

Hospital Report



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EMERGENCY DEPARTMENT CARE

Produced by the Hospital
Report Research Collaborative

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

FOREWORD

Day and night, committed and compassionate health professionals provide emergency care to thousands of Ontario patients. Emergency care is a crucial resource that every Ontarian relies upon. The Ontario government and the Ontario Hospital Association along with the province's hospitals are accountable for ensuring this resource is there for patients when they need it. A big part of our responsibility is informing the public about how our hospitals are performing.

To that end, we are very pleased to release this Emergency Department report as part of the Hospital Report 2005 series. The 2005 series will also include reports on Acute Care, and Complex Continuing Care as well as the recently released Rehabilitation Care report.

These reports inform the government, health care providers and the public about the performance of the province's hospitals and support quality improvement efforts throughout the system. The report shows where progress is being made, while pinpointing areas for improvement.

We would like to thank the researchers from the Hospital Report Research Collaborative, based at the University of Toronto, for their dedication, professionalism and scientific rigor in the development of the report, as well as the many other individuals who contributed to our common goal of improved emergency department care.

Without the commitment and cooperation of hospitals that voluntarily participate in this project, we would not have been able to expand the reports into additional areas of study. The reports in this series are an important tool in building a stronger health care system that responds to the needs of Ontarians today and is there for generations to come.



George Smitherman
Minister of Health
and Long-Term Care



Hilary Short
President and CEO
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SCORECARD OVERVIEW

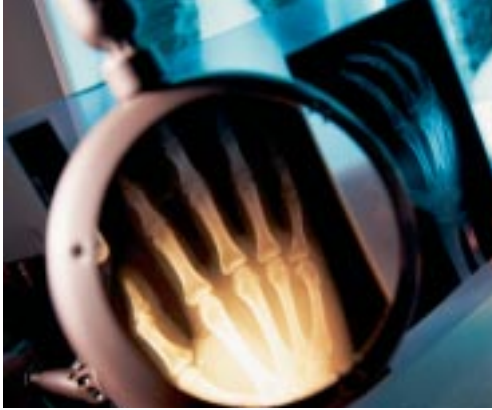
Hospital Report 2005: Emergency Department Care is a hospital-specific report that uses a balanced scorecard approach to report on the performance of Ontario hospitals that have emergency departments or urgent care centres.



WHAT DOES THE SCORECARD ILLUSTRATE?

Hospital Reports, started in 1998 and sponsored by the Ministry of Health and Long-Term Care and the Ontario Hospital Association, provide Ontario's hospitals with performance measures in a balanced scorecard framework. Balanced scorecards for emergency department care have been produced since 2001. There are two types of emergency departments (EDs) in Ontario hospitals: comprehensive emergency departments and urgent care centres. Comprehensive emergency departments are located in acute care hospitals, are open 24 hours a day, seven days per week, and provide care to patients who arrive by ambulance or other means. Urgent care centres are also located in hospitals, but have restricted hours and may not care for patients who arrive by ambulance. In the remainder of this Report, unless otherwise stated, the abbreviation ED describes both urgent care centres and comprehensive emergency departments.

- For the three System Integration and Change indicators that can be trended over time, there has been system-wide improvement since 2003 in the Use of Standardized Protocols and the Management and Support of Human Resources indicators, and a slight decline in the Use of Information Technology indicator. Overall, provincial scores are lowest for Internal Coordination of Care and External Partnerships, two indicators that will increase in strategic importance with the implementation of Local Health Integration Networks (LHINs) in Ontario. Low scores on the External Partnerships indicator suggests the need for EDs to coordinate strategically with key stakeholders. There remains considerable variation in scores across hospitals for Use of Standardized Protocols as well as for the Management and Support of Human Resources, suggesting further room for improvement for many hospitals.
- Data analysis for the Clinical Utilization and Outcomes quadrant demonstrates that despite the expected decrease in ED visit volume as a result of SARS, there were over 4.6 million visits to Ontario EDs in 2003/04. Over 60% of these visits were by individuals less than 45 years of age and almost 15% of total visits were for non-urgent care.



The vast majority of ED patients were discharged home (83.9%) while 10.8% were admitted to hospital, and 4.6% left the ED before their visit was complete. In terms of indicators of clinical quality, relatively few patients returned to the ED after treatment for asthma, indicating good short and long-term asthma management. However, variability in return rates indicates that there is room for improvement for some hospitals. While most pneumonia patients who were admitted to hospital from the ED required higher acuity care, there were several hospitals that admitted patients that could potentially have been treated more cost-effectively in the community. The average rate of x-rays for ankle and foot injuries was also above the benchmark recommended in the literature¹, suggesting significant room for improvement at many hospitals.

- For Patient Satisfaction, hospitals scored highest on the Consideration indicator and lowest on the Communication indicator, highlighting opportunities for many hospitals to improve on their communications with patients in the ED. Furthermore, the distribution of scores varied considerably for most of the indicators highlighting opportunities for hospitals to learn from one another. Small hospitals continue to score higher than community and teaching hospitals, and EDs in the GTA continue to score significantly lower than EDs in other locations. Hospital scores on all indicators were similar in 2003/04 and 2004/05.
- The Financial Performance and Condition indicators provide some insights into the productivity of nurses, administrators, and others who work in EDs. In 2003/04, these staff spent 86% of their time engaged in activities related to the operation of the emergency department. The remaining time was for training, sick time, and other benefit hours. There has been a slight decrease in the Total Worked Hours indicator value over the five-year period between 1999/00 and 2003/04. Nursing personnel represent a large proportion of the staff complement in EDs, and 85.8% of the hours they worked were spent engaged in patient care activities. The remaining hours were for sick time, maternity leave, and other benefit hours. Although the number of hours worked by nursing personnel as a proportion of hours paid decreased slightly over the past five years (1.3%), the number of hours actually worked by nursing personnel increased by 17.5% over the same period. The decrease in the indicator value despite the noticeable increase in the number of worked hours suggests that a slight increase in the number of benefit hours (such as sick time) must have also occurred during this period. Nursing personnel includes both registered nurses (RN) and other types of nursing staff. In 2003/04, 89.8% of nursing hours were provided by registered nursing staff.
- More women than men used the ED in 2003/04 in the 20-44 and 65 and older year age groups, and more women than men in the 20-44 year age group were triaged as urgent. Women visited the ED more often than men for conditions such as asthma and depression; these are conditions for which ED visits might have been prevented or reduced with timely access to primary care in the community. Likewise, in 2002/03 and 2003/04, women with asthma were more likely than men to return to the ED within 24-72 hours of their initial visit, reinforcing the importance of attention to women's health issues in patient management. Women are significantly less satisfied than men on all indicators of patient satisfaction. Several EDs in Ontario that did not use guidelines for the evaluation and management of sexual assault and/or domestic violence, and the provision of emergency oral contraception in 2002/03, reported the active use of these guidelines in 2003/04.

¹ Stiell I, Wells G, Laupacis A, Brison R, Verbeek R, Vandemheen K, & Naylor CD. Multicentre trial to introduce the Ottawa ankle rules for use of radiography in acute ankle injuries. *BMJ* 1995 Sep 2;311(7005):594-7

Monthly ED Visits for SARS Restricted and SARS Non-Restricted Hospitals

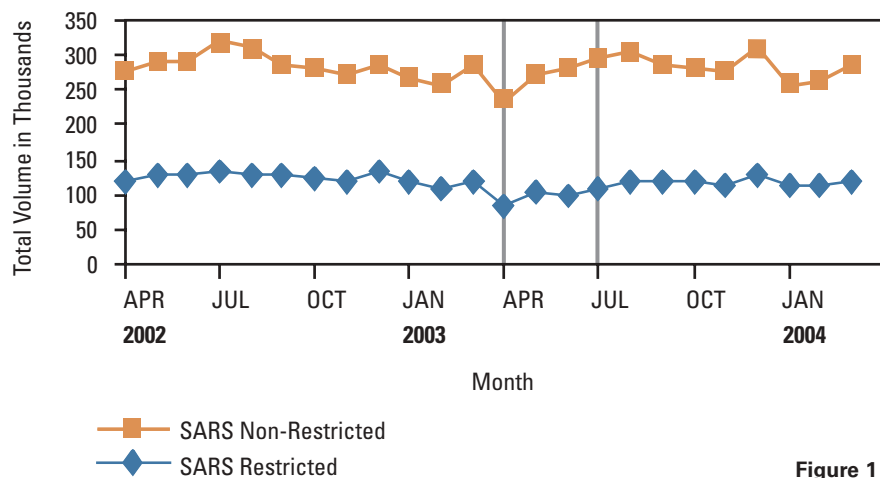


Figure 1

Severe Acute Respiratory Syndrome (SARS) presented unique operational challenges for Ontario hospitals during 2003/04. Provincial restrictions reduced access to hospitals most affected by SARS. In addition to these restrictions, patients reduced their own use of hospitals and EDs. This resulted in a decreased number of ED visits across both the 33 restricted EDs (indefinite restrictions) and the 141 non-restricted EDs (time-limited restrictions). The grey bars in the figure indicate the four month period from April through July when SARS had an impact on the number of ED visits. The effects were similar in both restricted and non-restricted hospitals and likely explain much of the 5.1% decrease in ED visits from 4,908,059 in 2002/03 to 4,671,317 in 2003/04.

Although SARS had a substantial effect on ED visits in Ontario overall, the extent of this effect on hospital level performance as measured by the clinical indicators is not known. Therefore, no adjustments were made to the clinical indicators to account for the effect of SARS. In

addition to the impact on patient volumes, labour intensive isolation and infection control mechanisms were implemented during the SARS period. Consequently, nurses who held positions in more than one hospital, or who worked as agency nurses across a number of facilities, were restricted from working in multiple hospitals during this period. As well, infection control policies also often limited the ability of direct care providers to report for work, affecting the underlying care delivery patterns during this period. It is possible that the increase in nursing benefit hours during 2003/04 was a result of these restrictions affecting the sharing of nursing resources across hospitals. However, it is not possible to determine the exact impact these factors had on measures of financial performance and condition, and thus, no adjustments were made to the labour productivity measures included in this Report to account for the effect of SARS. The System Integration and Change indicators were not negatively impacted by the SARS period since the data were collected in January 2004 and reflected practices in operation a long time after SARS. During the SARS period, lower patient satisfaction scores were observed across several indicators. To avoid penalizing some hospitals, statistical adjustments were made to compensate for the sudden drop in patient satisfaction.

Future Directions

The next Emergency Department Report to be released in 2007 will include Clinical Utilization and Outcomes indicators on ED care for children, chest pain in adults, and ED management of stroke and transient ischemic attacks (TIA). The classification scheme that should allow weighting of visits based on resource demands, should be available for the next Emergency Department Care report, and this will support inclusion of indicators of efficiency (Financial Performance and Condition) for EDs. There are no major changes anticipated for indicators of Patient Satisfaction or System Integration and Change.

HOW CAN HOSPITALS USE THE RESULTS?

The indicator results in this Report should be viewed as screening tests that can identify potential opportunities for quality improvement. Hospitals should “drill down” using their data from the e-Scorecard, the WHIC tool, and other data such as chart reviews to validate the results and to understand better the factors underlying the results. Hospital managers can also use this Report to identify other hospitals from which they might seek opportunities to learn.

No single indicator or quadrant should be used to judge a hospital ED. Each aspect of performance is important, including equity (i.e., sex differences), and relying solely on one quadrant such as patient satisfaction for comparison will provide an incorrect and incomplete picture of performance. Similarly, ranking hospitals by any one indicator or by adding up and averaging indicator scores will create incorrect information about relative hospital performance.

There are many factors that can cause indicator values to vary from hospital to hospital. Some of these factors, such as acuity of illness, are beyond a hospital’s control. Where possible, commonly accepted statistical techniques were used to reduce the impact of these factors on indicator results to improve comparability, but these techniques do not entirely eliminate their impact. These factors are described in more detail in each section.

To ensure optimal use of the scorecard results, including results by sex, Board members should identify indicators for which their hospital’s performance is lower than average or for which sex differences are significantly different* and ensure that sufficient resources are allocated to facilitate quality improvement in these areas. Within an environment of competing demands, Boards need to ensure that the organization’s culture supports an enduring commitment to quality improvement. These actions will increase the organization’s likelihood of achieving its strategic goals. The relationship between key strategic priorities and the results presented in this Report may also provide some support to Board members as they set priorities for the coming year.

With whom should the results be shared?

The objectives of this Report are to facilitate local quality improvement programs and to support hospital accountability. The primary audiences for this Report are Boards of Directors, and senior managers. To achieve the objectives of this Report, these individuals should identify meaningful ways to share the results with middle management, decision support and quality improvement staff, front line staff, patients, families, emergency service networks, base hospitals, and their communities.

Where can you find further information?

Further information is available in the e-Scorecard and technical summaries. The e-Scorecard is a web-based, password-protected electronic application incorporating annual Hospital Report indicators and underlying components. The prime objective of the e-Scorecard is to allow interactive comparative analyses for hospitals. All of these are available at the Hospital Report Research Collaborative website: www.hospitalreport.ca.

* Will be available on the Hospital Report website (www.hospitalreport.ca) August 2005 and will be integrated into the e-Scorecard in the Fall/Winter of 2005/06.

DO THE SCORECARD RESULTS RELATE TO KEY STRATEGIC PRIORITIES?



A survey completed by hospital CEOs in the winter of 2004 and validated in the fall of 2004, identified the following four key strategic priorities for hospitals. Scorecard results related to each of these priorities are highlighted.

- *Optimizing clinical and non-clinical staff recruitment and retention.* EDs are actively managing and investing in quality improvement programs to support human resources – such as ED staff training and education, strategies to improve quality of work life, and recruitment and retention strategies. Across Ontario, 54% of EDs reported the presence of a forum to routinely address specific issues and concerns relating to the evaluation of recruitment and retention strategies; 75% of EDs reported a similar forum to address quality of work life, including scheduling and workload issues. This is encouraging, since the recruitment of clinicians and other staff has been identified as a leading system-wide strategic priority facing all Ontario hospitals.
- *Enhancing patient safety.* The importance that hospitals place on adverse events (including patient safety) was positively correlated with ED patient satisfaction indicators of Consideration and Communication, although these correlations were not statistically significant. Hospitals that perform well across quadrants also tend to recognize the importance and the challenge of managing adverse events in their organizations.
- *Implementing decision support systems.* The use of clinical information technology (IT) in Ontario EDs varies considerably, with teaching hospitals developing and using these resources more intensely than in the past. To the extent that these technologies can aid in the implementation of decision-support systems, this is a positive development, since increased decision support has been recognized as a dominant system-wide strategic priority.
- *Improving horizontal and vertical integration.* The ED is a critical interface between the community and the acute care hospital. Inferences can be made about vertical integration across the continuum of care based on the types of patients who visit the ED. For example, in this Report the large number of low acuity patients seen in the ED is highlighted. This suggests that ED visits may be reduced through better integration with community-based care. Similarly, the pneumonia indicator in this Report is based on research that indicates that in well-defined cases, patients with pneumonia can be treated in the community rather than in hospital. Lower rates of pneumonia admission may indicate better community-hospital integration. Variation in performance on this indicator suggests that clinical integration between the hospital and the community should remain a priority for many hospitals. In the women's health section of this Report, differences in the rate of ED use for women and men on several key ambulatory care sensitive conditions are highlighted. With more equitable and timely use of primary care resources in the community, it is possible that many of the ED visits for these conditions might be avoided.

ARE THERE HIGH PERFORMING HOSPITALS?

For quality improvement purposes, the Hospital Report series identifies high performing hospitals in two ways: 1) hospitals that meet “high performer” criteria in two or more quadrants; and 2) hospitals that meet “high performer” criteria in a single quadrant. The following criteria were used to define high performing hospitals within each quadrant:

- *Clinical Utilization and Outcomes (CUO)*: Hospitals that perform above average on 2 of 4 indicators and do not score below average on any indicator; for the Ankle X-ray indicator, a hospital is considered above average if the confidence interval around its observed rate includes 60-62%.
- *System Integration and Change (SIC)*: For teaching/community hospitals, a hospital with the highest score on at least one indicator, and which also has “above average” performance on at least 5 of 6 indicators, and which has no indicators that are “below average”. For small hospitals, a hospital with the highest score on at least one indicator, and that also has “above average” performance on at least 5 of 6 indicators.
- *Financial Performance and Condition (Finance)*: Hospitals for which the indicator values for Total Worked Hours, Nursing Worked Hours, and RN Staffing Hours were more than one half standard deviation above the average.
- *Patient Satisfaction (PS)*: For the community hospital peer group, hospitals that scored above average on at least 3 of 4 indicators, and did not have below average performance on any indicators; for small and teaching hospital peer groups, hospitals that performed above average on at least 2 of 4 indicators and did not have below average performance on any indicators.

Hospitals that Achieve High Performance in Two or More Quadrants

Only two hospitals, Deep River and District Hospital and Groves Memorial Community Hospital, met the criteria in three of the four quadrants. The remaining hospitals met the criteria in two of four quadrants. These hospitals, which represent a range of locations and hospital size, may be able to provide useful ideas and practices to other EDs of similar size. Of the six high performing hospitals, five did not have any statistically significant sex differences on any indicators in the Patient Satisfaction (PS) and Clinical Utilization and Outcomes (CUO) quadrants. This finding reinforces the notion that in many cases, hospitals with good performance across multiple quadrants also have sex equitable performance.

- *Children’s Hospital of Eastern Ontario (CHEO)* met the criteria for Patient Satisfaction and the human resource indicators in Financial Performance and Condition. More specifically, the hospital scored above average on 4 of 4 patient satisfaction indicators and above the required but point for all 3 human resource indicators in the Financial Performance and Condition quadrant. As well, CHEO did not have any statistically significant differences for women and men on any indicators in the PS and CUO quadrants. Located in the Champlain LHIN, Children’s Hospital of Eastern Ontario is a teaching hospital that operates a comprehensive ED.
- *Deep River and District Hospital* met the criteria for System Integration and Change, Patient Satisfaction and the human resource indicators in Financial Performance and Condition. More specifically, the hospital scored above average in 5 of 6 SIC indicators, 4 of 4 patient satisfaction indicators and above the required cut point for all 3 human resource indicators in the Financial Performance and Condition quadrant. As well, Deep River and District Hospital did not have any statistically significant differences for women and men on any indicators in the PS and CUO quadrants. Located in the Champlain LHIN, Deep River and District Hospital is a small hospital that operates a comprehensive ED.
- *Grey Bruce Health Services* met the criteria for Patient Satisfaction and the human resource indicators in Financial Performance and Condition. More specifically, the hospital scored above average on 4 of 4 patient satisfaction indicators and above the required cut point for all three human resource indicators in the Financial Performance and Condition quadrant. As well, Grey Bruce Health Services did not have any statistically significant differences for women and men on any indicators in the PS and CUO quadrants. Located in the South West LHIN, Grey Bruce Health Services is a community hospital that operates a comprehensive ED.

- *Groves Memorial Community Hospital* met the criteria for Clinical Utilization and Outcomes, the human resource indicators in Financial Performance and Condition, and Patient Satisfaction. More specifically, the hospital scored above average in 2 of 4 clinical indicators, all 3 human resource indicators in Financial Performance and Condition, and 4 of 4 patient satisfaction indicators and did not score below average on any indicators in these quadrants. As well, Groves Memorial Community Hospital did not have any statistically significant differences for women and men on any indicators in the PS and CUO quadrants. Located in the Waterloo Wellington LHIN, Groves Memorial Community Hospital is a community hospital that operates a comprehensive ED.
- *Huron Perth Healthcare Alliance* met the criteria for Patient Satisfaction and the human resource indicators in Financial Performance and Condition. More specifically, the hospital scored above average on 4 of 4 patient satisfaction indicators and above the required cut point for all 3 human resource indicators in the Financial Performance and Condition quadrant. As well, Huron Perth Healthcare Alliance did not have any statistically significant differences for women and men on any indicators in the PS and CUO quadrants. Located in the South West LHIN, Huron Perth Healthcare Alliance is a community hospital that operates a comprehensive ED.
- *Perth and Smith Falls District Hospital* met the criteria for System Integration and Change and Patient Satisfaction. More specifically, the hospital scored above average in 5 of 6 SIC indicators and 4 of 4 patient satisfaction indicators. As well, Perth and Smiths Falls District Hospital did not have any statistically significant differences for women and men on any indicators in the CUO quadrant. Located in the South East LHIN, Perth and Smith Falls District Hospital is a community hospital that operates a comprehensive ED.
- *Quinte Health Care* met the criteria for Patient Satisfaction and the human resource indicators in Financial Performance and Condition. More specifically, the hospital scored above average on 4 of 4 patient satisfaction indicators and above the required cut point for all 3 human resource indicators in the Financial Performance and Condition quadrant. As well, Quinte Health Care did not have any statistically significant differences for women and men on any indicators in the PS and CUO quadrants. Located in the South East LHIN, Quinte Health Care is a community hospital that operates a comprehensive ED.
- *Ross Memorial Hospital* met the criteria for Patient Satisfaction and the human resource indicators in Financial Performance and Condition. More specifically, the hospital scored above average on 4 of 4 patient satisfaction indicators and above the required but point for all 3 human resource indicators in the Financial Performance and Condition quadrant. As well, Ross Memorial Hospital did not have any statistically significant differences for women and men on any indicators in the PS and CUO quadrants. Located in the Central East LHIN, Ross Memorial Hospital is a community hospital that operates a comprehensive ED.
- *West Lincoln Memorial Hospital* met the criteria for Patient Satisfaction and the human resource indicators in Financial Performance and Condition. More specifically, the hospital scored above average on 4 of 4 patient satisfaction indicators and above the required but point for all 3 human resource indicators in the Financial Performance and Condition quadrant. As well, West Lincoln Memorial Hospital did not have any statistically significant differences for women and men on any indicators in the PS quadrant. Located in the Hamilton Niagara Haldimand Brant LHIN, West Lincoln Memorial Hospital is a community hospital that operates a comprehensive ED.

Hospitals that Achieve High Performance in One Quadrant

In addition to hospitals that meet high performer criteria across quadrants, it is useful to highlight hospitals that performed very well in a particular quadrant when compared to their peers. These hospitals may also be able to share useful ideas and practices to contribute to improved performance in other hospitals.

Definition of High Performing Hospitals by Quadrant

System Integration and Change	Patient Satisfaction	Clinical Utilization and Outcomes	Financial Condition and Performance
For teaching/community hospitals, a hospital that achieves the highest score on one indicator, and also achieves “above average” on at least 5 of 6 indicators, and has no indicators that are “below average”. For small hospitals, a hospital with the highest score on one indicator, and also has “above average” on at least 5 of 6 indicators.	For the community hospital peer group, hospitals that scored above average on at least 3 of 4 indicators, and did not score below average on any indicators; for small and teaching hospital peer groups, hospitals that performed above average on at least 2 of 4 indicators and did not score below average on any indicators.	Hospitals that achieve above average on 2 of 4 indicators and do not score below average on any indicator; for the Ankle X-ray indicator, a hospital is considered above average if the confidence interval around its observed rate includes 60-62%.	Within each peer group, hospitals for which the indicator values for Total Worked Hours, Nursing Worked Hours, and RN Staffing Hours were more than one half standard deviation above the average.

High Performing Hospitals

<p>The Brantford General Hospital The Credit Valley Hospital Deep River & District Hospital Halton Healthcare Perth & Smith Falls District Hospital</p>	<p>Almonte General Hospital* Bluewater Health* Brockville General Hospital Children’s Hospital of Eastern Ontario* Deep River & District Hospital* Grey Bruce Health Services* Groves Memorial Community Hospital* The Hospital for Sick Children* Hotel Dieu Health Sciences Hospital, Niagara* Hotel Dieu Hospital, Kingston Huron Perth Healthcare Alliance* Kirkland & District Hospital Lakeridge Health London Health Sciences Centre* Orillia Soldiers’ Memorial Hospital* Perth & Smiths Falls District Hospital Peterborough Regional Health Centre* Quinte Health Care* Renfrew Victoria Hospital* Ross Memorial Hospital* St. Thomas-Elgin General Hospital* South Muskoka Memorial Hospital* Temiskaming Hospital Tillsonburg District Memorial Hospital Timmins and District Hospital* West Lincoln Memorial Hospital* West Parry Sound Health Centre* Winchester District Memorial Hospital*</p>	<p>Groves Memorial Community Hospital* Hanover & District Hospital* St. Michael’s Hospital* Strathroy Middlesex General Hospital* University Health Network*</p>	<p>Carleton Place & District Memorial Hospital Children’s Hospital of Eastern Ontario Deep River & District Hospital Grey Bruce Health Services Groves Memorial Community Hospital Huron Perth Healthcare Alliance Listowel & Wingham Hospitals Alliance Norfolk General Hospital Quinte Health Care Ross Memorial Hospital St. Francis Memorial Hospital South Huron Hospital Sunnybrook and Women’s College Health Sciences Centre West Lincoln Memorial Hospital The Willet Hospital</p>
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* These hospitals had no statistically significant differences for women and men any of the indicators in the quadrants noted above.

BACKGROUND

Hospital Report 2005: Emergency Department Care is a hospital-specific report that uses a balanced scorecard format to describe the performance of Ontario hospitals with EDs. In addition to providing indicator results at a hospital-specific level, the provincial means are also presented, which reflect the average value for each indicator for all hospitals in the Province with EDs, averages for each hospital type (teaching, community, small) and averages for the 14 Local Health Integration Networks (LHINs) being implemented across Ontario. To calculate these regional averages, hospital postal codes were mapped to the postal codes in each LHIN.

This Report includes results for 92 of 124 (74.2%) hospital corporations with EDs that voluntarily participated in the hospital-specific portion of this Report, with performance scores for 19 indicators across five important areas of performance. This participation rate, which includes 85.7% of the total ED visits in 2003/04, is similar to the participation rate in the 2003 Report. A list of participating and non-participating hospitals can be found on the HRRRC website (www.hospitalreport.ca).





A BALANCED SCORECARD

FOR ONTARIO'S HOSPITALS WITH EMERGENCY DEPARTMENT CARE

System Integration & Change

This quadrant describes an emergency department's ability to adapt to a dynamic health care environment. It examines the adoption of clinical information technologies and innovative work processes, support of emergency department staff, and the integration of emergency departments with other community health care providers. [6 indicators]

Clinical Utilization & Outcomes

This quadrant describes the varied and complex functions of emergency departments, provides a snapshot of emergency department utilization, and describes hospital level performance for care processes and outcomes related to asthma, ankle injury, and pneumonia. [5 indicators]

Patient Satisfaction

This quadrant examines patients' perceptions of their emergency department experience, including their overall impression of care, and their perceptions related to communication, responsiveness, and consideration. [4 indicators]

Financial Performance & Condition

This quadrant describes the financial performance of emergency departments in terms of human resource productivity indicators. [4 indicators]

Women's Health Perspective

The women's health perspective cuts across some of the quadrants of the balanced scorecard to provide a sex-based analysis of the results, and a discussion relevant to women's health. The women's health perspective is included as a separate section at the end of this Report.

This section reports differences for women and men on indicators of Clinical Utilization and Outcomes and Patient Satisfaction. It describes the magnitude and significance of these differences, as well as performance on other ED indicators (e.g., Use of Protocols in System Integration and Change).



INTERPRETING SCORES

FOR ONTARIO'S HOSPITALS WITH EMERGENCY DEPARTMENT CARE

The tables in this Report show the numeric scores for indicator values on a hospital-by-hospital basis. Also included is a shaded background that indicates whether the hospital's score on that indicator reflected above average performance, average performance, or below average performance. A score of above average performance or below average performance means that the hospital's score was statistically different than the average score for all participating hospitals.

For Clinical Utilization and Outcomes, hospitals' risk-adjusted rates were compared to the provincial mean for all measures other than ankle x-rays which were assessed relative to a defined benchmark. For Patient Satisfaction, performance classifications were assigned based on a hospital's score relative to their peer group mean (small, community or teaching). Finally, for System Integration and Change, performance classifications were assigned based on a hospital's score relative to peer group clusters of low, medium, and high scores, but for this quadrant teaching and community hospitals were grouped together (small, community/teaching) because small hospitals' scores were significantly different from the community/teaching group. There is no coloured shading for the Financial Performance and Condition quadrant because, for financial indicators, a value above the provincial average may not mean better performance.

Coloured shading for performance is assigned as follows:

- the hospital's score reflected *above average* performance
- the hospital's score reflected *average* performance
- the hospital's score reflected *below average* performance

For some indicators, lower values suggest better performance.

In these cases, lower values are labeled as *above average*.

NR means non-reportable – some results are not shown to protect patient confidentiality, because the number of events was too low to obtain a reliable estimate, or due to a data quality issue.

HOSPITAL REGIONS

Some hospitals have more than one site or serve many communities. In the tables that follow, hospital sites are not listed and only one community is shown. Regional indicator values are based on LHINs, by mapping hospital postal codes to LHINs. A listing of Ontario hospitals by LHIN can be found on the Hospital Report website: www.hospitalreport.ca.

The System Integration and Change (SIC) quadrant describes an ED's ability to manage change in a dynamic health care environment. It measures the structures, processes, and innovations used by EDs to support quality improvement. The SIC quadrant evaluates the ED's development and use of standardized protocols, its internal coordination of care, its involvement in external partnerships, its management and support of human resources, its applied use of data for decision-making purposes, and its use of clinical information technology.

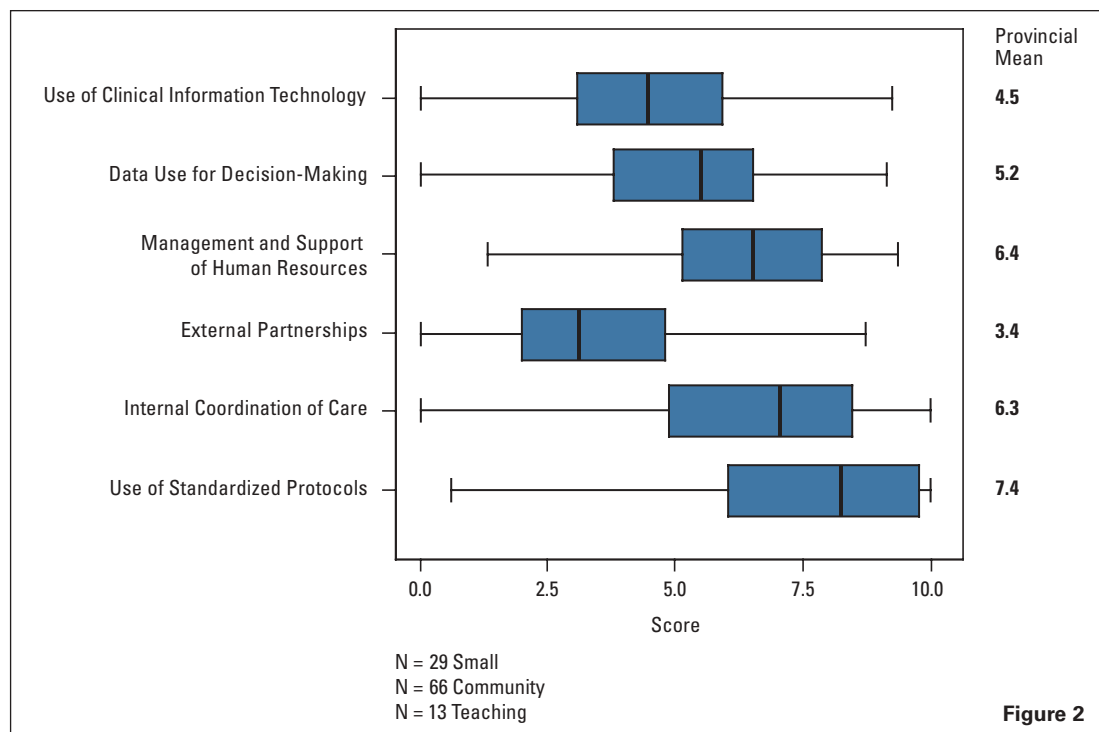
Data presented for this quadrant are from the System Integration and Change Survey, completed on a voluntary basis by hospital managers in January 2004. Provincial, peer group, and LHIN averages are based on data from 108 hospital corporations that completed the survey. Hospital-specific data are shown for 92 of 124 hospital corporations that voluntarily agreed to participate in all quadrants of this Report.

The maximum score for each indicator is 10. For each of the indicators, a higher score is desirable, as is an above average performance classification.

Indicator Definitions

- *Use of Standardized Protocols.* The degree to which EDs are developing and using clinical practice guidelines and medical directives for a broad range of relatively common conditions.
- *Internal Coordination of Care.* The degree to which EDs are engaging in a variety of strategies that facilitate internal coordination of care. This includes strategies used to address patient flow, the use of forums and committees to improve internal coordination, and the presence of specific staff roles to promote coordination.
- *External Partnerships.* The degree to which EDs are directly engaged in initiatives with external health care providers and agencies. This includes initiatives related to care coordination, evaluation and planning, education and training, communication and information sharing, surveillance and prevention, as well as the EDs' involvement with selected specialty programs.
- *Management and Support of Human Resources.* Evaluates the degree to which EDs are supporting staff training and education, and are implementing mechanisms that facilitate discussion of issues regarding quality of work life and recruitment and retention of staff. This includes support for staff and physician attendance at continuing education activities, use of committees and other processes to promote the management and support of human resources, use of specific staff roles to facilitate human resource management, and continuing education or professional development initiatives to support various staff roles.
- *Data Use for Decision-Making.* The extent to which EDs collect and disseminate clinical outcomes and appropriateness data related to timing issues, patient care management, and adverse events. Dissemination relates to the sharing of data among selected stakeholders within the hospital and the use of the data by committees and other specified staff.
- *Use of Clinical Information Technology.* This indicator tracks the extent to which EDs are using or developing electronic tracking systems, and electronic records, and performing selected functions online.

PROVINCIAL INDICATOR RESULTS (SIC)



This box and whisker plot displays the distribution of scores for hospitals in Ontario for all six indicators in the System Integration and Change quadrant. The thick black line inside the box is the median score, indicating that 50% of hospitals' scores are higher and 50% of scores are lower. Similarly, the left and right outlines of the box represent the 25th and 75th percentile scores, respectively. The whiskers extending from both ends of the box display the minimum and maximum scores for each indicator. To the right of each box is a score reflecting the provincial average for each indicator.

Means and medians are two measures of central tendency. Medians, which are the black lines in the centre of the boxplots, are the central values. Means, which are listed to the right of the figure, are the arithmetic average of the hospital values. Mean values that are substantially higher or lower than median values for the same indicator, reflect data with a distribution that is highly skewed.

SUMMARY OF RESULTS

- The median score on the Use of Standardized Protocols has improved significantly – from 7.4 in 2003 to 8.2 in this Report. Teaching hospitals demonstrated the most impressive gains on this indicator with a median score of 4.6 in 2003 and a median of 8.2 out of 10 in this Report. Improvements on this indicator may result from recognized clinical benefits^{1,2} resulting from implementation of standardized protocols that are reviewed and updated regularly. It is also possible that ED protocol use climbed higher due to an intensified awareness of clinical conditions associated with SARS; for example, there was an increase in medical directives associated with fever (from 54% of EDs with directives in use in 2003 to 65% of EDs in this Report), and in ED medical directives relating to shortness of breath (34% of EDs in 2003 to 52% of EDs in this Report). The regular use of clinical practice guidelines for chest pain (i.e., more than 75% of patients are cared for under the guideline) increased from 60% of EDs in 2003 to 78% of EDs in this Report. The regular use of guidelines to diagnose and treat pneumonia rose from 13% of EDs in 2003 to 32% of EDs in this Report.

- For ED Management and Support of Human Resources, the provincial median score rose from 5.1 in 2003 to 6.5 in this Report. Performance on this indicator is significantly positively associated with developing plans and procedures to coordinate patient flow, a component of the Internal Coordination of Care Indicator. These two measures are both reflective of an ED's ability to strategically deploy and support personnel to deliver optimal patient care.
- For the province as a whole, there was a slight decline in the Use of Clinical Information Technology indicator with the median score decreasing from 5.0 out of 10 in 2003 to 4.5 in this Report. Small and community hospitals decreased slightly while teaching hospitals improved. The overall downward trend for the use of information technology, however, is not unique to Ontario, or to hospital EDs.³ The variation among peer groups may reflect a strategic decision by small/community hospitals to wait to emulate leading practices in development by other organizations. New research also demonstrates that the mere installation of computerized physician order-entry systems is not a panacea; IT requires ongoing investment and re-evaluation in order to be effective,⁴ suggesting that a strategy of greater IT use needs to be undertaken prudently.
- Among the three indicators in this quadrant that are not readily comparable year-over-year, there is variation in the performance of Ontario EDs both by peer group and by region. While community (median of 7.5) and teaching hospitals (median of 8.1) fared well on the Internal Coordination of Care indicator, small hospitals, as a group, fared relatively poorly (median of 2.2). All hospital peer groups scored low on the External Partnerships indicator, likely due to redevelopment of this indicator which this year placed a heightened emphasis on the ED's level of integration with public health departments, primary care providers, local ambulance services, police services, long-term care facilities, and other EDs. The concentration of different provider agencies in close proximity to the hospital, as reflected by higher scores in the more urban regions, had a beneficial impact on ED performance for this indicator. Hospitals that performed well on this indicator tended to perform relatively well across other SIC components and indicators. On the Data Use for Decision-making indicator, scores were stronger for teaching hospitals (median of 6.9) and community hospitals (median of 5.7) than for small hospitals (median of 2.9).

Horizontal and vertical integration is a system-wide strategic priority identified over the last year by Ontario hospitals. Researchers performed a validation analysis on the findings of one facet of external partnerships: the strength of the relationships between Community Care Access Centres (CCACs) and acute care hospitals. Forty (40) out of 42 CCACs responded to the survey. Ninety-five percent of hospitals within the combined service area of the respondents were involved in one or more specified joint patient care strategies with CCACs, such as evaluating clinical outcomes and developing standardized protocols that span patient care in hospitals and in the community. Hospitals and CCACs equally agree that joint network participation has led to easier patient access to discharge services and to a positive impact on patient care coordination. Further details of this analysis can be found on the Hospital Report website (www.hospitalreport.ca).

1 Brand C, Landgren F, Hutchinson A, Jones C, Macgregor L, Campbell D (2005). "Clinical practice guidelines: barriers to durability after effective early implementation." *Internal Medicine Journal*, 35(3): 162-169.

2 Shekelle PG, Ortiz E, Rhodes S, Morton SC, Eccles MP, Grimshaw JM, Woolf SH (2001). "Validity of the Agency for Healthcare Research and Quality clinical practice guidelines: how quickly do guidelines become outdated?" *Journal of the American Medical Association*, 286(12): 1461-1467.

3 Trivedi MH, Hern JK, Marcee A, Grannemann B, Kleiber B, Bettinger T, Altshuler KZ, McClelland A (2002). "Development and Implementation of Computerized Clinical Guidelines: Barriers and Solutions." *Methods of Information in Medicine*, 41(5): 435-442.

4 Koppel R, Metlay JP, Cohen A, Abaluck B, Localio AR, Kimmel SE, Strom BL (2005). "Role of Computerized Physician Order Entry Systems in Facilitating Medication Errors." *Journal of the American Medical Association*, 293: 1997-1203.

Characteristics of Hospitals Performing Well on System Integration and Change Indicators

- Hospital EDs that were high performers in this quadrant were more heavily engaged in external partnerships with regional specialty programs (e.g., Regional Stroke Program) and with groups such as other EDs, long-term care facilities, and CCACs in activities related to care coordination, evaluation and planning, education and training, and communication and information-sharing.
- Hospital EDs that were high performers in this quadrant were more heavily committed to recruitment and retention activities. Such activities relate to the investments made in forums to address quality of worklife, including scheduling and workload issues, and in structures to address the identification and evaluation of staff recruitment and retention strategies.

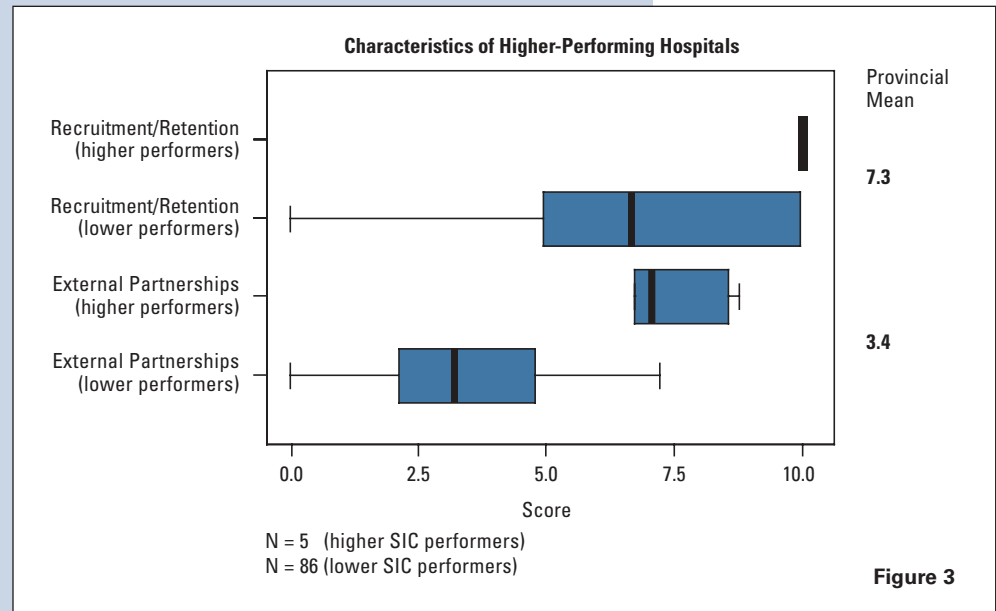


Figure 3

- In general, higher-performing hospitals were more cognizant of the major challenges of the system-wide strategic priorities identified by hospital CEOs through the strategic priorities' research conducted over the past year. All high-performing hospitals identified each system-wide priority as a major challenge to their long-term sustainability. By contrast, several lower performing hospitals reported that these challenges posed little significance to their long-term sustainability. For example, 29% of lower performing hospitals reported that managing adverse events – a major patient safety challenge according to the literature – posed no or only somewhat of a challenge to the hospital's long-term sustainability. All hospitals classified as high performing hospitals for this quadrant include an explicit commitment to improving patient safety in their mission statements.

■ Above average performance ■ Average performance ■ Below average performance

Organization Name	City	LHIN	Use of Standardized Protocols	Internal Coordination of Care	External Partnerships	Management and Support of Human Resources	Data Use for Decision-Making	Use of Clinical Information Technology
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Provincial Average			7.4	6.2	3.4	6.4	5.2	4.5
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Teaching Hospitals

Children's Hospital of Eastern Ontario	Ottawa	11	9.4	8.8	5.2	8.7	9.0	3.5
(The) Hospital for Sick Children	Toronto	7	10.0	9.0	3.2	9.3	8.3	5.9
Hotel Dieu Hospital	Kingston	10	6.0	5.1	6.6	5.5	7.0	3.8
Kingston General Hospital	Kingston	10	6.0	8.5	7.2	7.8	7.6	7.0
London Health Sciences Centre	London	2	10.0	5.4	3.6	6.2	7.0	6.8
Mount Sinai Hospital	Toronto	7	8.5	6.9	2.5	9.1	4.6	4.0
(The) Ottawa Hospital	Ottawa	11	10.0	9.8	5.9	8.9	9.0	5.8
St. Joseph's Health Care London	London	2	9.3	7.7	2.7	8.0	6.7	5.7
St. Joseph's Healthcare Hamilton	Hamilton	4	8.2	8.1	6.6	6.0	3.8	6.5
St. Michael's Hospital	Toronto	7	4.1	6.1	6.2	8.9	6.3	5.9
Sunnybrook & Women's College Health Sciences Centre	Toronto	7	7.0	9.2	3.7	5.1	6.3	6.9
University Health Network	Toronto	7	2.1	5.3	4.6	6.7	6.9	6.8
PEER GROUP AVERAGE			7.5	7.5	4.8	7.7	6.8	5.8

Small Hospitals

Alexandra Hospital	Ingersoll	2	8.7	1.8	1.6	5.4	2.7	4.7
Alexandra Marine & General Hospital	Goderich	2	8.7	5.6	2.5	3.9	5.5	6.1
Almonte General Hospital	Almonte	11	10.0	2.2	1.6	4.3	3.2	1.7
Arnprior & District Memorial Hospital	Arnprior	11	9.0	4.9	0.7	4.3	5.4	1.0
Carleton Place & District Memorial Hospital	Carleton Place	11	9.9	7.1	2.2	7.3	4.3	1.6
Deep River and District Hospital	Deep River	11	8.4	0.0	8.6	7.9	9.0	4.3
Dryden Regional Health Centre	Dryden	14	2.6	5.1	1.5	6.1	2.1	3.4
Four Counties Health Services	Newbury	2	0.6	1.1	1.2	7.8	1.8	2.6
Glengarry Memorial Hospital	Alexandria	11	5.0	0.6	1.4	1.7	2.9	1.5
Haldimand War Memorial Hospital	Dunnville	4	2.5	2.4	2.0	3.7	2.2	1.8
Haliburton Highlands Health Services	Haliburton	9	9.3	2.1	0.1	3.4	0.7	0.2
Hanover & District Hospital	Hanover	2	6.8	3.1	1.5	4.9	3.5	6.3
Listowel & Wingham Hospitals Alliance	Listowel/Wingham	2	6.3	3.7	0.0	4.4	3.6	5.4

Organization Name	City	LHIN	Use of Standardized Protocols	Internal Coordination of Care	External Partnerships	Management and Support of Human Resources	Data Use for Decision-Making	Use of Clinical Information Technology
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Small Hospitals continued

MICs Group Health Services	Iroquois Falls	13	4.3	1.0	0.8	3.9	0.7	4.4
North Wellington Health Care	Mount Forest	3	7.9	2.4	2.3	5.2	4.7	2.6
St. Francis Memorial Hospital	Barry's Bay	11	10.0	4.4	3.8	5.6	4.6	1.4
Sensenbrenner Hospital	Kapuskasing	13	0.6	0.0	0.0	2.3	0.6	5.4
South Huron Hospital	Exeter	2	7.9	0.9	1.8	4.2	3.4	6.4
(The) West Nipissing General Hospital	Sturgeon Falls	13	5.7	1.7	1.5	5.5	2.8	2.4
(The) Willett Hospital	Paris	4	NR	NR	NR	NR	NR	NR
PEER GROUP AVERAGE			5.9	2.8	1.8	4.5	3.1	3.1

Community Hospitals

Algonquin Health Services	Huntsville	12	7.0	8.5	5.2	6.6	4.4	4.2
Bluewater Health	Sarnia	1	4.6	4.8	0.3	6.6	5.5	5.6
(The) Brantford General Hospital	Brantford	4	10.0	8.2	7.0	9.3	9.2	6.0
Brockville General Hospital	Brockville	10	10.0	7.1	5.8	6.3	4.4	7.3
Cambridge Memorial Hospital	Cambridge	3	9.1	7.6	3.2	8.2	5.8	6.5
Chatham-Kent Health Alliance	Chatham	1	9.9	6.1	1.8	8.4	5.5	8.9
Collingwood General and Marine Hospital	Collingwood	12	5.6	2.9	4.0	4.6	4.2	6.0
(The) Credit Valley Hospital	Mississauga	6	10.0	9.3	6.7	8.7	8.0	9.3
Grand River Hospital	Kitchener	3	8.5	6.5	2.2	7.7	5.7	8.0
Grey Bruce Health Services	Owen Sound	2	9.7	8.7	6.7	7.6	6.2	4.4
Groves Memorial Community Hospital	Fergus	3	10.0	5.6	4.4	7.3	6.4	1.3
Guelph General Hospital	Guelph	3	5.4	5.9	5.0	7.1	4.1	5.1
Halton Healthcare	Oakville	6	10.0	9.0	8.8	8.1	6.7	7.1
Hôpital Général de Hawkesbury & District General Hospital Inc.	Hawkesbury	11	9.4	6.1	2.2	4.2	3.5	2.8
Hôpital Montfort	Ottawa	11	7.9	9.5	2.5	6.4	3.9	2.8
Hôpital régional de Sudbury Regional Hospital	Sudbury	13	8.8	6.9	3.9	4.1	3.7	4.5
Hotel Dieu Health Sciences Hospital, Niagara	St. Catharines	4	7.2	8.0	3.5	7.5	5.7	3.9
Hotel-Dieu Grace Hospital	Windsor	1	8.7	7.9	4.8	7.7	7.8	5.1
Humber River Regional Hospital	Toronto	8	10.0	6.7	4.9	8.4	7.7	5.4

* NR refers to non-reporting hospitals. Due to a reorganization that took place after our 2004 SIC survey, The Willett Hospital is now independent of The Brantford General Hospital, which together formerly constituted The Brant Community Healthcare System. Since The Brantford General Hospital and The Willett Hospital filled out one SIC survey together, only The Brantford General Hospital's results are reported here.

Organization Name	City	LHIN	Use of Standardized Protocols	Internal Coordination of Care	External Partnerships	Management and Support of Human Resources	Data Use for Decision-Making	Use of Clinical Information Technology
Community Hospitals continued								
Huron Perth Healthcare Alliance	Stratford	2	7.1	7.5	2.0	4.8	3.9	7.6
Joseph Brant Memorial Hospital	Burlington	4	9.0	7.3	4.7	7.1	5.7	3.0
Kirkland and District Hospital	Kirkland Lake	13	4.6	6.3	4.4	5.6	3.1	3.3
Lake of the Woods District Hospital	Kenora	14	7.4	5.6	2.1	4.1	5.8	5.7
Lakeridge Health	Oshawa	9	10.0	9.3	4.7	8.9	5.7	6.8
Leamington District Memorial Hospital	Leamington	1	7.2	7.3	6.0	7.4	6.2	4.5
Markham Stouffville Hospital	Markham	8	10.0	7.5	2.3	7.7	5.2	4.7
Niagara Health System	Niagara Falls	4	8.7	8.5	5.8	8.1	5.6	5.4
Norfolk General Hospital	Simcoe	4	7.4	7.3	4.0	6.5	7.7	6.2
North Bay General Hospital	North Bay	13	10.0	5.1	2.0	6.9	5.2	3.6
North York General Hospital	Toronto	8	10.0	9.7	3.0	8.7	5.7	6.5
Northumberland Hills Hospital	Cobourg	9	7.4	6.6	1.3	8.3	6.6	5.9
Orillia Soldiers' Memorial Hospital	Orillia	12	8.1	4.9	2.4	6.5	5.5	3.9
Pembroke Regional Hospital	Pembroke	11	6.6	7.9	3.9	5.7	4.8	5.7
Perth & Smiths Falls District Hospital	Smith Falls	10	10.0	7.8	6.7	7.9	8.5	8.3
Peterborough Regional Health Centre	Peterborough	9	10.0	7.1	2.4	7.9	7.3	4.5
Queensway Carleton Hospital	Nepean	11	10.0	6.1	4.4	5.7	7.6	1.9
Quinte Health Care	Belleville	10	10.0	7.2	5.0	8.1	5.2	5.0
Renfrew Victoria Hospital	Renfrew	11	9.7	9.0	5.9	6.3	5.8	4.3
Ross Memorial Hospital	Lindsay	9	6.5	7.3	3.1	7.1	8.4	3.7
Rouge Valley Health System	Scarborough	9	9.4	7.4	2.1	7.7	6.3	4.1
St. Joseph's Health Centre	Toronto	7	6.7	9.0	4.3	8.9	6.0	7.5
St. Mary's General Hospital	Kitchener	3	7.4	8.5	2.2	8.3	5.3	5.0
St. Thomas-Elgin General Hospital	St. Thomas	2	10.0	7.3	6.1	8.5	7.0	4.4
(The) Scarborough Hospital	Scarborough	9	9.9	8.6	3.9	8.0	3.9	7.2
Southlake Regional Health Centre	Newmarket	8	8.1	8.1	2.3	5.9	5.9	4.3
South Muskoka Memorial Hospital	Bracebridge	12	6.9	5.1	4.3	6.6	2.8	2.5
Strathroy Middlesex General Hospital	Strathroy	2	3.1	6.9	3.1	6.4	3.5	4.4
Temiskaming Hospital	New Liskeard	13	10.0	10.0	3.0	5.2	6.5	5.7

Organization Name	City	LHIN	Use of Standardized Protocols	Internal Coordination of Care	External Partnerships	Management and Support of Human Resources	Data Use for Decision-Making	Use of Clinical Information Technology
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Community Hospitals continued

Thunder Bay Regional Health Sciences Centre	Thunder Bay	14	7.7	9.3	5.1	9.0	5.7	6.2
Tillsonburg District Memorial Hospital	Tillsonburg	2	8.8	7.3	4.8	6.2	7.3	2.4
Timmins & District Hospital	Timmins	13	10.0	8.3	4.0	7.4	5.5	5.7
Toronto East General Hospital	Toronto	7	8.4	9.0	3.8	8.6	6.6	5.9
Trillium Health Centre	Mississauga	6	10.0	10.0	3.1	7.7	6.7	6.2
West Lincoln Memorial Hospital	Grimsby	4	2.5	8.4	2.4	7.2	5.4	1.8
West Parry Sound Health Centre	Parry Sound	13	4.1	7.2	3.9	5.9	6.0	1.2
William Osler Health Centre	Brampton	5	9.6	8.7	5.0	7.3	6.5	4.8
Winchester District Memorial Hospital	Winchester	11	2.2	6.9	2.8	4.6	6.0	1.3
Windsor Regional Hospital	Windsor	1	9.9	7.8	2.0	5.6	4.2	7.6
Woodstock General Hospital	Woodstock	2	4.0	9.0	5.8	6.4	7.0	4.1
York Central Hospital	Richmond Hill	8	9.3	8.7	5.3	9.4	6.7	5.4
PEER GROUP AVERAGE			8.0	7.5	3.8	7.0	5.7	4.9

Average Results by LHIN

LHIN 1 (Erie St. Clair)	8.0	6.8	3.0	7.1	5.8	6.3
LHIN 2 (South-West)	7.5	5.4	3.0	6.0	4.9	4.9
LHIN 3 (Waterloo Wellington)	8.1	6.1	3.2	7.3	5.3	4.7
LHIN 4 (Hamilton Niagara Haldimand Brant)	6.6	7.4	4.4	7.2	5.8	4.7
LHIN 5 (Central West)	9.1	9.4	5.3	7.5	6.5	5.0
LHIN 6 (Mississauga Halton)	10.0	9.4	6.2	8.2	7.1	7.5
LHIN 7 (Toronto Central)	6.7	7.8	4.0	8.1	6.4	6.1
LHIN 8 (Central)	8.6	7.3	3.3	7.8	5.8	5.0
LHIN 9 (Central East)	8.7	6.6	2.4	7.0	5.5	4.4
LHIN 10 (South East)	8.4	7.1	6.3	7.1	6.6	6.3
LHIN 11 (Champlain)	8.4	5.9	3.6	5.8	5.6	2.7
LHIN 12 (North Simcoe Muskoka)	7.3	6.3	3.2	6.2	4.5	4.0
LHIN 13 (North-East)	5.8	4.8	2.1	4.6	3.5	3.7
LHIN 14 (North-West)	3.9	4.6	2.2	4.8	2.9	3.5

This quadrant focuses on the clinical aspects of care provided by EDs in Ontario. The National Ambulatory Care Reporting System (NACRS) provides the data that are used for the Clinical Utilization and Outcomes (CUO) indicators. NACRS data for 2002/03 and 2003/04 were analyzed for this Report. In 2002, the coding for NACRS changed dramatically making it impossible to trend CUO data between the 2003 (based on 2001/02 data) and 2005 ED Hospital Reports. Data from all eligible EDs in Ontario that contribute to the NACRS database were used to calculate provincial, peer group, and LHIN averages. The hospital-level indicator results include data from 91 of the 124 hospital corporations that voluntarily agreed to participate in the Report (note that one participating corporation did not submit data to NACRS during the study period).

This quadrant provides both a snapshot of the kinds of patients who accessed EDs and the care they received, as well as hospital specific performance on four indicators across three clinical conditions: asthma, ankle and foot injuries, and pneumonia. Together, these clinical conditions span a variety of age ranges and acuity levels.

A Snapshot of Ontario Emergency Departments

Ontario EDs provide emergent, urgent, and non-urgent care to a high volume of patients of all ages who present to the ED with a wide range of clinical conditions and varied complexity of care needs. This section describes both the characteristics of patients who sought care at Ontario EDs as well as the kind of care they received once in the ED.

- While individuals less than 45 years of age account for just over 60% of total ED visits, only about 36.7% of Ontario's population in this age group visited the ED in 2003/04. This suggests that a small proportion of this age group has numerous repeat visits to the ED over the course of the year. Of the 60%, more than one-quarter of the visits are for patients aged 0-19 years. In contrast, those 65 years of age and older account for 18.4% of total ED visits, yet approximately 56.6% of this age group visit the ED over the course of the year.

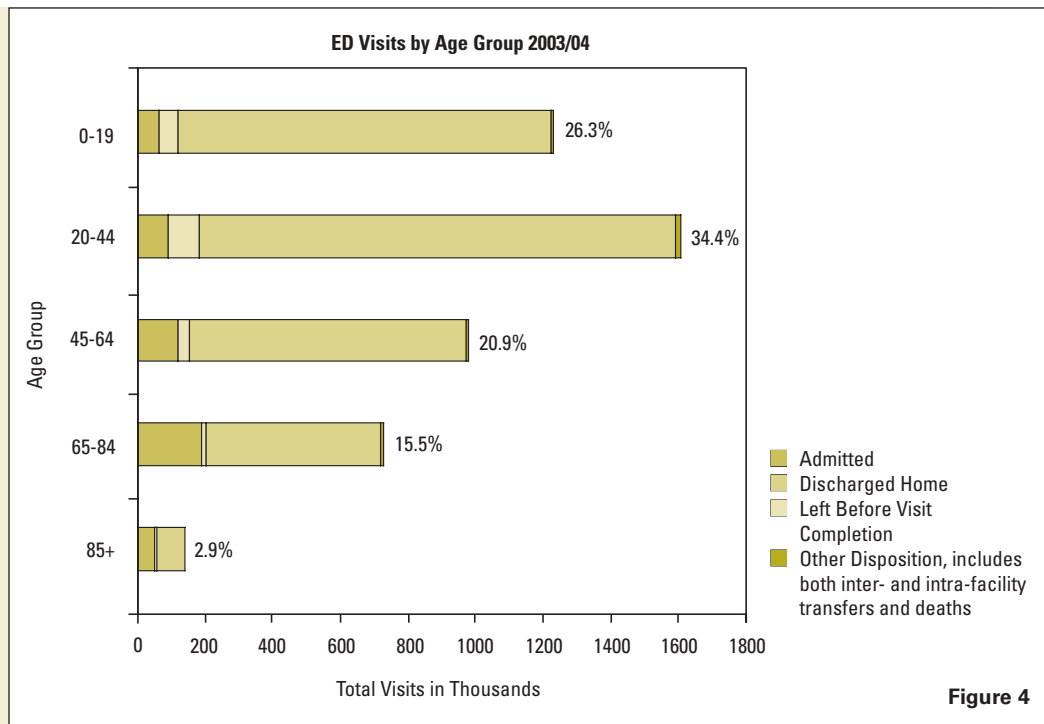
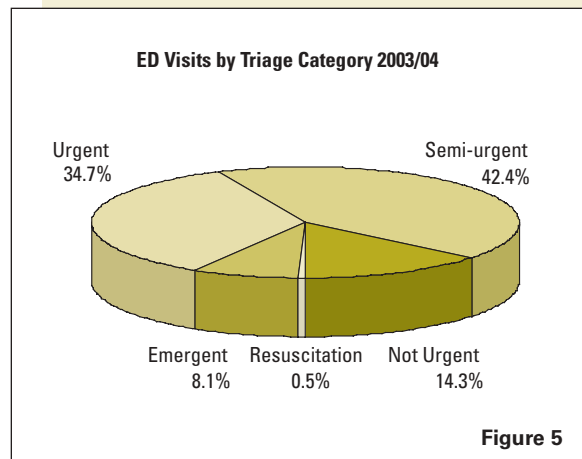


Figure 4



- Overall, 10.8% of patients seen in the ED were admitted to hospital and this rate increased from 4.8% in the 0-19 age group to 37.9% in the 85+ age group. In contrast, the proportion of patients who left the ED before their visit was complete decreased with age, from 5.1% in the 0-19 age group to 1.7% in the 85+ age group.
- The Canadian Triage Acuity Scale (CTAS) provides a measure of the acuity of patients' symptoms on arrival at the ED, and accordingly assigns priority for nursing and physician assessment. Patients in the highest acuity level (resuscitation) account for the smallest proportion (0.5%) of visits while those requiring semi-urgent care account for the largest number of visits (42.4%) The lowest acuity category, with 14.3% of all visits, includes patients who are defined as non-urgent and who can potentially be treated in other less acute settings. Acuity levels vary by age with patients at either end of the age spectrum being triaged at higher levels.
- Amongst children seeking care in an ED, young infants (0-90 days) account for the highest number of visits per population, with this rate decreasing as age increases. Likewise, the acuity of visits is highest for infants and declines with age, with a small upswing for adolescents. For children up to four years of age, respiratory illnesses such as asthma, upper respiratory infections, and croup are the predominant conditions seen in the ED. In the older age groups, abdominal pain and injuries begin to dominate. A high proportion of all paediatric visits are for upper respiratory infections, ear infections, and abdominal pain.

Most Common ED Diagnoses for the Paediatric Age Group

Age	0-90 days	3-24 mos	2-4 yrs	5-9 yrs	10-14 yrs	15-19 yrs
Total Visits	32,049	187,836	214,654	225,517	239,928	326,865
Resus & Emergent Visits (% of total visits)	6,196 (19.3)	14,916 (7.9)	13,021 (6.1)	9,041 (4.0)	8,540 (3.6)	14,667 (4.5)
Most Common Diagnosis	Respiratory infection	Respiratory infection	Respiratory infection	Otitis media	Abdominal pain	Abdominal pain
2nd Most Common Diagnosis	Jaundice	Otitis media	Otitis media	Respiratory infection	Pharyngitis	Pharyngitis
3rd Most Common Diagnosis	Bronchiolitis	Fever	Head wound	Head wound	Respiratory infection	Hand wound

- Patients who have sustained a transient ischemic attack (TIA) are at high risk of a second TIA or stroke in the days or weeks immediately following the initial event. In 2003/04, of the 7,361 TIA patients seen in Ontario EDs, almost 10% had a return visit for TIA or stroke within 30 days. Quality care of these patients may lead to improved outcomes if they are recognized in the ED as a medical emergency and comprehensive assessment, diagnosis, and secondary prevention is managed efficiently. An indicator for care of patients with TIA will be included in the next ED report.
- A new data element called “chief complaint” (primary reason for accessing the ED) was incorporated into the 2003/04 NACRS database. The most common chief complaint in the adult population is chest pain. In the future, chief complaint will be incorporated in the redevelopment of chest pain indicators.
- The CUO indicators were adjusted for age, sex, and triage level.

Indicator Definitions

Asthma

- *Return Visit Rate for Asthma (<24hrs)*. The proportion of patients discharged from the ED with a diagnosis of asthma who have an urgent or emergent return visit for asthma or a related condition to any ED within 24 hours. This is a measure of the EDs ability to manage acute exacerbations of asthma. A lower return rate is better.
- *Return Visit Rate for Asthma (24-72hrs)*. The proportion of patients discharged from the ED with a diagnosis of asthma who have an urgent or emergent return visit for asthma or a related condition to any ED between 24 to 72 hours after the initial discharge. This is a measure of the ED’s longer-term asthma management strategies. A lower return rate is better.

Pneumonia

- *Inpatient LOS \leq 2 Days for Pneumonia Patients Admitted from the ED*. The proportion of pneumonia patients seen in the ED who are admitted with an ED diagnosis of pneumonia and who then have an inpatient stay of two days or less. This measure provides an indication of the number of patients who could potentially be safely treated in the community rather than being admitted to hospital. A lower rate is better.

Ankle and Foot Injury

- *Rate of Ankle X-Ray at Initial Visit*. The proportion of patients with an ankle or foot injury who receive an x-ray of the ankle or foot at the first ED visit. Validated decision rules indicate that an x-ray rate of 60-65% is an achievable benchmark.
- *Return Ankle X-Ray Rate*. The proportion of patients who do not receive an x-ray at the initial visit and who return to any ED within seven days with the same condition, and subsequently receive an x-ray on the return visit. This measure can assess under-utilization of x-rays and potentially missed fractures during the initial visit. A lower value is better. (Note that this indicator is new this year, and is therefore only calculated at a provincial level.)

PROVINCIAL INDICATOR RESULTS (CUO)

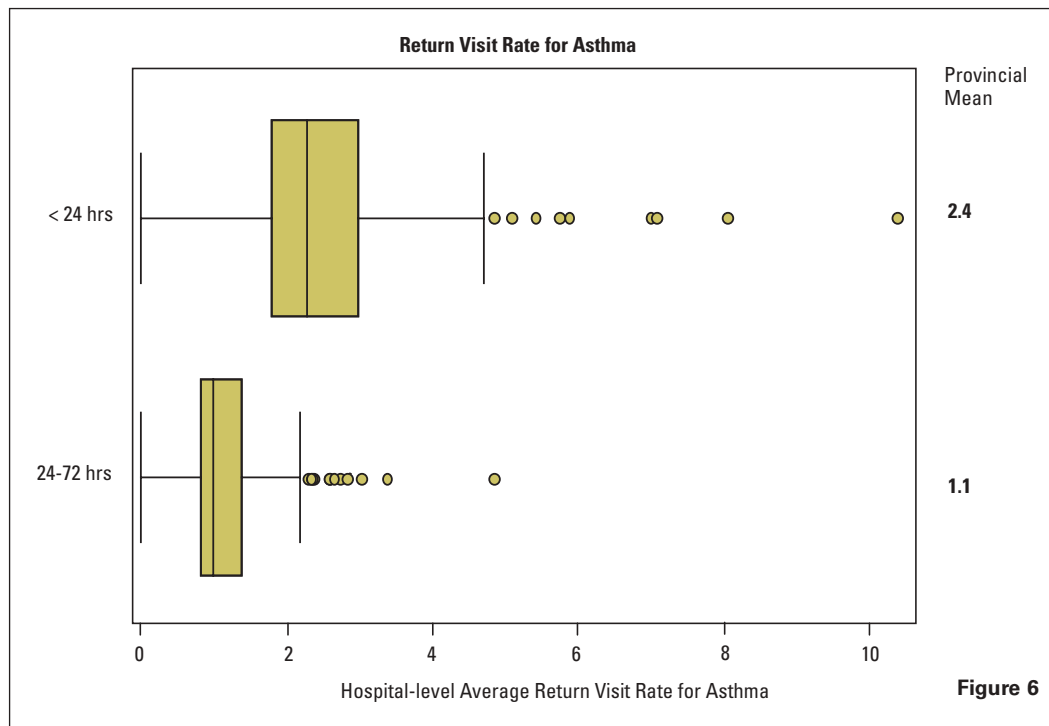


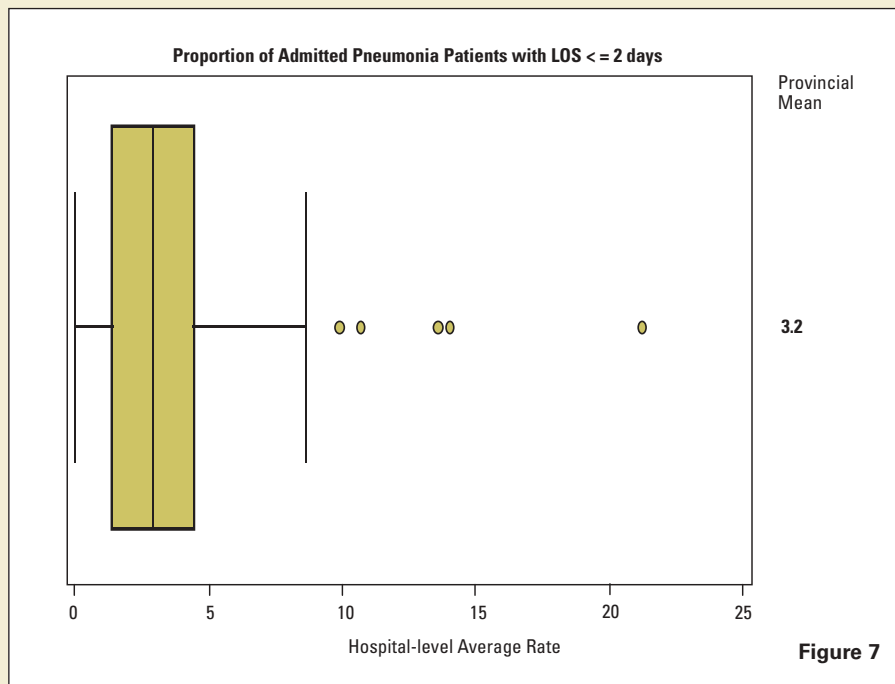
Figure 6

These box and whisker plots display the distribution of hospital scores in Ontario for select indicators in the Clinical Utilization and Outcomes quadrant. The relative contribution of each hospital to the distribution is determined by weighting each hospital by its sample size. The black line inside the box reflects the median hospital score, indicating that 50% of hospitals scored higher and 50% of hospitals scored lower. Similarly, the left and right outlines of the box represent hospitals with 25th and 75th percentile scores, respectively. Excluding the outliers, the whiskers extending from both ends of the box display the minimum and maximum hospital scores for the indicators. Circles represent the outliers with scores greater than one and one-half box lengths from the edges of the box. To the right of the box plot, the mean hospital score for each indicator is displayed.

Means and medians are two measures of central tendency. Medians, which are the black lines in the centre of the boxplots, are the central values. Means, which are also listed to the right of each figure, and are used in this Report to evaluate and compare hospital performance, are the arithmetic average of the hospital values. Unlike medians, means are influenced by extreme values. Mean values that are substantially higher or lower than median values for the same indicator, reflect data with a distribution that is highly skewed.

SUMMARY OF RESULTS

- Hospitals are performing well on both of the asthma return indicators with relatively low rates. In 2003/04, the return rate within 24 hours was 2.4% and the rate within 24-72 hours was 1.1% indicating that hospitals are successfully managing both acute and long term asthma exacerbations.



- Similarly on the pneumonia indicator, hospitals are performing relatively well across the province with a mean rate of 3.2 out of 100 admitted pneumonia patients having an inpatient length of stay of two days or less. There are, however, several outlier hospitals that have significantly higher rates suggesting room for improvement.

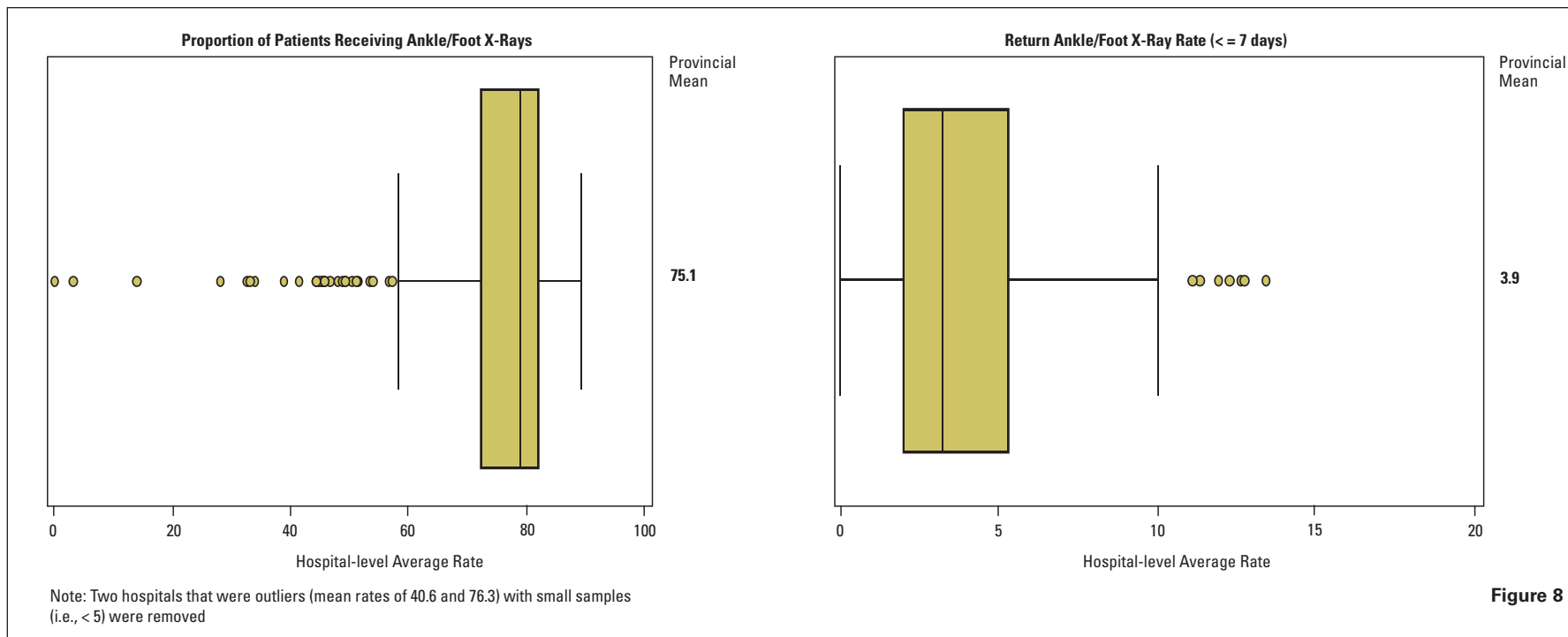


Figure 8

- Not all ankle or foot injuries require an x-ray. The use of x-rays for all patients with potential fractures can waste resources, increase length of stay in the ED, and unnecessarily expose patients to radiation. A decision rule to identify patients who should be x-rayed – the Ottawa Ankle Rule – has been shown to identify all patients with fractures while reducing the total number of x-rays performed by as much as 30%. Application of the rules in multiple centres has found that the rate of ankle and foot x-rays should be between 60-62%.¹ Therefore, the rate of performing ankle x-rays is both an indicator of clinical efficiency and quality in the ED. In general, while it is desirable to have a relatively low rate on this indicator, in order to accurately identify ankle and foot fractures, too low a rate can be an indication that a hospital is under-utilizing x-rays, and hence, under-diagnosing ankle and foot injuries. Similarly, too high a rate on this indicator suggests that the ED may not be employing the Ottawa Ankle Rule in their assessment, and hence is not using x-rays efficiently. The mean provincial rate of 75.1% indicates that x-rays are being over-utilized while the wide distribution of rates across hospitals suggests that the guideline is not being implemented consistently.

1 Stiell I, Wells G, Laupacis A, Brison R, Verbeek R, Vandemheen K, & Naylor CD. Multicentre trial to introduce the Ottawa ankle rules for use of radiography in acute ankle injuries. *BMJ* 1995 Sep 2;311(7005): 594-597

■ Above average performance ■ Average performance ■ Below average performance NR Non-reportable N/A Didn't participate

Organization Name	City	LHIN	Return Visit Rate for Asthma (<24hrs)	Return Visit Rate for Asthma (24-72hrs)	Inpatient LOS ≤ 2 Days for Pneumonia Patients Admitted from the ED	Rate of Ankle X-Ray
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Provincial Average			2.4	1.1	3.2	75.1
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Teaching Hospitals

Children's Hospital of Eastern Ontario	Ottawa	11	2.2	2.1	N/A	81.6
(The) Hospital for Sick Children	Toronto	7	0.9	1.4	N/A	81.6
Kingston General Hospital – SEOHC*	Kingston	10	2.0	0.8	4.3	63.3
London Health Sciences Centre	London	2	1.4	1.0	0.6	78.5
Mount Sinai Hospital	Toronto	7	2.2	1.0	1.9	79.8
(The) Ottawa Hospital	Ottawa	11	2.0	0.8	1.6	69.8
St. Joseph's Health Care London**	London	2	N/A	N/A	N/A	N/A
St. Joseph's Healthcare Hamilton	Hamilton	4	1.3	1.2	9.9	81.5
St. Michael's Hospital	Toronto	7	2.6	1.0	1.4	58.1
Sunnybrook & Women's College Health Sciences Centre	Toronto	7	2.2	0.8	0.0	75.1
University Health Network	Toronto	7	1.2	0.9	4.0	64.2
PEER GROUP AVERAGE			1.9	1.1	3.7	74.4

Small Hospitals

Alexandra Hospital	Ingersoll	2	1.2	1.0	1.2	56.6
Alexandra Marine & General Hospital	Goderich	2	7.0	NR	NR	49.2
Almonte General Hospital	Almonte	11	0.0	NR	NR	51.4
Arnprior & District Memorial Hospital	Arnprior	11	1.6	1.1	1.3	58.3
Carleton Place & District Memorial Hospital†	Carleton Place	11	5.1	4.8	0.0	65.5
Deep River and District Hospital	Deep River	11	NR	NR	NR	58.1
Dryden Regional Health Centre	Dryden	14	3.7	NR	3.3	59.3
Four Counties Health Services	Newbury	2	NR	NR	NR	NR
Glengarry Memorial Hospital	Alexandria	11	2.9	1.0	1.2	59.4
Haldimand War Memorial Hospital	Dunnville	4	2.8	NR	2.9	33.9
Haliburton Highlands Health Services	Haliburton	9	4.4	1.0	3.1	51.0
Hanover & District Hospital	Hanover	2	2.2	NR	0.9	58.1

* Kingston General Hospital: The indicator values for Kingston General Hospital are based on a combination of data from both Kingston General Hospital and Hotel Dieu Hospital, Kingston.

** St. Joseph's Health Care London: The ED at St. Joseph's Health Care London was in transition during this reporting period; consequently the hospital was not required to submit NACRS data.

† Carleton Place & District Hospital: Due to data transfer issues between the hospital and CIHI, the volume of visits in NACRS for August and November of 2003 is zero whereas hospital records indicate approximately 3500 visits for these two months combined.

■ Above average performance ■ Average performance ■ Below average performance NR Non-reportable

Organization Name	City	LHIN	Return Visit Rate for Asthma (<24hrs)	Return Visit Rate for Asthma (24-72hrs)	Inpatient LOS ≤ 2 Days for Pneumonia Patients Admitted from the ED	Rate of Ankle X-Ray
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Small Hospitals continued

Listowel & Wingham Hospitals Alliance	Listowel/Wingham	2	3.1	0.0	1.5	68.6
MICs Group Health Services	Iroquois Falls	13	1.1	3.0	NR	45.7
North Wellington Health Care	Mount Forest	3	0.7	NR	1.6	50.3
St. Francis Memorial Hospital	Barry's Bay	11	3.4	NR	NR	64.6
Sensenbrenner Hospital	Kapuskasing	13	1.4	0.0	NR	41.4
South Huron Hospital	Exeter	2	5.9	NR	NR	61.1
(The) West Nipissing General Hospital	Sturgeon Falls	13	3.5	NR	NR	74.1
(The) Willett Hospital	Paris	4	0.0	NR	NR	77.7
PEER GROUP AVERAGE			1.8	1.0	1.5	57.9

Community Hospitals

Algonquin Health Services	Huntsville	12	2.4	0.9	3.4	76.1
Bluewater Health	Sarnia	1	2.5	0.9	1.0	77.6
(The) Brantford General Hospital	Brantford	4	2.9	1.2	2.1	81.6
Brockville General Hospital	Brockville	10	3.0	1.1	0.0	83.7
Cambridge Memorial Hospital	Cambridge	3	1.1	1.0	4.5	82.0
Chatham-Kent Health Alliance	Chatham	1	1.0	0.8	3.6	77.3
Collingwood General and Marine Hospital	Collingwood	12	3.1	2.0	6.6	74.1
(The) Credit Valley Hospital	Mississauga	6	1.3	1.0	4.2	81.1
Grand River Hospital	Kitchener	3	2.8	0.7	2.9	81.8
Grey Bruce Health Services	Owen Sound	2	2.7	1.2	1.3	57.2
Groves Memorial Community Hospital	Fergus	3	2.9	1.8	0.0	60.0
Guelph General Hospital	Guelph	3	2.3	0.9	6.3	75.3
Halton Healthcare	Oakville	6	3.5	1.1	2.2	79.9
Hôpital Général de Hawkesbury & District General Hospital Inc.	Hawkesbury	11	3.4	NR	1.1	69.1
Hôpital Montfort	Ottawa	11	2.4	0.0	4.3	73.5
Hôpital régional de Sudbury Regional Hospital	Sudbury	13	1.9	1.1	1.4	85.3
Hotel Dieu Health Sciences Hospital, Niagara	St. Catharines	4	2.7	2.8	7.0	72.2
Hotel-Dieu Grace Hospital	Windsor	1	2.8	0.8	4.3	NR
Humber River Regional Hospital	Toronto	8	1.9	0.9	3.5	85.2

■ Above average performance ■ Average performance ■ Below average performance NR Non-reportable

Organization Name	City	LHIN	Return Visit Rate for Asthma (<24hrs)	Return Visit Rate for Asthma (24-72hrs)	Inpatient LOS ≤ 2 Days for Pneumonia Patients Admitted from the ED	Rate of Ankle X-Ray
Community Hospitals continued						
Huron Perth Healthcare Alliance	Stratford	2	2.9	1.1	2.5	71.2
Joseph Brant Memorial Hospital	Burlington	4	2.4	2.4	2.9	88.9
Kirkland and District Hospital	Kirkland Lake	13	4.4	1.6	1.2	45.7
Lake of the Woods District Hospital	Kenora	14	2.3	0.5	0.0	NR
Lakeridge Health	Oshawa	9	2.5	1.1	1.5	78.9
Leamington District Memorial Hospital	Leamington	1	2.7	0.7	0.7	44.2
Markham Stouffville Hospital	Markham	8	1.3	1.9	4.8	89.0
Niagara Health System	Niagara Falls	4	3.0	1.5	4.5	80.5
Norfolk General Hospital	Simcoe	4	2.4	0.8	0.0	84.5
North Bay General Hospital	North Bay	13	2.0	0.5	2.8	85.8
North York General Hospital	Toronto	8	3.2	1.1	5.6	74.3
Northumberland Hills Hospital	Cobourg	9	3.0	1.5	0.0	79.9
Orillia Soldiers' Memorial Hospital	Orillia	12	2.5	1.4	2.7	79.9
Pembroke Regional Hospital	Pembroke	11	2.3	0.5	2.6	78.9
Perth & Smiths Falls District Hospital	Smith Falls	10	4.2	1.5	8.0	70.8
Peterborough Regional Health Centre	Peterborough	9	2.0	0.4	6.8	81.8
Queensway Carleton Hospital	Nepean	11	3.6	0.9	5.1	87.2
Quinte Health Care	Belleville	10	3.3	1.5	2.4	73.9
Renfrew Victoria Hospital	Renfrew	11	2.8	0.7	2.6	72.5
Ross Memorial Hospital	Lindsay	9	1.3	1.4	3.9	81.7
Rouge Valley Health System	Scarborough	9	1.9	1.4	2.2	86.2
St. Joseph's Health Centre	Toronto	7	2.3	1.0	0.0	84.5
St. Mary's General Hospital	Kitchener	3	3.5	0.6	5.8	77.4
St. Thomas-Elgin General Hospital	St. Thomas	2	1.8	2.3	3.4	78.8
(The) Scarborough Hospital	Scarborough	9	3.5	1.3	3.1	84.3
Southlake Regional Health Centre	Newmarket	8	2.2	1.3	3.5	82.9
South Muskoka Memorial Hospital	Bracebridge	12	2.5	NR	3.6	72.8
Strathroy Middlesex General Hospital	Strathroy	2	2.8	0.0	1.0	75.3
Temiskaming Hospital	New Liskeard	13	0.6	0.5	13.6	58.9

■ Above average performance ■ Average performance ■ Below average performance

Organization Name	City	LHIN	Return Visit Rate for Asthma (<24hrs)	Return Visit Rate for Asthma (24-72hrs)	Inpatient LOS ≤ 2 Days for Pneumonia Patients Admitted from the ED	Rate of Ankle X-Ray
Community Hospitals continued						
Thunder Bay Regional Health Sciences Centre	Thunder Bay	14	2.2	0.9	0.2	76.1
Tillsonburg District Memorial Hospital	Tillsonburg	2	5.7	1.5	0.7	69.9
Timmins & District Hospital	Timmins	13	2.4	1.3	0.9	75.3
Toronto East General Hospital	Toronto	7	2.0	0.9	6.2	84.6
Trillium Health Centre	Mississauga	6	2.0	1.0	0.9	87.2
West Lincoln Memorial Hospital	Grimsby	4	1.6	1.0	14.0	73.3
West Parry Sound Health Centre	Parry Sound	13	2.6	2.2	1.7	73.5
William Osler Health Centre	Brampton	5	1.8	0.7	5.5	81.9
Winchester District Memorial Hospital	Winchester	11	2.6	0.5	3.5	79.1
Windsor Regional Hospital	Windsor	1	2.2	0.5	3.0	77.8
Woodstock General Hospital	Woodstock	2	4.7	2.1	1.0	67.5
York Central Hospital	Richmond Hill	8	0.6	0.6	2.7	82.1
PEER GROUP AVERAGE			2.5	1.1	3.3	77.4

Average Results by LHIN

LHIN 1 (Erie St. Clair)	2.1	0.8	2.6	63.1
LHIN 2 (South-West)	2.7	1.2	1.5	66.8
LHIN 3 (Waterloo Wellington)	2.4	0.8	4.3	74.9
LHIN 4 (Hamilton Niagara Haldimand Brant)	2.5	1.4	5.5	78.4
LHIN 5 (Central West)	2.0	0.7	4.7	81.7
LHIN 6 (Mississauga Halton)	2.2	1.0	2.1	83.2
LHIN 7 (Toronto Central)	1.7	1.0	2.4	76.3
LHIN 8 (Central)	2.1	1.2	3.6	82.6
LHIN 9 (Central East)	2.4	1.1	3.2	80.8
LHIN 10 (South East)	3.0	1.3	3.2	70.4
LHIN 11 (Champlain)	2.7	1.2	2.5	74.4
LHIN 12 (North Simcoe Muskoka)	2.8	1.2	4.1	79.0
LHIN 13 (North-East)	1.9	0.9	2.8	69.5
LHIN 14 (North-West)	2.6	1.0	1.3	57.8

Patient Satisfaction

This quadrant describes results from the NRC-Picker survey for patients who visited an Ontario ED between April 1 2003 and March 31 2004, and several months of the 2004/05 fiscal year, with the number of months in the latter fiscal year varying by hospital. The new survey developed by the Picker Institute reflects patient data that are event-based (e.g., did something happen?) rather than perception-based (e.g., how would you rate something?). Specifically, the survey focuses on the patient experience, evaluating the services patients received and their interaction with hospital staff, including nurses and doctors.

Because the data included in this quadrant are from a new survey, it is not possible to trend satisfaction over time. The previous survey included in the 2003 Report, developed by Parkside and Associates, does not readily map to the Picker survey. Further research will explore the potential for linking these two disparate surveys.

Data are presented for 92 of 124 eligible hospitals that voluntarily surveyed their patients. The overall response rate was 26%, with individual hospital response rates ranging from 16% to 43%, with a total of 45,455 surveys returned.

The maximum score for each indicator is 100. For each of the indicators, a higher score is desirable, as is an above average performance classification. A number of variables were used to adjust indicator scores for factors beyond a hospital's control that were observed to impact scores. These included age and sex, as well as the following questions from the survey: How would you rate your general health? Do you have a regular family physician? In the last six months have you been a patient in a hospital overnight or longer? As noted in the introductory section, the scores were also adjusted to decrease the impact of SARs.

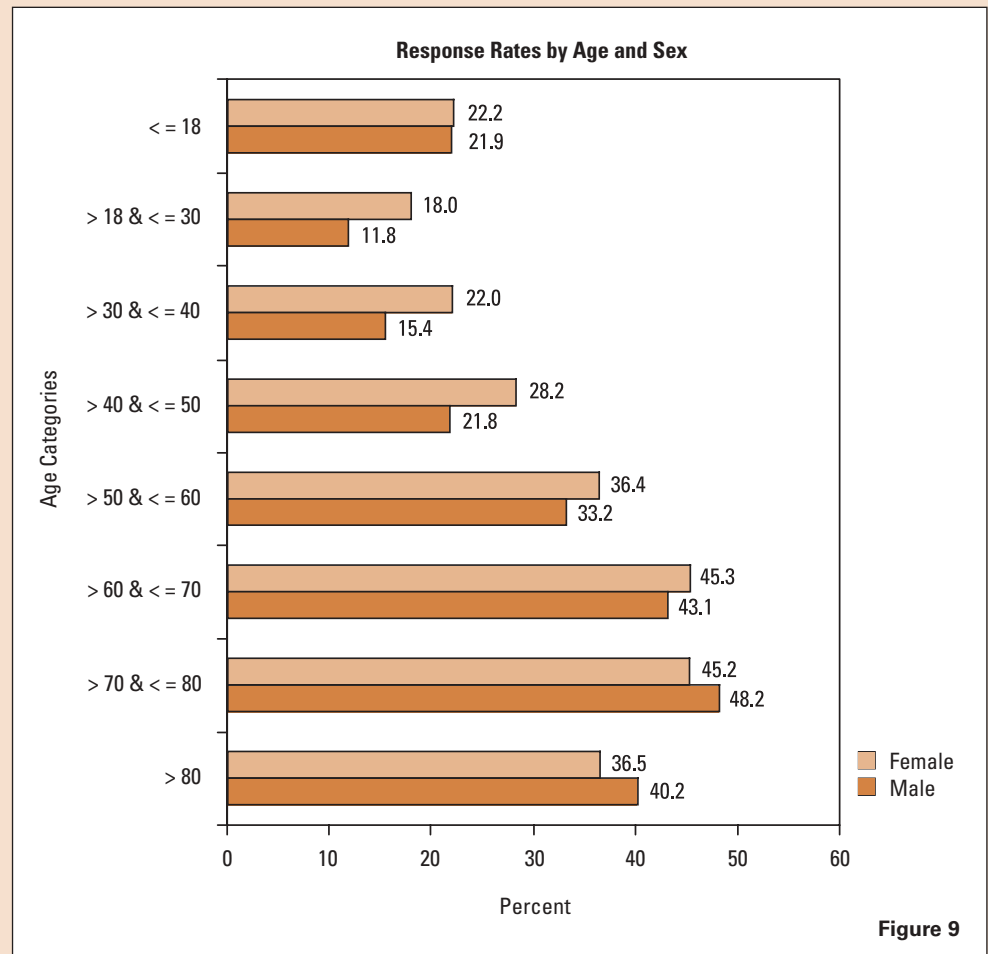


Figure 9

Indicator Definitions

- *Consideration (based on 6 survey questions).* Patients' assessment of whether they were treated with respect and courtesy by doctors, nurses and other staff during their stay in the ED.
- *Responsiveness (based on 10 survey questions).* Patients' assessment of the amount of time they waited to see doctors and nurses and receive test results; assessment of pain management; assessment of team work; and the staff's responsiveness to their needs.
- *Communication (based on 14 survey questions).* Patients' assessment of how well information was communicated to them or their family during their ED stay.
- *Overall Impression (based on 4 survey questions).* Patients' assessment, overall, of their ED stay.

Questionnaire items included in each of the indicators are detailed in the technical report on the Hospital Report Research Collaborative website: www.hospitalreport.ca. These indicator groupings were based on a survey of hospital managers across Ontario and a series of focus groups with patients in several Ontario centres.

PROVINCIAL INDICATOR RESULTS (PS)

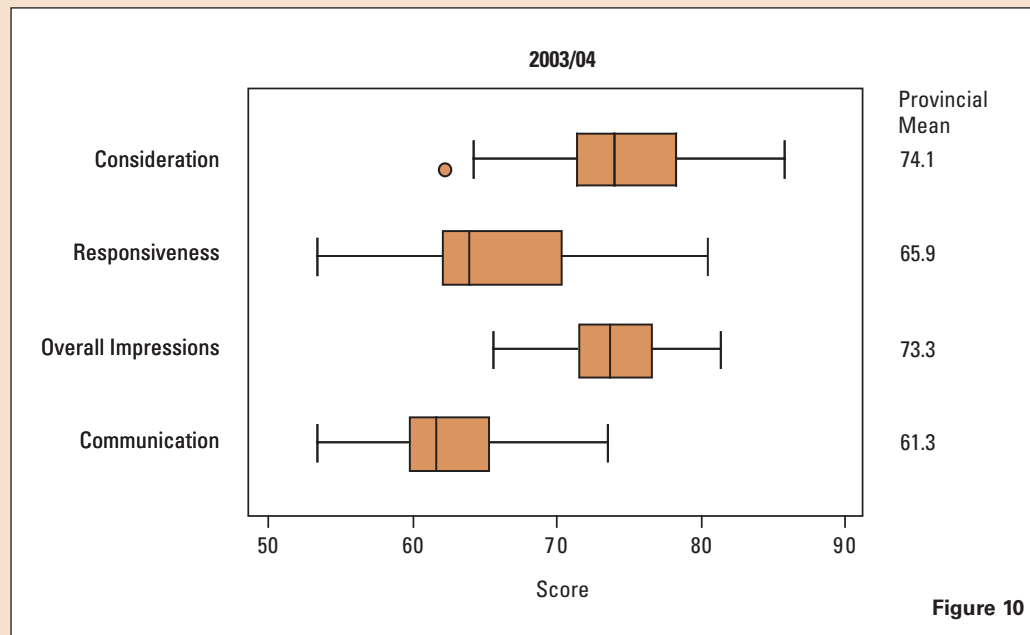
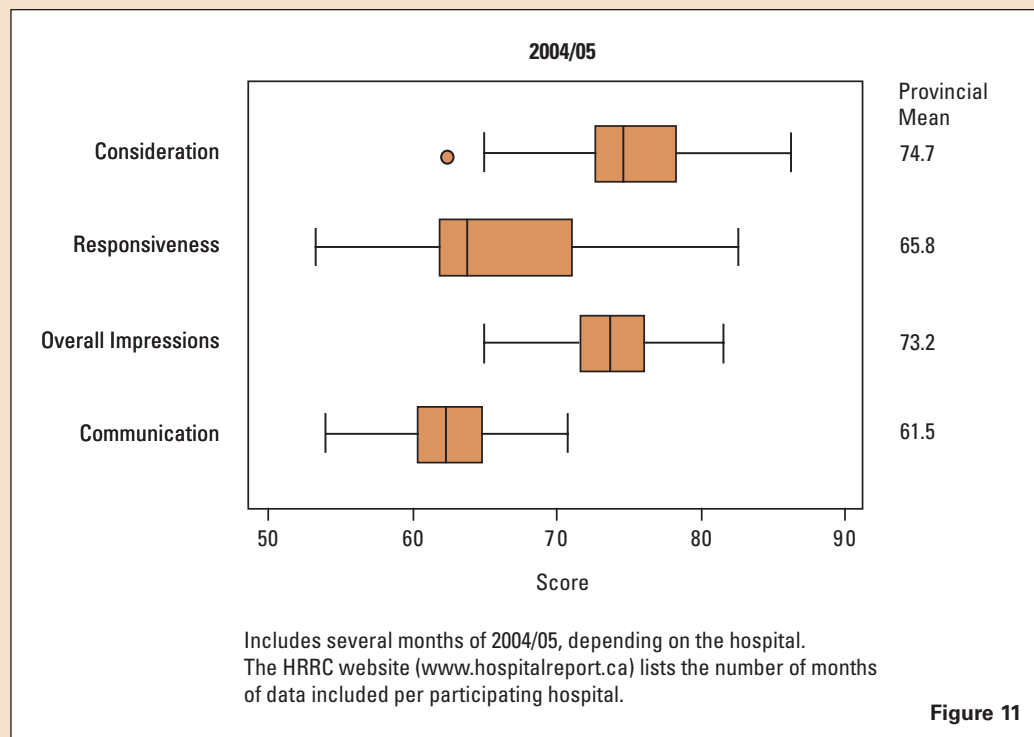


Figure 10

This box and whisker plot displays the distribution of scores for hospitals in Ontario for all indicators in the Patient Satisfaction quadrant. The relative contribution of each hospital to the distribution is determined by weighting each hospital by its sample size. The black line inside the box reflects the median score – the point at which 50% of hospitals had a higher score and 50% of hospitals had a lower score. Similarly, the left and right outlines of the box represent the 25th and 75th percentile scores, respectively. The whiskers extending from both ends of the box display the minimum and maximum scores for the indicators. Circles represent the outliers with scores greater than one and one-half box lengths from the edges of the box. To the right of the box plot, the provincial mean score for each indicator is displayed.



Means and medians are two measures of central tendency. Medians, which are the black lines in the centre of the boxplots, are the central values. Means, which are listed to the right of the figure, are the arithmetic average of the hospital values. Mean values that are substantially higher or lower than median values for the same indicator, reflect data with a distribution that is highly skewed.

SUMMARY OF RESULTS

- Over both fiscal years, hospitals scored highest on the Consideration indicator and lowest on the Communication indicator, with a fairly wide distribution of scores for Responsiveness and Consideration. These results highlight opportunities for improvement for all three of these patient satisfaction indicators. The scores on each indicator are consistent across both years.
- Over both fiscal years, across all indicators, small hospitals score higher than community and teaching hospitals; although teaching hospitals score lowest among all three peer groups, the scores for community and teaching hospitals are very similar. Hospitals located in the GTA continue to score significantly lower than hospitals elsewhere in the province.
- Research on the determinants of patient satisfaction for this Report has led to a change in our understanding of factors affecting satisfaction. Risk adjustment models this year include the patients' perceptions of acuity of illness, other demographic factors, and the hospital where care is received. These models also allow for interaction between these factors. Research also identified that patients' education levels are associated with satisfaction (higher education level (college or beyond) tend to be associated with higher levels of patient satisfaction) but this factor is not included in the risk adjustment models.

■ Above average performance ■ Average performance ■ Below average performance N/A Didn't participate

Organization Name	City	LHIN	Consideration		Responsiveness		Overall Impressions		Communication	
			2003/04	2004/05	2003/04	2004/05	2003/04	2004/05	2003/04	2004/05

Provincial Average			74.1	74.7	65.9	65.8	73.3	73.2	61.3	61.5
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Teaching Hospitals

Children's Hospital of Eastern Ontario	Ottawa	11	79.4	81.1	66.9	66.3	75.6	79.4	69.1	73.2
(The) Hospital for Sick Children	Toronto	7	81.8	79.6	68.2	70.8	76.3	80.2	73.3	74.4
Hotel Dieu Hospital	Kingston	10	80.2	81.7	72.0	70.7	78.1	79.7	65.8	64.7
Kingston General Hospital	Kingston	10	72.7	71.7	66.5	65.6	73.7	72.6	60.7	59.6
London Health Sciences Centre	London	2	76.1	80.1	66.9	70.9	74.0	78.1	65.8	66.8
Mount Sinai Hospital	Toronto	7	73.2	73.4	63.2	61.8	71.7	71.0	61.8	63.7
(The) Ottawa Hospital	Ottawa	11	72.9	72.0	60.9	61.5	72.8	73.0	59.8	60.2
St. Joseph's Health Care London	London	2	74.7	76.8	61.3	62.2	71.6	73.6	60.8	62.6
St. Joseph's Healthcare Hamilton	Hamilton	4	73.3	71.4	62.5	62.9	71.5	71.1	60.7	61.3
St. Michael's Hospital	Toronto	7	71.7	75.6	62.5	62.3	71.3	74.0	61.0	61.5
Sunnybrook & Women's College Health Sciences Centre	Toronto	7	74.1	73.8	62.5	58.6	73.0	72.5	61.4	58.8
University Health Network	Toronto	7	68.0	66.4	58.7	55.7	68.9	68.2	58.3	56.9
PEER GROUP AVERAGE			72.1	72.6	62.0	60.8	71.2	72.0	60.5	60.3

Small Hospitals

Alexandra Hospital	Ingersoll	2	79.8	79.8	74.8	72.0	79.5	79.3	65.4	66.1
Alexandra Marine & General Hospital	Goderich	2	83.0	81.0	78.2	74.9	79.6	78.2	69.4	70.4
Almonte General Hospital	Almonte	11	85.9	84.5	83.5	84.8	81.4	79.2	73.6	72.3
Arnprior & District Memorial Hospital	Arnprior	11	82.5	81.5	76.8	74.9	79.3	79.9	69.3	62.5
Carleton Place & District Memorial Hospital	Carleton Place	11	80.7	84.0	75.1	81.9	77.0	80.3	67.5	71.9
Deep River and District Hospital	Deep River	11	85.3	82.8	83.2	81.3	80.8	81.6	74.2	69.6
Dryden Regional Health Centre	Dryden	14	76.7	73.6	70.7	66.7	75.4	71.7	62.2	59.4
Four Counties Health Services	Newbury	2	81.4	86.3	75.1	79.0	76.4	80.0	67.9	71.9
Glengarry Memorial Hospital	Alexandria	11	80.6	77.5	77.2	74.3	77.6	75.4	67.2	63.6
Haldimand War Memorial Hospital	Dunnville	4	80.9	80.1	80.6	78.5	79.8	80.6	69.4	67.8
Haliburton Highlands Health Services	Haliburton	9	N/A	86.4	N/A	82.6	N/A	81.0	N/A	69.5
Hanover & District Hospital	Hanover	2	79.4	N/A	71.2	N/A	76.8	N/A	67.4	N/A
Listowel & Wingham Hospitals Alliance	Listowel/Wingham	2	80.8	81.9	75.7	75.7	78.9	79.5	67.7	67.1

■ Above average performance ■ Average performance ■ Below average performance N/A Didn't participate

Organization Name	City	LHIN	Consideration		Responsiveness		Overall Impressions		Communication	
			2003/04	2004/05	2003/04	2004/05	2003/04	2004/05	2003/04	2004/05

Small Hospitals continued

MICs Group Health Services	Iroquois Falls	13	N/A	82.3	N/A	76.4	N/A	78.0	N/A	69.9
North Wellington Health Care	Mount Forest	3	82.7	81.8	78.8	79.0	79.6	76.6	69.9	67.1
St. Francis Memorial Hospital	Barry's Bay	11	80.8	83.1	77.6	79.1	78.2	78.7	70.5	70.8
Sensenbrenner Hospital	Kapuskasing	13	77.1	77.0	70.7	70.7	78.2	74.6	66.2	66.3
South Huron Hospital	Exeter	2	78.3	77.6	74.2	72.4	76.0	74.2	65.8	62.9
The West Nipissing General Hospital	Sturgeon Falls	13	75.6	75.5	70.4	73.2	76.0	74.2	64.4	65.1
(The) Willett Hospital	Paris	4	79.8	80.7	72.0	73.4	76.7	76.5	62.3	66.2
PEER GROUP AVERAGE			79.1	79.9	73.8	74.4	77.0	77.1	65.8	66.0

Community Hospitals

Algonquin Health Services	Huntsville	12	N/A	82.5	N/A	77.0	N/A	78.6	N/A	69.9
Bluewater Health	Sarnia	1	76.9	74.9	70.1	68.2	77.0	75.0	65.3	60.7
(The) Brantford General Hospital	Brantford	4	75.4	73.5	63.6	61.2	75.1	70.9	61.8	61.1
Brockville General Hospital	Brockville	10	77.2	73.6	67.8	64.7	74.6	71.1	63.8	61.9
Cambridge Memorial Hospital	Cambridge	3	69.9	68.2	58.9	56.0	68.2	72.2	61.2	58.3
Chatham-Kent Health Alliance	Chatham	1	73.1	71.2	64.7	63.7	73.4	69.7	61.5	60.3
Collingwood General and Marine Hospital	Collingwood	12	77.3	76.0	66.6	69.6	72.5	73.8	64.3	63.6
(The) Credit Valley Hospital	Mississauga	6	68.1	67.6	56.3	57.5	68.8	66.9	58.7	54.5
Grand River Hospital	Kitchener	3	72.0	N/A	55.8	N/A	71.0	N/A	59.3	N/A
Grey Bruce Health Services	Owen Sound	2	83.2	83.8	79.0	78.8	80.9	80.3	69.9	71.4
Groves Memorial Community Hospital	Fergus	3	80.3	79.4	72.7	71.0	80.0	78.2	68.4	62.2
Guelph General Hospital	Guelph	3	72.1	70.4	60.9	57.8	72.0	71.7	59.3	57.1
Halton Healthcare	Oakville	6	71.7	69.6	63.3	60.1	72.3	69.7	59.7	57.9
Hôpital Général de Hawkesbury & District General Hospital Inc.	Hawkesbury	11	73.2	72.7	64.2	62.1	73.8	71.5	60.7	59.6
Hôpital Montfort	Ottawa	11	69.2	N/A	61.3	N/A	70.8	N/A	63.0	N/A
Hôpital régional de Sudbury Regional Hospital	Sudbury	13	71.6	73.6	59.3	61.8	72.1	74.2	60.5	62.9
Hotel Dieu Health Sciences Hospital, Niagara	St. Catharines	4	76.8	N/A	66.9	N/A	76.9	N/A	67.3	N/A
Hotel-Dieu Grace Hospital	Windsor	1	69.7	74.7	62.1	62.4	71.5	71.0	61.2	65.0
Humber River Regional Hospital	Toronto	8	64.3	65.0	54.6	55.9	66.4	65.0	55.7	54.1
Huron Perth Healthcare Alliance	Stratford	2	82.4	82.5	78.3	77.7	79.0	78.9	69.3	68.4

Organization Name	City	LHIN	Consideration		Responsiveness		Overall Impressions		Communication	
			2003/04	2004/05	2003/04	2004/05	2003/04	2004/05	2003/04	2004/05

Community Hospitals continued

Joseph Brant Memorial Hospital	Burlington	4	73.9	77.1	64.0	67.3	73.5	75.4	60.7	62.4
Kirkland and District Hospital	Kirkland Lake	13	77.5	77.4	69.9	70.9	76.3	75.2	65.0	66.6
Lake of the Woods District Hospital	Kenora	14	74.7	78.2	67.7	72.2	75.6	77.4	61.5	64.7
Lakeridge Health	Oshawa	9	77.2	76.3	69.3	71.5	75.8	74.1	61.7	63.8
Leamington District Memorial Hospital	Leamington	1	72.8	74.3	63.5	63.0	72.0	72.2	61.9	60.7
Markham Stouffville Hospital	Markham	8	74.1	74.4	62.7	61.7	74.1	73.4	62.9	61.1
Niagara Health System	Niagara Falls	4	72.4	72.7	63.8	63.8	71.9	71.8	60.4	60.5
Norfolk General Hospital	Simcoe	4	74.8	74.6	65.6	66.3	75.4	75.4	61.6	63.2
North Bay General Hospital	North Bay	13	71.2	74.0	62.9	64.2	73.3	72.7	62.3	62.2
North York General Hospital	Toronto	8	66.3	69.8	58.8	59.4	69.2	69.2	57.4	57.7
Northumberland Hills Hospital	Cobourg	9	74.1	74.7	60.8	66.5	72.4	73.2	59.6	59.0
Orillia Soldiers' Memorial Hospital	Orillia	12	77.8	75.3	70.3	68.3	78.0	74.7	64.9	64.1
Pembroke Regional Hospital	Pembroke	11	70.1	70.0	63.4	60.5	71.1	69.1	60.0	60.5
Perth & Smiths Falls District Hospital	Smith Falls	10	79.6	83.0	74.2	78.5	76.7	79.9	65.9	67.5
Peterborough Regional Health Centre	Peterborough	9	78.0	73.6	69.7	65.5	76.4	72.0	64.8	57.5
Queensway Carleton Hospital	Nepean	11	76.2	76.5	61.9	62.1	74.1	76.1	62.9	62.8
Quinte Health Care	Belleville	10	77.2	76.8	69.2	69.7	75.3	75.6	63.9	64.5
Renfrew Victoria Hospital	Renfrew	11	79.5	N/A	75.2	N/A	75.9	N/A	66.1	N/A
Ross Memorial Hospital	Lindsay	9	78.9	75.6	70.1	65.7	78.6	74.7	65.1	60.6
Rouge Valley Health System	Scarborough	9	70.0	69.6	58.8	59.3	68.9	69.0	58.7	58.5
St. Joseph's Health Centre	Toronto	7	68.6	67.1	58.8	53.2	70.2	63.4	56.2	53.3
St. Mary's General Hospital	Kitchener	3	74.2	74.8	63.1	65.0	74.1	73.4	61.0	60.0
St. Thomas-Elgin General Hospital	St. Thomas	2	75.8	79.4	68.2	69.5	76.4	76.7	66.5	65.6
(The) Scarborough Hospital	Scarborough	9	65.4	67.1	53.5	56.8	65.7	70.2	53.6	54.8
Southlake Regional Health Centre	Newmarket	8	75.4	71.4	65.3	61.0	73.2	71.0	60.5	57.0
South Muskoka Memorial Hospital	Bracebridge	12	78.6	80.8	71.6	71.1	74.8	76.1	67.8	69.3
Strathroy Middlesex General Hospital	Strathroy	2	71.8	74.5	63.8	67.3	72.4	73.9	62.3	63.1
Temiskaming Hospital	New Liskeard	13	78.2	77.8	70.8	69.7	77.1	77.6	64.7	63.9

Organization Name	City	LHIN	Consideration		Responsiveness		Overall Impressions		Communication	
			2003/04	2004/05	2003/04	2004/05	2003/04	2004/05	2003/04	2004/05

Community Hospitals continued

Thunder Bay Regional Health Sciences Centre	Thunder Bay	14	71.1	71.0	63.4	59.7	71.9	69.7	59.6	55.7
Tillsonburg District Memorial Hospital	Tillsonburg	2	79.7	80.8	69.9	72.8	76.7	77.6	65.3	64.4
Timmins & District Hospital	Timmins	13	77.1	76.6	67.6	64.9	76.3	74.8	64.1	63.3
Toronto East General Hospital	Toronto	7	66.5	68.1	57.5	56.7	69.2	69.7	56.3	60.3
Trillium Health Centre	Mississauga	6	69.8	67.3	63.6	54.4	69.8	68.7	57.0	54.1
West Lincoln Memorial Hospital	Grimsby	4	75.9	76.3	67.9	67.8	75.6	76.1	63.9	62.4
West Parry Sound Health Centre	Parry Sound	13	78.4	79.6	71.8	71.3	77.0	75.9	62.9	65.0
William Osler Health Centre	Brampton	5	68.4	67.6	60.0	58.3	68.6	68.5	58.3	56.0
Winchester District Memorial Hospital	Winchester	11	81.9	83.9	75.3	76.3	78.3	80.8	68.0	69.9
Windsor Regional Hospital	Windsor	1	68.8	68.6	55.9	55.1	67.7	69.0	55.8	58.5
Woodstock General Hospital	Woodstock	2	72.9	72.9	63.5	61.4	73.3	70.0	57.5	57.1
York Central Hospital	Richmond Hill	8	66.0	68.1	54.9	55.6	65.9	70.5	55.6	60.2
PEER GROUP AVERAGE			73.4	74.3	65.4	65.3	73.2	72.8	60.9	61.1

Average Results by LHIN

LHIN 1 (Erie St. Clair)	72.6	64.0	72.9	61.6
LHIN 2 (South-West)	79.3	72.6	77.2	66.2
LHIN 3 (Waterloo Wellington)	75.9	66.2	74.7	63.6
LHIN 4 (Hamilton Niagara Haldimand Brant)	73.9	65.5	73.2	61.5
LHIN 5 (Central West)	68.4	60.0	68.6	58.3
LHIN 6 (Mississauga Halton)	70.5	61.7	71.0	59.0
LHIN 7 (Toronto Central)	70.7	60.9	70.8	60.3
LHIN 8 (Central)	68.7	59.2	69.7	58.3
LHIN 9 (Central East)	73.7	63.8	72.7	60.2
LHIN 10 (South East)	77.5	70.0	75.6	64.1
LHIN 11 (Champlain)	77.5	69.8	75.6	65.3
LHIN 12 (North Simcoe Muskoka)	77.5	69.4	75.5	65.3
LHIN 13 (North-East)	75.5	67.3	75.4	63.2
LHIN 14 (North-West)	73.4	66.3	73.6	60.7

This quadrant provides insights into the financial performance and condition of Ontario's EDs. The indicators presented are based on data from the 2003/04 fiscal year, which was the most recent financial data available to the Research Collaborative at the time of analysis. These data are submitted annually to the Ontario Ministry of Health and Long-Term Care using formats specified by the Ontario Hospital Reporting System.

Developing indicators of financial performance and condition that are specific to activities occurring in EDs is particularly challenging for two reasons. First, EDs function as a unit within much larger hospital structures. Although some ED expenses can be isolated, many other costs stem from using resources that are shared with other hospital units. Typical examples include the laboratory, housekeeping staff, and information systems support. As a result, it is difficult to isolate all of the revenues and expenditures that relate solely to ED activities.

Second, many of the performance indicators the advisory panel recommended require a method to classify and group similar patients. These classification schemes usually have mechanisms for assessing the relative differences in resource demands made by different types of patients. Although a classification scheme for emergency patients has been developed, the data being generated by these systems is still undergoing review and testing, and is not yet available.

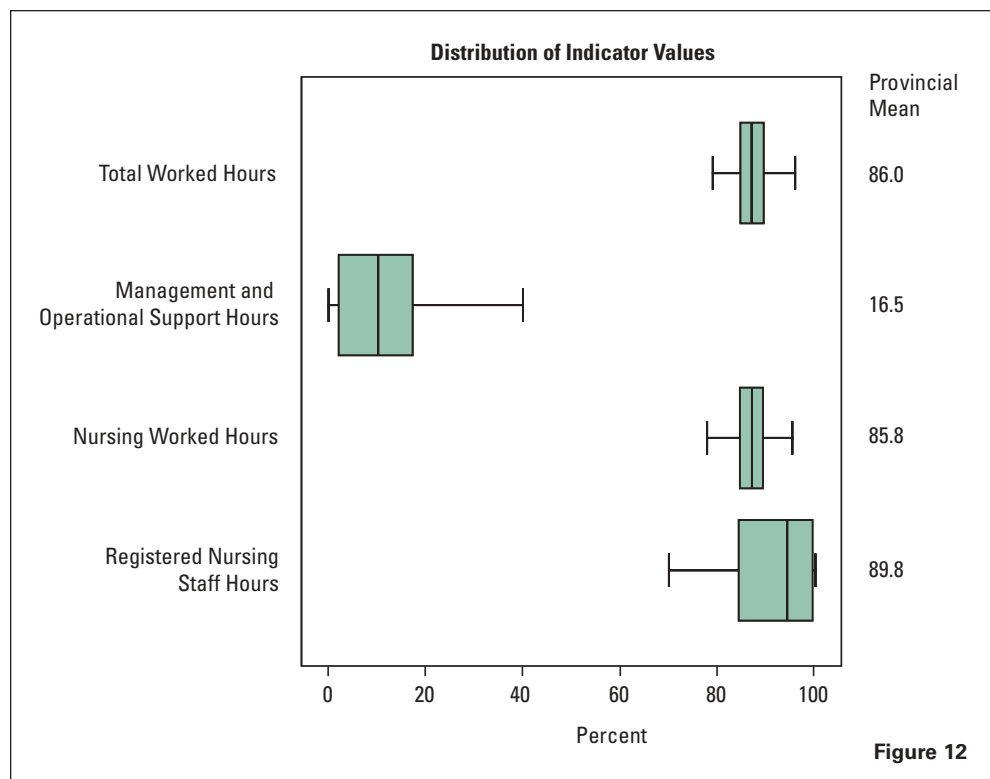
In the absence of cost data, case mix groups and associated weights, only four measures of financial performance and condition related to ED activities were recommended for use this year by the advisory panel.

Data from all 124 hospital corporations with EDs were used to calculate provincial, LHIN and peer group means; hospital-specific data are shown for 92 of 124 hospital corporations that voluntarily agreed to participate in this Report.

Indicator Definitions

- *Total Worked Hours.* Measures the proportion of staff hours spent engaged in activities related to operation of the ED. Sick time and educational time are examples of staff hours (nursing and non-nursing) that are not spent engaged in activities directly related to the operation of the ED. Medical staff hours are excluded due to variations in physician staffing models and/or methods of physician remuneration among hospitals.
- *Management and Operational Support Hours.* Measures the proportion of staff hours spent engaged in activities related to managing or directly supporting the department but not directly involved in providing patient care. The activities of a unit manager or registration clerk are examples of management and operational support.
- *Nursing Worked Hours.* Measures the proportion of time nursing personnel spend working in the hospital on activities such as direct patient care, charting, and in-service education, as a proportion of the total hours earned. The hours being measured are for those nursing personnel who normally engage in activities related to patient care, and excludes nurses who fill management and administrative roles.
- *Registered Nursing Staff Hours.* Measures the proportion of nursing care hours that were provided by registered nurses.

PROVINCIAL INDICATOR RESULTS (FINANCE)



This box and whisker plot displays the distribution of scores for hospitals in Ontario for all indicators in the Financial Performance and Condition quadrant. The black line inside the box reflects the median score – the point at which 50% of hospitals had a higher score and 50% of hospitals had a lower score. Similarly, the left and right outlines of the box represent the 25th and 75th percentile scores, respectively. The whiskers extending from both ends of the box display the minimum and maximum scores for the indicators. To the right of the box plot, the provincial mean score for each indicator is displayed.

Means and medians are two measures of central tendency. Medians, which are the black lines in the centre of the box-plots, are the central values. Means, which are listed to the right of the figure, are the arithmetic average of the hospital values. Mean values that are substantially higher or lower than median values for the same indicator, reflect data with a distribution that is highly skewed.

SUMMARY OF RESULTS

- Over 86% of staff hours were spent on activities related to the operation of the emergency department. The remaining 14% is accounted for by vacation time, sick time, maternity leave, and other benefits. Small hospitals had the highest percent of worked time (87.6%) and teaching hospitals had the lowest percent (85.1%). Overall, Ontario hospitals reported a slight drop in the value for this indicator over the five-year period from 1999/00 to 2003/04.

- For 2003/04, EDs reported 16.5% of total hours were spent on management and operational support activities. Teaching hospitals had the highest percent (20.8%) of management and operational support hours and small hospitals had the lowest values (8.6%). The value for this indicator has increased over the past five years. It is difficult to make inter-hospital comparisons using this indicator because there are wide variations in how emergency departments are structured and how they report their use of staff. For example, the hours worked by registration clerks, ward aides, multi-skilled workers, orderlies, service consultants, housekeepers and others may or may not be included in ED data depending upon local practices. At this time, we cannot assess the materiality of these reported differences.
- For 2003/04, 85.8% of the hours worked by nursing personnel were spent engaged in patient care activities. The remaining time is accounted for by vacation time, orientation and other benefit hours. Small hospitals reported the highest percentage of nursing worked hours (87.8%) and teaching hospitals had the lowest percentage (84.9%).
- For 2003/04, 89.8% of hours worked by nursing staff were provided by registered nurses. This result suggests that emergency department staffing models rely heavily on registered nursing staff. Teaching hospitals reported the highest percentage of registered nursing hours (91.1%) and small hospitals had the lowest percentage (88.8%). Over the five-year period from 1999/00 to 2003/04, registered nursing hours increased by almost 1.5 million hours. This increase may be a reflection of Ministry of Health initiatives over the past few years to increase nurse staffing.

Organization Name	City	LHIN	Total Worked Hours (%)	Management & Operational Support Staff Hours (%)	Nursing Worked Hours (%)	Registered Nursing Staff Hours (%)
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Provincial Average			86.0	16.5	85.8	89.8
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Teaching Hospitals

Children's Hospital of Eastern Ontario	Ottawa	11	88.6	39.6	89.1	95.5
(The) Hospital for Sick Children	Toronto	7	86.9	19.5	86.6	100.0
Hotel Dieu Hospital	Kingston	10	88.1	1.8	87.9	83.4
Kingston General Hospital	Kingston	10	84.9	15.0	84.8	92.3
London Health Sciences Centre	London	2	81.3	21.5	81.1	93.0
Mount Sinai Hospital	Toronto	7	83.6	21.4	82.7	99.6
(The) Ottawa Hospital	Ottawa	11	83.2	17.9	83.7	94.9
St. Joseph's Health Care London	London	2	86.1	11.2	85.4	87.0
St. Joseph's Healthcare Hamilton	Hamilton	4	90.1	16.3	89.1	83.3
St. Michael's Hospital	Toronto	7	89.2	16.0	88.7	77.1
Sunnybrook & Women's College Health Sciences Centre	Toronto	7	89.9	32.9	91.2	95.8
University Health Network	Toronto	7	86.2	27.6	86.5	84.3
PEER GROUP AVERAGE			85.1	20.8	84.9	91.1

Small Hospitals

Alexandra Hospital	Ingersoll	2	75.2	8.8	73.2	100.0
Alexandra Marine & General Hospital	Goderich	2	83.8	4.0	83.3	80.2
Almonte General Hospital	Almonte	11	86.7	10.1	86.4	100.0
Arnprior & District Memorial Hospital	Arnprior	11	94.0	13.5	94.8	90.7
Carleton Place & District Memorial Hospital	Carleton Place	11	93.8	6.9	94.6	100.0
Deep River and District Hospital	Deep River	11	90.1	0.0	90.1	100.0
Dryden Regional Health Centre	Dryden	14	87.8	26.1	87.4	85.0
Four Counties Health Services	Newbury	2	84.5	4.5	84.0	95.3
Glengarry Memorial Hospital	Alexandria	11	92.0	0.0	92.0	87.9
Haldimand War Memorial Hospital	Dunnville	4	93.5	28.8	91.6	NR
Haliburton Highlands Health Services	Haliburton	9	92.3	0.0	92.3	74.1
Hanover & District Hospital	Hanover	2	91.6	0.0	91.6	93.4

Organization Name	City	LHIN	Total Worked Hours (%)	Management & Operational Support Staff Hours (%)	Nursing Worked Hours (%)	Registered Nursing Staff Hours (%)
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Small Hospitals continued

Listowel & Wingham Hospitals Alliance	Listowel/Wingham	2	89.0	4.8	89.2	95.9
MICs Group Health Services	Iroquois Falls	13	86.5	0.0	86.5	78.9
North Wellington Health Care	Mount Forest	3	89.4	0.0	89.4	91.3
St. Francis Memorial Hospital	Barry's Bay	11	95.3	0.0	95.3	99.2
Sensenbrenner Hospital	Kapuskasing	13	81.0	0.0	81.0	74.8
South Huron Hospital	Exeter	2	88.8	0.0	88.8	100.0
(The) West Nipissing General Hospital	Sturgeon Falls	13	85.1	4.7	85.4	79.9
(The) Willett Hospital	Paris	4	92.8	0.0	92.8	100.0
PEER GROUP AVERAGE			87.6	8.6	87.8	88.8

Community Hospitals

Algonquin Health Services	Huntsville	12	89.3	3.4	89.6	91.3
Bluewater Health	Sarnia	1	84.3	13.6	83.8	97.5
(The) Brantford General Hospital	Brantford	4	90.3	12.2	89.5	82.6
Brockville General Hospital	Brockville	10	86.4	18.9	87.6	83.4
Cambridge Memorial Hospital	Cambridge	3	83.6	NR	83.6	98.9
Chatham-Kent Health Alliance	Chatham	1	86.8	3.4	86.9	88.6
Collingwood General and Marine Hospital	Collingwood	12	87.3	27.8	87.3	97.9
(The) Credit Valley Hospital	Mississauga	6	86.8	30.3	86.0	97.9
Grand River Hospital	Kitchener	3	87.0	24.8	86.5	99.3
Grey Bruce Health Services	Owen Sound	2	89.1	11.8	89.3	96.6
Groves Memorial Community Hospital	Fergus	3	92.4	22.3	92.6	99.9
Guelph General Hospital	Guelph	3	87.8	27.1	86.5	93.7
Halton Healthcare	Oakville	6	88.3	19.4	88.1	86.2
Hôpital Général de Hawkesbury & District General Hospital Inc.	Hawkesbury	11	89.6	4.5	89.1	70.1
Hôpital Montfort	Ottawa	11	88.2	25.1	87.8	83.2
Hôpital régional de Sudbury Regional Hospital	Sudbury	13	85.7	14.0	85.4	86.8
Hotel Dieu Health Sciences Hospital, Niagara	St. Catharines	4	88.4	11.6	88.7	87.9
Hotel-Dieu Grace Hospital	Windsor	1	83.9	14.9	83.3	89.9
Humber River Regional Hospital	Toronto	8	83.5	17.8	83.2	89.8

Organization Name	City	LHIN	Total Worked Hours (%)	Management & Operational Support Staff Hours (%)	Nursing Worked Hours (%)	Registered Nursing Staff Hours (%)
Community Hospitals continued						
Huron Perth Healthcare Alliance	Stratford	2	89.3	2.7	89.1	99.1
Joseph Brant Memorial Hospital	Burlington	4	81.8	13.7	81.4	94.7
Kirkland and District Hospital	Kirkland Lake	13	84.5	9.3	84.7	99.8
Lake of the Woods District Hospital	Kenora	14	89.7	11.1	90.4	79.1
Lakeridge Health	Oshawa	9	87.2	12.4	86.9	84.9
Leamington District Memorial Hospital	Leamington	1	85.4	1.7	85.6	71.6
Markham Stouffville Hospital	Markham	8	89.8	13.4	88.8	71.5
Niagara Health System	Niagara Falls	4	85.0	8.6	84.7	91.0
Norfolk General Hospital	Simcoe	4	88.3	33.5	88.7	99.8
North Bay General Hospital	North Bay	13	86.5	11.7	84.9	100.0
North York General Hospital	Toronto	8	86.1	15.7	86.1	73.5
Northumberland Hills Hospital	Cobourg	9	84.7	15.4	84.4	99.4
Orillia Soldiers' Memorial Hospital	Orillia	12	87.8	1.7	87.8	78.1
Pembroke Regional Hospital	Pembroke	11	87.6	9.2	87.9	80.2
Perth & Smiths Falls District Hospital	Smith Falls	10	90.3	0.0	90.3	90.9
Peterborough Regional Health Centre	Peterborough	9	84.5	14.7	83.8	90.5
Queensway Carleton Hospital	Nepean	11	88.5	10.3	88.6	86.1
Quinte Health Care	Belleville	10	89.1	8.9	89.5	99.8
Renfrew Victoria Hospital	Renfrew	11	91.8	0.0	91.8	75.7
Ross Memorial Hospital	Lindsay	9	90.3	5.2	90.4	95.9
Rouge Valley Health System	Scarborough	9	86.2	22.9	85.8	95.7
St. Joseph's Health Centre	Toronto	7	83.9	18.2	82.8	73.4
St. Mary's General Hospital	Kitchener	3	86.2	30.9	86.4	100.0
St. Thomas-Elgin General Hospital	St. Thomas	2	79.4	11.3	78.0	97.1
(The) Scarborough Hospital	Scarborough	9	83.6	23.9	82.5	91.3
Southlake Regional Health Centre	Newmarket	8	86.6	5.2	86.5	100.0
South Muskoka Memorial Hospital	Bracebridge	12	86.9	0.0	86.9	78.1
Strathroy Middlesex General Hospital	Strathroy	2	86.5	9.1	85.9	100.0
Temiskaming Hospital	New Liskeard	13	89.2	0.0	89.2	87.2

Organization Name	City	LHIN	Total Worked Hours (%)	Management & Operational Support Staff Hours (%)	Nursing Worked Hours (%)	Registered Nursing Staff Hours (%)
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Community Hospitals continued

Thunder Bay Regional Health Sciences Centre	Thunder Bay	14	87.7	23.4	86.8	95.6
Tillsonburg District Memorial Hospital	Tillsonburg	2	88.1	16.4	89.3	96.6
Timmins & District Hospital	Timmins	13	83.3	7.5	82.5	99.2
Toronto East General Hospital	Toronto	7	84.2	30.8	81.0	84.5
Trillium Health Centre	Mississauga	6	88.1	15.8	87.8	92.2
West Lincoln Memorial Hospital	Grimsby	4	92.2	17.2	91.7	99.5
West Parry Sound Health Centre	Parry Sound	13	93.5	4.2	93.2	70.9
William Osler Health Centre	Brampton	5	85.6	21.8	85.3	84.5
Winchester District Memorial Hospital	Winchester	11	84.2	2.3	84.0	99.9
Windsor Regional Hospital	Windsor	1	79.1	26.8	77.7	100.0
Woodstock General Hospital	Woodstock	2	86.0	4.7	86.2	82.9
York Central Hospital	Richmond Hill	8	83.7	12.7	83.3	84.2
PEER GROUP AVERAGE			86.2	15.7	85.8	89.5

Average Results by LHIN

LHIN 1 (Erie St. Clair)		83.5	14.1	83.3	91.3
LHIN 2 (South-West)		84.7	13.2	84.7	94.1
LHIN 3 (Waterloo Wellington)		86.8	22.0	86.3	98.1
LHIN 4 (Hamilton Niagara Haldimand Brant)		85.3	14.6	85.0	90.6
LHIN 5 (Central West)		85.9	20.3	85.7	83.9
LHIN 6 (Mississauga Halton)		87.7	21.5	87.4	91.9
LHIN 7 (Toronto Central)		86.3	24.1	85.6	85.3
LHIN 8 (Central)		85.5	14.0	85.2	85.5
LHIN 9 (Central East)		85.9	16.9	85.6	90.6
LHIN 10 (South East)		87.5	11.0	87.8	93.1
LHIN 11 (Champlain)		86.9	16.9	87.2	89.7
LHIN 12 (North Simcoe Muskoka)		85.7	11.8	85.6	89.0
LHIN 13 (North-East)		86.7	8.7	86.5	87.4
LHIN 14 (North-West)		86.8	19.8	86.6	93.1

Understanding how women use, benefit from, experience and assess the quality of care they receive in EDs in Ontario, and how this differs from men, is important. As a principle, equity is something Canadians take pride in and is a goal that we should continue to strive to achieve. The unique contexts of women's lives, including their reproductive and caregiving roles, their propensity to live alone, at lower socioeconomic levels and with more chronic disease at an older age, as well as their potential to be exposed to domestic violence and sexual assault, reinforce the need to pay attention to women's health in EDs.

Moreover, the study of differences for women and men and equity[†] in the context of performance in health-care has shown that good performance in women's health or equity, may be associated with good performance overall.¹

Examining sex differences on indicators of clinical utilization and outcomes, and patient satisfaction more closely is a critical starting point to understanding the nature and significance of these differences, and identifying and defining opportunities to achieve more equitable care in EDs. Sex is biological maleness and femaleness. Gender is made up of multiple dimensions, and reflects the interaction of sex with other economic, cultural, environmental, social characteristics (e.g., age, income, ethnicity, social support), as well as roles ascribed to the sexes, and relations between the sexes. Because of the limited availability of other gender-related variables in routinely collected hospital data, the analysis in this section is limited to sex. Pursuing gender-based analysis is an important long-term goal. Hospitals should have systems for collecting, disaggregating, monitoring and understanding data by sex in the short term, and by gender in the long term.

This section of the Report highlights, at a system level, the degree and significance of the sex differences in ED care across two quadrants: Clinical Utilization and Outcomes (CUO) and Patient Satisfaction (PS). In addition, this section highlights the use of three women's health protocols (sexual assault, domestic violence, emergency oral contraception), based on responses to the System Integration and Change Survey (SIC) survey.

[†] Equity means equal opportunity for use of and/or benefit from health services for equal need and/or potential.

¹ Magistretti AI, Stewart DE, Brown AD. (2002). Performance Measurement in Women's Health: The Women's Health Report 2001 Series, A Canadian Experience. *Women's Health Issues*, 12(6): 327-337.

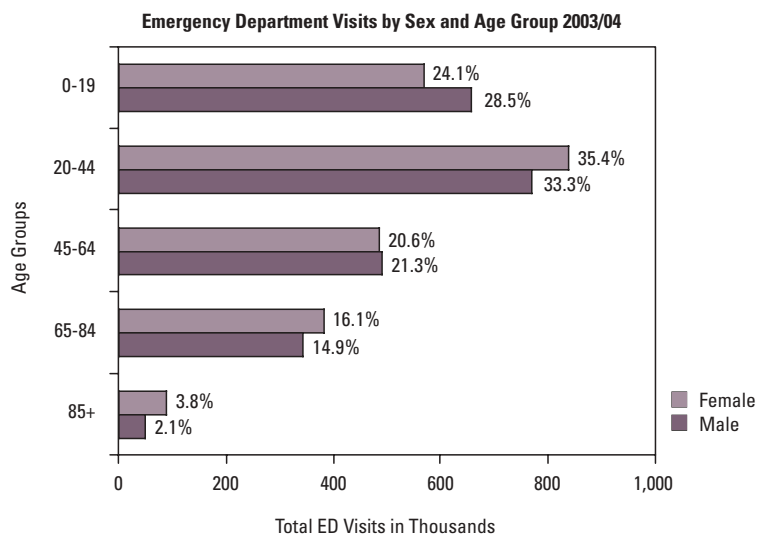


Figure 13

Clinical Utilization and Outcomes by Sex

In 2003/04, there were more women (35.4%) than men (33.3%) who visited the ED in the 20-44 year age group. This pattern was similar for the 65 year and older age groups for which 19.9% were women and 17.0% were men (Figure 13). Over five percent more women than men in the 20-44 year age group were classified as urgent priority for physician assessment, using the Canadian Triage Acuity Scale (Figure 14). Issues related to reproductive health and pregnancy may contribute to more urgent ED visits for women in this age group.

Although men and non-obstetric women shared two of the top three reasons for ED visits in Ontario – 1) pain in throat and chest and 2) abdominal and pelvic pain (non-obstetric) – they differed in their use of the ED for other key conditions. In particular, non-obstetric women and men in Ontario differed significantly in the number and proportion of ED visits that might have been prevented or reduced through timely access to primary care in the community. Figure 14 shows the differences for non-obstetric women and men on ED visits for select ambulatory care sensitive conditions (ACSCs).^{2,3} Substantially more women than men are seen in the ED for disorders of the urinary system, followed by depressive episodes and asthma. Research shows that for such ACSCs, prior primary care could have prevented their onset, helped to control an acute episode, or managed the chronic disease or condition. Although for some of these conditions, these sex differences may be a result of differences in disease prevalence, others may reflect differences in barriers to timely and appropriate primary care.^{4,5} Future stratification of ED visits for these conditions by age, region (and services available regionally), socioeconomic conditions, co-morbidities, access to a primary care provider, and the extent to which ED visits result in hospitalization, will help identify contributing causes of use of the ED for ACSCs, and inform targeted strategies for improving access to care in the community.

2 Guide to Prevention Quality Indicators – Hospital Admission for Ambulatory Care Sensitive Conditions. (2001). AHRQ Quality Indicators. Rockville, MD: Agency for Healthcare Research and Quality. AHRQ Pub No. 02-RQ203, Version 2.1, Revision 2, Jan 2003. Available at: www.qualityindicators.ahrq.gov/data/hcup/prevqi.htm

3 Alberta Health and Wellness. Alberta's Report on Comparable Health Indicators. (2002). Available at: www.health.gov.ab.ca/resources/publications/pdf/pircReport.pdf

4 Oster A, Bindman AB. (2003). Emergency department visits for ambulatory care sensitive conditions: insights into preventable hospitalizations. *Medical Care*, 41(2): 198-207.

5 Brown AD, Goldacre MJ, Hicks N, Rourke JT, McMurtry RY, Brown JD, Anderson GM. (2001). Hospitalization for ambulatory care-sensitive conditions: A method for comparative access and quality studies using routinely collected statistics. *Canadian Journal of Public Health*, 92(2): 155-159.

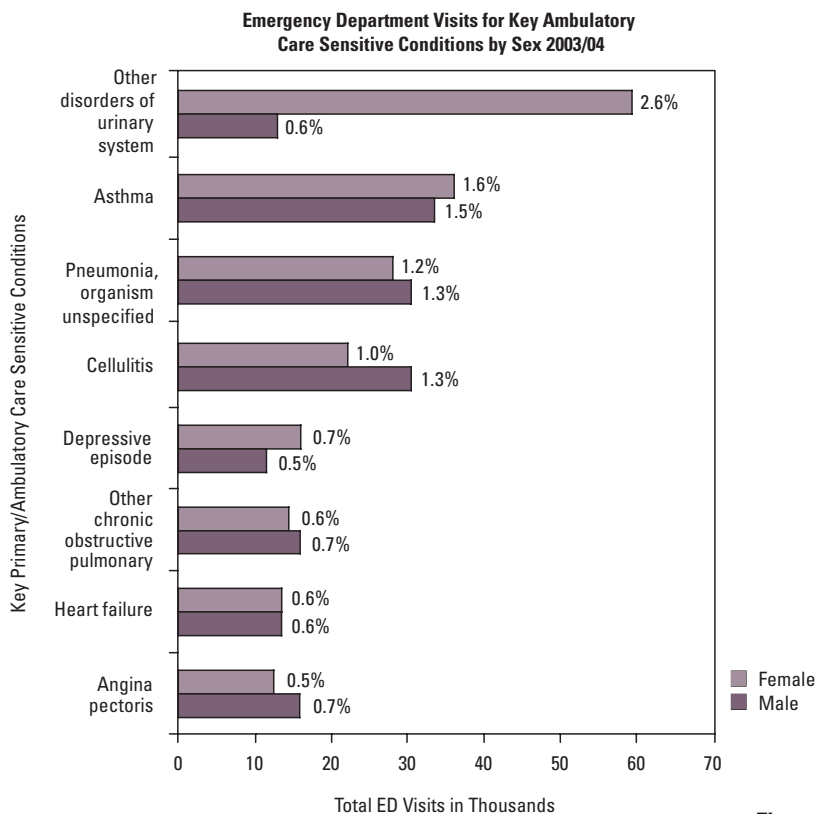


Figure 14

The asthma, pneumonia, and ankle and foot injury indicators featured in the CUO quadrant of this Report, were stratified by sex at both provincial and hospital levels. Of the four indicators featured (see pg. 23 for indicator definitions), two reflect statistically significant sex differences at a provincial level in both 2002/03 and 2003/04:

1. At a system level, women with asthma (1.3%) were significantly more likely than men (0.9%) to return to the ED within 24-72 hours of their initial visit ($p < 0.05$). This indicator is a measure of the EDs' longer-term asthma management strategies. Given that asthma is frequently exacerbated with pregnancy and other hormonal fluctuations (e.g., during the perimenstrual phase), attention to sex differences in the management of asthma in the ED is imperative.⁶ Women's health-specific guidelines for the management of asthma have been developed and updated.⁷ As shown in Figure 15, at a hospital level, 14 more EDs had women with higher return visit rates for asthma within 24-72 hours than men; although, few of these differences were statistically significant, hospitals should examine their own data, including patient charts, more closely to determine whether any of these differences are clinically meaningful.
2. Men with pneumonia (3.4%) were significantly more likely than women (3.0%) to be hospitalized with a resulting length of stay of two days or shorter ($p < 0.05$). As a measure of the number of patients who could potentially be safely treated in the community, this is an example of an ACSC for which the rates of preventable short-term hospitalization in Ontario are higher for men than women.

6 Skobeloff EM, Spivey WH, Silverman R, Eskin BA, Harchelroad F, Alessi TV. (1996). The effect of the menstrual cycle on asthma presentations in the emergency department. *Archives of Internal Medicine*, 156: 1837-1840.

7 NAEPP Working Group Report on Managing Asthma During Pregnancy: Recommendations for Pharmacologic Treatment – 2004 Update are available at: <http://www.nhlbi.nih.gov/health/prof/lung/asthma/astpreg.htm>.

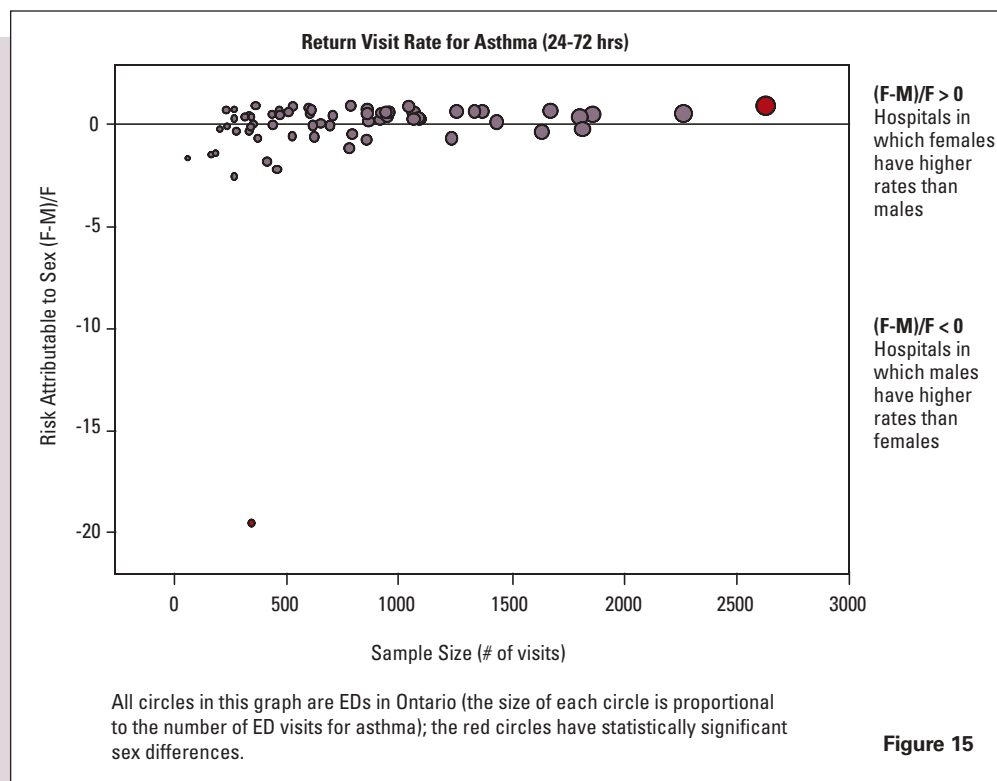
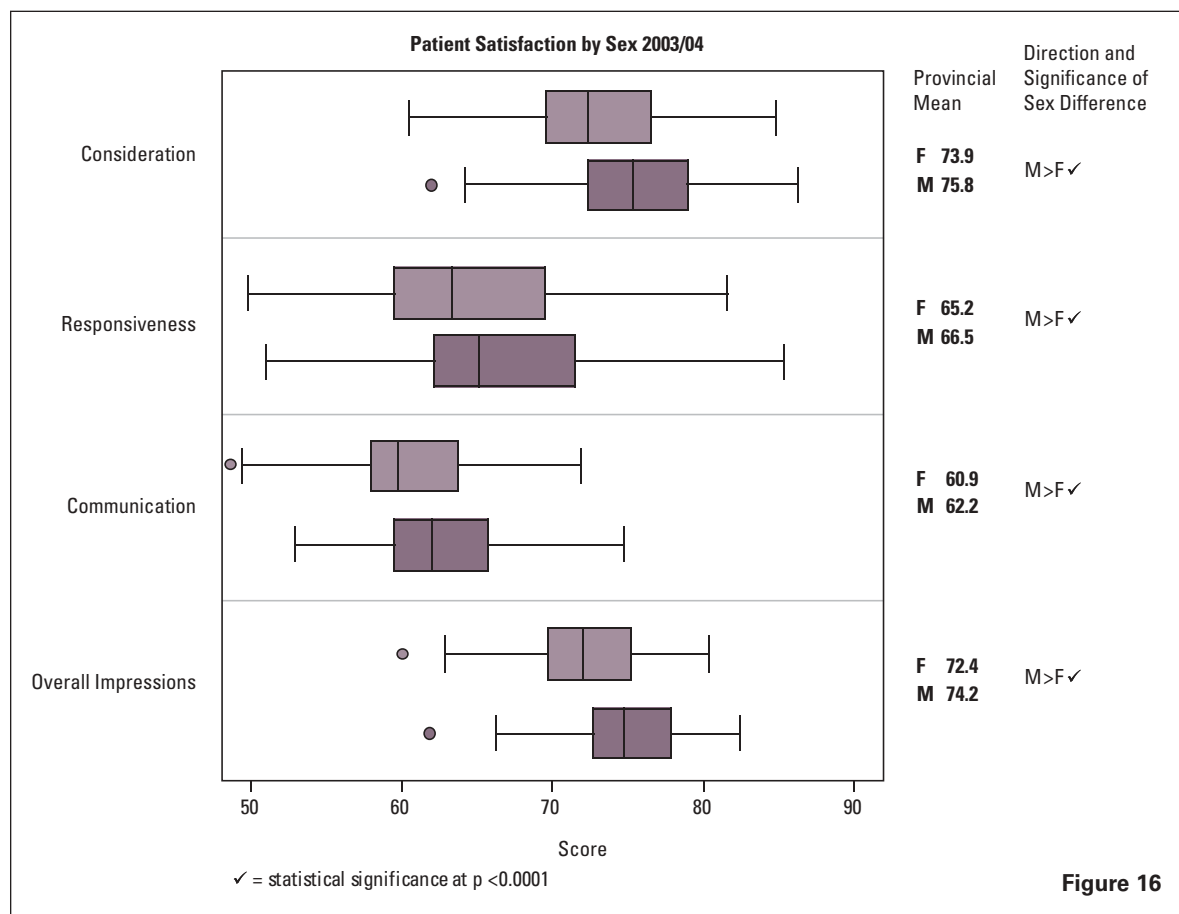


Figure 15

**Figure 16**

This box and whisker plot displays the distribution of hospital scores in Ontario for select indicators by sex. The relative contribution of each hospital to the distribution is determined by weighting each hospital by its sample size. The black line inside the box reflects the median hospital score, indicating that 50% of hospitals scored higher and 50% of hospitals scored lower. Similarly, the left and right outlines of the box represent hospitals with 25th and 75th percentile scores, respectively. Excluding the outliers, the whiskers extending from both ends of the box display the minimum and maximum hospital scores for the indicators. Circles represent the outliers with scores greater than one and one half box lengths from the edges of the box. To the right of the box plot, the mean hospital score for each indicator is displayed.

Means and medians are two measures of central tendency. Medians are the central values. Means, which are listed to the right of the figure, and are used in this Report to evaluate and compare sex differences, and hospital performance, are the arithmetic average of the hospital values. Unlike medians, means are influenced by extreme values. Mean values that are substantially higher or lower than median values for the same indicator, reflect data with a distribution that is highly skewed.

Patient Satisfaction by Sex

- Exploring sex differences in patient satisfaction acknowledges that women and men may have different health care experiences, and helps to highlight which aspects of care may require the most immediate attention to enhance sex equity in ED care.

As highlighted in the previous section on Patient Satisfaction, for the 2003/04 ED Picker survey results, women had significantly higher response rates until about the age of 70, after which men had higher response rates. In general, the response rate increased with age.

- Overall, women reported lower satisfaction with the care and services they received in Ontario's EDs than men. As shown in Figure 16, at the provincial level, risk-adjusted scores for women were slightly lower than those for men on all four indicators of Consideration, Responsiveness, Communication and Overall Impressions (see pg. 32 for indicator definitions). Although consistently small, these differences were all statistically significant ($p < 0.0001$) as expected, given the large sample sizes.

Figure 17 shows that based on patients' overall impressions of the care and services they received during their visit, there were three and a half times more EDs in which women were less satisfied than men. In 11 of these EDs – indicated by red circles – the sex difference was statistically significant ($p < 0.0001$). There were no hospitals for which men were significantly less satisfied than women on any of the key indicators.

Although sex differences in patient satisfaction are similar in overall direction ($F > M$) across sectors (e.g., Rehabilitation, Acute Care), sex differences observed in the ED sector are more consistently significant across hospitals than in the other sectors.

The causal mechanisms underlying the relationships between sex, other factors and patient satisfaction, and the extent to which these variables and their interactions actually predict patient satisfaction, are the subjects of continued study to determine:

- Why women are consistently less satisfied with the care and services they receive;
- Whether sex is a proxy for other patient, gender or care-related factors that may influence perceptions of the care experience (e.g., sociodemographic characteristics, expectations, actual quality of care received);
- If the differences persist when comparing men and women with similar conditions and co-morbidities; and
- Whether these differences are reducible through quality improvement strategies.

An important next step to better understand and identify reasons for such differences is to investigate whether specific questions drive sex differences at the indicator level. For example, logistic regression analyses* show that for 6 of the 11 hospitals in which the overall assessment of the ED visit was significantly less favourable for women than men, two patient satisfaction survey questions were most integral to this result ($p < 0.01$).

* Although individual questions were not risk-adjusted, the unadjusted questions and overall adjusted indicators were highly correlated ($r = 0.90$ or higher, and $p < 0.0001$).

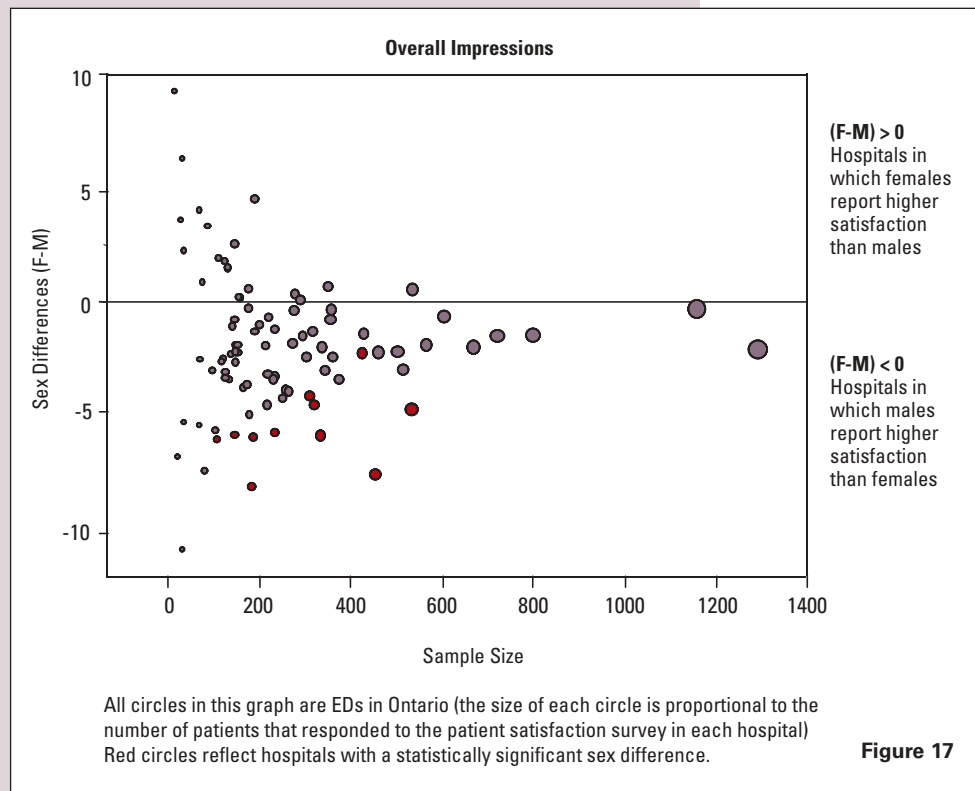


Figure 17

These questions were:

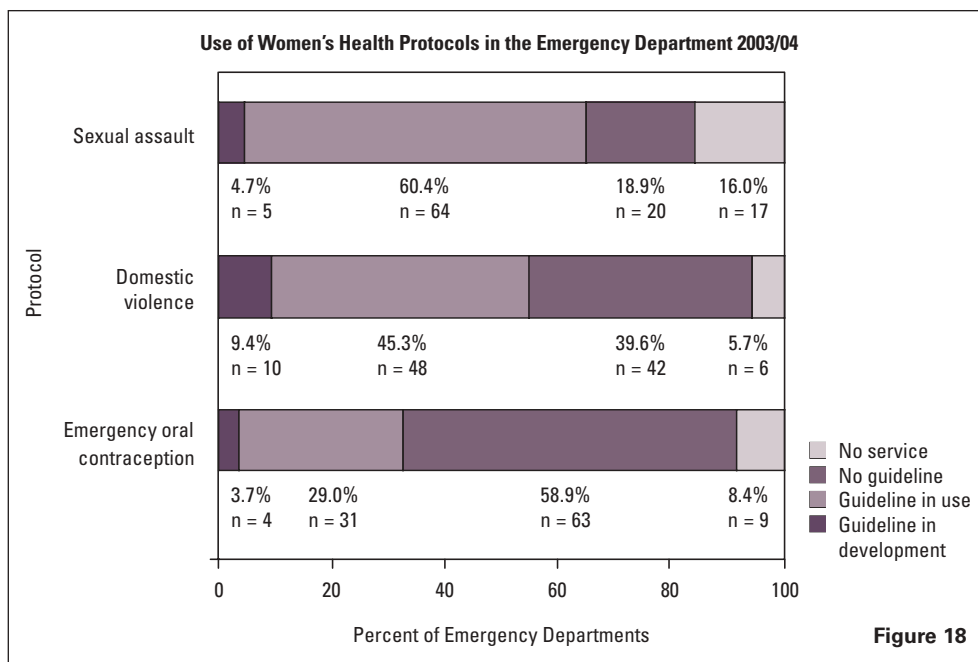
- Did you have confidence and trust in the doctors treating you?
- Would you recommend this hospital to your friends and family?

In addition, for 4 of the 5 hospitals in which the assessment of the responsiveness** to patients' needs in the ED was significantly less favourable for women than men, three questions were most integral to determining the sex differences in the indicator ($p < 0.01$):

- While you were in the Emergency Department, were you able to get all the services you needed?
- While you were in the Emergency Department, were there times when you did not get the help you needed?
- How would you rate the availability of your nurses?

In other words, hospitals that wish to target significant sex differences for these indicators might start by better understanding and focusing on strategies relevant to specific issues in the areas of access to services, trust and confidence with doctors, and availability and responsiveness of nurses.

Use of Women's Health Protocols



Women exposed to violence suffer deleterious physical and psychosocial effects, and are frequent users of emergency services. While some of these women present in EDs, a substantial proportion of cases remain unreported.

The System Integration and Change (SIC) survey for the ED sector assessed the use and development of standardized clinical protocols (i.e., guidelines, pathways, directives) for three women's health issues of priority: sexual assault, domestic violence, and emergency oral contraception.

EDs in Ontario were most likely to report using protocols for the evaluation and management of sexual assault (60.4%), and domestic violence (45.3%). Far fewer EDs reported use of a protocol for provision of emergency oral contraception (29.0%) (Figure 18).

** For question-level regression analyses for the responsiveness indicator, a subset of questions were omitted because these had a large number of missing values.

Compared to results reported in 2002/03, more EDs reported using the three guidelines in 2003/04. Specifically:

- For Sexual Assault, 7 hospitals that had reported “No guideline/protocol” in 2002/03, reported actively using a protocol on their patients in 2003/04.
- For Domestic Violence, 10 hospitals that had reported “No guideline/protocol” in 2002/03, reported actively using a protocol on their patients in 2003/04.
- For Emergency Oral Contraception, 11 hospitals that had reported “No guideline/protocol” in 2002/03, reported actively using a protocol on their patients in 2003/04.

Although there is evidence of overall progress in the development and use of structured tools to guide care for women requiring emergency services for sexual assault, domestic violence and emergency oral contraception, these results also highlight opportunities for improvement. Specifically, Ontario hospitals must work to ensure that guidelines or protocols are adopted in EDs that currently report “no use”; and that these are paired with strategies to promote guideline implementation (e.g., health care provider education and reminder tools). Secondly, it is important to ensure that there is adequate regional access to these services in areas where EDs report “no service”. Finally, the quality of guidelines must be evaluated on an ongoing basis to ensure that they reflect the best available evidence.⁸

Ontario’s EDs should actively use mechanisms for developing and sharing best practice tools and processes for the evaluation and management of sexual assault and domestic violence and the provision of emergency oral contraception (e.g., Ontario’s Network of Sexual Assault/Domestic Violence Treatment Centres www.satcontario.com).

⁸ Wathen N, MacMillan HL. (2003). Interventions for violence against women: A scientific review. *Journal of the American Medical Association*, 289: 589-600, e1-e10. evaluation of interventions is underway.



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