days in small hospitals.

FIGURE 3.6: AVERAGE LENGTH OF STAY ACROSS PATIENT GROUPS

Over the four reported years, average lengths of stay in Ontario have remained relatively stable for most of the medical and surgical conditions examined in this report.



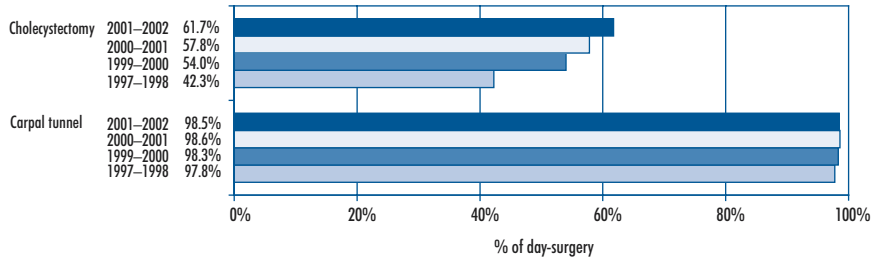
Source: Discharge Abstract Database, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures.
This is due to a change in data collection format for the 2001–2002 data.

Day-Surgery Use for Cholecystectomy and Carpal Tunnel Release Surgery

Ten years ago, patients who had their gall bladders removed could expect to stay in hospital for several days. Now, with more use of minimally invasive laparoscopic techniques, an increasing number of patients are treated in day-surgery programs. Not only do they spend less time in hospital, but these patients also tend to experience less pain after their surgery and recover more quickly. Over half (61.7%) of all cholecystectomies were performed as day-surgeries in 2001–2002, an increase of about eight percentage points over the last three reported years. Other types of procedures are also frequently provided in day-surgery programs. For example, carpal tunnel release is one of the most common procedures performed on a day-stay, or "outpatient", basis—in 2001–2002, over 98% were done as day-surgeries. This finding was consistent with rates in the three previous reported years. In next year's report, these two indicators will likely not be included because cholecystectomy and carpal tunnel release surgeries are done consistently as day-surgeries.

FIGURE 3.7: CHOLECYSTECTOMY AND CARPAL TUNNEL RELEASE AS DAY-SURGERY

An increasing number of patients are now being treated in day-surgery programs. The graph below illustrates the percentage of cholecystectomy and carpal tunnel release patients treated in day-surgery in 1997–1998, 1999–2000, 2000–2001 and 2001–2002.



Source: Discharge Abstract Database, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

Readmission Rates for Medical and Surgical Patient Groups

Following their discharge from hospital, most patients recover at home or in other types of care facilities. But some are readmitted within a short period of time due to a related health problem.

Among the patient groups studied, readmissions were most common for AMI patients. A little more than 7% of AMI patients in 2001–2002 had a related condition requiring an urgent or emergent return to hospital within 28 days of their original discharge. In contrast, readmission rates for the surgical patient groups were much lower: 1.0% for hysterectomy, 1.7% for cholecystectomy, and 2.4% for prostatectomy.

Readmission rates for most of the patient groups remained stable or increased only slightly (less than 0.5 percentage points for heart failure, GI bleed and pneumonia patients) between 2000–2001 and 2001–2002. The two exceptions to this trend were for AMI and asthma patients, whose readmission rates decreased by 0.1 and 0.3 percentage points, respectively.

Compared to the 2000–2001 asthma readmissions rates shown in last year's report, the rates for the same year shown in this year's report have decreased by 1.9 percentage points. A change in calculation methodology explains the difference: this year multiple readmissions within a 28 day window were counted only once instead of each time the patient was readmitted.

Readmission rates varied between teaching and community hospitals. Small hospitals cannot be included in the comparison of average readmission rates because too few of those participating had large enough patient volumes to provide meaningful results. The surgical patient groups saw relatively small absolute differences in rates. For example, average hysterectomy readmission rates for community and teaching hospitals were 0.8% and 1.3%, respectively; average prostatectomy readmission rates were 2.6% for community hospitals, and 2.5% for teaching hospitals. For medical patient groups there were slightly larger differences between the two hospital types: for asthma patients, the readmission rate in teaching hospitals was 1.9%; in community hospitals it was 3.1%.

Readmission rates can be affected by a number of factors related to the clinical management decisions made during the initial hospital stay, including the availability of appropriate diagnostic or therapeutic technologies, or the types of drugs prescribed on discharge. Many other factors are also important, including patient compliance with post-discharge therapy, or the quality and availability of follow-up care in the community. Furthermore, treatment of chronic conditions such as asthma and heart failure requires careful coordination and integration of care between hospital and community caregivers.

What is a Readmission?

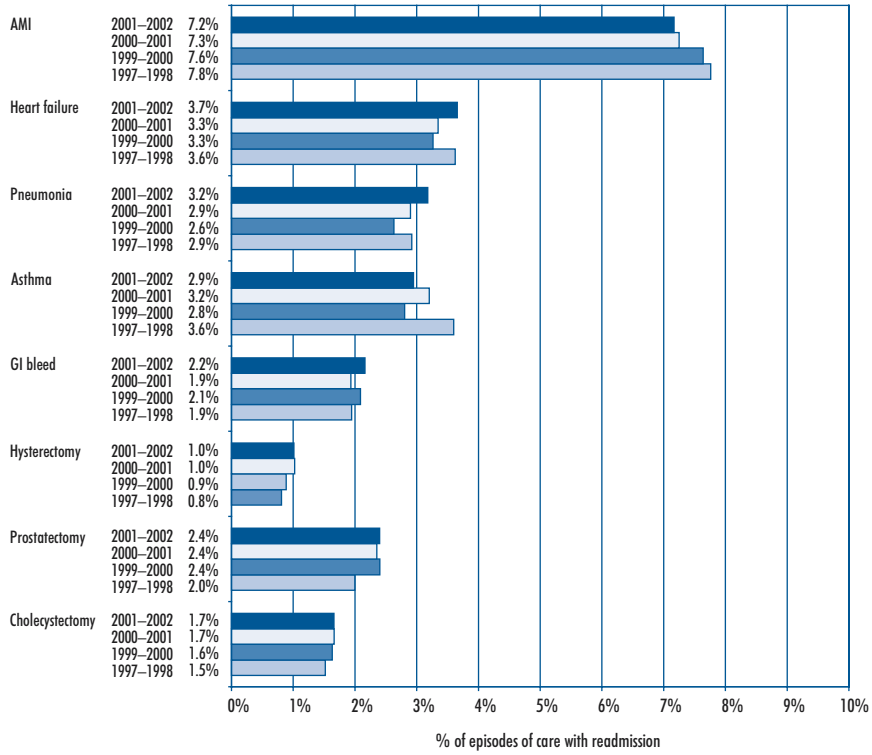
A readmission occurs during an episode of care if the subsequent hospitalization (in either the same or another Ontario acute care hospital) meets all of the following criteria:

1. It is for a diagnosis or procedure associated with the reason for the initial hospital stay.
2. It does not follow a discharge where the patient signed him/herself out (or died).
3. It occurs within a specified time period after the initial discharge.
4. It was an emergent or urgent (not elective) admission.
5. *Change in Methods:* In previous years, multiple asthma readmissions were counted each time a readmission occurred. This year, however, for cases with multiple asthma readmissions, only one readmission is counted every 28 days after the initial readmission. This is to prevent readmissions for chronic asthma patients from skewing indicator results.

However, although readmissions for medical conditions can involve factors outside the direct control of the hospital, high rates can prompt hospitals to look more carefully at their own practices. For example, they may explore such factors as the risk of discharging patients too early, or their (the hospital's) relationship with community physicians and community-based care. The "Working with Other Health Care Partners" and "Continuity of Care" indicators in the System Integration and Change quadrant chapter of this report measure some of these community relationships.

FIGURE 3.8: READMISSION RATES ACROSS PATIENT GROUPS

After patients are discharged from hospital, they are sometimes readmitted due to a related health problem. The graph below shows readmission rates in 1997–1998, 1999–2000, 2000–2001 and 2001–2002 for eight of the patient groups examined in this report.



Source: Discharge Abstract Database, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.

Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

Complication Rates for Medical and Surgical Patients

The development of complications while in hospital can be related to the quality of care provided by health professionals while the patient is in hospital and the health status of the patient upon admission. There are a number of key considerations to take into account when interpreting complication rates:

- Patients with other pre-existing health problems (co-morbidities) or more severe diseases are more likely to develop complications in hospital, regardless of the quality of care. Risk-adjustment helps to reduce the effect of differences in patients' health status on comparisons, but it does not eliminate it.
- Complications can also result from invasive diagnostic procedures and more aggressive therapies that are part of modern medical care. The long-term benefits of these advances may be accompanied by short-term risks. This trade-off emphasizes the need to look beyond single performance measures.
- The extent to which complications, disease severity, and co-morbidities are accurately recorded can have an impact on performance measurement. Hospitals with high rates of complications may record more detailed information about their patients. As such, both high and low rates of complications may signal the need for hospitals to look closely at how they provide care and record information about that care.

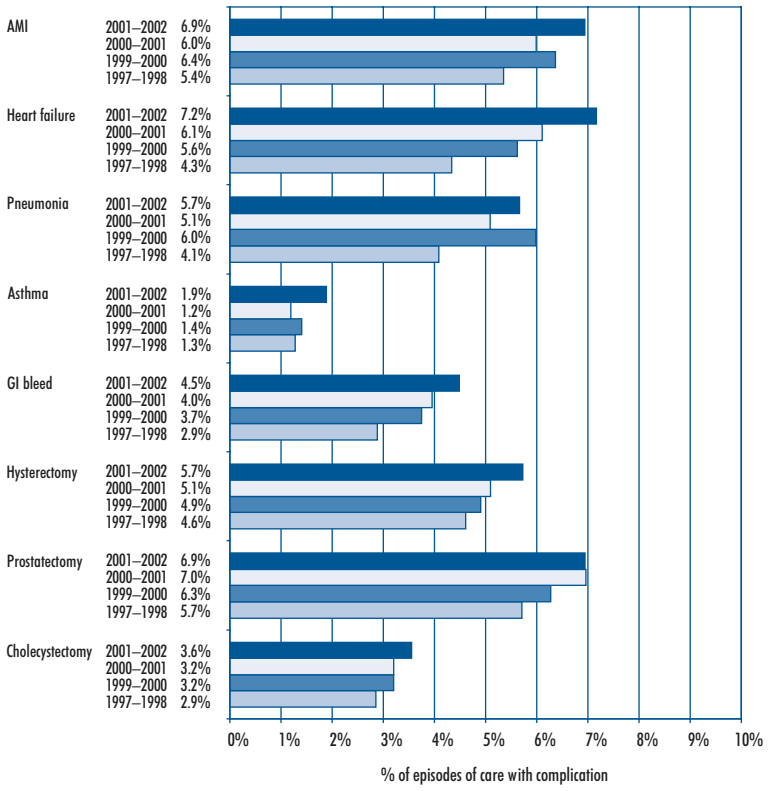
What is a Complication?

An episode of care is counted as having a complication if all of the following apply:

1. The discharge abstract for the episode includes a diagnosis that has been defined by the advisory panel as relevant to the quality of care.
2. The hospital coded that diagnosis as occurring after admission to hospital and as having an impact on length of stay or treatment.
3. The length of stay for that episode was longer than expected or the patient died in hospital.

FIGURE 3.9: COMPLICATION RATES ACROSS PATIENT GROUPS

Complication rates have increased for most patient groups over the four reported years. Reasons for this increase might include changes in the following: coding practices of complications, health status of patients upon admission to hospital, and quality of care provided to patients.



Source: Discharge Abstract Database, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

Generally, complication rates have risen between 1997–1998 and 2001–2002. However, across the province the proportion of prostatectomy cases with a complication decreased slightly (but only by 0.1 percentage point) between 2000–2001 and 2001–2002. The complication rates for the other patient groups increased by 0.4 to 1.1 percentage points. The largest proportional increase occurred for heart failure patients, the smallest for cholecystectomy patients.

It is possible that these rises in complication rates are due to changes in coding practices as well as changes in quality of care. In addition, rises in complication rates may be due to an overall increase in patient acuity in Ontario hospitals over the four reported years. The risk-adjustment models used in the analysis, which attempt to minimize differences in the health status of patients admitted to different hospitals, only adjust the data within a year, not across years. As such, differences in patients' acuity from one year to the next are not addressed.

Where are the Hospital-Specific Complication Results?

Due to some data quality issues, the four complication indicators (AMI, pneumonia, cholecystectomy, and hysterectomy complications) have been removed from the hospital-specific results for this year (province-wide results are still included). For more information on this issue, refer to the "Coding Variations and Data Quality" sidebar in this chapter.

Nursing-Related Outcomes

This year the CUO quadrant of *Hospital Report 2003: Acute Care* includes four evidence-based indicators that focus on outcomes related to nursing care. These indicators were identified through a critical appraisal of the literature and consultation with key stakeholders.[3] The four complication-based indicators are: urinary tract infections following specific surgical procedures, hospital-acquired bacterial pneumonia, skin pressure ulcers, and fractures following admission to hospital. The indicators are presented for relevant subsets of the ten patient groups used for the core CUO indicators.

Infections acquired while a patient is staying in a hospital, known as nosocomial infections, are widely considered an indicator of the quality of nursing care.[4] While nurses are not solely responsible for the control of infections, they are the only people in the hospital close to the patient every hour of the day and night, and thus, they can provide continuous, professional supervision with respect to infection control.

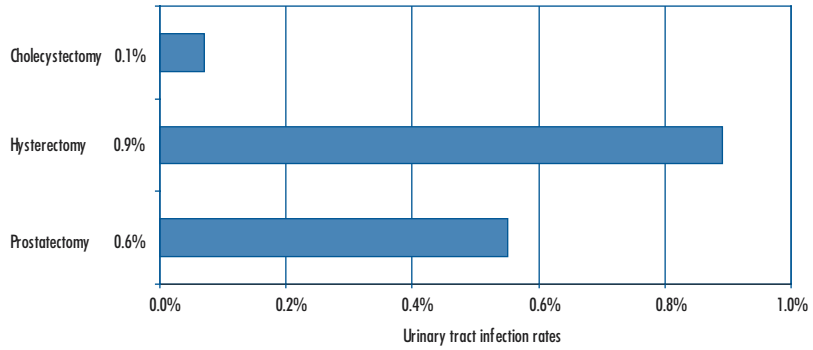
Furthermore, basic hygiene, such as handwashing, is considered the most effective preventive practice with respect to nosocomial infections.[4] Urinary tract infection, a common nosocomial infection, can occur because of the inattention to sterile techniques for placing indwelling urinary catheters or to hygiene related to the care of an indwelling urinary catheter. The placement and care of urinary tract catheters is largely a nursing function.

Ontario age- and sex-adjusted rates for urinary tract infections for the three surgical groups are very similar to the rates reported in *Hospital Report 2002: Acute Care*. The rates for the three surgical groups range from 0.1% to 0.9%. These complication rates appear to be low when compared to data from a multi-state American study, but it is important to note that American data are profoundly different from those in Canada and further exploration is necessary to determine whether or not Canadian rates truly are low.[5] The higher rates for the hysterectomy (0.9%) and prostatectomy (0.6%) groups may reflect a greater use of indwelling urinary catheters following surgery for these patients than for cholecystectomy patients (0.1%).

Two key risk factors for hospital-acquired pneumonia are: prolonged patient immobility, and inappropriate or failure to perform pulmonary hygiene techniques. Nursing care influences both these risk factors by minimizing immobility and by teaching and reinforcing pulmonary exercises to promote adequate ventilation of the lungs. The age- and sex-adjusted rates of hospital-acquired pneumonia among the specific patient groups are low, ranging between 0.36% and 3.15%. The rates are higher in the medical groups (e.g. stroke and AMI) than in the surgical groups, which may reflect in part the fact that these patients tend to be less mobile and stay in hospital for longer periods of time. For each patient group the rates calculated this year are higher than those reported for the same patient groups in *Hospital Report 2002: Acute Care*.

FIGURE 3.10: URINARY TRACT INFECTION RATES FOLLOWING SPECIFIC SURGICAL PROCEDURES IN 2001–2002

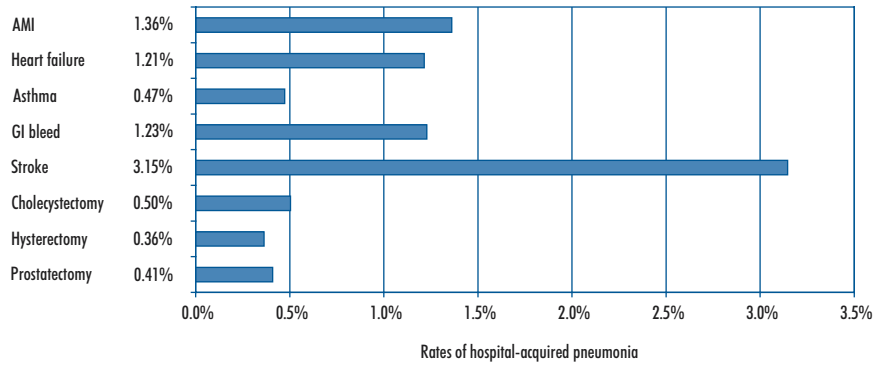
The quality of nursing care in Ontario hospitals is positively reflected by the low urinary tract infection rates for hysterectomy, prostatectomy, and cholecystectomy patients.



Source: Discharge Abstract Database, 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

FIGURE 3.11: HOSPITAL-ACQUIRED PNEUMONIA RATES ACROSS PATIENT GROUPS IN 2001–2002

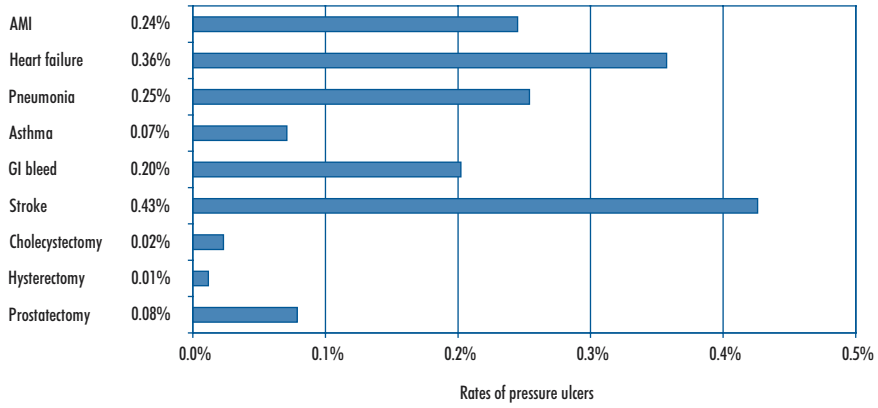
Hospital-acquired pneumonia rates are much higher for the medical patients than the surgical patients.



Source: Discharge Abstract Database, 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

FIGURE 3.12: HOSPITAL-ACQUIRED SKIN PRESSURE ULCER RATES ACROSS PATIENT GROUPS IN 2001–2002

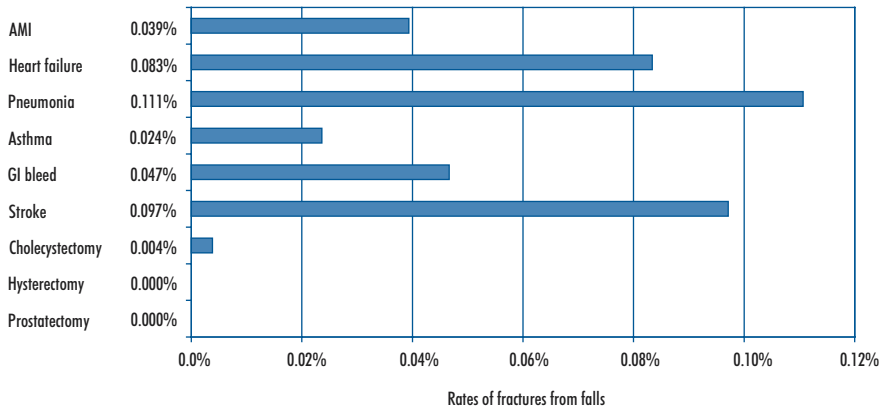
Hospital-acquired skin ulcer rates are much higher for the medical patients than the surgical patients.



Source: Discharge Abstract Database, 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

FIGURE 3.13: FRACTURES FOLLOWING ADMISSION TO HOSPITAL IN 2001–2002

Rates for fractures following admission to hospital were low, especially for surgical patients. Higher rates for some medical patient groups are expected because of known fall risk factors.



Source: Discharge Abstract Database, 2001–2002.
Note: For surgical patient groups, the 2001–2002 results do not exclude canceled or previous procedures. This is due to a change in data collection format for the 2001–2002 data.

Decubitus, or skin ulcers, is a new evidence-based indicator in *Hospital Report 2003: Acute Care*. Skin ulcerations are caused by prolonged pressure on skin areas, usually due to lack of mobility. This indicator has frequently been used for measuring nursing quality.[5] The Ontario rates are higher for the medical groups, such as stroke, heart failure, pneumonia, and AMI, than the surgical groups, which is consistent with known risk factors for skin ulcers.[6]

Fractures following admission to hospital is another new evidence-based indicator in *Hospital Report 2003: Acute Care*. These fractures are often caused by a fall, which is the leading cause of morbidity in seniors.[7] Patients are at risk of falling for a multitude of reasons, including problems with vision and functional limitations resulting from stroke, arthritis, or acute illness. Because safe practices such as the use of transfer aids and modifications of the physical environment to reduce potential fall hazards are central activities performed by nurses, this indicator has frequently been used for measuring nursing quality.[7,8,9] The age- and sex-adjusted rates for hospitalized patients who sustained a fracture of an upper limb, a lower limb, or the skull after hospital admission was highest for patients admitted with pneumonia (0.111%), stroke (0.097%) and heart failure (0.083%). Higher rates for these patient groups are expected because of known risk factors for falls. The rate of fracture after hospital admission for the surgical groups was zero, except for cholecystectomy patients (0.004%).

Women's Health

For some time, researchers and policy-makers have recognized that there are important differences in the way that women and men seek, receive, and benefit from care. There are a number of potential reasons for these differences, including:

- Differences in biology, such as the age at which diseases affect men and women or the way that diseases progress because of hormone, body size and other biological differences.
- Different roles that men and women often play in society. Because women provide the bulk of informal care in our society and make the majority of health care decisions for their families, the way that they seek care and the choices they make as users of health care may be different.
- Bias in the system. Since the landmark 1991 report by the National Institutes of Health in the United States[10], we have known that because medical research has been historically focused on men, less was known about how to treat women. Related to this problem of "absence of evidence", bias may also result from gaps in clinical education and other factors that affect the way that providers and female patients interact.

This section describes some indicators that are specific to women, such as c-section rates. It also compares the results for women and men for indicators relevant to both sexes, such as outcomes of care for pneumonia. Other chapters in the report compare performance with regard to women versus men, or highlight policies relevant to women's health, including the application of guidelines and clinical protocols to help ensure appropriate use of procedures such as c-sections.

Recent national discussions about the future of health care in Canada have emphasized values such as equity of access to care. To know whether we are achieving this it is necessary to be able to measure how the health care system is performing. Using various indicators to compare differences between care for males versus females is a first step, but other kinds of analyses will be necessary as well. These might include looking at performance in relation to where patients live, their levels of education or income, or other factors that characterize Canada's diverse population.

In 2001–2002, the proportion of births by primary c-section (c-section deliveries in women who have not had a previous c-section) was 16.5%. This represents approximately 19,500 births in Ontario, nearly a 20% increase from 1997–1998.

The c-section rate has long been a common performance indicator, along with other, related indicators. Recently a number of experts have suggested that vaginal births in women who have already had a c-section may pose risks, and that repeat c-sections may be more advisable than was previously suggested. For this reason, we are not reporting the rate of vaginal births after c-sections (or VBAC) as an indicator.

TABLE 3.1: TRENDS OVER TIME IN PRIMARY C-SECTION RATES AND THE RATIO OF VAGINAL TO ABDOMINAL HYSTERECTOMIES IN ONTARIO

This table shows the percentage of births by primary c-section as well as the ratio of vaginal to abdominal hysterectomy rates over the four reported years.

Clinical Outcome	Fiscal Year			
	1997–1998	1999–2000	2000–2001	2001–2002
Primary c-section rates	13.9%	14.7%	16.0%	16.5%
Ratio of vaginal to abdominal hysterectomy rates	0.52	0.45	0.44	0.41

Source: Discharge Abstract Database, 1997–1998, 1999–2000, 2000–2001, 2001–2002.

Debate also continues over what is an "appropriate" c-section rate. A number of studies have shown that a substantial proportion of women would prefer to deliver by c-section. In many cases, as well, c-sections may be performed to avoid potential complications that would require resources not readily available

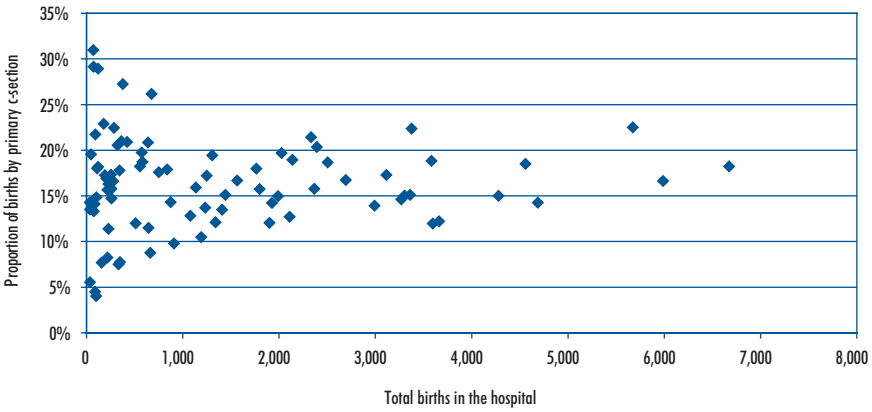
in many hospitals. There is therefore no "right" rate of primary c-section births. The important element of reporting c-section rates is to allow examination of the variation in rates across hospitals. Figure 3.14 compares the variation in the proportion of births by primary c-section rates with the total number of births in each hospital.

Figure 3.14 shows that there is greater variation when there are fewer births at a hospital. However, there still is substantial variation in these rates in hospitals with higher numbers of births. This variation suggests that there may be opportunities for physicians and other care providers to communicate with and further educate patients about the risks and benefits of various birthing options and to ensure that adequate resources are available to support patient decision-making and preferences.[11,12]

Figure 3.15 presents similar information for the ratio of vaginal to abdominal hysterectomies. These ratios reflect the variation in frequency of hysterectomies performed through the vagina versus through the abdomen. As vaginal hysterectomies are associated with fewer complications and shorter lengths of stay, higher ratios (greater than 1.00) are generally better. Once again, however, there is no "correct" ratio; rather it is important to examine and use variation as a starting point towards identifying hospitals with high rates along with other positive outcomes associated with those rates.

FIGURE 3.14: PROPORTION OF BIRTHS BY PRIMARY C-SECTION AGAINST TOTAL BIRTHS IN EACH ONTARIO HOSPITAL

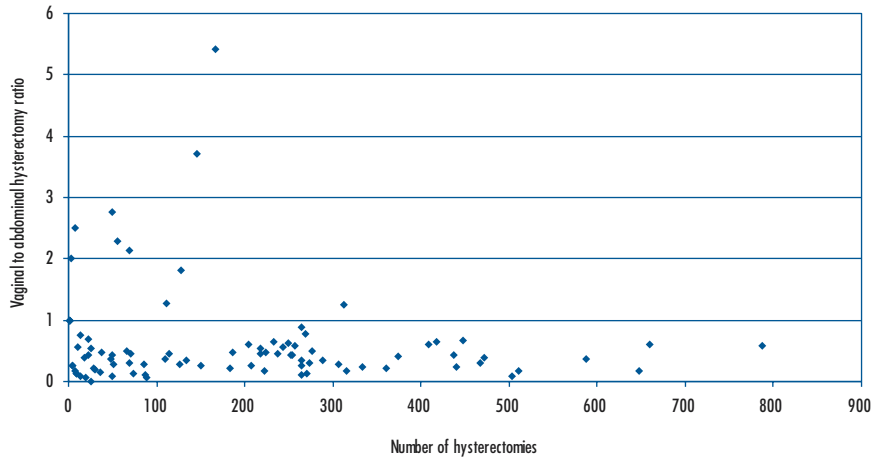
Rates of primary c-section (c-section deliveries in women who have not had a previous c- section) vary across Ontario hospitals.



Source: Discharge Abstract Database, 2001–2002.

FIGURE 3.15: RATIO OF VAGINAL TO ABDOMINAL HYSTERECTOMIES AGAINST TOTAL NUMBER OF HYSTERECTOMIES IN ONTARIO IN 2001–2002

Few hospitals have a high ratio of vaginal to abdominal hysterectomies. A ratio greater than one indicates more vaginal hysterectomies were performed than abdominal hysterectomies. A higher vaginal hysterectomy rate is generally considered better since vaginal hysterectomies are associated with fewer complications and shorter lengths of stay.



Source: Discharge Abstract Database, 2001–2002.

Table 3.2 describes trends over time in the care provided to women compared to men. In each case, risk-adjusted rates for the indicators included earlier in this chapter are calculated separately for men and women. Then the ratio of the risk-adjusted rate for women compared to men is calculated. Ratios higher than 1.00 indicate that women tend to experience more of a certain indicator, for example longer lengths of stay, higher readmission rates, or more access to a technology. Ratios less than 1.00 indicate the opposite. It is unlikely that women and men "should" have the same value for any indicator. For example, women typically develop heart disease later in life, which makes many interventions, such as angiography, potentially more difficult. The critical issue when looking at these charts is whether or not the ratio is getting closer to 1.00, suggesting that equity in care is improving.

Table 3.2 shows that there has been relatively little change in many of these ratios over the past four years: small changes such as a slight decline in access to angiography are counter-balanced by a small decline in AMI complications. Women continue to be less likely to receive angiography and more likely to experience readmissions for related illnesses following AMI. In contrast, women are much more likely to receive day-surgery cholecystectomy and much less likely to experience complications of cholecystectomy.

TABLE 3.2: TRENDS OVER TIME IN INDICATOR RESULTS FOR MEN AND WOMEN

This table shows that there has been some change in the ratios of risk-adjusted rates for women compared to men, especially for AMI and pneumonia. The closer the ratio is to 1.00, the more equity there is in care received by men and women. A ratio greater than 1.00 indicates the provincial rate for the indicator is higher for women than for men, while a ratio less than 1.00 indicates the reverse.

Clinical Outcome	Fiscal Year			
	1997–1998	1999–2000	2000–2001	2001–2002
Access to angiography	0.81	0.79	0.79	0.77
AMI complications	1.19	1.36	1.29	1.24
AMI readmissions	1.10	1.12	1.06	1.23
Cholecystectomy day-surgery	1.32	1.28	1.23	1.27
Cholecystectomy complications	0.39	0.37	0.38	0.38
Pneumonia complications	0.93	1.02	1.09	1.05

Source: Discharge Abstract Database, 1997–1998, 1999–2000, 2000–2001, 2001–2002.

Summary

In this report, we compare results for 2001–2002 (the latest data available) to 2000–2001 (the year reported in *Hospital Report 2002: Acute Care*), 1999–2000 (the year reported in *Hospital Report 2001: Acute Care*), and 1997–1998 (the year reported in *Hospital Report '99*). Findings include:

- The percentage of day-surgery patients as a proportion of all acute care patients in Ontario has increased from less than 47% to around 50% over the four reported years covered in this report.
- For seven of the ten patient groups, hospitalization rates decreased. The three exceptions were carpal tunnel release surgery patients, GI bleeding, and AMI cases (Figure 3.1).
- Almost 35% of AMI patients in 2001–2002 received coronary angiography during their episode of hospital care, up from approximately 17% in 1997–1998. Likewise, about 23% of AMI patients received a revascularization procedure (CABG or PTCA) in 2001–2002. This was up from just over 10% in 1997–1998 (Figure 3.4).
- At just under ten days, stroke patients have the longest average length of stay of all the patient groups included in this quadrant. AMI, heart failure, and pneumonia patients also have relatively long lengths of stay—ranging from 7.5 to 8.6 days in 2001–2002 (Figure 3.6).

- Among patient groups studied, readmissions were most common for AMI patients; in 2001–2002 over 7% had a related condition requiring an urgent or emergent return to hospital within 28 days of their original discharge (Figure 3.8).
- Generally, complication rates have risen between 1997–1998 and 2001–2002. This may be due to coding changes, increased acuity of patients in Ontario acute care hospitals and quality of care. However, across the province the proportion of prostectomy cases with a complication decreased between 2000–2001 and 2001–2002. For the other patient groups for which complication rates are calculated, these increased by 0.4 to 1.1 percentage points (Figure 3.9).
- The outcomes related to nursing care (urinary tract infection, hospital-acquired pneumonia, skin pressure ulcers, and fractures following admission to hospital) have rates that appear to be low when compared to data from a multi-state American study.[5] However, it is important to note that American data is profoundly different from that in Canada and further exploration is necessary to determine whether or not these rates truly are low.
- Women continue to be less likely to receive angiography and more likely to experience readmissions for complications following AMI. In contrast, women are much more likely to receive day-surgery cholecystectomy and much less likely to experience complications of cholecystectomy.

Next Steps

This year's analysis for the CUO quadrant focuses on the same patient groups as in previous years. However, there were a number of modifications made to the methodologies that underlie the clinical indicators in this year's report. This reflects the fact that the development of the methodologies used to calculate each indicator is an ongoing evolutionary process.

Over the next year, the CUO quadrant will continue to undergo a major redevelopment, as part of the ongoing "rolling redevelopment" strategy for future acute care hospital reports. The literature review for this redevelopment has begun and includes a comprehensive review of current indicators to ensure their ongoing relevance to hospitals. It will also examine new approaches, new outcome and utilization measures, and the inclusion of new patient groups. For example, ways to quantify issues regarding access to care will be examined and patient safety outcomes will be considered for inclusion in next year's report. Finally, it will further incorporate women's health and nursing-related care indicators into the quadrant. The redevelopment team will include technical and clinical experts who will be guided by hospital-CEO nominated advisory groups composed of physicians, nurses, and hospital administrators.

There are several recommendations for the future development of the nursing component of the CUO indicators that will be pursued. Further research and consultation with clinicians will be undertaken to refine the method for risk-adjustment for the clinical outcome indicators relevant to nursing. This will enable refinement of the level at which performance data will be reported with the aim of hospital-level reporting for diagnostically determined and procedurally determined patient groups. Research is being conducted to establish the feasibility of collecting data on functional status, self-care status, and symptom control. The results of this research are expected to inform the development of nursing performance indicators for future *Hospital Reports*.

Future work for the women's health section will identify best practices in equity, better ways of measuring equity, and indicators that are more useful for quality improvement exercises that accommodate important issues such as women's health.

For more information

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[2] Canadian Institute for Health Information. (1999). *Canadian Coding Sourcebook*. Ottawa: CIHI.

[3] McGillis Hall L, Doran D, Spence Laschinger H, Mallette C, O'Brien-Pallas L, Pedersen C. (2001). *Nursing Report 2001: Preliminary Study for Hospital Report 2001*.

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[5] Needleman J, Buerhaus P, Mattke S, Stewart M, Zelevinsky K. (2002). *Nurse Staffing and Patient Outcomes in Hospitals*. Boston: Harvard School of Public Health. Final report.

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[7] RNAO Registered Nurses Association of Ontario. (2002). *Nursing Best Practice Guideline Shaping the Future of Nursing: Risk Assessment & Prevention of Falls*. Toronto: RNAO.

[8] Majesky SJ, Brester MH, Nishio KT. (1978). Development of a research tool: patient indicators of nursing care. *Nursing Research*, 27(6), 365–371.

[9] Blegan MA, Vaughn TE, & Goode CJ. (2001). Nurse experience and education: effect on quality of care. *Journal of Nursing Administration*, 31, 33–39.

[10] National Institutes of Health. *Agenda for Research on Women's Health for the 21st Century*. 1999: 10.

[11] Caesarean Section Working Group. (October 2000). *Attaining and Maintaining Best Practices in the Use of Caesarean Section*. Toronto: Ontario Women's Health Council. Available at: www.womenshealthcouncil.on.ca

[12] Lomas J, Anderson GM, Domnick-Pierre K, *et al*. (1989). Do practice guidelines guide practice? The effect of a consensus statement on the practice of physicians. *New England Journal of Medicine*, 321: 1306–1311.

Patient Satisfaction

Patient Satisfaction

Hospital Report 2003: Acute Care, in its fourth year of reporting, once again describes how Ontario patients view the quality of the care they received while in hospital. By asking patients what they think about the quality of care and services provided to them, the Patient Satisfaction quadrant provides an important measure of patients' perspectives.

The Standardized Hospital Patient Satisfaction Survey (SHoPSS) on which this quadrant has been based, is one of the largest patient satisfaction surveys in Canada. The quadrant findings in this year's report were based on the Parkside survey questionnaire that asked patients across Ontario their opinions of the care they received. However, Ontario hospitals have adopted a new questionnaire from the National Research Council (NRC) and Picker Group Canada that will replace the Parkside questionnaire and form the basis for the Patient Satisfaction quadrant in the 2004 series reports. This is described in further detail in the "Next Steps" section at the end of this chapter.

What are Ontario hospitals doing with this new information? One year after Ontario acute care hospitals received their 2002 SHoPSS results, 92% reported having made some change based on the survey findings, an increase from the previous year. This year's Acute Care System Integration and Change survey identified several common themes in the way Ontario hospitals are addressing patient satisfaction concerns. See the "Listening to Patients" section of this chapter for more details on these initiatives, as well as Figure 4.13 for a breakdown of specific opportunities for change that hospitals identified.

What's New for 2003

This year's findings continue to build on the Patient Satisfaction indicators presented in previous *Hospital Reports*. Similar to the other quadrants, numeric ranges which include a hospital's numeric score have replaced the star-based system of performance allocations.

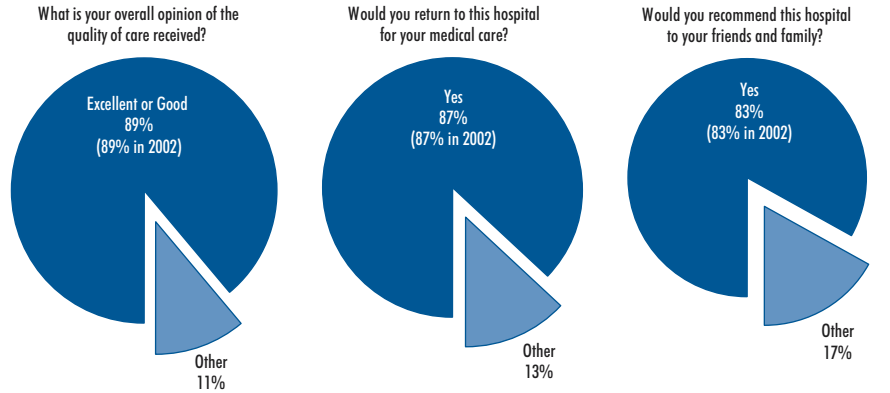
Patient Satisfaction: A Snapshot of Ontario Hospitals

With the introduction in 1999 of SHoPSS as a tool for the *Hospital Report* project, comparisons between hospitals became possible. Three of the 65 questions in the survey ask patients about their hospital experience in general. Considered "bottom-line", i.e. fundamental questions, together they comprise the Global Quality indicator.

In results consistent with those of previous reports, 89% of patients indicated that their overall quality of care was excellent or good. Similar to 2000–2001, the overwhelming majority of patients (87%) also affirmed that they would return to the hospital, and 83% said that they would recommend the hospital to friends and family.

That being said, it is useful to add that while the Global Quality indicator is a good measure of patients' overall perceptions of their care, it can be influenced not just by a hospital's efforts to improve care, but by factors such as a patient's medical condition, encounters with health care providers and/or room assignments (e.g. private or shared room).

FIGURE 4.1: QUESTIONS MAKING UP THE GLOBAL QUALITY INDICATOR



Source: Standardized Hospital Patient Satisfaction Survey, 2001–2002.

Other questions from the SHoPSS are also combined to provide summary measures, or indicators, of unique dimensions of patient satisfaction. These indicators can serve as guideposts to help shape hospital goals and measure progress in the improvement of care and satisfaction. In total, ten indicators are calculated from patient responses to the SHoPSS; eight are presented in the Patient Satisfaction quadrant, the other two are discussed in the System Integration and Change quadrant chapter.

Figure 4.2 presents province-wide indicator scores, weighted for differences in patient volumes. The weighting of hospital indicator scores by patient volume reflects the actual discharge pattern of each hospital on the province-wide indicators. For example, teaching hospitals generally have larger patient volumes

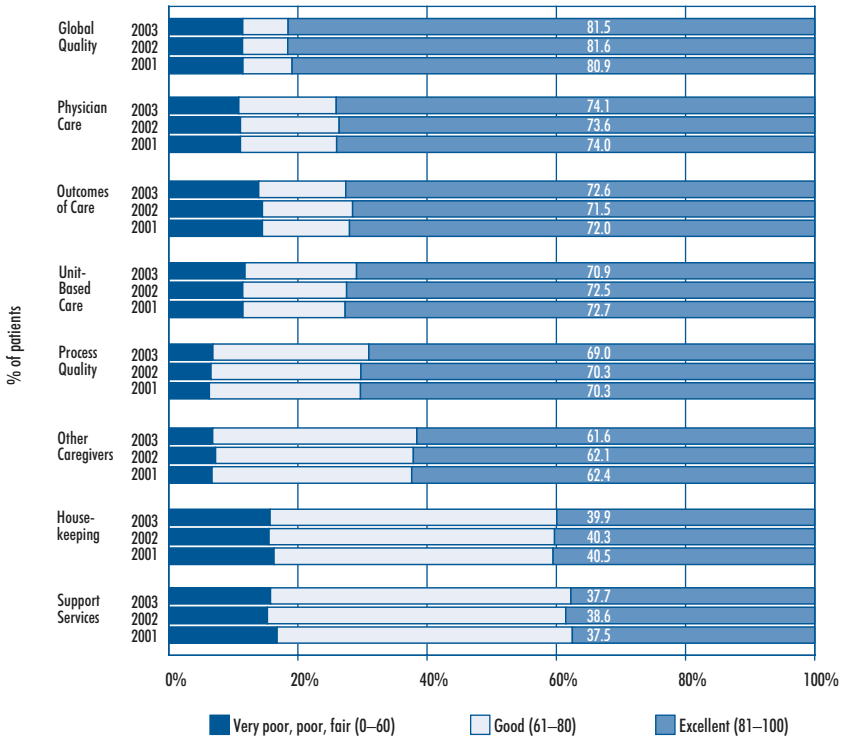
What Makes Up the Eight Indicators of Patient Satisfaction

- **Global Quality**–three questions dealing with the overall quality of care received at the hospital and whether patients would return to the hospital or recommend the hospital to others who need care.
- **Process Quality**–the best overall comprehensive indicator of patient satisfaction as it includes most aspects of quality of care and services. This indicator is based on 55 questions and 9 subscales.
- **Unit-Based Care**–ten questions about patients' perceptions of the skill, courtesy, sensitivity, level of communication, and efficiency of unit-based care providers, e.g. nurses.
- **Physician Care**–ten questions about patients' perceptions of the skill, courtesy, sensitivity, level of communication, and efficiency of care provided by physicians.
- **Support Services**–five questions about the courtesy of hospital support staff (social workers, volunteers, and receptionists), as well as the quality of food served.
- **Housekeeping**–five questions about the patients' overall impressions of housekeeping services provided in the hospital, including cleanliness of the hospital and courtesy of housekeeping staff.
- **Other Caregivers**–four questions about patients' satisfaction with the skill and courtesy of individuals in the hospital who drew blood, the radiology personnel, and physiotherapists.
- **Outcomes of Care**–three questions relating to patients' satisfaction with the outcome of their hospital care.

Note: For all of the specific questions that make up each indicator, refer to the *Hospital Report 2003: Acute Care Technical Summary*.

FIGURE 4.2: PROVINCE-WIDE PATIENT SATISFACTION

Province-wide results for the eight indicators of patient satisfaction are presented below. Indicator scores are divided into three groups: very poor, poor or fair; good; and excellent. In four of the eight indicators over 70% of patients reported high levels of satisfaction (a rating of excellent). The Global Quality indicator had the highest percentage of patients reporting excellent satisfaction (81.5%). In contrast, only 37.7% of patients rated the Support Services indicator as excellent, with 15.8% indicating that these services were either very poor, poor or fair. Over the last 3 reporting years, the number of patients rating Housekeeping, Other Caregivers, Process Quality and Unit-Based Care as excellent have been declining while Global Quality, Physician Care, Outcomes of Care and Support Services have shown increases in ratings of excellent since 2001.



Source: Standardized Hospital Patient Satisfaction Survey, 2000–2002.*

*Sample populations are not the same from year to year, nor are the participating hospitals. Numbers are as reported in the corresponding *Hospital Report: Acute Care* for each year.

There's More...

Patient Satisfaction indicators addressing Coordination and Continuity of Care are presented in the System Integration and Change chapter. This quadrant captures the extent to which Ontario hospitals integrate their services with community partners and develop innovative practices. As well, the Intensity of Information Use and Hospitals in the Community indicators in the System Integration and Change chapter measure hospital dissemination of patient satisfaction results to physicians, staff, hospital boards, and the community.

Indicator Scores and Percentage of Patients?

When discussing "indicator scores" and "percentages of patients", the difference may not be immediately apparent. The indicator score simply refers to the average, or mean, of all responses for a particular indicator across the province. Indicator scores range from 0 to 100. Each integer on this scale is referred to as an indicator point. Figure 4.2 and Figures 4.4 through 4.11 show results displayed according to five rating categories: excellent, good, fair, poor and very poor. In the case of these figures, we are talking about the percentage of patients whose individual indicator scores fall within one of these categories, based on a defined scale. For further detail, refer to the *Hospital Report 2003: Acute Care Technical Summary*.

than small hospitals and will therefore contribute more to the province-wide indicator score. Of all hospitals participating in this survey, teaching hospitals treated 2.5 times as many patients on average than did community hospitals, which in turn treated approximately 5.6 times more patients than small hospitals.

Just as there are differences in patient volumes among small, community and teaching hospitals, there are consistent differences in average indicator scores of satisfaction among these three hospital peer groups.

On average, patients treated in small hospitals reported higher levels of satisfaction than those treated in community or teaching hospitals. The greatest difference was for the Housekeeping indicator: it was nine indicator points higher for small hospitals than for teaching hospitals and eight indicator points higher for community hospitals. See the *Hospital Report 2003: Acute Care Technical Summary* for more details summarizing provincial comparisons by the three hospital types.

Province-wide scores are discussed in detail for each of the eight indicators of patient satisfaction, including the presentation of results by sex. For each indicator, males reported slightly higher patient satisfaction scores than females. On average, males reported 1.7 indicator points higher than females for each indicator (note: the indicator specific sections that follow discuss the differences for these indicators in more detail). The greatest difference between males and females was for the Unit-Based Care indicator, which was approximately one standard deviation, or 2.9 indicator points, higher for males. Patient satisfaction with hospital care also seems to be related to age[1] as well as sex: on average male seniors sixty years of age and older reported the highest satisfaction levels for all indicators, while females in their twenties reported the lowest satisfaction levels for all indicators.

How was the Research Done?

The Data Source

Standardized surveys were mailed to just over 71,700 patients who stayed at least overnight in Ontario acute care hospitals and were discharged between January and March of 2002. Approximately 50% of the surveys were completed and returned. For a hospital's indicator score to be presented at the hospital-specific level (see the insert at the back of this report), at least 100 valid survey responses from general medical and surgical inpatients (excluding psychiatry and obstetrics patients) were required. Hospitals that did not reach this minimum requirement received a Non-Reportable (NR) rating, meaning that hospital-specific values were not calculated.

Selecting the Indicators

This year's Patient Satisfaction indicators are the same as those used in previous *Hospital Report: Acute Care* reports. In developing the Patient Satisfaction quadrant for *Hospital Report '99*, an advisory group of hospital representatives selected the Parkside questionnaire from responses to a Request for Proposals issued by the Ontario Hospital Association. Using data from a pilot test of this survey and advice from the advisory group, researchers developed ten indicator scales by combining questions that were conceptually and statistically related. To do so, questions were converted to scores out of 100 and results for questions that made up an indicator scale were then averaged.

The Methods

The methodology used in this report is described in detail in the *Hospital Report 2003: Acute Care Technical Summary*, available free of charge on the Web sites of partners and sponsors of the *Hospital Report* series. For a list of Web sites, see the back cover of this report. Important features of the methodology include:

- Patients from three types of hospitals were surveyed: 15 small, 64 community, and 13 teaching hospitals, for a total of 92 hospitals. Eight small hospitals did not meet the 100 survey response level required for hospital-specific reporting in the Patient Satisfaction quadrant. Therefore the hospital-specific portion of this report contains the Patient Satisfaction indicator values for only 84 hospitals.
- Not all questions on every survey were answered. In total, 764 surveys (approximately 2%) were dropped from the analysis because fewer than half of the questions were completed on each survey.

There's More in the Technical Summary

The *Hospital Report 2003: Acute Care Technical Summary* provides additional background material on such topics as:

- History of the survey tool;
- How the categorical responses are translated into numerical scores;
- Risk-adjustment techniques and multiple regression analysis; and,
- Weighting of indicator scores by patient volume.

How Performance is Allocated

In past reports, participating Ontario acute care hospitals were compared on eight indicators of Patient Satisfaction. Depending on their results, each hospital received one of five possible performance allocations: "above average", "somewhat above average", "provincial average", "somewhat below average", and "below average".

The content and methodologies of the *Hospital Report* series have evolved, so this year the way performance is measured has been updated. For the first time this year, for each indicator, and for each participating hospital, a numeric range that includes the hospital's numeric score is presented. The ranges vary across indicators. In addition to the ranges, a symbol that indicates whether the hospital's score on each indicator was "above average", "provincial average" or "below average" has also been included.

There are a number of reasons behind the shift from the star system to the numeric range reporting:

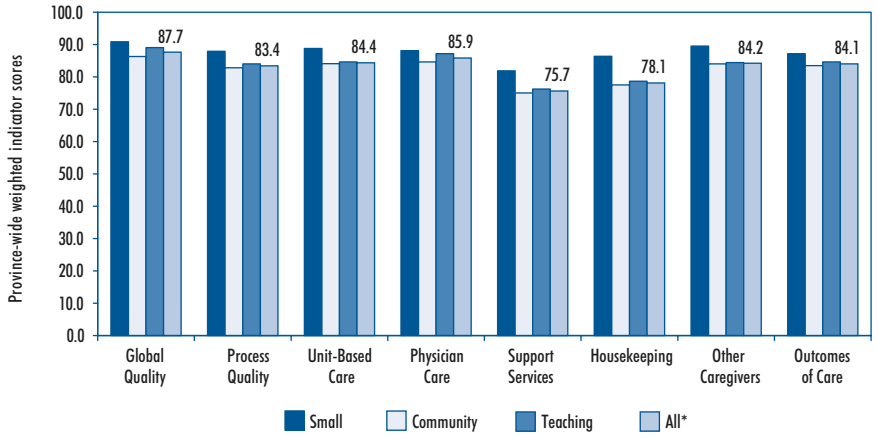
1. Concerns about how the star system was perceived and understood by the public, which thought that a five-star hospital was five times better than a one-star hospital.
2. The star system did not provide sufficient information to patients and consumers about the quality of care provided in hospitals.
3. Problems in differentiating visually among groups of stars.

Based on how a 99.9% confidence interval (a range where the true indicator value would be expected to fall with a confidence of 99.9%) for the hospital's score compares with the provincial average, each hospital is allocated one of the three performance symbols. Under this allocation system "above average" and "below average" performance means that the hospital's score was statistically different (see the *Hospital Report 2003: Acute Care Technical Summary* for a detailed definition of "statistical difference") from the provincial average. A graphical presentation of the confidence interval based allocation is presented in the *Hospital Report 2003: Acute Care Technical Summary*. The purpose of such a detail comparison is to identify the differences that are unlikely to occur by chance. Before assigning the performance allocations, the indicator values were risk-adjusted (using multiple regression analysis) to control for differences across hospitals with regard to key patient characteristics, such as, age, gender, self-reported health status, number of hospitalizations during the recent past and if some one else other than the patient provided the responses to the survey questionnaire. Patients' adjusted indicator values are then averaged to derive a rating for each hospital. The hospital specific numeric ranges and performance allocations for 84 Ontario hospitals are available in the insert at the back of this report. The performance allocation symbols are assigned as follows:

●: The hospital's score was statistically above the provincial average;
◑: The hospital's score was statistically around the provincial average;
○: The hospital's score was statistically below the provincial average; and,
NR: Means non-reportable (some results were not shown to protect patient or physician confidentiality, or because there was incomplete data).

FIGURE 4.3: PATIENT SATISFACTION BY PEER GROUPS

When comparing patient satisfaction by peer groups, small hospitals consistently achieve the highest scores in every indicator with an average difference of 4.7 indicator points over the province-wide average for all peer groups. Teaching hospitals scored slightly higher than the province-wide average with an average difference of 0.7 indicator points. Community hospitals scored 0.7 indicator points below the province-wide average for all peer groups.



*Only data labels for the province-wide indicator scores for all peer groups have been shown.
Source: Standardized Hospital Patient Satisfaction Survey, 2002.

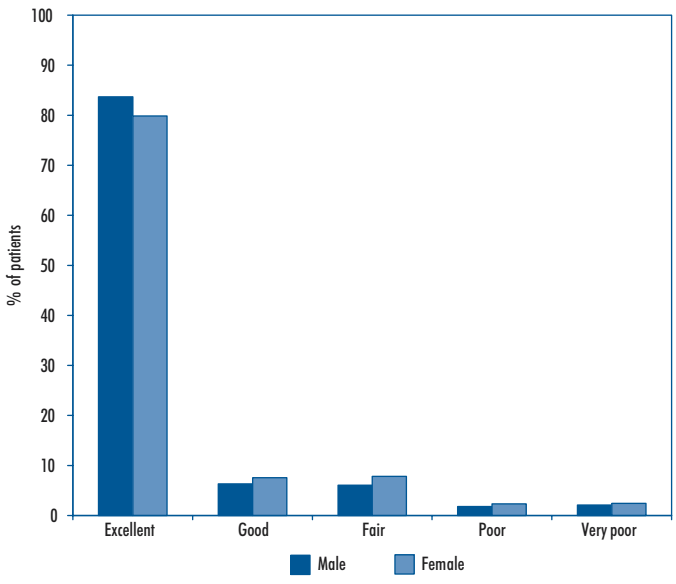
- Research has shown that a patient's age, sex, and self-assessed health tend to make a difference in satisfaction levels.[2,3] To make comparisons as fair as possible, a statistical "risk-adjustment" technique was used to control for pre-existing influences.

Global Quality

The Global Quality indicator measures patients' overall response to their hospital care after their stay. This indicator consistently has the highest scores for patient satisfaction. For *Hospital Report 2003: Acute Care*, the province-wide Global Quality indicator score was 87.7 points out of 100. When the Global Quality indicator was analyzed by sex, males reported moderately higher scores than females: 88.8 versus 86.9 points out of 100, respectively, but overall 81.5% of Ontario patients reported levels of high satisfaction (a rating of excellent). Global Quality is the only indicator in which more than 80% of hospital patients (both males and females) report excellent satisfaction. Though there was a slight decrease from 2002 to 2003, the Global Quality indicator still shows the greatest increases over the four hospital report years (more than two indicator points from 1999 to 2003).

FIGURE 4.4: PATIENTS' GLOBAL PERCEPTIONS

The graph shows the percentage of male and female patients giving ratings in each of the five response categories for the Global Quality indicator.



Source: Standardized Hospital Patient Satisfaction Survey, 2002.

What Makes Up the Global Quality Indicator?

The Global Quality indicator is based on three survey questions:

1. What is your overall opinion of the quality of care received?
2. Would you return to this hospital for your medical care?
3. Would you recommend this hospital to your friends or family?

Process Quality

The Process Quality indicator is considered the best overall comprehensive indicator of patient satisfaction. It is more closely linked to the actual care the patient received than the Global Quality indicator. The Process Quality indicator is a measure made up of nine subscales (comprising 55 questions) which includes most aspects of patient satisfaction relating to the quality of care and services. For further details, refer to the *Hospital Report 2003: Acute Care Technical Summary*.

The Unit-Based Care and Physician Care subscales combined contribute 41% of the weight towards the Process Quality indicator, while Support Services, Housekeeping, Other Caregivers and Continuity of Care account for almost 42%. These six subscales are also presented as individual indicators in this report. The subscales Admissions, Pain Management, and Finances (for example, patient costs for crutches) account for the remaining 17% of the Process Quality indicator score.

The province-wide Process Quality indicator score was 83.4 points out of 100, with 69.0% of Ontario patients reporting high levels of satisfaction (a rating of excellent). When the Process Quality indicator was analyzed by sex, males reported moderately higher scores than females: 84.4 compared to 82.6 points out of 100, respectively.

How have hospital indicator scores changed over the last year? Of those hospitals that participated in the previous reporting year, 19% showed an increase of more than one indicator point in the Process Quality indicator score while the same percentage showed a decrease of more than one indicator point.

What Makes Up the Process Quality Indicator?

The Process Quality indicator is made up of nine subscales. Six of the nine subscales are also presented as individual indicators in this report, while three subscales are used only for calculating this indicator. The table below shows the weight out of 100 that each of the nine subscales contributes towards the Process Quality indicator.

TABLE 4.1: INDICATOR SUBSCALES

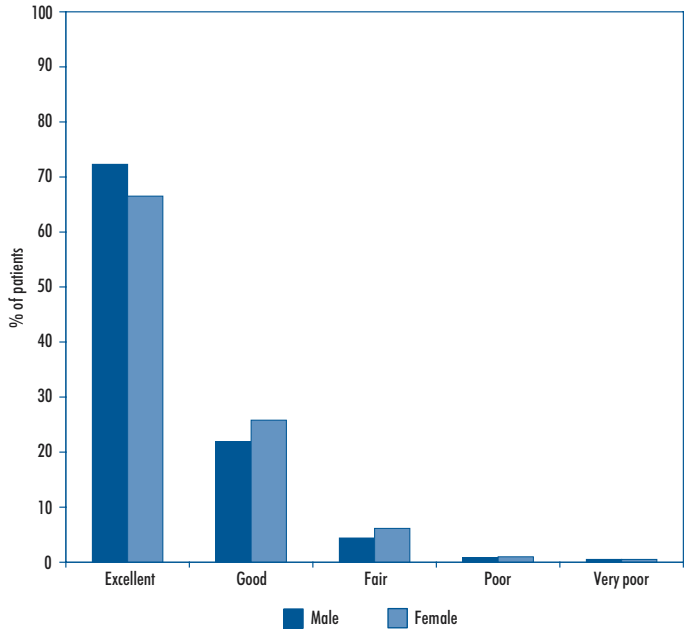
Indicator Subscales	Weight
Unit-Based Care*	26%
Physician Care*	15%
Support Services*	13%
Housekeeping*	11%
Pain Management	10%
Other Caregivers*	9%
Continuity of Care*	9%
Admissions	5%
Finance	2%

*These subscales are also presented as individual indicators in this report.

Source: Standardized Hospital Patient Satisfaction Survey, 2002.

FIGURE 4.5: PATIENTS' OVERALL PERCEPTIONS OF PROCESS QUALITY

The graph shows the percentage of male and female patients giving ratings in each of the five response categories for the Process Quality indicator.



Source: Standardized Hospital Patient Satisfaction Survey, 2002.

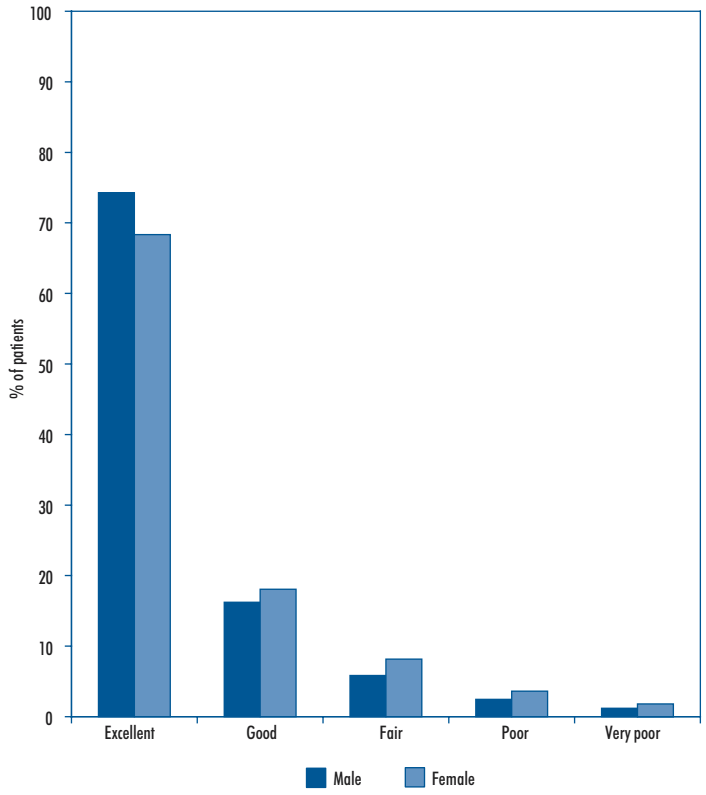

Satisfaction with Unit-Based Care

During a hospital stay, patients come into contact with a variety of staff. Responses to the questions that comprise this indicator reflect evaluations of many different types of front-line staff, not just nurses. Staff providing unit-based care include registered nurses (RNs), registered practical nurses (RPNs), aides, and multi-skilled workers of many kinds. Registered nurses do, however, provide the bulk of this care.

The province-wide Unit-Based Care indicator score was 84.4 points out of 100. When this indicator was analyzed by sex, males reported moderately higher scores than females: 86.0 versus 83.1 points out of 100, respectively. Across all Patient Satisfaction indicators, the greatest difference between males and females reporting excellent satisfaction was for Unit-Based Care, with males reporting satisfaction levels six indicator points higher than those of females. More than 14 in 20 patients rated Unit-Based Care as excellent, while less than one in 20 patients reported poor or very poor satisfaction levels.

FIGURE 4.6: HOW PATIENTS FEEL ABOUT UNIT-BASED CARE

The graph shows the percentage of male and female patients giving ratings in each of the five response categories for the Unit-Based Care indicator.



Source: Standardized Hospital Patient Satisfaction Survey, 2002.

What Makes Up the Unit-Based Care Indicator?

The Unit-Based Care indicator is based on ten survey questions:

1. What is your overall opinion of nursing care?
2. Were you satisfied with the thoroughness of care you received from the nursing staff?
3. Did you feel that the nursing staff was concerned about you as a person?
4. How would you rate the courtesy of nursing staff?
5. Did you receive satisfactory answers from the nursing staff?
6. How would you rate the skill of nursing staff?
7. Did you feel comfortable about sharing your personal concerns with the nursing staff?
8. Did the nursing staff place things needed within your reach?
9. When you used your call button, were you answered promptly?
10. Did the nursing staff call you by name?

Satisfaction with Physician Care

Although physicians are typically not employees of hospitals, the care that they provide is an important contributor to overall patient satisfaction with hospitals. This indicator had the second-highest satisfaction score after the Global Quality indicator.

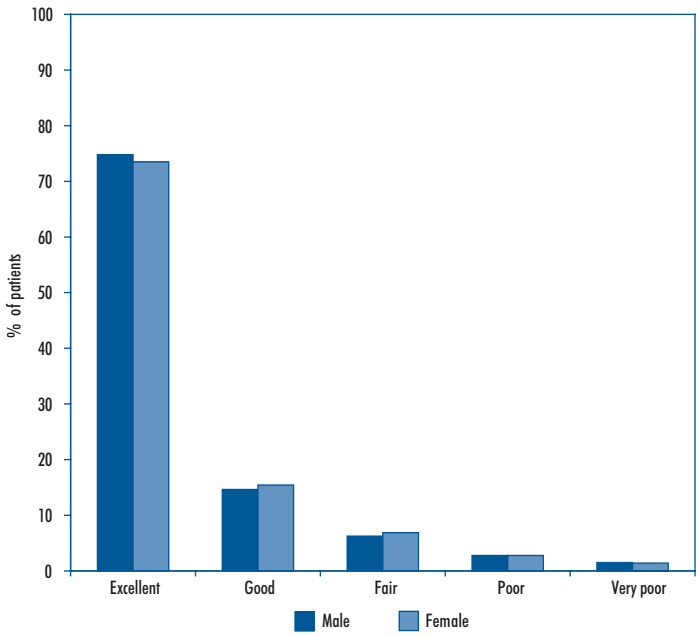
The province-wide Physician Care indicator score was 85.9 points out of 100. Satisfaction with Physician Care was rated excellent by 74.1% of patients.

In particular, 95% of patients rated the skill of their physician as good or excellent, similar to past results. Conversely, 22% of patients responded that their physician did not keep them informed about their medical condition or did so only to some extent. This result is also similar to past findings. In particular, 21% of patients indicated that their questions regarding tests and treatments had not been answered in a manner that they could understand, or that they could only understand to some extent. More details about how hospitals are addressing opportunities to improve interpersonal communication between patients and health care providers can be found in the "Listening to Patients" section at the end of this quadrant chapter.

Are there differences in Patient Satisfaction scores among small, community, and teaching hospitals? For all indicators, the smallest difference between the average score by hospital type was for Physician Care. Only 3.5 points separate the average scores for small, community, and teaching hospitals. See Figure 4.3 for indicator scores by hospital type.

FIGURE 4.7: HOW PATIENTS FEEL ABOUT PHYSICIAN CARE

The graph shows the percentage of male and female patients giving ratings in each of the five response categories for the Physician Care indicator.



Source: Standardized Hospital Patient Satisfaction Survey, 2002.

What Makes Up the Physician Care Indicator?

The Physician Care indicator is based on ten survey questions:

1. What is your overall opinion of physician care?
2. Did your physician adequately explain your diagnosis and treatment to you?
3. Were you satisfied with the thoroughness of care you received from your physician?
4. Did your physician keep you informed about your condition and the care planned for you?
5. How would you rate the courtesy of physicians?
6. How would you rate the skill of physicians?
7. Were you adequately involved with decisions affecting your care?
8. Were your questions about your tests/treatments answered in a way you could understand?
9. Were you satisfied with how well your family members were kept informed about your condition?
10. Were you told what to expect during your hospital stay?

Support Services

From the moment patients enter a hospital, they encounter a variety of hospital support workers. The Support Services indicator measures the courtesy of social workers, receptionists and volunteers, as well as patients' perceptions of the food they were served.

The province-wide Support Services indicator score was 75.7 points out of 100. This is the lowest of the eight Patient Satisfaction indicator scores presented in this chapter. In fact, a greater percentage of patients report satisfaction scores of good rather than excellent for the Support Services and Housekeeping indicators.

What Makes Up the Support Services Indicator?

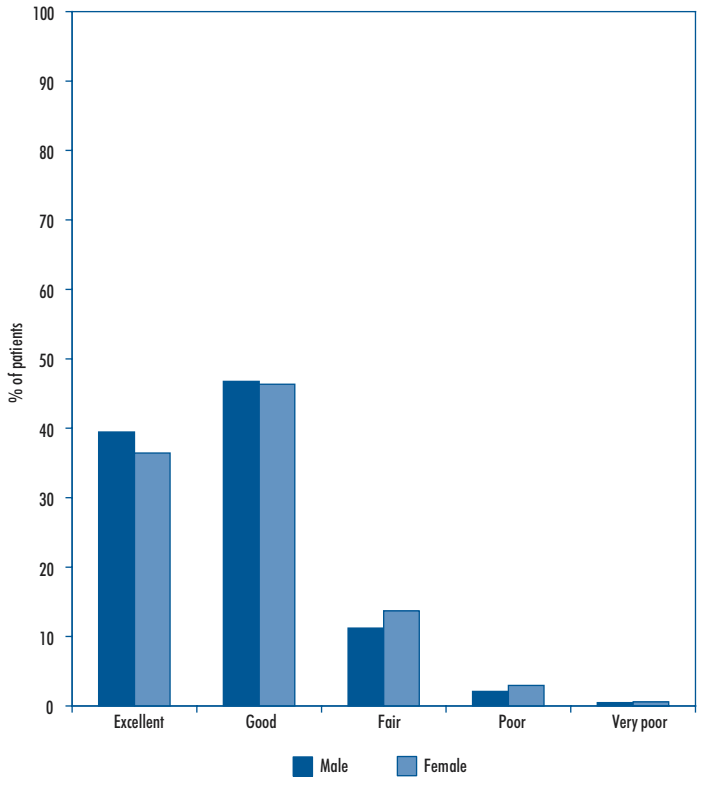
The Support Services indicator is based on five survey questions:

1. How would you rate the courtesy of people who delivered your food?
2. How would you rate the courtesy of the receptionist/secretary?
3. How would you rate the courtesy of the social workers?
4. How would you rate the courtesy of the volunteers?
5. What is your overall opinion of the food served during your stay?

One of the questions in the Support Services indicator asks patients for their overall opinion of food served. Nearly half of all patients had rated the food as either very poor, poor, or fair. This is consistent with scores that the food served in most North American health care facilities has traditionally received in this type of survey. The courtesy of staff delivering food to the patient, which tends to be rated separately from and more positively than food quality[4], was rated as good or excellent by more than eight in ten patients.

FIGURE 4.8: HOW PATIENTS FEEL ABOUT SUPPORT SERVICES

The graph shows the percentage of male and female patients giving ratings in each of the five response categories for the Support Services indicator.



Source: Standardized Hospital Patient Satisfaction Survey, 2002.

Housekeeping

The Housekeeping indicator measures patients' satisfaction with the cleanliness of their hospital surroundings and is influenced by varying sanitary expectations. For *Hospital Report 2003: Acute Care* the province-wide Housekeeping indicator score was 78.1 points out of 100. When the Housekeeping indicator was analyzed by sex, males once again reported moderately higher scores than females—79.5 versus 77.0 points out of 100, respectively. Last year, these scores were 79.8 (male) versus 76.9 (female).

The Housekeeping indicator has the second-lowest satisfaction score of all the indicators. Only for the Housekeeping and Support Services indicators do a greater percentage of patients report satisfaction scores of good rather than excellent. In the case of the Housekeeping indicator, the percentages were 44% (good) and 40% (excellent).

Approximately 14% of respondents indicated that the cleanliness of the hospital in general was either very poor, poor, or fair. About 20% said the cleanliness of the bathroom was either very poor, poor, or fair. That being said, 89% of patients rated the courtesy of the housekeeping staff as good or excellent.

Patients treated in different types of hospitals reported varying levels of satisfaction with the Housekeeping indicator. Average indicator scores for small hospitals were nine points higher than for community hospitals and eight points higher than for teaching hospitals.

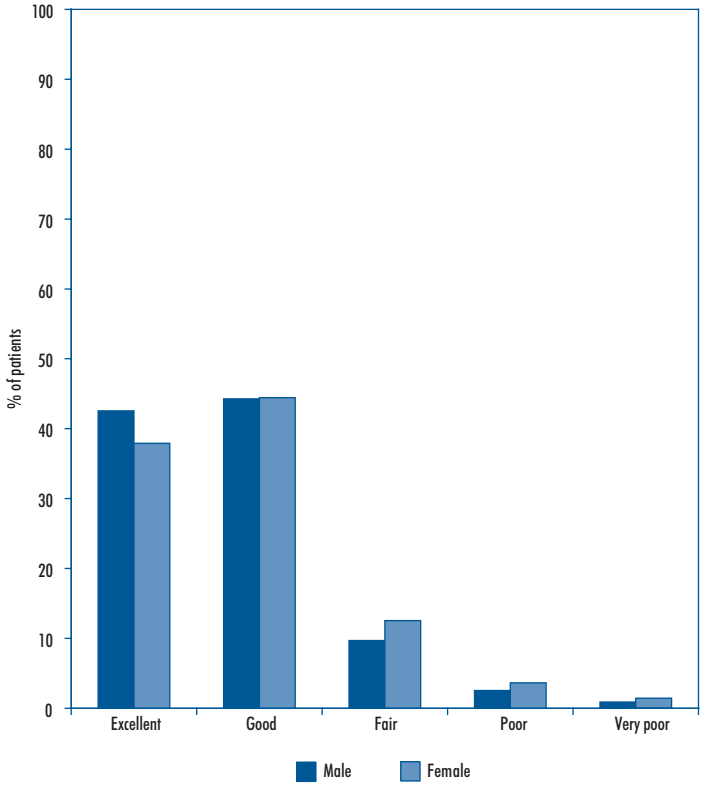
What Makes Up the Housekeeping Indicator?

The Housekeeping indicator is based on five survey questions:

1. What is your overall opinion of housekeeping services?
2. How would you rate the cleanliness of your room?
3. How would you rate the cleanliness of your bathroom?
4. How would you rate the cleanliness of the hospital in general?
5. How would you rate the courtesy of housekeeping staff?

FIGURE 4.9: HOW PATIENTS FEEL ABOUT HOUSEKEEPING

The graph shows the percentage of male and female patients giving ratings in each of the five response categories for the Housekeeping indicator.



Source: Standardized Hospital Patient Satisfaction Survey, 2002.

Other Caregivers

In addition to nurses and physicians, patients are treated by a variety of caregivers while in hospital, including radiology technicians, physiotherapists, and venopuncturists (people who draw blood). The Other Caregivers indicator reflects patients' perceptions of the services provided by these other members of the health care team. As patients often do not distinguish among different types of caregivers, this indicator may be more a measure of satisfaction with care processes in general rather than with specific provider groups.

The province-wide Other Caregivers indicator score was 84.2 points out of 100. As well, 61.6% of Ontario patients surveyed reported excellent satisfaction levels with Other Caregivers. These results are similar to those of last year.

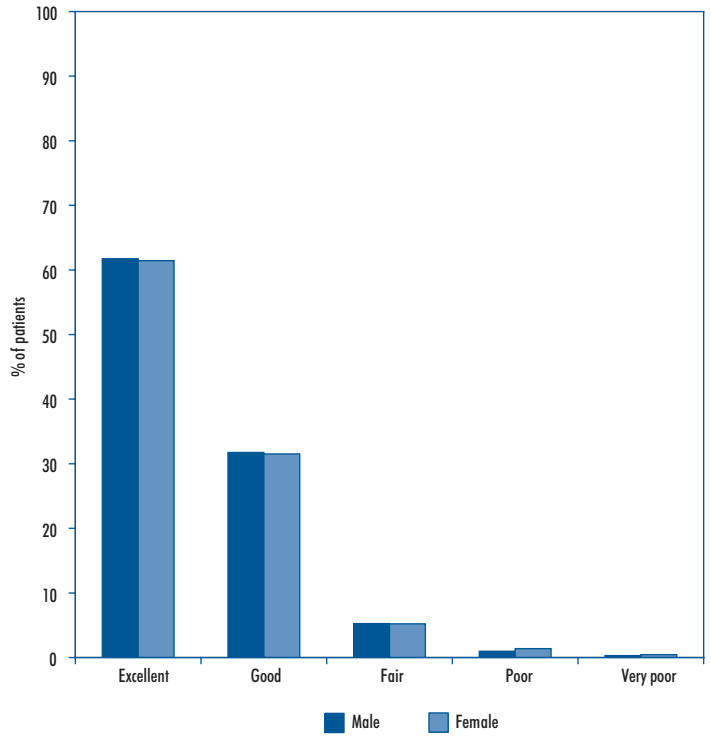
What Makes Up the Other Caregivers Indicator?

The Other Caregivers indicator is based on four survey questions:

1. How would you rate the skill of people who drew blood?
2. How would you rate the skill of x-ray/radiology personnel?
3. How would you rate the courtesy of people who drew blood?
4. How would you rate the skill of physiotherapists?

FIGURE 4.10: HOW PATIENTS FEEL ABOUT OTHER CAREGIVERS

The graph shows the percentage of male and female patients giving ratings in each of the five response categories for the Other Caregivers indicator.



Source: Standardized Hospital Patient Satisfaction Survey, 2002.

Outcomes of Care

The Outcomes of Care indicator allows quality of care to be judged based on patients' perceptions. As a complement, indicators in the Clinical Utilization and Outcome quadrant chapter measure patient outcomes, such as readmissions, using clinical data.

What Makes Up the Outcomes of Care Indicator?

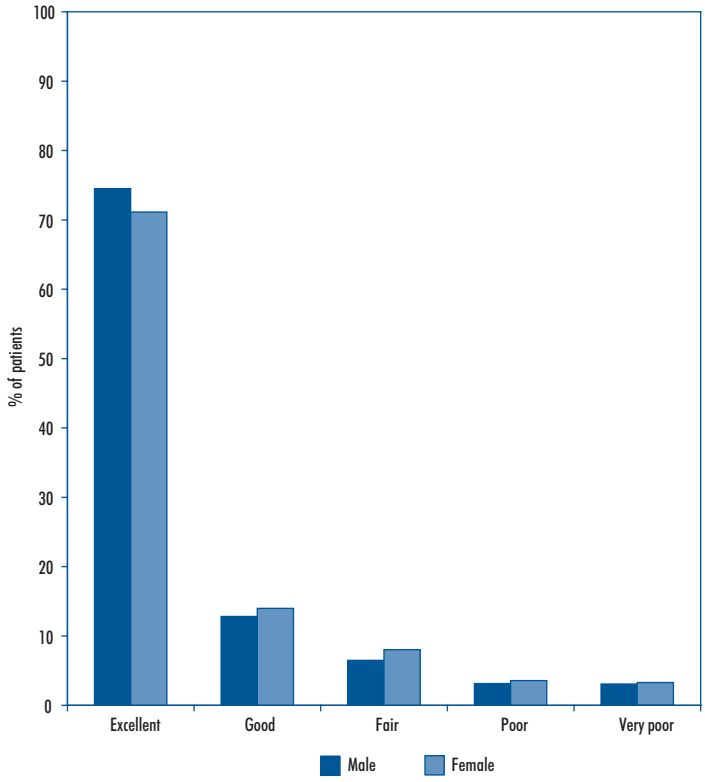
The Outcomes of Care indicator is based on three survey questions:

1. Overall, are you satisfied with the outcome of your hospital care?
2. Do you feel the condition for which you were admitted to the hospital has improved as much as expected?
3. When you left the hospital, did you have a better understanding of your condition than when you entered?

The province-wide Outcomes of Care indicator score was 84.1 points out of 100. Since findings from the SHoPSS were first released in *Hospital Report '99*, almost three in four patients have reported excellent satisfaction for this indicator. When the Outcomes of Care indicator was analyzed by sex, males reported moderately higher scores than females: 84.8 to 83.5 points out of 100, respectively. However, while 83% of patients were satisfied with the outcome of their hospital care, only 68% felt they had a better understanding of their condition upon leaving the hospital.

FIGURE 4.11: HOW PATIENTS FEEL ABOUT OUTCOMES OF CARE

The graph shows the percentage of male and female patients giving ratings in each of the five response categories for the Outcomes of Care indicator.



Source: Standardized Hospital Patient Satisfaction Survey, 2002.

Relating Patient Satisfaction to Clinical Outcomes of Care

Do patients who have positive clinical outcomes report greater satisfaction on the Outcomes of Care indicator? Future inter-quadrant analysis will allow the linking of patient satisfaction and clinical data where informed patient consent has been given. In the Clinical Utilization and Outcomes chapter variations by medical and surgical patient groups are discussed for measures of complications, readmissions, access to technology and length of stay.

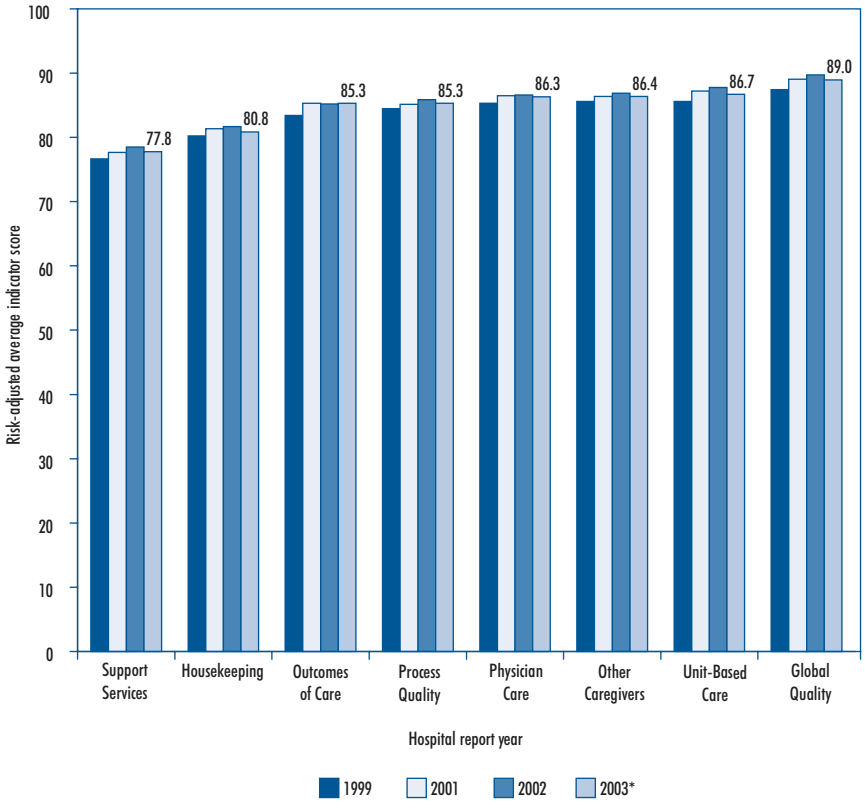
Increasing Patient Satisfaction

Four years of surveying the satisfaction of patients treated in Ontario's acute care hospitals provides an opportunity to examine how scores have changed over time. Since 1999, the SHoPSS has been used to report on the satisfaction of patients' care and services at a province-wide and hospital level.

There are variations in the province-wide sample of hospitals and patients from year to year based on hospital participation in the SHoPSS. For example, the four years of data presented reflect variations in the time of year that patients were discharged and subsequently surveyed. Seasonality may influence the ability to compare variations in the sample from year to year, e.g. it may have an impact on the types of patients sampled and the response rate of these patients. However, over the four-year period, the results of each of the province-wide indicators have been similar. For more details on the discharge and survey dates of patients sampled for the four reporting years, see the *Hospital Report 2003: Acute Care Technical Summary*.

FIGURE 4.12: HOW HAVE PROVINCE-WIDE INDICATOR SCORES CHANGED?

This year's results have decreased slightly after two years of increasing scores. The indicator score for Outcomes of Care was the only one to rise, by 0.1 indicator points, compared to *Hospital Report 2002: Acute Care*. Outcomes of Care also showed the greatest increase in the mean score of all hospitals among the four report years (up almost two indicator points). Global Quality retains its place as the indicator with the highest satisfaction rating (89.0) despite a slight decrease from last year's 89.7 score. In contrast, Support Services (77.8) and Housekeeping (80.8) continued to lag behind the other indicators of Patient Satisfaction. The Housekeeping and Process Quality indicators achieved the smallest increases—0.61 and 0.79 indicator points over the four *Hospital Report* years.



*Only data labels for the mean indicator scores for 2003 have been shown.
Source: Standardized Hospital Patient Satisfaction Survey, 1999–2002.

Changes in Satisfaction: Process Quality

How much do Patient Satisfaction scores change year to year? The Process Quality indicator was selected for analysis because, overall, it is considered the most comprehensive and reliable measure of patient satisfaction. This year's scores were compared to those presented in last year's report.

In total, 78 hospitals participated in both *Hospital Report 2002: Acute Care* and *Hospital Report 2003: Acute Care*. Of these, 62% reported less 1 indicator point change over last year's results. Of the remaining hospitals, half reported an increase of more than 1 indicator point and half a decrease of more than 1 indicator point. Therefore the Process Quality indicator scores have remained relatively constant between 2002 and 2003.

TABLE 4.2: CHANGING HOSPITAL SCORES

Quartile of Improvers	# of Facilities	Least Improvement	Most Improvement	Average Change in Indicator Score
0–25%	19	-5.23	-0.86	-2.03
26–50%	20	-0.86	-0.09	-0.52
51–75%	20	-0.09	0.65	0.20
76–100%	19	0.77	3.63	1.59

Source: Standardized Hospital Patient Satisfaction Survey, 2002.

To describe how scores have changed for this indicator, the 78 hospitals were divided into quartiles. Hospitals with the greatest improvement in score were assigned to the top quartile (76% to 100%) while those with the greatest decrease were assigned to the bottom quartile (0% to 25%). The range of scores within each quartile is presented in the columns identifying the largest and smallest improvements in score. The average change in score for each quartile is also shown.

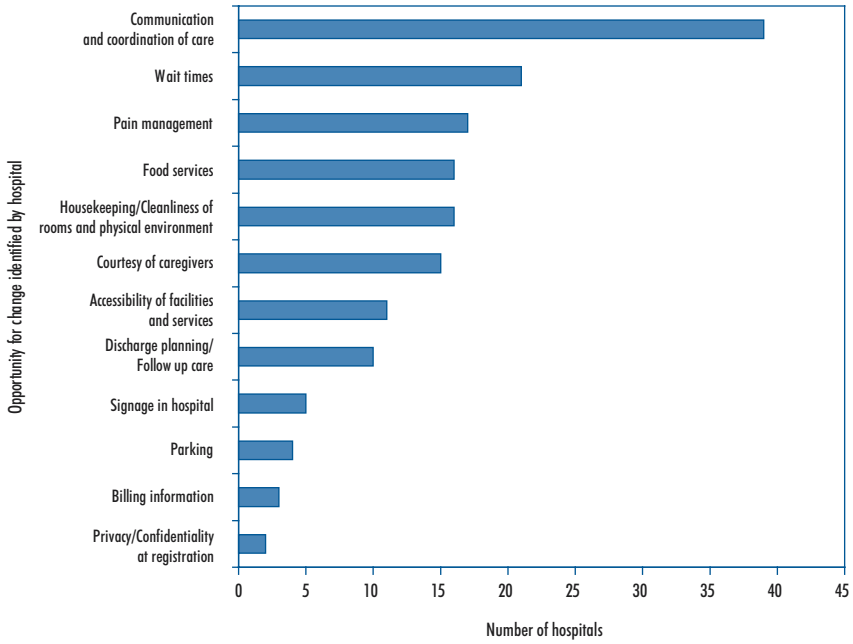
Listening to Patients

For the past three years, the System Integration and Change questionnaire has been completed on an annual basis by approximately 120 hospitals within Ontario. In this year's questionnaire, 92% of hospitals answered that they had made some changes to their organizational practices as a result of a formal patient satisfaction survey (not necessarily or exclusively the SHoPPS). There were several common themes identified across all participating hospitals.

Communication Processes and Coordination of Care were the two areas where opportunities for change were most evident. The first included topics such as communication among caregivers, between caregivers and patients, and keeping families informed and involved in the decision-making process. Opportunities to improve coordination of care included ensuring that patients knew who was responsible for their care at all times, that explanations from caregivers were concise and understandable, and that all parties had access to timely and accurate information across unit transfers. Courtesy of Caregivers and Discharge Planning/Follow-up Care are related issues that were also identified as areas for potential change.

FIGURE 4.13: OPPORTUNITY FOR CHANGE IDENTIFIED BY HOSPITALS AS A RESULT OF PATIENT SATISFACTION FINDINGS

Ontario hospitals that completed the 2003 Acute Care System Integration and Change Survey were asked to list two opportunities for change that they had identified as a result of a formal patient satisfaction survey. The bars represent the number of hospitals whose responses could be grouped into one of twelve categories. These categories were assigned if more than one hospital identified the same opportunity for change. Responses unique to only one hospital could not be grouped into a particular category and are not displayed in this graph.



Source: System Integration and Change Acute Care Survey, 2003.

Wait times for procedures, room transfers, and the time it took nurses to respond to call bells was the next most frequently identified area where there were opportunities for improvement. Pain Management was yet another area where opportunities for improvement were recurrently identified.

Foodservices and Housekeeping were also commonly identified as areas that could be improved. Patients expressed a lack of satisfaction with the selection, quality, and temperature of prepared food. Housekeeping issues included poor cleanliness of rooms, surgical wards, and the hospital itself. Patients were often dissatisfied with the amenities within their rooms or in the common lounge areas of the hospital.

Lack of clarity in posted signs or directions within the hospital, poor parking facilities, lack of information on patient bills, lack of facilities to accommodate persons with disabilities, and lack of privacy and confidentiality in the ER at the time of registration were topics less commonly identified, which still could be improved.

Summary

Measuring how effectively Ontario's hospitals are meeting the needs of their patients is a complex process. Research suggests that for maximum effect, changes to improve patient satisfaction must be very specific and focused on patient care. The Patient Satisfaction quadrant provides a crucial perspective on what patients have to say about the quality of the care and services provided. The eight indicators presented in this quadrant serve as guideposts to help direct the attention of hospitals toward possible areas for improvement. Indicator-specific findings for the most recent data include:

- The Global Quality indicator has consistently had the highest score out of all eight indicators throughout the four *Hospital Report* years. This year the score was 88 out of 100.
- Of those hospitals that participated in the previous reporting year, 19% showed an increase of more than one indicator point in the Process Quality indicator score. The same percentage of hospitals showed a decrease of more than one indicator point.
- Across all Patient Satisfaction indicators, the greatest difference between males and females reporting excellent satisfaction was for the Unit-Based Care indicator, with males reporting excellent satisfaction levels six indicator points higher than females.
- In response to questions in the Physician Care indicator, 95% of patients rated the skill of their physician as good or excellent; 22% of patients reported that their physician did not keep them informed about their medical condition or did so only to some extent.
- In contrast to the other indicators of Patient Satisfaction, for the Support Services and Housekeeping indicators, a greater percentage of patients reported satisfaction scores of good rather than excellent.
- In the Outcomes of Care indicator, while 83% of patients were satisfied with the outcome of their hospital care, only 68% felt they had a better understanding of their condition upon leaving the hospital.

Although Ontario hospitals continue to achieve higher ratings from patients regarding satisfaction, large differences in scores between indicators and across hospitals remain. However, analysis of the Process Quality indicator demonstrates that hospital-level improvements in patient satisfaction are possible. The province-wide increases in patient satisfaction have raised the bar against which hospitals are compared. Hospitals must make efforts to increase the satisfaction of their patients in order to keep pace.

Next Steps

The ongoing challenge to increase the satisfaction of Ontario's acute care patients requires going beyond global indicators of patient satisfaction. Next steps include:

- A new survey tool for patient satisfaction developed by the National Research Council (NCR) and Picker Group Canada will be used across Ontario acute care hospitals for next year's report. As a result, the Patient Satisfaction quadrant will undergo complete redevelopment for *Hospital Report 2004: Acute Care*. This will involve the creation of new indicators tailored specifically for the new questionnaire.

- This new survey also asks patients to rate specific aspects of care. By systematically tracking satisfaction levels over time, individual hospitals and the hospital system can monitor success in responding to patient expectations. The survey information also provides hospitals with insights about where they can focus to improve satisfaction levels.
- The time period for next year's survey will no longer be restricted to three months.
- Future reports will further examine how results from the three other quadrants relate to overall patient satisfaction. For example:

  System Integration and Change—The SIC survey may allow changes in individual hospital patient satisfaction to be related to specific efforts on the part of hospitals to improve the quality and processes of care.

  Clinical Utilization and Outcomes—Inter-quadrant analysis may provide opportunities to investigate how patient satisfaction varies by patient groups and clinical outcomes.

  Financial Performance and Condition—Patient satisfaction with hospital services, such as housekeeping, could also be related to hospital staffing.

For more information

[1] Rosenheck R, Wilson NJ, and Meterko M. (1997). The influence of patient and hospital factors on consumer satisfaction with inpatient mental health treatment. *Psychiatric Services*, 48(12): 1553–61.

[2] Tucker J and Kelley V. (2000). The influence of patient socio-demographic characteristics on patient satisfaction. *Military Medicine*, 165(1): 72–6.

[3] Hall JA, Milburn MA, and Epstein AM. (1993). A causal model of health status and satisfaction with medical care. *Medical Care*, 31(1): 84–94.

[4] Lau C and Gregoire MB. (1998). Quality ratings of a hospital foodservice department by inpatients and postdischarge patients. *Journal of the American Dietetic Association*, 98 (11): 1303–07.

Financial Performance and Condition

Financial Performance and Condition

Financial performance and condition are important components of overall hospital performance. Strong financial performance and sound financial condition are critical to a hospital's ability to provide necessary services. Information describing the financial performance and condition of Ontario hospitals is required by many stakeholders, including hospital management, unions, the federal government and the Ontario Ministry of Health and Long-Term Care (MOHLTC). These parties are responsible for important decisions regarding health care in Ontario and must understand how hospitals manage their financial and human resources. Indicators of Financial Performance and Condition can help them do this, especially when examined in conjunction with indicators of Clinical Utilization and Outcomes, Patient Satisfaction and System Integration and Change.

This chapter of *Hospital Report 2003: Acute Care* examines financial indicators that measure the viability, liquidity, efficiency and human resource use of Ontario's hospitals for the four reported years of 1997–1998, 1999–2000, 2000–2001 and 2001–2002 (no report was issued for 1998–1999). These indicators help describe how this sector of Ontario's economy is being managed.

A Snapshot of Ontario Hospitals

Hospitals receive most of their revenue from MOHLTC. Since the first volume in the *Hospital Report: Acute Care* series was released (describing financial performance and condition for the 1997–1998 fiscal year), revenues provided to acute care hospitals by MOHLTC have increased by 36% to a total of $8.57 billion in 2001–2002. This amount represented 85.4% of the total revenues related to hospital operations recorded by Ontario acute care hospitals in 2001–2002 alone. Revenues from non-MOHLTC sources also grew significantly over this period with a 33% increase. In 2001–2002 Ontario acute care hospitals received $33 in funds from non-Ministry sources for every $100 received from MOHLTC.

Over the past five years, long-term acute care hospital debt fluctuated from a low of $208 million to a high of $276 million. The number of hospital employees grew by 15% during the same period. Also, the number of inpatient acute care days fell by 1% while day-surgery cases rose by 13% to a total of 1.16 million in 2001–2002, and the average inpatient length of stay increased slightly.

How was the Research Done?

The Data Source

Ontario hospitals collect data describing their financial activities on a daily basis. The data are grouped and summarized in the hospital's accounting system according to standards developed by the Canadian Institute for Health Information (CIHI) and adapted for use in Ontario. The standards embody generally accepted accounting principles.

Hospitals report information describing their financial activities in a variety of formats. One of these formats is a detailed listing of general ledger account balances as at the fiscal year end. This listing provides a snapshot of the financial position of all expense, revenue, asset, liability and equity accounts. The listing is submitted in electronic form to MOHLTC, accompanied by a signed statement from the hospital certifying that the data submitted correspond in all material aspects with the hospital's audited financial statements and that any differences can be explained. After applying a number of edit checks and other review processes, the data are submitted to the Ontario Hospital Reporting System (OHRS)—a provincial database of hospital financial data. The OHRS is used for many purposes by the MOHLTC, including monitoring the financial condition of hospitals and making informed funding decisions. The data used in this quadrant were extracted from this database.

The Last Few Years

Hospital Report 2003: Acute Care provides an overview of the financial performance and condition of Ontario's acute care hospitals for the 2001–2002 fiscal year. A brief summary of key financial and operational indicators, aggregated for all acute care hospitals in Ontario, is provided below. Values from previous editions of *Hospital Report: Acute Care* are also included.

	1997–1998	1999–2000	2000–2001	2001–2002
Total hospital revenue	$8.4 billion	$9.6 billion	$10.5 billion	$11.4 billion
Hospital revenue related to operations*	$7.5 billion	$8.5 billion	$9.3 billion	$10.0 billion
Share of total operating revenue from provincial government	84.7%	85.3%	85.7%	85.4%
Long-term debt**	$219 million	$208 million	$276 million	$238 million
Number of hospital employees (full-time equivalents)	105,000	111,000	115,000	121,000
Inpatient acute care days	7.03 million	7.16 million	6.97 million	6.99 million
Average length of acute care stay	5.97 days	6.19 days	6.13 days	6.11 days
Day-surgery cases	1.03 million	1.09 million	1.14 million	1.16 million

*These figures are total hospital revenues, excluding Other Vote (other government funds), OHIP, grant, donation, internal recovery and externally funded research revenues.

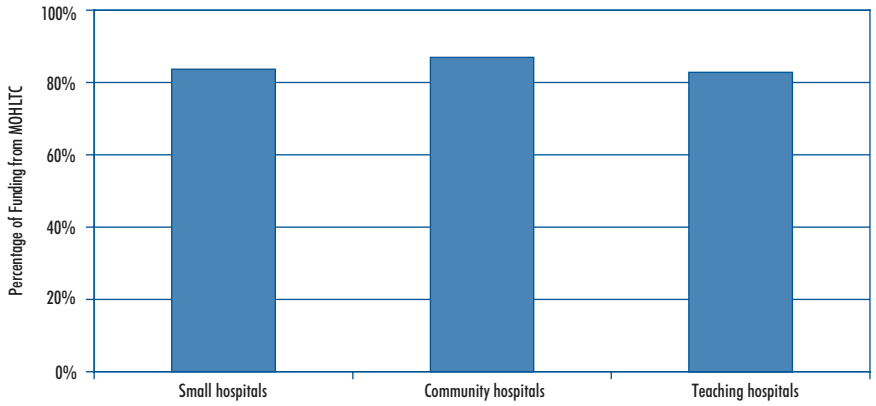
**These figures exclude bonds issued by one of the province's teaching hospitals.

Source: Ontario Hospital Reporting System and Discharge Abstract Database.

Note: Figures from 1997–1998, 1999–2000 and 2000–2001 have been reclassified to conform to the current methodologies. Accordingly, they may not be identical to figures published in previous *Hospital Reports*.

FIGURE 5.1: UNDERSTANDING HOSPITAL FUNDING

Most hospital revenue comes from the Ontario Ministry of Health and Long-Term Care (MOHLTC), as shown below.



Source: Ontario Hospital Reporting System, 2001–2002.

How Ontario's Hospitals are Funded

The majority of hospital revenue for Ontario hospitals comes from MOHLTC. Each year, a complex process is used to divide this funding among Ontario's hospitals. In most years, the starting point is the hospital's base budget for the previous year, adjusted for inflation. Additional adjustments to a hospital's base funding may also be made using a model that measures relative efficiency and expected volumes for hospitals (for further information see the Joint Policy and Planning Committee (JPPC) web site at www.jppc.org).

Hospitals also receive additional funding for priority programs, such as selected cardiac services, organ transplants, and end stage renal disease programs. Priority program funding is provided annually, and reallocated as necessary during the year based on demand, provincial health care policy, recommended population targets, and the ministry's planning process.

What's New in 2003?

- Indicator results are presented using data from the four reported years, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.
- Three new indicators of nursing financial performance are being reported at a system-wide level in this report.

Selecting the Indicators

The financial indicators used in *Hospital Report 2003: Acute Care* are consistent with those used in *Hospital Report 2002: Acute Care*, *Hospital Report 2001: Acute Care* and *Hospital Report '99*. For *Hospital Report '99*, members of two working groups of the JPPC—the Hospital Funding Committee and the Data Quality Review Team—acted as a Financial Advisory Group in the indicator selection process. These groups are composed of senior hospital and ministry executives, as well as other experts familiar with hospital finances and reporting requirements in Ontario.

This report is based on work completed by researchers at the University of Toronto for *Hospital Report '99*. The research team conducted literature reviews and, with the advice of the Financial Advisory Group, selected a pool of possible indicators. An iterative process was used to identify, consider, and evaluate these indicators. This process included providing statistical information to the Financial Advisory Group to assist in their deliberations, particularly when choosing between indicators with overlapping content. Ultimately, nine measures of Financial Performance and Condition were selected for inclusion in *Hospital Report '99*.

Coding Variations and Data Quality

The Unit Cost Performance indicator uses weighted cases in its calculation. These data come from the acute care patient discharge abstract data collected by CIHI. They are grouped by CIHI into Case Mix Groups or CMG™ that are homogeneous with respect to resource use and clinical condition. The grouping methodology incorporates a "complexity overlay" or PIx™ model, defined by the presence of certain co-morbid conditions on the patient's discharge abstract, and uses both the CMG and the PIx level (in combination with the patient's age) to assign the patient a Resource Intensity Weight or RIW™. A RIW is a relative value that describes the expected resource consumption of a patient in relation to the "average" patient in Canada for a given year. Studies done jointly in the last year by CIHI, the JPPC and MOHLTC have identified variations in coding across hospitals of patients' comorbidities.

To mitigate the effect that these variations may have on the Unit Cost Performance indicator, the JPPC calculated hospital-specific values for the Unit Cost Performance indicator for *Hospital Report 2003: Acute Care* using a revised methodology. The primary change to the methodology is the replacement of CIHI's complexity overlay model with a "collapsed" complexity model, which does not relate the assigned RIW to the complexity level of the individual patient. This adjustment should reduce the effects of reporting variations on this indicator. In addition, the revised methodology takes into account other recent decisions made by the Rate Subcommittee of the JPPC with respect to the Unit Cost Performance indicator (for further details, please refer to the *Hospital Report 2003: Acute Care Technical Summary*).

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The Methods

The methodology used in this report is described in detail in the *Hospital Report 2003: Acute Care Technical Summary*. It is available free of charge on *Hospital Report* series partners' and sponsors' Web sites. For a list of Web sites, see the back cover of this report. Important elements of the methodology include:

- The provision of verification reports to all hospitals to ensure the accuracy of the data. These reports highlighted individual hospitals' preliminary indicator values and summarized the data elements used to calculate the indicators. Hospitals were asked to review the material and identify any necessary changes in data originally submitted to MOHLTC. A joint panel of representatives from MOHLTC, JPPC, CIHI, and Ontario hospitals reviewed the requests for data changes with the Financial Quadrant Research group. As a result, in 2003 data submission changes were made for seven hospitals. Specific cases in which hospital values changed due to data resubmissions are noted with a footnote in the insert found at the back of this report. Despite this precaution, some data quality issues may remain. For example, variations in interpretations of reporting guidelines and coding practices, cost/asset sharing relationships among hospitals and affiliated research institutes or foundations, and other factors may affect the comparability of the data.
- The identification and analysis of outlier values, i.e. those values considered to be either significantly above or below the normal range of values for a given indicator. All hospitals with outlier values were contacted to verify the findings and facilitate any necessary adjustments to improve data quality and comparability.

How Performance is Allocated

In previous editions of *Hospital Report: Acute Care*, hospitals indicator values were grouped into one of five financial performance categories: "above average", "somewhat above average", "provincial average", "somewhat below average", and "below average". Performance categories were represented by star symbols. This year, for the first time, a numeric range that includes the hospital's numeric score is presented for each participating hospital and financial indicator. This method replaces the "star symbol" method used in the Financial Quadrant in previous reports. Hospital-by-hospital results for 92 corporations are available in the insert that accompanies this report.

Indicators of Financial Performance and Condition

Unfortunately, there are no standards or benchmarks for hospital indicators of Financial Performance and Condition, other than industry averages. An industry average does not represent a level of performance that all hospitals should strive to maintain—in fact, some well-managed hospitals will be close to the average and some will not. However, if a hospital's ratios are far removed from the industry averages, this raises a cautionary note, and there should be further investigation about why the variance occurred. For any indicator, there can be many reasons for an extreme value, which require investigation into areas of financial strength and areas of potential concern. In the discussion which follows each indicator, some guidance for interpretation of the indicator values is provided.

Financial Viability

Financial viability refers to a hospital's ability to fund growth, new programs, working capital needs and new equipment through an excess of revenues over expenses. One indicator of financial viability is Total Margin.

Total Margin

The Total Margin indicator measures the relative financial health of a hospital. It is the degree to which a hospital's total revenues exceed its total expenses in a given year. This indicator has been defined in a manner that adjusts for differences among hospitals and how non-Ministry revenues are recorded. A positive value indicates that revenues exceeded expenses; a negative value the reverse.

Calculating Total Margin

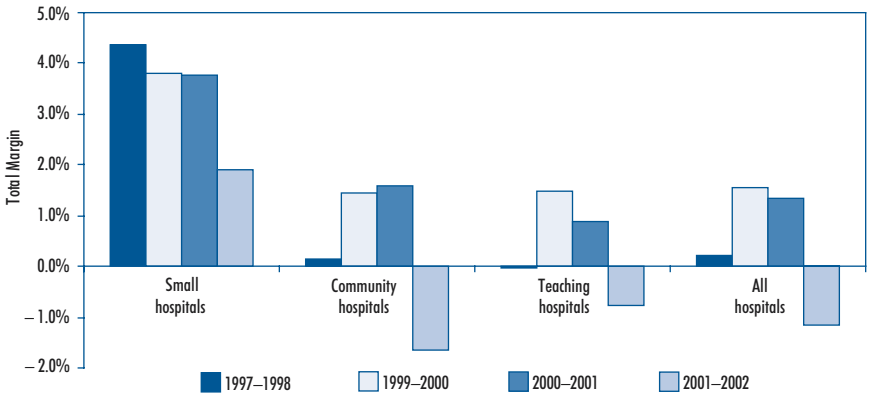
The Total Margin indicator is calculated as follows:

(Total Revenues – (Total Expenses – Facility Amortization), excluding Externally Funded Research Revenues and Expenses) * 100

Total Revenues, excluding Other Votes (MOHLTC funding specifically designated for the use of approved programs), OHIP Revenue, Grants, Donations, Interdepartmental Recoveries (the effect of internal business activity), and Externally Funded Research Revenues

FIGURE 5.2: HOW TOTAL MARGIN VARIES BY HOSPITAL TYPE AND FISCAL YEAR

Total Margin reflects the degree to which a hospital's total revenues exceed its total expenses excluding facility amortization. While results vary among hospitals, small hospitals generally appear to have higher total margins than do community or teaching hospitals. The values below show weighted averages by hospital type for fiscal years 1997–1998, 1999–2000, 2000–2001 and 2001–2002.



Source: Ontario Hospital Reporting System, 1997–1998, 1999–2000, 2000-2001 and 2001–2002.

After adjusting for exclusions (see formula), Ontario's hospitals reported almost $10 billion in revenues in 2001–2002. This was less than total reported expenses across the province. Ontario hospitals reported expenses in excess of revenues of over $115 million for an overall total margin of –1.16%. This indicator has decreased by 2.5 percentage points from fiscal year 2000–2001, when it was 1.35%. During this period, total expenses increased by 11%, outpacing total revenue growth. The total margin was 1.55% in 1999–2000 and 0.22% in 1997–1998.

Although Ontario hospitals had expenses in excess of revenues in 2001–2002, the financial health of hospitals varied. Sixty-one hospitals reported revenues in excess of expenses (for a total surplus of almost $89 million) and 59 reported expenses in excess of revenues (for a total deficit of almost $205 million). Overall, small hospitals reported a positive total margin (1.90%) but teaching and community hospitals reported negative total margins (– 0.75% and –1.66% respectively). During this period, 85 of 120 Ontario acute care hospitals reported a decrease in their total margin value, while only 35 hospitals reported an increase.

A hospital's financial viability is the net result of a large number of its managerial policies and decisions. For example, a low total margin could be due to poor cost control, and indicate a need for greater efficiency in operations. Because some Ontario hospitals have debt obligations, a low total margin could also be due to heavy use of debt. If two hospitals have identical revenues, operating costs, and surpluses before interest, but one hospital uses more debt than the other, it will have higher interest charges. Those interest charges will reduce a surplus or increase a deficit. Since revenues are constant, the result will be a relatively low total margin. In such a case, the low total margin would not indicate an operating problem but rather a difference in financing strategies.

In the context of not-for-profit hospitals, a high total margin is not necessarily a good thing. A relatively high total margin might indicate that the hospital is not spending sufficiently and possibly failing to meet community needs. Thus, the optimal total margin is one that is sufficiently high to provide a hospital

with the funds it needs to replace equipment and acquire new equipment, maintain and improve the quality of care, and so on, but not so high as to indicate the hospital is not fulfilling the mandate of a not-for-profit hospital.

Recommended use of *Total Margin*: A small positive value is probably no cause for concern. Negative values or large positive values, and significant changes from previous years should be investigated.

Efficiency

Three indicators of efficiency are presented in this report: Unit Cost Performance, Corporate Services, and Days in Inventory. Unit Cost Performance measures efficiency by comparing services provided to a hospital's patients ("outputs") to the resources ("inputs") required to produce them. Corporate Services and Days in Inventory measure efficiency in terms of how the hospital's resources are used.

Unit Cost Performance

The JPPC has devoted considerable effort over many years to develop an appropriate method for comparing hospitals' Unit Cost Performance. This method, known as the JPPC Rate Formula, predicts a hospital's expected cost per equivalent weighted case taking into account the following factors: the hospital's size, teaching role, chronic care activity, tertiary care role and the extent to which the hospital is geographically isolated from other institutions. The Unit Cost Performance indicator compares this expected value to a hospital's actual cost per equivalent weighted case. This is useful for making relative efficiency comparisons among hospitals.

A negative Unit Cost Performance value indicates that services cost less than expected while a positive value suggests the reverse. Unit Cost Performance results were used to allocate a substantial proportion of new provincial government funding to hospitals in fiscal years 2001–2002 and 2002–2003.

Calculating Unit Cost Performance

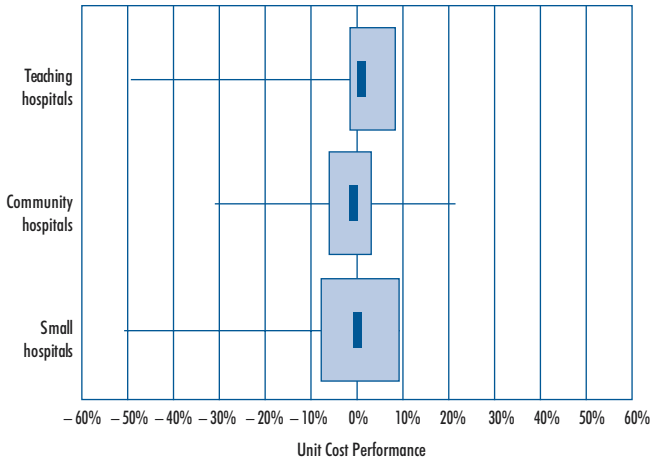
2001–2002 values for the Unit Cost Performance indicator were obtained from the JPPC.

$$\frac{(\text{Actual Cost per Equivalent Weighted Case} - \text{Expected Cost per Equivalent Weighted Case}) * 100}{\text{Actual Cost per Equivalent Weighted Case}}$$

Note: Specialty acute hospitals such as the Children's Hospital of Eastern Ontario and the Hospital for Sick Children are not included in the JPPC Hospital Funding Formula; therefore, it was not possible to produce the Unit Cost Performance indicator for these two hospitals.

FIGURE 5.3: UNIT COST PERFORMANCE RESULTS COMPARED

This box plot describes the distribution of Unit Cost Performance indicator values by peer group. The thick vertical line in the middle of the box is the median. One half of hospitals have scores above this level, and one half have scores below. The rectangular box shows the interquartile range. It contains 50% of the indicator values (25% immediately above the median and 25% below). The "whiskers" are lines that extend to the highest and lowest indicator scores.



Note: The upper "whiskers" for the Teaching Hospital peer group and Small Hospital peer group were suppressed for confidentiality reasons.
Source: Ontario Joint Policy and Planning Committee, 2001–2002.

Overall, in 2001–2002, 51 of 120 acute care hospitals reported a higher actual cost per weighted case than expected. Results varied across the three peer groups. For teaching hospitals, six hospitals reported a negative Unit Cost Performance value while six reported a positive Unit Cost Performance value. Thirty-eight community hospitals reported a negative Unit Cost Performance value, while 27 reported a positive one. Twenty small hospitals showed a negative Unit Cost Performance value, while 18 showed a positive value. In general, there was more variation in values among small hospitals than among community and teaching hospitals. Five hospitals were given a rating of "Non-Reportable" for this indicator because of data-related issues.

A hospital's ability to achieve greater unit cost efficiency is influenced by a number of factors, including staff mix, productivity, local prices of goods and services, community linkages, management practices and physician practices.

The Unit Cost Performance indicator has been used both for funding of Ontario hospitals over a period of years and for purposes of internal management, thus proving its value as a measure of cost performance. As with any other indicator however, the Unit Cost Performance indicator must not be considered in isolation. A hospital could achieve a very low cost per equivalent weighted case, but if many patients have poor outcomes at this level of performance, one could argue that the hospital is very efficient at providing services of low quality. For this reason, the results of the Unit Cost Performance indicator should be considered alongside a hospital's performance in the Clinical Utilization and Outcomes and Patient Satisfaction quadrants.

Recommended use of *Unit Cost Performance*: A negative value is probably no cause for concern. Large positive values and significant changes from previous years should be investigated.

This year, variations in the practice of coding patient diagnoses in Ontario hospitals necessitated the use of a revised methodology in the calculation of the hospital-specific values for Unit Cost Performance. For more information, please read the "Coding Variations and Data Quality" sidebar in this chapter.

Corporate Services

Most hospital staff provide services directly to patients. Other staff are needed to manage hospital operations, hire employees, pay bills, and perform other corporate service functions. The Corporate Services indicator measures how much a hospital spends in areas of administrative service relative to total operating expenses. A higher value for this indicator suggests that a greater share of a hospital's operating expenses is spent on corporate services. To improve comparability of results, cash discounts, compensation for physicians, and amortization are excluded from the calculation.

Calculating Corporate Services

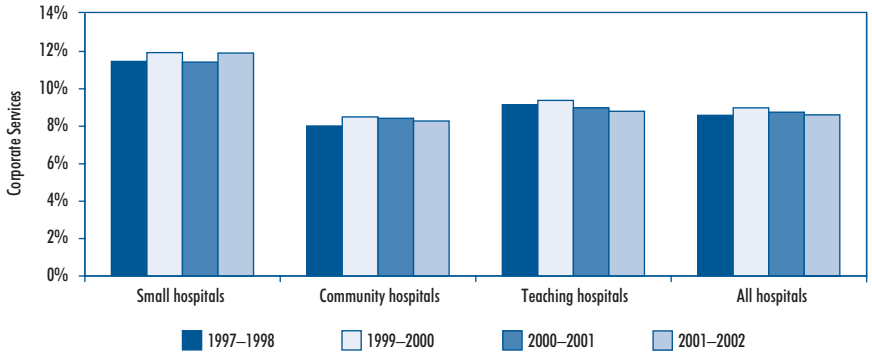
$$\frac{\text{(Expenses for Administration Services (General Administration, Finance, Human Resources, System Support, and Communication Expenses), Net of Recoveries except Cash Discounts and excluding Medical Compensation and all Amortization)} * 100}{\text{Operating Expenses, Net of Recoveries and excluding Medical Compensation and all Amortization}}$$

Across the province, Ontario hospitals reported spending about $783 million on corporate services in 2001–2002. That represented 8.61% of hospital operating dollars, down from 2000–2001 (8.76%). In 1999–2000 and 1997–1998 the corresponding values were 8.98% and 8.59% respectively.

In 2001–2002, small hospitals tended to report higher values for the Corporate Services indicator than did community or teaching hospitals. A variety of factors may explain differences in corporate services costs among hospitals. For instance, larger hospitals might be able to achieve a lower manager-to-staff ratio than would be possible in smaller hospitals. Hospitals may also vary in the way they define patient care and corporate service costs.

FIGURE 5.4: HOW CORPORATE SERVICES VARY BY HOSPITAL TYPE AND FISCAL YEAR

In 2001–2002, small hospitals reported spending more on corporate services as a percentage of their operating expenses than community or teaching hospitals. This is consistent with previous results as shown below. Values show weighted averages by hospital type and fiscal year.



Source: Ontario Hospital Reporting System, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.

In general, the goal of corporate management is to support the operations of the hospital at the lowest possible cost. A hospital that underspends on corporate services may have dissatisfied staff, inadequate technology, insufficient resources in place to ensure that service is available when needed, and other consequences of management inattention. A hospital that overspends on corporate services may be taking scarce resources away from patient care and other alternative uses of revenues.

The lowest possible cost of corporate services is not easily calculated. Moreover, an appropriate level of spending should take into account many different aspects of hospital operations, including the complexity of a hospital's services, its management practices, its information systems, and its recruitment strategies. For example, the research, education and tertiary referral roles of teaching hospitals usually involve a different mix of management skills and corporate services staff. A hospital that invests significant amounts in information technology may have higher initial capital costs but lower long-term operating costs.

For these reasons it is important to consider results for the Corporate Services indicator in context with others in the balanced scorecard. For example, a hospital with sophisticated information technology allowing doctors to securely but easily access important information about a patient's care might report a high Corporate Services indicator value, but might score well on the System Integration and Change Clinical Information Technology indicator.

Recommended use of Corporate Services: A value around the mean is probably no cause for concern. Values much higher or lower than the mean should be investigated. Significant changes from previous years should be investigated.

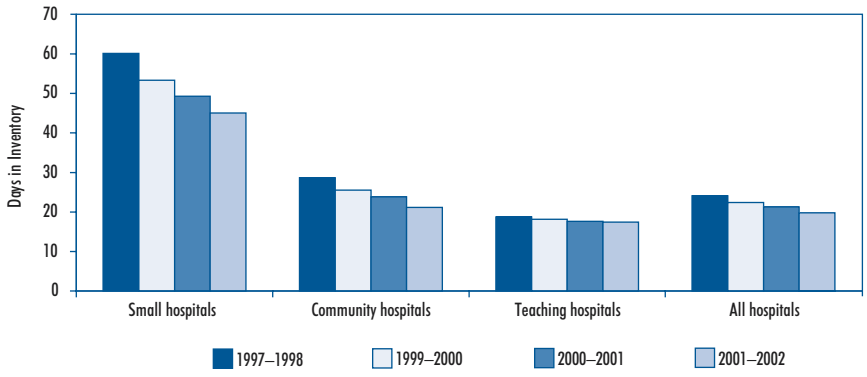
Calculating Days in Inventory

Year-End Inventory Balance (the cost of all supplies in inventory on March 31st)

Total General and Patient-Specific Supplies Expense/365 days

FIGURE 5.5: HOW DAYS IN INVENTORY VARIES BY HOSPITAL TYPE AND FISCAL YEAR

In 2001–2002, small hospitals on average tended to have longer periods between supply purchase and use than did community or teaching hospitals. The graph below also shows a gradual decline in the Days in Inventory indicator for each peer group over the four reported years. The values reported in this graph are the weighted averages by hospital type for each reported year.



Source: Ontario Hospital Reporting System, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.

Days in Inventory

Having enough supplies available to meet daily needs is important for hospitals, but holding too much inventory on hand ties up money that might otherwise be available for other purposes. The Days in Inventory indicator measures the average number of days that supplies are held in inventory. A higher value indicates a longer period between purchase and use of supplies; a lower value indicates a shorter period. For the purposes of comparability, equipment, building and grounds, costs of referred-out services, and sundry (miscellaneous) expenses are not included in this indicator.

Data from the four reported years for Days in Inventory suggest that there is a trend in hospitals toward lower inventory levels. This indicator value has fallen every year since 1997–1998 when the value was 24.11 days. In 1999–2000 it was 22.42 days, in 2000–2001, 21.29, and in 2001–2002 it fell to 19.80 days. This represents a 17.9% decrease in the Days in Inventory value over this period. However, despite this decrease, there was still significant variation among individual hospitals in 2001–2002, with days in inventory ranging from 7 to 85.

Why is this range so large? In general, the ability of a hospital to maintain as small an inventory as possible is influenced by a host of factors, including materials management practices, physical space, supplier relations, and the geographic location of the hospital. For example, remote hospitals or those that experience larger seasonal variations in demand may need to maintain larger inventories. Inventory management also depends heavily on the types of services provided by the hospital. A hospital with a high proportion of surgical patients will usually require more inventory than a hospital with a high proportion of family-practice or mental-health patients.

Hospital inventories typically include instruments and supplies for all areas of the hospital including nursing, administration, housekeeping, laundry, dietary, maintenance and so on. Inventories must be acquired before patients are admitted to hospital. This requires a forecasting of the different types of patients who may be admitted before establishing target inventory levels, which makes inventory management a difficult task. Also, because errors in the establishment of inventory levels could quickly result in clinicians not having the necessary instruments or other supplies when needed, inventory management is as important as it is challenging. The twin goals of inventory management are (1) to ensure that the inventories needed to sustain operations

are available, but (2) to hold the costs of ordering and carrying inventories to the lowest practical level. The typical costs associated with inventory are: (1) carrying costs; (2) ordering, shipping and receiving costs; and, (3) costs of running short.

Days in Inventory indicates how long a hospital could continue to provide services with no additional inventory shipments. A low value indicates low inventory costs, which reflects good inventory management as long as there is no risk of a stock-out situation of critical supplies. A high value indicates a large investment in inventory, an investment that could be put to better use.

Recommended use of *Days in Inventory*: A value around the mean is probably no cause for concern. Values much higher than the mean and significant changes from previous years should be investigated.

Liquidity

Liquidity indicators measure how a hospital is managing its current assets (those that could be converted to cash within a year) and current liabilities (wages, suppliers' bills, and other expenses that must be paid within a year). Hospitals with greater liquidity may have more financial flexibility, particularly with respect to buying equipment. In *Hospital Report 2003: Acute Care*, there are two measures of liquidity: Current Ratio and Working Capital to Revenue.

Current Ratio

A hospital's current ratio represents the number of times its short-term obligations can be paid using the hospital's short-term assets. It is calculated by dividing current assets by current liabilities. A higher value indicates greater liquidity, a lower value indicates lesser liquidity. If a hospital's ratio is less than one, it has insufficient current assets to cover its current liabilities. On the other hand, very high values may indicate under-investment in longer-term assets that usually yield greater returns. Payer practices, payment policies, credit arrangements, investment policies, management strategies, and other factors can all affect a hospital's liquidity.

Across the province in 2001–2002, Ontario hospitals reported current assets of almost $2.1 billion and current liabilities of approximately $2.2 billion, after adjusting to remove the effect of deferred revenues and contra accounts. Deferred revenues are excluded because these amounts typically relate to accounting entries made to comply with defer-and-match accrual requirements for the amortization of capital assets. These are not current liabilities that the organization would be expected to honour.

Calculating the Current Ratio

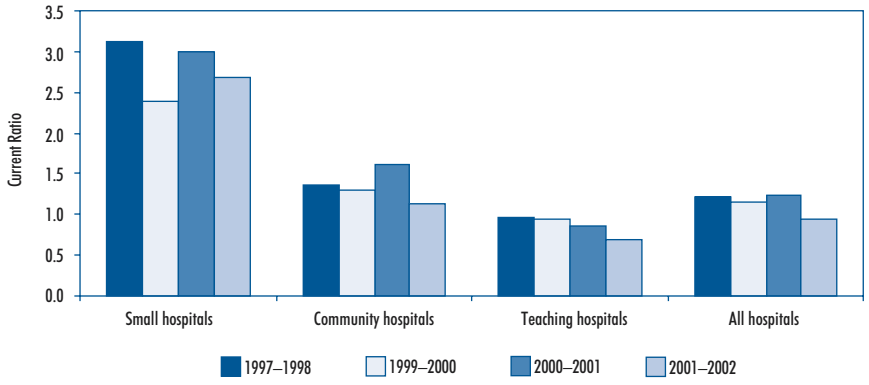
$$\frac{\text{Current Assets + Debit Current Liability Balances, excluding Deferred Revenues}}{\text{Current Liabilities, excluding Deferred Revenue Balances + Credit Current Assets, except Current Asset Contra Accounts}}$$

The province-wide average current ratio was 0.95, suggesting that Ontario hospitals, on average, did not have sufficient short-term funds to pay their short-term-obligations during 2001–2002. This value indicates that if all current assets were converted to cash at their book value, the hospitals would have, on average, 95 cents for every dollar of current liabilities.

The current ratio in 2000–2001, 1999–2000 and 1997–1998 was 1.24, 1.15 and 1.21, respectively. The decline in the current ratio between 2000–2001 and 2001–2002 was caused by a 14% decrease in current assets and an 11% increase in current liabilities. In total, 95 hospitals showed a decrease in their current ratio, while only 25 showed an increase.

FIGURE 5.6: HOW CURRENT RATIO VARIES BY TYPE OF HOSPITAL AND FISCAL YEAR

The graph below indicates that Ontario's small and community hospitals continued to remain liquid during the four reported years. Teaching hospitals, however, may be facing liquidity problems. The values reported in this graph are the weighted averages by hospital type for each year.



Source: Ontario Hospital Reporting System, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.

If a hospital has a current ratio well above 1.0, one can ask if this is favourable or unfavourable. The answer depends on who is asking the question. Companies that provide supplies, drugs, and equipment to hospitals like to see a high current ratio. This is because the current ratio provides the best single indicator of the extent to which the claims of short-term creditors can be met. If a hospital is encountering financial difficulties, it will often begin paying its bills (accounts payable) more slowly, borrowing from its bank, and reducing inventory levels. Some of these actions will also drive up the hospital's liabilities. For this reason, the current ratio is a commonly used measure of short-term solvency.

Although suppliers and lenders may value a high current ratio, from the perspective of the community, too high a current ratio could mean that the hospital has a lot of money tied up in non-productive assets, such as excess cash or inventory. The preferred situation for this group would be the redeployment of non-productive assets to the greatest extent possible to provide additional patient care, acquire new technology, and so on.

An optimal current ratio is therefore one that is high enough to satisfy creditors but low enough to indicate that a hospital is minimizing investment in short-term assets. If current liabilities are rising faster than current assets, the current ratio will fall, potentially leading to problems with financial management.

Recommended use of *Current Ratio*: A value around 1.0 is probably no cause for concern. Values much higher or lower than 1.0 and significant changes from previous years should be investigated.

Working Capital to Revenue

Calculating Working Capital to Revenue

(Current Assets – Current Liabilities, excluding Deferred Revenues) * 100

Total Revenues, excluding Internal Recovery Revenue

Note: In previous editions of *Hospital Report: Acute Care*, this indicator was named "Working Capital". The name has been changed this year to more accurately reflect the components of the indicator; however, the formula and technical specifications of the indicator remain the same.

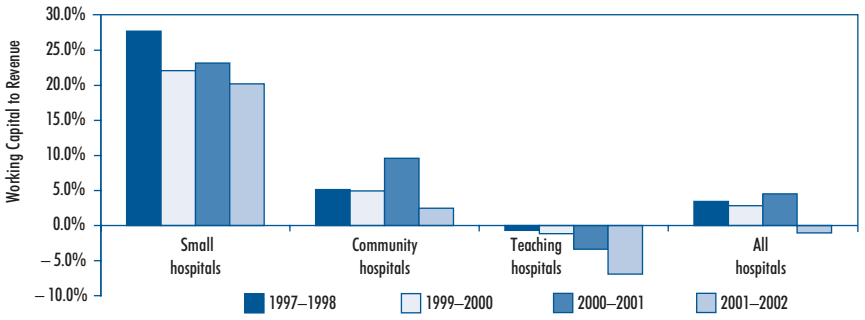
A hospital's liquidity can also be measured by how much capital is available in the short term ("working capital"), after liabilities have been taken into account. The Working Capital to Revenue indicator measures what current assets remain after paying all of the current liabilities and adjusting for the size of the hospital's total revenues. A larger positive value indicates a greater supply of working capital relative to total revenues. Hospitals with a positive value are likely to have greater financial flexibility. A negative value means that there is no working capital available. The financial flexibility of a hospital in this situation tends to be more limited.

Among Ontario hospitals, Working Capital to Revenue declined between 1997–1998 and 1999–2000 from 3.44% to 2.83%. Between 1999–2000 and 2001–2002 this indicator value decreased to –1.04%. This change suggests that hospitals have had to use up some of their current assets and have incurred increased current liabilities to cover their deficits.

As with other indicators, Working Capital to Revenue values differ by hospital type. Small hospitals reported the largest Working Capital to Revenue ratio at 20.22%. This compares to 2.47% for community hospitals. Ontario's teaching hospitals had a negative combined Working Capital to Revenue ratio (–6.92%).

FIGURE 5.7: HOW WORKING CAPITAL TO REVENUE VARIES BY TYPE OF HOSPITAL AND FISCAL YEAR

The Working Capital to Revenue indicator measures what current assets remain after paying all of the current liabilities, adjusted for the size of the hospital's total revenues. The values reported in this graph are the weighted averages by hospital type for each year.



Source: Ontario Hospital Reporting System, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.

Many of the factors that can affect a hospital's current ratio may also influence its ability to generate working capital. Examples include payer practices, payment policies, credit arrangements, investment policies, and management practices. Differences in Working Capital to Revenue across hospital types may also be explained by the extent to which hospitals use working capital—instead of donations by hospital foundations or other funding sources—to pay for capital expenditures or long-term investments.

In general, the goal of working capital management is to support the operations of the hospital at the lowest possible cost. While there are unique factors relating to each component of working capital, there are two important general aspects to consider. First, current assets are necessary, but there are costs associated with holding them. Therefore, if a hospital can manage its current assets more efficiently and thereby operate with a smaller investment in working capital, this will increase its liquidity. Second, a hospital will have problems meeting day-to-day needs if it reduces its cash, inventory, and receivables too much. Thus, the optimal working capital policy is one that carefully trades off the costs and benefits of holding working capital.

Recommended use of *Working Capital to Revenue*:
A small positive value is no cause for concern. Negative values or large positive values and significant changes from previous years should be investigated.

Calculating Equipment Expenditure

Total Expenses related to the maintenance and operation of equipment (calculated as Equipment Maintenance + Replacement of Major Equipment Parts + Amortization on Major Equipment + Net Gain/Loss on Disposal + Interest on Major Equipment Loans + Rental/Lease of Equipment + Minor Equipment Purchases + Equipment Expense not Elsewhere Classified) * 100

Total Expenses, Net of All Recoveries

Capital

Spending on Equipment

In 2001–2002, hospitals in Ontario reported that they owned approximately $5.1 billion of equipment. Hospitals also spend substantial sums every year to operate and maintain all of this equipment.

The Equipment Expenditure indicator measures how much a hospital spends in a given year to operate its computer systems, x-ray machines, and other capital equipment, and compares this amount to its total expenses. Ontario hospitals reported spending $708 million on equipment-related expenses (including amortization) in 2001–2002 or 6.51% of total expenses. In 2000–2001, they reported spending 6.54% of total expenses to operate equipment while in 1999–2000 and 1997–1998 the values were 6.61% and 5.78% respectively.

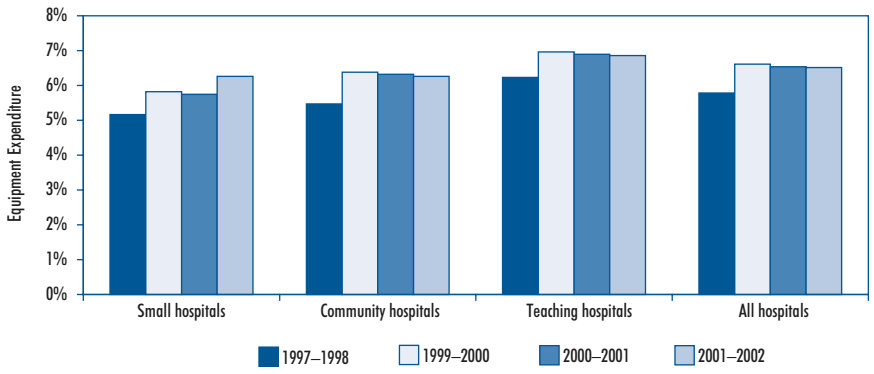
Teaching hospitals spent more on equipment-related expenses as a percentage of total expenses (6.86%) than community (6.26%) or small (6.26%) hospitals in 2001–2002. In part, this finding may reflect equipment requirements related to the highly specialized types of care, teaching activities, and research initiatives that occur more frequently in teaching hospitals.

Many factors, such as the types of services provided, teaching activities, and research programs, affect a hospital's need for equipment and therefore their equipment-related expenses. The age of equipment can also have an impact on equipment-operating costs. Newer equipment often requires less maintenance thereby allowing for operational savings and increased productivity.

In general, the goal of equipment management is to support the operations of the hospital at the lowest possible cost. A hospital that underspends on equipment may have insufficient resources in place to ensure that service is available when needed, dissatisfied clinicians, inadequate technology, and other consequences. A hospital that overspends on equipment may be taking scarce resources away from patient care and other alternative uses of revenues.

FIGURE 5.8: HOW EQUIPMENT EXPENDITURE VARIES BY HOSPITAL TYPE AND FISCAL YEAR

In 2001–2002, teaching hospitals reported spending more to operate equipment as a percentage of total expenses than small or community hospitals. The values reported in this graph are the weighted averages by hospital type for each year.



Source: Ontario Hospital Reporting System, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.

Unfortunately, the lowest possible equipment expenditure is not easily calculated. Moreover, an appropriate level of spending should take into account many different aspects of hospital operation. For example, hospitals with a high proportion of patients requiring tertiary care usually report a higher level of equipment expenditure for radiology, intensive care units, computer systems and so on. Also, hospitals with a high proportion of surgical patients will usually require more equipment than hospitals with a high proportion of family practice, paediatrical or mental-health patients.

Recommended use of *Equipment Expenditure*: A value around the mean is probably no cause for concern. Values much higher or lower than the mean and significant changes from previous years should be investigated.

Human Resources

The equivalent of approximately 121,000 full-time employees worked in Ontario hospitals in 2001–2002, an increase of 5.22% since 2000–2001. This report includes two indicators that measure how hospitals allocate their staff's time to patient care and non-patient care: Nursing Care Hours and Patient Care Hours. In addition, it introduces three new system-wide indicators assessing nursing resources in Ontario's hospitals: Nursing Hours per Weighted Case, Registered Nursing Staff Hours and Direct Patient Care.

Calculating Nursing Care Hours

Nursing Inpatient Services Unit Producing Personnel Worked and Purchased Service Hours * 100

Total Nursing Inpatient Services Earned Hours, excluding Medical Compensation Hours

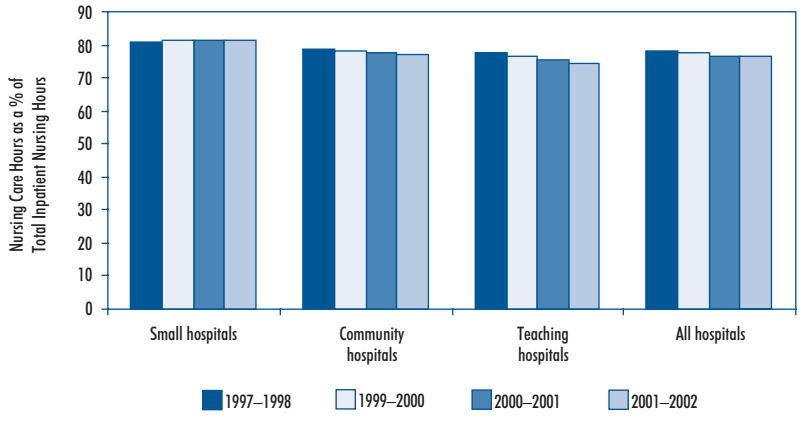
Nursing Care Hours

Hospitals report the number of hours that registered nurses, registered practical nurses, and other hospital nursing staff spend providing patient care, as well as the number of benefit hours such as vacation, education and sick time for these employees. The Nursing Care Hours indicator measures how much time inpatient nursing staff have available to provide patient care as a percentage of their total earned hours.

The data show that most nursing staff time (76.36% in 2001–2002) is spent providing patient care. Nursing management and non-worked time (e.g. holidays, sick time, maternity leave, and educational time) accounted for just under a quarter of nursing inpatient services hours. The percentage devoted to patient care has decreased slightly every year for the four reported years (78.27% in 1997–1998, 77.61% in 1999–2000 and 76.78% in 2000–2001). Small hospitals had higher values than their community and teaching hospital counterparts for all of these years. There were also variations among hospitals of the same type.

FIGURE 5.9: HOW NURSING CARE HOURS VARY BY HOSPITAL TYPE AND FISCAL YEAR

In 2001–2002, small hospitals reported having more hours available for patient care as a percentage of total nursing hours than did community or teaching hospitals. The graph illustrates that the percentage of total nursing hours available for nursing care has decreased slightly over the four reported years for all hospitals. The values reported in this graph are the weighted averages by hospital type for each year.



Source: Ontario Hospital Reporting System, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.

A hospital's ability to have a higher percentage of nursing hours available for patient care may be influenced by staff mix, collective agreements, the supply of nurses, management practices, and other factors. Differences among hospitals may also be attributable to variations in the types of personnel recorded as working in different departments. For example, one hospital may attribute hours devoted to entering data to the information systems department, while others might attribute it to the nursing units. Both hospitals could have exactly the same number of nurses and other hospital nursing staff, but the number of nursing hours would appear higher at the second hospital.

In general, the goal of nursing care management is to provide as much service as possible at the lowest possible cost. A hospital with a low proportion of nursing care hours may have inefficient staffing practices or high absenteeism, but it could also be investing in its nurses through educational leave or have a higher proportion of nurses on maternity leave. A hospital with a high proportion of nursing care hours may have efficient staffing practices or low absenteeism, or conversely, be under-investing in its nursing staff or have a lower proportion of nurses on maternity leave.

The appropriate level of nursing care hours is not easily calculated. Moreover, an appropriate level of human resource utilization should take into account many different aspects of hospital operations. Variations in this indicator between teaching, community and small hospitals can occur for a variety of reasons including the scope of the teaching role and registered nursing supply challenges related to the nursing shortage.

Recommended use of *Nursing Care Hours*: A value around the mean is probably no cause for concern. Values much higher or lower than the mean and significant changes from previous years should be investigated.

Patient Care Hours

Most hospital staff provide or support patient care activities, but some perform other functions. The Patient Care Hours indicator measures the percentage of all hospital-worked hours for staff who are theoretically available to carry out activities that contribute directly to patient care. A higher value indicates more worked time for patient care and less for support and corporate services. A hospital's ability to achieve a higher ratio of worked time for patient care is influenced by factors such as staff mix, collective agreements, labour supply, management practices, and other factors.

Calculating Patient Care Hours

$$\frac{\text{Nursing Inpatient Services, Ambulatory Care, and Diagnostic \& Therapeutic Worked and Purchased Service Hours} * 100}{\text{Total Operating Worked Hours, excluding Medical Compensation Hours}}$$

Ontario hospital staff worked a total of 192 million hours in 2001–2002. Of these, over half (59.47%, or 114 million hours) were worked by staff who provided patient care. In 2000–2001 the ratio was 59.38%, in 1999–2000, 59.41%, and in 1997–1998, 60.32%. During the four reported years, small hospitals typically reported lower patient-care hour ratios relative to teaching and community hospitals.

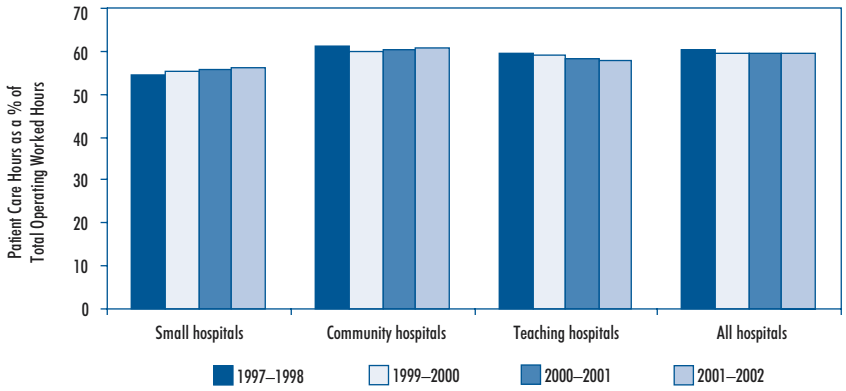
In general, the goal of patient care management is to provide as much service as possible at the lowest possible cost. A hospital that directs too few hours of provider time toward patient care may be allocating too many resources to corporate or support services and not meeting its community service mission.

A hospital that commits a high proportion of total provider hours to patient care activities may signal an organization with inadequate technology, limited professional development activities, and potentially inefficient operations that can lead to dissatisfied staff.

The appropriate level of patient care hours is not easily calculated. Moreover, an appropriate level of human resource utilization should take into account many different aspects of hospital operation.

FIGURE 5.10: HOW PATIENT CARE HOURS VARY BY HOSPITAL TYPE AND FISCAL YEAR

In 2001–2002, small hospitals reported spending fewer hours on patient care as a percentage of total operating worked hours than did community or teaching hospitals. The graph below shows little variation in Patient Care Hours over the four reported years. The values reported in this graph are the weighted averages by hospital type for each year.



Source: Ontario Hospital Reporting System, 1997–1998, 1999–2000, 2000–2001 and 2001–2002.

Recommended use of *Patient Care Hours*: A value around the mean is probably no cause for concern. Values much higher or lower than the mean and significant changes from previous years should be investigated.

Developing Indicators of Nursing Financial Performance

Indicator Validation Process

An advisory panel of senior executive personnel from a sample of Ontario hospitals was convened to review the original nursing indicators that had been proposed in *Hospital Report 2001—Preliminary Studies Volume 2—Exploring: Nursing; Women's Health; Population Health*. The advisory panel comprised the senior executive teams (i.e., chief executive officer, chief nursing executive, and chief financial officer) of one teaching hospital, two community hospitals, and one small hospital, each from different parts of Ontario. The purpose of the panel was to identify indicators around which there was the greatest consensus concerning the value of the indicator for management purposes in Ontario hospitals. The researchers used the format outlined in the *Hospital Report—First Principles* document to provide guidance about the design and selection of indicators for the panel members. Each panel participant ranked the proposed indicators in order of importance and relevance. The three most important nursing indicators were identified as:

1. Nursing hours per weighted case;
2. Registered nursing staff hours; and
3. Direct patient care.

The research team calculated these nursing indicators for four groups of hospitals: teaching, community, small, and all hospitals in the province. The advisory panel reviewed the results, strongly supported the integration of these indicators into the *Hospital Report* series, and provided valuable feedback to the research team regarding the definitions, interpretation and discussion of the indicators. In particular, the panel approved the use of weighted cases as used in the hospital funding formula and Unit Cost Performance indicator (see "Coding Variations and Data Quality" sidebar) to ensure consistency and understanding by hospital sites (e.g. nursing hours per weighted case). As well, they approved the use of similar indicators in the different *Hospital Report* series initiatives (e.g. registered nursing staff hours in *Hospital Report 2003: Acute Care* and *Hospital Report 2003: Emergency Department Care*), acknowledged that the accuracy of the data provided within the industry related to nursing workload will influence the indicator results (e.g. direct patient care), and raised a number of issues for future consideration.

Nursing Hours per Weighted Case

One way of gauging the efficiency of a hospital is by measuring the number of nursing hours worked per weighted case. The Nursing Hours per Weighted Case indicator does so by measuring the amount of acute nursing inpatient services and surgical-day-care worked hours (including purchased service hours) per acute inpatient and surgical-day-care weighted case.

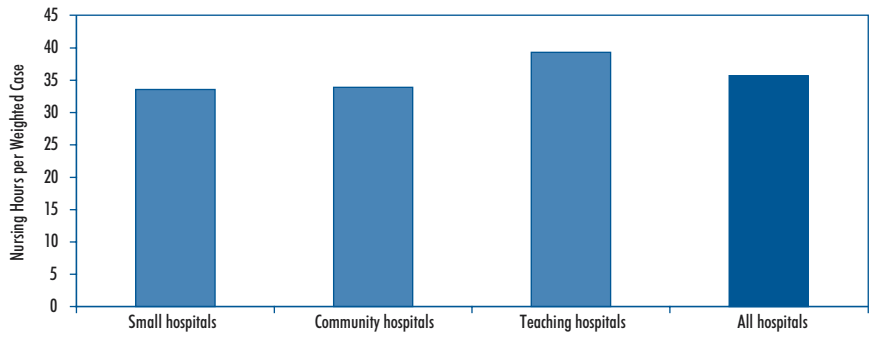
Calculating Nursing Hours per Weighted Case

$$\frac{\text{Acute Nursing Inpatient Services and Surgical Day Care Worked and Purchased Service Hours} * 100}{\text{Acute Inpatient and Surgical Day Care Weighted Cases}}$$

In 2001–2002, an average of 35.7 nursing hours per weighted case were provided to acute care inpatients and day-surgery patients. Teaching hospitals reported the highest number of nursing hours per weighted case (39.3 hours) and small hospitals the lowest (33.6 hours). For their part, community hospitals reported 33.9 nursing hours per weighted case. This indicator captures the utilization of nursing staff most directly involved in the delivery of patient care in relation to patient complexity. A higher figure indicates a greater number of nursing hours per weighted case; a lower figure the reverse. For 2001–2002, the higher absolute number of nursing hours per weighted case in teaching hospitals may be a reflection of higher patient complexity.

FIGURE 5.11: HOW NURSING HOURS PER WEIGHTED CASE VARY BY HOSPITAL TYPE

In 2001–2002, teaching hospitals reported more Nursing Care Hours per Weighted Case than small and community hospitals. The values reported in this graph are the weighted averages by hospital type.



Source: Ontario Hospital Reporting System, 2001–2002.

Registered Nursing Staff Hours

Different hospitals may use a different mix of patient care staff to provide similar services. The RN Staff Hours indicator measures the percentage of unit-producing personnel (UPP) earned hours (worked, benefit, and purchased service hours) for unit-producing personnel who are registered nurses.

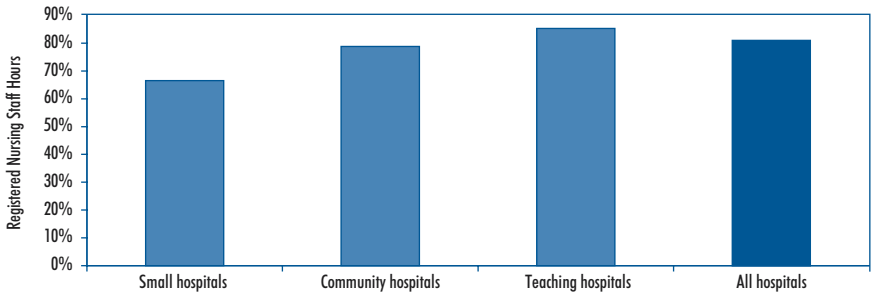
Calculating Registered Nursing Staff Hours

$$\frac{\text{Acute Nursing Inpatient Services Registered Nurse Unit-Producing Personnel Earned Hours} * 100}{\text{Acute Nursing Inpatient Services Total Unit-Producing Personnel Earned Hours}}$$

In 2001–2002, an average of 81.0% of total unit-producing personnel earned hours was for registered nursing staff. This suggests that registered nurses comprise the majority of staff in all three types of hospitals. Teaching hospitals reported the highest percentage of registered nursing staff (85.3%) and small hospitals the lowest (66.5%). Community hospitals were in the middle, with 78.8%. A lower percentage indicates not only a smaller proportion of registered nursing staff, but also more use of registered practical nurses and/or unregulated staff. It should be noted that there are variations in the method of allocating registered nurses, regulated practical nurses, and unregulated staff by hospitals. Substantial evidence in the acute care literature suggests that higher proportions of registered nurses in the staff mix lead to improved patient outcomes.[2–11] While teaching and community hospitals in Ontario are able to attain high proportions of RNs in their staff mix, small hospitals may face RN supply challenges related to the nursing shortage. This indicator should be reviewed in relation to outcome indicators in the Patient Satisfaction and Clinical Utilization and Outcomes quadrant, and the process indicators in the System Integration and Change quadrant.

FIGURE 5.12: HOW REGISTERED NURSING STAFF HOURS VARY BY HOSPITAL TYPE

In 2001–2002 small hospitals had fewer registered nurses in their staff mix than community and teaching hospitals. The values reported in this graph are the weighted averages by hospital type.



Source: Ontario Hospital Reporting System, 2001–2002.

Direct Patient Care

While nurses spend the majority of their time caring for patients, they also perform other functions. This indicator measures the percentage of unit-producing personnel worked hours (including purchased service hours) for direct patient care using nursing workload data. Essentially, this indicator can be considered a measure of productivity because of its use of nursing workload data.

Calculating Direct Patient Care

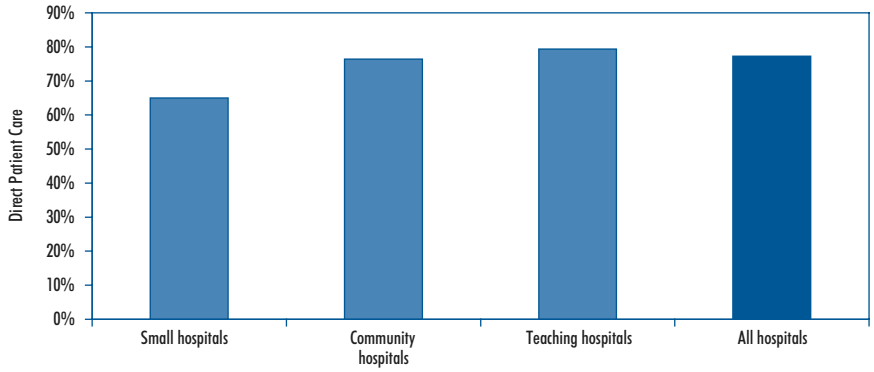
Acute Nursing Inpatient Services Service Recipient Workload Units/60

Acute Nursing Inpatient Services Unit-Producing Personnel Worked and Purchased Service Hours

For 2001–2002, an average of 77.3% of total unit-producing personnel worked hours were for direct patient care. This result suggests that most inpatient nursing staff time in all hospital types is spent on direct patient care. Teaching hospitals reported the highest percentage of direct patient care (79.3%) and small hospitals the lowest (65.0%). Community hospitals reported 76.4%.

FIGURE 5.13: HOW DIRECT PATIENT CARE VARIES BY HOSPITAL TYPE

The graph below suggests that in 2001–2002, nursing staff in teaching hospitals spent more time providing patient care than nursing staff in both small and community hospitals. The values reported in this graph are the weighted averages by hospital type.



Source: Ontario Hospital Reporting System, 2001–2002.

A higher percentage indicates a greater proportion of hours spent on direct patient care. A lower percentage indicates a lesser proportion of hours spent on direct patient care and more time spent on other activities. Variations in this indicator among teaching, community and small hospitals can occur for a variety of reasons. These include the utilization of different models of patient care delivery, changes to programs and services (i.e. restructuring), staffing cuts, and the composition of the nursing staff mix.

How hospitals allocate workload between inpatient and outpatient units varies, particularly in small hospitals. Also, obstetrical and paediatric inpatient functional centers are allowed to report outpatient activities under the OHRS guidelines.

Summary

This chapter provides Ontario hospital stakeholders with a discussion of the results for twelve province-wide measures of financial performance and condition. Hospital-specific measures for nine of these indicators are included in the insert. When used in combination with the indicators in the other quadrants, these measures can help managers, board members, care providers, government officials, and others to better understand the financial situation of Ontario's acute care hospitals.

This chapter also introduces three new system-wide nursing indicators that were developed with the input of a senior administrative Advisory Panel based on the work outlined in *Hospital Report 2001—Preliminary Studies Volume 2—Exploring: Nursing; Women's Health; Population Health*.

In this report, we compare results for 2001–2002 (the latest data available) to results from previous editions of *Hospital Report: Acute Care*. Findings include:

- Together, Ontario acute care hospitals combined to report expenses in excess of revenues of over $115 million dollars.
- Total margin decreased by 2.5 percentage points.
- Long-term debt decreased by almost $38 million from 2000–2001 to 2001–2002.
- Corporate services spending as a percentage of total operating expenses fell slightly—from 8.76% in 2000–2001 to 8.61% in 2001–2002.
- Days in inventory dropped to 19.80 days in 2001–2002, from 21.29 in 2000–2001.
- Liquidity dropped—the current ratio decreased from 1.24 in 2000–2001 to 0.95 in 2001–2002.

- Expenses relating to equipment, in percentage terms, remained relatively constant—equipment expenditure decreased from 6.54% in 2000–2001 to 6.51% in 2001–2002.
- The proportion of patient care hours to total hours for nursing staff also remained fairly constant—76.78% in 2000–2001 versus 76.36% in 2001–2002.
- The proportion of hours worked by hospital staff who contribute to patient care to total hospital-worked hours remained fairly constant—59.38% in 2000–2001 and 59.47% in 2001–2002.

Next Steps

In order to ensure that the Financial Performance and Condition quadrant continues to be a useful tool, the research team is evaluating current measures and exploring the potential application of new ones. Current projects include:

- Exploring the continued relevance of current indicators, investigating the possibility of adding important new indicators, and considering options for refining the measurement and interpretation of existing indicators.
- Working towards reporting the three new nursing indicators at a hospital-specific level for *Hospital Report 2004: Acute Care*. This will include investigation of several data quality issues that have been identified by the researchers and practitioners. At the same time, further integration of these indicators into other reports of the *Hospital Report* series will occur.
- Identifying indicator benchmarks and thresholds. These values will be reported in future reports.

For more information

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Appendices



Appendix A: Ontario Hospitals included in *Hospital Report 2003: Acute Care*

Hospital Organization/Corporation Name	Sites Included	Participation Level	Peer Group	Region
Alexandra Hospital		Hospital Specific	Small	5
Almonte General Hospital		Hospital Specific	Small	2
Arnprior & District Memorial Hospital		Hospital Specific	Small	2
Atikokan General Hospital		System Wide	Small	1
Blind River District Health Centre		System Wide	Small	1
Brant Community Healthcare System		Hospital Specific	Community	4
	Willett Hospital			
	The Brantford General Hospital			
Brockville General Hospital		Hospital Specific	Community	2
Cambridge Memorial Hospital		Hospital Specific	Community	4
Campbellford Memorial Hospital		System Wide	Small	2
Carleton Place & District Memorial Hospital		Hospital Specific	Small	2
Chatham-Kent Health Alliance		Hospital Specific	Community	5
	Public General Hospital			
	St. Joseph's Hospital			
	Sydenham District Hospital			
Children's Hospital of Eastern Ontario		Hospital Specific	Teaching	2
Collingwood General & Marine Hospital		Hospital Specific	Community	4
Cornwall General Hospital		Hospital Specific	Community	2
The Credit Valley Hospital		Hospital Specific	Community	3
Deep River and District Hospital		System Wide	Small	2
Dryden Regional Health Centre		Hospital Specific	Small	1
Englehart & District Hospital		Hospital Specific	Small	1
Espanola General Hospital		System Wide	Small	1
Four Counties Health Services		Hospital Specific	Small	5
Geraldton District Hospital		System Wide	Small	1
Glengarry Memorial Hospital		Hospital Specific	Small	2
Grand River Hospital		Hospital Specific	Community	4
	K-W Health Centre			
Grey Bruce Health Services		Hospital Specific	Community	5
	Bruce Peninsula Site			
	Markdale Site			
	Meaford Site			
	Owen Sound Site			
	Southampton Site			
Groves Memorial Community Hospital		Hospital Specific	Community	4
Guelph General Hospital		Hospital Specific	Community	4
Haldimand War Memorial Hospital		Hospital Specific	Small	4
Haliburton Highlands Health Services Corporation		System Wide	Small	2
	Haliburton Hospital Site			
	Minden Hospital Site			
Halton Healthcare		Hospital Specific	Community	4
	Milton District Hospital Site			
	Oakville-Trafalgar Memorial Hospital Site			
Hamilton Health Sciences		Hospital Specific	Teaching	4
	Hamilton General			
	Henderson General			
	McMaster University Medical Centre (MUMC)			
Hanover & District Hospital		Hospital Specific	Small	5
Headwaters Health Care Centre		Hospital Specific	Community	4
Hôpital Général de Hawkesbury & District General Hospital Inc.		Hospital Specific	Community	2
Hôpital Montfort		Hospital Specific	Community	2
Hôpital Notre-Dame Hospital		System Wide	Small	1
Hôpital régional de Sudbury Regional Hospital		Hospital Specific	Community	1
	Laurentian Site			
	Memorial Site			
	St. Joseph's Health Centre			

Hospital Organization/Corporation Name	Sites Included	Participation Level	Peer Group	Region
Hornepayne Community Hospital		System Wide	Small	1
The Hospital for Sick Children		Hospital Specific	Teaching	3
Hotel Dieu Health Science Hospital (Niagara)		Hospital Specific	Community	4
Hotel-Dieu Grace Hospital (Windsor)		Hospital Specific	Community	5
	Hotel-Dieu Site			
Hotel Dieu Hospital—SEOHSC		System Wide	Teaching	2
Humber River Regional Hospital		Hospital Specific	Community	3
	Church Street Site			
	Finch Avenue Site			
	Keele Street Site			
Huntsville District Memorial Hospital		Hospital Specific	Community	1
Huron Perth Hospitals Partnership		Hospital Specific	Community	5
	Alexandra Marine & General Hospital			
	Clinton Public Hospital			
	Listowel Memorial Hospital			
	Seaforth Community Hospital			
	South Huron Hospital			
	St. Marys Memorial Hospital			
	Stratford General Hospital			
	Wingham & District Hospital			
Huronia District Hospital (North Simcoe Hospital Alliance)		Hospital Specific	Community	4
Joseph Brant Memorial Hospital		Hospital Specific	Community	4
Kemptville District Hospital		Hospital Specific	Small	2
Kingston General Hospital—SEOHSC		Hospital Specific	Teaching	2
Kirkland & District Hospital		Hospital Specific	Community	1
Lady Dunn Health Centre		System Wide	Small	1
Lake of the Woods District Hospital		Hospital Specific	Community	1
Lakeridge Health		Hospital Specific	Community	3
	Lakeridge Health Bowmanville			
	Lakeridge Health Oshawa			
	Lakeridge Health Port Perry			
	Lakeridge Health Uxbridge			
	Lakeridge Health Whitby			
Lambton Hospitals Group		Hospital Specific	Community	5
	Charlotte Eleanor Englehart Hospital			
	St. Joseph's Health Centre of Sarnia			
	Sarnia General Hospital			
Leamington District Memorial Hospital		Hospital Specific	Community	5
Lennox and Addington County General Hospital		System Wide	Small	2
London Health Sciences Centre		Hospital Specific	Teaching	5
	Victoria Campus—South Street Site			
	Victoria Campus—Westminister Site			
Manitoulin Health Centre		System Wide	Small	1
	Little Current			
	Mindemoya			
Manitouwadge General Hospital		System Wide	Small	1
Markham Stouffville Hospital		Hospital Specific	Community	3
Mattawa General Hospital		System Wide	Small	1
McCausland Hospital		System Wide	Small	1
MICs Group Health Services		Hospital Specific	Small	1
	Anson General Hospital			
	Bingham Memorial Hospital			
	The Lady Minto Hospital			

Hospital Organization/Corporation Name	Sites Included	Participation Level	Peer Group	Region
Mount Sinai Hospital		Hospital Specific	Teaching	3
Niagara Health System		Hospital Specific	Community	4
	Douglas Memorial Hospital Site			
	Greater Niagara General Site			
	Niagara-on-the-Lake Hospital Site			
	Port Colborne General Site			
	St. Catharines General Site			
	Welland County General Hospital Site			
Nipigon District Memorial Hospital		System Wide	Small	1
Norfolk General Hospital		Hospital Specific	Community	4
North Bay General Hospital		Hospital Specific	Community	1
	McLaren Site			
	Scollard Site			
North Wellington Health Care		Hospital Specific	Small	4
	Louise Marshall Hospital			
	Palmerston and District Hospital			
North York General Hospital		Hospital Specific	Community	3
	Branson Division			
	General Division			
Northumberland Health Care Corporation		Hospital Specific	Community	2
Orillia Soldiers' Memorial Hospital		Hospital Specific	Community	4
The Ottawa Hospital		Hospital Specific	Teaching	2
	Civic Campus			
	General Campus			
	Riverside Campus			
	University of Ottawa Heart Institute			
	*Reported distinctly in the hospital specific results			
Pembroke General Hospital		Hospital Specific	Community	2
Perth & Smith Falls District Hospital		Hospital Specific	Community	2
	Great War Memorial Hospital of Perth			
	Smith Falls Community Hospital			
Peterborough Regional Health Centre		Hospital Specific	Community	2
	Peterborough Civic Hospital			
	St. Joseph's Health Centre of Peterborough			
Queensway Carleton Hospital		Hospital Specific	Community	2
Quinte Healthcare Corporation		Hospital Specific	Community	2
	Belleville General			
	North Hastings			
	Prince Edward County Memorial Site			
	Trenton Memorial			
RHSJ Health Centre of Cornwall		Hospital Specific	Community	2
Red Lake Margaret Cochenour Memorial Hospital		System Wide	Small	1
Renfrew Victoria Hospital		Hospital Specific	Community	2
Riverside Health Care Facilities Inc.		System Wide	Community	1
	La Verendrye Hospital			
	Emo Health Centre			
	Rainy River Health Centre			
Ross Memorial Hospital		Hospital Specific	Community	2
Rouge Valley Health System		Hospital Specific	Community	3
	Rouge Valley Ajax & Pickering			
	Rouge Valley Centenary			
Royal Victoria Hospital		Hospital Specific	Community	4
Sault Area Hospitals		Hospital Specific	Community	1
	Sault Ste. Marie General Hospital			
	Plummer Memorial Public Hospital			
The Scarborough Hospital		Hospital Specific	Community	3
	Scarborough General Site			
	Scarborough Grace Site			

Hospital Organization/Corporation Name	Sites Included	Participation Level	Peer Group	Region
Sensenbrenner Hospital		System Wide	Small	1
Services de santé de Chapleau		System Wide	Small	1
Sioux Lookout District Health Centre		System Wide	Small	1
Smooth Rock Falls Hospital		System Wide	Small	1
South Bruce Grey Health Centre		System Wide	Community	5
	South County of Bruce General Hospital (Walkerton Site)			
	Durham Memorial Hospital (Durham Site)			
	Kincardine Site			
	Chelsey & District Memorial (Chelsey Site)			
South Muskoka Memorial Hospital		System Wide	Community	1
Southlake Regional Health Centre		Hospital Specific	Community	3
St. Francis Memorial Hospital		Hospital Specific	Small	2
St. Joseph's Health Care London		Hospital Specific	Teaching	5
	St. Joseph's Hospital			
St. Joseph's Health Centre (Toronto)		Hospital Specific	Community	3
St. Joseph's Healthcare Hamilton		Hospital Specific	Teaching	4
St. Mary's General Hospital (Kitchener)		Hospital Specific	Community	4
St. Michael's Hospital		Hospital Specific	Teaching	3
St. Thomas-Elgin General Hospital		Hospital Specific	Community	5
Stevenson Memorial Hospital		Hospital Specific	Small	4
Strathroy Middlesex General Hospital		Hospital Specific	Community	5
Sunnybrook & Women's College Health Sciences Centre		Hospital Specific	Teaching	3
	Orthopaedic and Arthritic Campus			
	Women's College Campus			
	Sunnybrook Campus			
Temiskaming Hospital		Hospital Specific	Community	1
Thunder Bay Regional Hospital		Hospital Specific	Community	1
	McKellar Site			
	Port Arthur Site			
Tillsonburg District Memorial Hospital		Hospital Specific	Community	5
Timmins & District Hospital		Hospital Specific	Community	1
Toronto East General Hospital		Hospital Specific	Community	3
Trillium Health Centre		Hospital Specific	Community	3
	Mississauga Site			
	Queensway Site			
University Health Network		Hospital Specific	Teaching	3
	Princess Margaret Hospital			
	Toronto General Hospital Site			
	Toronto Western Hospital Site			
West Lincoln Memorial Hospital		System Wide	Community	4
West Nipissing General Hospital		System Wide	Small	1
West Parry Sound Health Centre		Hospital Specific	Community	1
	James St. Site			
	Church St. Site			
William Osler Health Centre		Hospital Specific	Community	3
	Etobicoke Campus			
	Georgetown Campus			
	Brampton Memorial Campus			
Wilson Memorial General Hospital		System Wide	Small	1
Winchester District Memorial Hospital		Hospital Specific	Community	2
Windsor Regional Hospital		Hospital Specific	Community	5
	Metropolitan Campus			
	Western Campus			
Woodstock General Hospital		Hospital Specific	Community	5
York Central Hospital		Hospital Specific	Community	3

Appendix B: Performance Allocations for Hospitals Participating in the Hospital-Specific Portion of the Report

System Integration and Change Quadrant

All Hospitals

Indicator	Province-Wide Mean	Performance Allocations ○	◑	●	NR
Clinical Information Technology	42.54	3	81	8	0
Clinical Data: Collection, Dissemination, and Benchmarking	57.46	4	81	5	2
Intensity of Information Use	54.97	4	86	2	0
Development and Use of Standardized Protocols	44.36	7	84	1	0
Coordination of Care	84.08	3	69	12	8
Hospitals in the Community	38.06	5	85	2	0
Working with Other Health Care Partners	48.59	3	84	5	0
Continuity of Care	86.75	2	78	4	8
Strategies for Managing ALC Patients	49.33	3	82	4	3
Supporting Hospital Staff	53.67	1	88	3	0

Small Hospitals

Indicator	Province-Wide Mean	Performance Allocations ○	◑	●	NR
Clinical Information Technology	26.42	0	14	1	0
Clinical Data: Collection, Dissemination, and Benchmarking	36.83	0	11	2	2
Intensity of Information Use	35.92	0	14	1	0
Development and Use of Standardized Protocols	29.23	2	13	0	0
Coordination of Care	87.06	0	3	4	8
Hospitals in the Community	30.60	1	14	0	0
Working with Other Health Care Partners	35.57	0	14	1	0
Continuity of Care	89.65	0	7	0	8
Strategies for Managing ALC Patients	32.26	0	14	0	1
Supporting Hospital Staff	43.31	0	14	1	0

Teaching/Community Hospitals

Indicator	Province-Wide Mean	Performance Allocations ○	◑	●	NR
Clinical Information Technology	47.91	3	67	7	0
Clinical Data: Collection, Dissemination, and Benchmarking	63.32	4	70	3	0
Intensity of Information Use	61.31	4	72	1	0
Development and Use of Standardized Protocols	49.02	5	71	1	0
Coordination of Care	83.81	3	66	8	0
Hospitals in the Community	40.54	4	71	2	0
Working with Other Health Care Partners	52.93	3	70	4	0
Continuity of Care	86.48	2	71	4	0
Strategies for Managing ALC Patients	54.94	3	68	4	2
Supporting Hospital Staff	57.12	1	74	2	0

Clinical Utilization and Outcomes Quadrant

All Hospitals

Indicator	Performance Allocations ○	◑	●	NR
Acute Myocardial Infarction				
Access to Coronary Angiography	31	38	17	6
Readmissions	3	67	5	17
Asthma				
Readmissions	0	15	1	76
Stroke				
Length of Stay	12	68	9	3
Cholecystectomy				
Access to Day-Surgery	13	32	25	22
Hysterectomy				
Length of Stay	0	20	48	24
Readmissions	0	38	3	51
Prostatectomy				
Readmissions	0	31	1	60

Small Hospitals

Indicator	Performance Allocations ○	◑	●	NR
Acute Myocardial Infarction				
Access to Coronary Angiography	4	9	0	2
Readmissions	0	3	0	12
Asthma				
Readmissions	0	0	0	15
Stroke				
Length of Stay	1	13	1	0
Cholecystectomy				
Access to Day-Surgery	0	1	2	12
Hysterectomy				
Length of Stay	0	2	2	11
Readmissions	0	0	0	15
Prostatectomy				
Readmissions	0	0	0	15

Community Hospitals

Indicator	○	◑	●	NR
Acute Myocardial Infarction				
Access to Coronary Angiography	25	27	10	2
Readmissions	3	57	2	2
Asthma				
Readmissions	0	14	1	49
Stroke				
Length of Stay	6	51	7	0
Cholecystectomy				
Access to Day-Surgery	12	24	21	7
Hysterectomy				
Length of Stay	0	13	41	10
Readmissions	0	30	2	32
Prostatectomy				
Readmissions	0	26	0	38

Teaching Hospitals

Indicator	○	◑	●	NR
Acute Myocardial Infarction				
Access to Coronary Angiography	2	2	7	2
Readmissions	0	7	3	3
Asthma				
Readmissions	0	1	0	12
Stroke				
Length of Stay	5	4	1	3
Cholecystectomy				
Access to Day-Surgery	1	7	2	3
Hysterectomy				
Length of Stay	0	5	5	3
Readmissions	0	8	1	4
Prostatectomy				
Readmissions	0	5	1	7

Patient Satisfaction Quadrant*

All Hospitals

Indicator	Mean	Performance Allocations ○	◑	●	NR
Global Quality	89.0	2	67	15	8
Process Quality	85.3	7	61	16	8
Other Caregivers	86.4	9	66	9	8
Unit-Based Care	86.7	8	62	14	8
Physician Care	86.3	4	71	9	8
Outcomes of Care	85.3	3	75	6	8
Support Services	77.8	11	58	15	8
Housekeeping	80.8	6	58	20	8

Small Hospitals

Indicator	Mean	Performance Allocations ○	◑	●	NR
Global Quality	91.1	0	4	3	8
Process Quality	88.3	0	3	4	8
Other Caregivers	89.7	0	4	3	8
Unit-Based Care	89.2	0	3	4	8
Physician Care	87.9	0	6	1	8
Outcomes of Care	87.8	0	6	1	8
Support Services	82.5	0	3	4	8
Housekeeping	87.0	0	1	6	8

Community Hospitals

Indicator	Mean	Performance Allocations ○	◑	●	NR
Global Quality	88.3	2	55	7	0
Process Quality	84.9	6	50	8	0
Other Caregivers	86.1	7	52	5	0
Unit-Based Care	86.5	7	50	7	0
Physician Care	85.8	4	56	4	0
Outcomes of Care	84.9	3	59	2	0
Support Services	77.2	10	45	9	0
Housekeeping	80.2	5	47	12	0

Teaching Hospitals

Indicator	Mean	Performance Allocations ○	◑	●	NR
Global Quality	90.9	0	8	5	0
Process Quality	85.5	1	8	4	0
Other Caregivers	85.9	2	10	1	0
Unit-Based Care	86.5	1	9	3	0
Physician Care	88.0	0	9	4	0
Outcomes of Care	86.2	0	10	3	0
Support Services	77.9	1	10	2	0
Housekeeping	80.4	1	10	2	0

* Eight hospitals (all small) did not meet the minimum 100 valid survey response criteria and therefore were excluded from the analysis.

Appendix C: Advisory Membership for *Hospital Report 2003: Acute Care*

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Bonnie Adamson	North York General Hospital
Sandra Conley	Ontario Hospital Association
Wayne Coveyduck	Temiskaming Hospital
Rueben Devlin	Humber River Regional Hospital
Elma Heidemann	Canadian Council on Health Services Accreditation
Zenita Hirji	Ministry of Health and Long-Term Care
Gordon Key	Huronia District Hospital (North Simcoe Hospital Alliance)
Bill Kreutzweiser	Ontario Hospital Association
Brian Lemon	Lakeridge Health
Wendy Nicklin	The Ottawa Hospital
Cliff Nordal	St. Joseph's Health Care London
Rita Notarandrea	Royal Ottawa Hospital
Sandy Nuttall	Ontario Ministry of Health and Long-Term Care
Steve Orsini	Ontario Hospital Association
Mark Rochon	Toronto Rehabilitation Institute
Ann Marie Strapp	Ministry of Health and Long-Term Care
Marian Walsh	Bridgepoint Health
Helen Whittome	Ministry of Health and Long-Term Care
Andrew Williams	Huron Perth Hospitals Partnership

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David Mercer	Ministry of Health and Long-Term Care
Steve Orsini	Ontario Hospital Association
Allison Stuart	Ministry of Health and Long-Term Care
Mitchell Toker	Ministry of Health and Long-Term Care

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Ronald Holliday	London Health Sciences Centre
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Susan McNair	St. Joseph's Health Centre (Toronto)
Dale Mercer	Hotel Dieu Hospital—SEOHSC
Rajiv Midha	Sunnybrook & Women's College Health Sciences Centre
Morley Mossing	Sault Area Hospitals
Carol Mulder	University Health Network
Joan Murphy	University Health Network
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Ronald Sears	Ross Memorial Hospital
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Glenn Street	Perth & Smith Falls District Hospital

We welcome comments and suggestions on *Hospital Report 2003: Acute Care*, and on how to make future reports more useful and informative. Please complete this feedback sheet, or e-mail ideas to hospitalreport@cihi.ca.

Please complete and return this questionnaire to:

Hospital Report 2003: Acute Care Feedback
Canadian Institute for Health Information
90 Eglinton Avenue East, Suite 300
Toronto, Ontario
M4P 2Y3

Instructions

For each question, please put an "X" beside the *most appropriate* response. There are no right or wrong answers, we are simply interested in your opinions about this report. Our goal is to improve future reporting efforts. Individual responses will be kept confidential.

Overall Satisfaction with the Report

For each question, please place an "X" beside the most appropriate response.

1. How did you obtain your copy of the report?
   - ❑ It was mailed to me
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2. To what extent have you read through the report?
   - ❑ I have read through the entire document
   - ❑ I have read certain chapters and browsed through the entire report
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3. Please indicate how useful you found each of the following sections of the report by putting an "X" in the *most appropriate* category:

Introduction	❑ Very useful	❑ Somewhat useful	❑ Not useful	❑ Did not read
System Integration and Change	❑ Very useful	❑ Somewhat useful	❑ Not useful	❑ Did not read
Clinical Utilization and Outcomes	❑ Very useful	❑ Somewhat useful	❑ Not useful	❑ Did not read
Patient Satisfaction	❑ Very useful	❑ Somewhat useful	❑ Not useful	❑ Did not read
Financial Performance and Condition	❑ Very useful	❑ Somewhat useful	❑ Not useful	❑ Did not read
Insert of Hospital-Specific Results	❑ Very useful	❑ Somewhat useful	❑ Not useful	❑ Did not read

4. How satisfied are you with the following aspects of the report?

a.	Clarity/readability	❑ Excellent	❑ Good	❑ Fair	❑ Poor
b.	Organization/format	❑ Excellent	❑ Good	❑ Fair	❑ Poor
c.	Use of figures	❑ Excellent	❑ Good	❑ Fair	❑ Poor
d.	Quality of analysis	❑ Excellent	❑ Good	❑ Fair	❑ Poor
e.	Level of detail presented	❑ Too much	❑ About right		❑ Too little
f.	Length of the report	❑ Too long	❑ About right		❑ Too short

5. The overall goal of *Hospital Report 2003: Acute Care* is to aid in understanding and assessing the performance of the province's hospital system as a whole, as well as individual hospital performance.

   a) How successful were we in providing useful information on the performance of Ontario's hospital system as a whole?
   - ❑ Very successful
   - ❑ Successful
   - ❑ Somewhat Successful
   - ❑ Not at all Successful

   b) How successful were we in providing useful information on the performance of specific hospitals?
   - ❑ Very successful
   - ❑ Successful
   - ❑ Somewhat Successful
   - ❑ Not at all Successful

6. How do you plan on using the information presented in this report?

_____

_____

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7. How would you improve this report?

_____

_____

_____

_____

_____

8. Do you have any suggestions for future reports?

_____

_____

_____

_____

_____

Reader Information

9. What is your main position or role?
   - ❑ Health services manager or administrator
   - ❑ Board member
   - ❑ Health care provider
   - ❑ Other hospital staff
   - ❑ Researcher
   - ❑ Policy analyst
   - ❑ Elected official
   - ❑ Student
   - ❑ Other, please specify _____

Thank you for your feedback

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