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Department of the Premier and Cabinet
Cabinet Submission briefing note
Submission No. 3034 Date: 7 November 2002

Minister for Health and Minister Assisting the Premier on Women's Policy

Queensland Health – Measured Quality, Public report and Hospital reports

Purpose

1. To inform Cabinet of the content of the Queensland Health "Measured Quality" report (the Report) including sixty associated individual hospital reports and Queensland Health's intent to publicly distribute a selected summary and analysis of the Report entitled "Queensland Hospitals in the Twenty-First Century".

Background

2. Queensland Health's Measured Quality Program (the Program), which forms part of the strategic plan for quality under the existing Australian Health Care Agreement (1998 – 2003), was introduced to provide performance measurement data on all Queensland public hospitals. The Program aims to increase safety and accountability of the public health system through the provision of comparative public hospital performance data, public reporting of the performance data and enhancement of the national knowledge base on quality measurement.
3. The Report represents the first comprehensive performance measurement report of public hospitals in Queensland and provides baseline performance data against clinical outcomes, efficiency, patient satisfaction and system integration and change indicators. The Report is accompanied by sixty individual hospital performance reports which identify key issues arising from the analysis of the data for each hospital. The individual hospital reports will be released to relevant District and Zonal managers within Queensland Health for dissemination and action where necessary. The report "Queensland Hospitals in the Twenty-First Century is a selected summary of the data for dissemination to key government, non-government and community stakeholders.

Issues

4. The Report found that clinical indicator rates for Queensland were at or below the rates for public hospitals throughout Australia with the exception of stroke, hysterectomy for women under 35 years of age and caesarean rates. The higher in-hospital mortality rate may be explained by the low discharge rates of stroke patients to nursing homes compared to the rest of Australia. The caesarean rates and hysterectomy rates are only slightly higher than national rates.
5. The Report found some significant variations in indicators between the four hospital peer groups (grouped into Principal Referral and Specialised, large, medium and small hospitals). These issues are being addressed through Queensland Health's integration and quality initiatives including clinical pathways, integrated risk management, development of an electronic health record and Service Integration workshops.
6. The Report also highlights poor discharge planning as an issue in many hospitals but does not identify strategies to address this issue. Queensland Health advises that the report will be used to inform further work on key issues such as discharge planning.
7. The data will be subject to trend analysis through continued data collection. Queensland Health intends to collect further data against some indicators in mid 2003 and annually thereafter with patient satisfaction data to be collected every two to three years.
8. A new Australian Health Care Agreement is currently being negotiated with the Commonwealth Department of Health and Ageing. Queensland Health advises that there is strong national support for the continuation of quality funding under the new Australian Health Care Agreement therefore continued funding for the Measured Quality Program is likely.
9. The submission states a risk management strategy is being implemented in anticipation of potential questions raised on public presentation, including reasons for variations across hospital groups. Queensland Health have developed a media and advocacy strategy and Professor Bruce Barraclough, Chair of the Australian Council for Quality and Safety in Healthcare has agreed to publicly support Queensland Health during the release of the public report.

Is this in accordance with Government election commitments?

10. Not applicable.

Recommendation

11. That the contents of the submission be noted and that the communication strategy be delegated to the Minister for Health and Minister Assisting the Premier on Women's Policy and the Premier to settle.

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Action Officer: Ros Walker
Area: Social Policy
Telephone: 47693

DDG (PD): RB 7/11

DG: 7/11

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CABINET DECISION

Cairns, 11 November 2002

Decision No. 3758 (Submission No. 3034)

TITLE: Information Submission - Queensland Hospitals in the 21st Century - Measured Quality Public and Hospital Reports.

CABINET decided:

1. That following consideration, the contents of the submission be noted.

2. To delegate to the Premier and Minister for Trade and the Minister for Health and Minister Assisting the Premier on Women's Policy:

   a) The development of a communication strategy
   b) The finalisation of the document
   c) The finalisation of the strategy to manage the dissemination of the information from the 60 Hospital Reports and the formation of a Department of Health team to undertake the work.

CIRCULATION: Implementation Responsibility
Nil.
Departmental Records
Department of the Premier and Cabinet.
Treasury Department.
Department of Health and copy to the Minister.
Perusal and Return
All other Ministers.

Cabinet Secretary

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SECURITY CLASSIFICATION "A"

INFORMATION SUBMISSION

COVER SHEET

TITLE

Queensland Hospitals in the 21st Century: Measured Quality Public & Hospital reports

MINISTER

Minister for Health and Minister Assisting the Premier on Women's Policy

OBJECTIVE

To inform Cabinet of the content and proposed release of the Queensland Health – *Measured Quality Public Report ('Queensland Hospitals in the Twenty-First Century - A First Report - 2002')* and the 60 individual *Hospital Reports* which will not be released publicly.

SUMMARY

The Measured Quality Program Area was undertaken by Queensland Health to develop reports that routinely measure and utilise performance data for the Queensland public health system. This is the first time that an Australian health service has undertaken this type of reporting and demonstrates that Queensland Health is leading the way in promoting better accountability on public health system performance.

The purpose of these reports is:

- To provide a balanced and comparative picture of performance of 60 Queensland public hospitals;
- To report to the public on the performance of the Queensland Health public hospital system;
- To obtain baseline data on current Queensland Health public hospital performance; and
- Contribute to the national knowledge base on quality measurement.

A range of performance indicators have been developed across the areas of:

- Clinical Outcomes;
- Efficiency;
- Patient Satisfaction; and
- System Integration & Change.

The balanced scorecard methodology has been adopted to present the performance data across these four quadrants.

The reports that have been developed include:

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- One Public Report *('Queensland Hospitals in the Twenty-First Century - A First Report - 2002');* and
- Sixty *Hospital Reports*

Following cabinet consideration, the *Measured Quality Public Report ('Queensland Hospitals in the Twenty-First Century - A First Report - 2002')* will be publicly released to various parties including government & non-government and community stakeholders. The 60 *Measured Quality Hospital Reports* will be released to each of the relevant District Managers and Zonal Managers within Queensland Health for dissemination and action where necessary. The sixty reports are not intended for general public release.

RESULTS OF CONSULTATION

- **Is there agreement? YES. See paragraph 23 of body of submission.**

RECOMMENDATION

That following consideration, the contents of the submission be noted.

WENDY EDMOND MP
MINISTER FOR HEALTH
MINISTER ASSISTING THE PREMIER ON WOMEN'S POLICY
5 November 2002

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BODY OF SUBMISSION

OBJECTIVE

1. To inform Cabinet of the content and proposed release of the Queensland Health – *Measured Quality Public Report ('Queensland Hospitals in the Twenty-First Century - A First Report - 2002')* and the 60 individual *Hospital Reports* which will not be released publicly.

BACKGROUND

- **Context**

2. During 1998, Queensland Health started developing a comprehensive framework to improve the safety and quality of public health services. This was in response to both State and national calls for reform.

3. Nationally, a number of reports on the safety of the Australian health system were published driving public policy change and resulting in the allocation of approximately $660M to the States and Territories for quality improvements through the 1998-2003 Australian Health Care Agreement (AHCA).

4. Within Queensland, strategic developments in Queensland Health and in the State's public administration demanded a greater emphasis on safety and accountability. A Queensland Health Council on Safety and Quality in Health Care (Quality Council) was established in March 1999 to oversee the quality agenda and includes ensuring that risk management and quality management systems are in place in Queensland Health.

5. One of the 23 Program Areas that received approval from the Quality Council was the Measured Quality Program Area. The goal of the Measured Quality Program Area is to improve the capacity of the Queensland public health system to provide quality services and deliver optimal outcomes by developing systems to routinely measure and utilise performance data. These systems will be developed through the balanced scorecard methodology and will action the Corporate key value of performance accountability (Strategic Plan 2000-2010) and other key strategies of the Strategic Plan by providing:

   - comparative data on the quality of services provided by Districts and Zones, more informed investment decisions can be made; and
   - benchmarking information on performance across key indicators, this Program will contribute to a corporate culture of evidence-based practice.

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6. The goal is consistent with the Strategic Plan statement that Queensland Health's performance will be assessed by monitoring the outcomes of health services and client satisfaction.

7. The target groups for this Program Area are:

- Clinical leaders at the Hospital, District, Zonal and Statewide levels;
- Management at the District, Zonal and Corporate levels; and
- Consumers.

ISSUES

8. The *Measured Quality Public Report ('Queensland Hospitals in the Twenty-First Century - A First Report - 2002')* has been undertaken in the context of a 20 year development plan for public sector health services in Queensland. The *Smart State Health 2020* discussion paper, which was the subject of public consultation from April to June this year, committed Queensland Health to involving communities in health care and developing an integrated patient-centred health system.

9. The purpose of the *Measured Quality Public Report ('Queensland Hospitals in the Twenty-First Century - A First Report - 2002')* is to provide a snapshot for the community on the performance of Queensland Health's public hospitals. This purpose links strongly with the section highlighted in the *Smart State: Health 2020 discussion paper: 'Community engagement'*, where it has been flagged that it is essential for the government and the community to engage in discussing the big issues associated with health and health care.

10. Generally, the clinical indicator rates for Queensland were at or below the rates for public hospitals throughout the rest of Australia. The only exceptions were in-hospital mortality for stroke, hysterectomy for women under 35 years of age and caesarean rates. A possible explanation for the higher in-hospital mortality rate for stroke is the corresponding low discharge rates to nursing homes in Queensland, compared to the rest of Australia. The combination of nursing home discharge rate plus the mortality rate is similar for Queensland and the rest of Australia. The rates for hysterectomy on women under 35 years of age rate is only slightly higher than the rate for the rest of Australia ie. Aust (excl QLD): 10.51% to QLD: 11.19%. The caesarean section rate for all births is only slightly higher than the national average ie. Aust: 21.9% to QLD: 23.4%. The national (excluding Northern Territory) caesarean section rate for women who were private patients in hospital was 55.3% higher than the rate for public patients.

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11. The report highlights some variation between the four Hospital peer groups of Principal Referral & Specialised, Large, Medium, & Small Hospitals. These variations are particularly evident between the Principal Referral & Specialised and Large peer groups, and the Medium and Small peer groups. Some of the activities that Queensland Health is undertaking to address these variations include:

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- The Primary Clinical Care Manual – aimed at health professionals working in rural and remote locations;
- Transition Programs for nurses – aimed at nurses to develop knowledge and skills;
- Clinical Pathways – to improve the quality and efficiency of clinical care;
- Infection Control Program Area – surveillance and prevention;
- Integrated Risk Management – development of a Risk Management Framework and eduction programs;
- Improved use of Medicines – prevention of adverse drug events;
- Clinical Information System – Provision of a patient-centric Electronic Health Record across the continuum of care; and
- Service Integration workshops – Integration of all types of services and levels of service working together to provide good health care.

12. The ongoing production of both the Public and Hospital reports will assist by informing management on areas where quality activities may need to be undertaken. Where variation between Queensland and Rest of Australia have been highlighted, appropriate analysis on the reasons for the variation will be performed at both a hospital and 'system' level. Action will be taken, where necessary, to improve the results through the dedication of time, resources and policy change, including appropriate changes to models of care.

13. The report prepared for public release *"Queensland Hospitals in the 21st Century"* was developed from sixty *Measured Quality Hospital reports* that provide each hospital with data on a set of core indicators measuring:

- Clinical Utilisation and Outcomes;
- Patient Satisfaction;
- Efficiency; and
- System Integration and Change.

14. The quadrants of the balanced scorecard used to present the indicator results, provide hospitals with performance measures that directly align with sections of the *Smart State: Health 2020 discussion paper* that dealt with:

- Clinical Utilisation and Outcomes – *Smart State: Health 2020, 'Safe, accountable and quality health services'*;
- Patient Satisfaction - *Smart State: Health 2020, 'Community engagement'*;
- Efficiency - *Smart State: Health 2020, 'Paying for health in 2020'*; and
- System Integration and Change - *Smart State: Health 2020, 'Health workforce of 2020'*.

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OPRINT

15. The sixty hospital reports flag areas for potential improvement and areas where performance is potentially best practice. These hospitals will now participate in various round-table sessions and forums, which will focus on benchmarking and dissemination and interpretation of their hospital report, so as appropriate action can be taken using the range of change management projects and specialist units currently available within Queensland Health.

16. The confidential distribution of each hospital report to the relevant District Manager and Zonal Manager will provide the hospital with the appropriate environment to disseminate the results within the report. Some of the units and program areas that are currently operating within Queensland Health will be on-hand to assist hospital staff with interpreting the results and to develop strategies to improve quality include:

- Clinician Development program area;
- Organisational Improvement Unit;
- Collaborative for Health care Improvement program area ;
- Risk Management program area; and
- Clinical Audit program area.

17. Phase 1 of the Measured Quality Program Area will be complete once the Public and Hospital reports are distributed to the appropriate parties. Data analysis has commenced on Phase 2 with a second round of sixty hospital reports to be produced by June 2003. Various improvements have been made to the Phase 2 reports, including the presentation of 2 years data which will enable trend analysis to be performed, and refinement of individual indicators based on feedback from Health Service District comments and consultation with expert groups.

18. In instances where an individual clinical indicator result for a particular hospital was considered to be a 'negative outlier', some preliminary discussions and audits (or investigative activities) have been undertaken to identify some potential reasons for the results. A summary of the clinical indicators that have been flagged with nineteen hospitals, highlighting their responses and activities that have been (or in the process of being) undertaken by the hospital is provided at the front of each individual relevant hospital report.

19. A risk management strategy is being put in place in anticipation of questions that could be raised from the presentation of the Public report. This includes the identification of particular issues raised in the Public report and the result of some preliminary enquiries with Health Service District executives on potential reasons for variation.

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20. The media and advocacy strategy has been considered as a potential containment measure for the release of the Public report. Professor Bruce Barraclough, Chair – Australian Council for Quality and Safety in Healthcare has been given a detailed brief on the objectives and methodology used in the Measured Quality Public Report and has indicated that he is a strong advocate for this type of reporting to be adopted nationally. As Queensland Health is leading the way with this project, Professor Barraclough has indicated that he will continue his support for Queensland Health during the release of the Public report and the continuing work that Queensland Health is undertaking in this area.

21. The benefits of the approach that Queensland Health is taking in the production and release of a Public report are numerous. Some of these benefits include the promotion of better accountability on the performance of the Queensland public health system, promotion of a culture of evidence based practice, and provision of comparative data to enable more informed investment decisions.

CONSULTATION

22. Consultation has occurred with the Department of Premier and Cabinet and the Treasury Department.

RESULTS OF CONSULTATION

23. Both Departments support the general purpose of the Queensland Health – Measured Quality, Public report & Hospital reports.

PUBLIC PRESENTATION

24. A communication strategy has been developed in conjunction with the release of the *Measured Quality Public Report ('Queensland Hospitals in the Twenty-First Century - A First Report - 2002').*

25. The sixty *Measured Quality Hospital Reports* will be distributed for further dissemination and action to the relevant District Managers & Zonal Managers only, and will not be made available publicly.

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CONSULTATION ADDENDUM

Department name	Officer consulted	Date consulted
Premier & Cabinet	Ms Lynne Rodgers Ros Walker	9th October 2002 & 29th October 2002
Treasury	Ms Tania Homan & Ms Peta Tran	15th October 2002

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Queensland Hospitals in the Twenty-First Century

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A First Report

2002

Queensland Government
Queensland Health

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Foreword

Over the last decade there has been increasing interest in, and focus on the quality of health care in Australia. This interest arose out of studies that showed very real concerns about the safety and quality of health care services nationally and internationally. In response to these concerns, Queensland Health is undertaking a large program of activities under the Quality Improvement and Enhancement Program (QIEP) that concentrates on particular areas of safety and quality of health care in Queensland. This program is being undertaken in the context of a 20 year development plan for the public sector health services in Queensland – *the Smart State: Health 2020.*

As a 'learning organisation' Queensland Health is committed to a process of continuously monitoring its performance and finding ways to improve that performance. It is acknowledged that an essential part of improving services is to develop a way of measuring quality and safety and to apply this method across the system. While Queensland Health measures its performance in many individual areas, no one indicator can adequately represent overall quality of health care services.

Queensland Health has developed a measurement method which encompasses a number of areas essential to the overall quality and safety of care. The process allows comparisons to be made between hospitals and over time. The first phase of this program has developed measurements and comparisons for hospital inpatient services.

This report on phase one has been prepared for the public of Queensland. It provides information about Queensland Health hospital services, how they are being measured and the results of these measurements. It also describes a range of related improvement activities and programs being undertaken by Queensland Health.

I encourage you to read this report and use the information to participate in the ongoing public debate over the quality of health services and the decisions required to improve them.

(Dr) R L Stable
Director-General
June 2002

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Executive Summary

The purpose of this report is to provide a snapshot for the community of the performance of its public hospitals and the activities Queensland Health is undertaking to address any problems identified. The focus of this first stage of the measurement process is on **hospital inpatient services** which is the largest single component of Queensland Health activity.[1]

The sixty hospitals included in this report represent 94 percent of public hospital activity and 84 percent of the available inpatient beds.

As these hospitals offer a wide range of services, they have been classified into four different 'peer groups'. This was done by grouping hospitals that are of similar size, provide similar types and volumes of services and are in similar areas. The groups are:

- Principal Referral and Specialised hospitals
- Large hospitals
- Medium hospitals
- Small hospitals.

The Principal Referral and Specialised and Large hospital peer groups performed 89 percent of the activity of the hospitals in the study.

Four different aspects or quadrants of health care delivery have been measured and reported. Where possible, the data have been analysed (risk adjusted) to account for potentially confounding factors such as different levels of patient risk.

Summary of findings for each quadrant

Clinical Utilisation and Outcomes

The indicator results in this quadrant are presented to show comparisons between the peer group means and the mean for the study cohort as a whole (shown as "State" in the graphs).

Findings

There was significant variation between the hospital peer groups for about half of the indicators that were examined, after the data had been risk-adjusted. Some of the key findings include:

- in-hospital mortality rates for heart attack, heart failure and stroke were all lower in the Principal Referral and Specialised hospitals;
- long stay rates for maternity services and patients undergoing hysterectomy were generally higher for smaller hospitals;
- long stay rates for asthma, and to a lesser extent for pneumonia, were lower in Medium and Small hospitals; and,
- complication rates for colorectal cancer surgery were lower for the Large peer group of hospitals, while amputation rates due to diabetic foot were lower in Medium and Smaller hospitals.

Generally, Queensland public hospital indicator rates were at or below the rates for public hospitals throughout the rest of Australia, with the exceptions of in-hospital mortality for stroke, hysterectomy for women under 35 years of age and caesarean section rate.

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Indicators that showed statistically significant differences in outcomes for patients who were admitted to public hospitals as either public or private patients included:

- long stay rates for hysterectomy, and hip and knee replacement surgery, which were all lower for private patients, while private patients had a higher long stay rate for heart failure;
- complications of surgery rates were lower for private patients for hip and knee replacements and hysterectomy;
- the hysterectomy rate for women aged under 35 years was lower for those admitted as private patients; and,
- rates for caesarean section, induction and severe perineal tears were all higher for women admitted as private patients.

Patient Satisfaction

The results showed that most patients (89 percent) were satisfied with their hospital stay, with 59 percent being very satisfied.

Four measures that received the highest commendation from patients were:

- cleanliness of rooms
- attitudes of staff spoken to before admission
- courtesy of nurses
- helpfulness of staff.

Areas requiring improvement included:

- discharge planning processes
- access and admission processes
- provision of clear treatment related information
- management of patient complaints.

Efficiency

The indicator results are presented to show comparisons between the peer group medians and the median for the study cohort as a whole (shown as 'State' in the graphs). Results showed that:

- Occupancy rates were higher in the Principal Referral and Specialised hospital and Large hospital groups, as were energy costs and cost per weighted separation. This suggests a more complex patient cohort overall in these hospital groups.
- Catering costs were lower in the Principal Referral and Specialised hospital group possibly because of the economies of scale to be achieved in larger hospitals.

System Integration and Change

The indicator results are presented to show comparisons between the peer group medians and the median for the study cohort as a whole (shown as 'State' in the graphs). Results showed that:

- There was more widespread availability, collection and use of electronic information to support clinical activities in the Principal Referral and Specialised and Large hospital groups. This decreases with the decreasing size of the hospitals.
- The development and use of clinical pathways is more extensive in the Principal Referral and Specialised and Large hospital groups. The smaller hospitals have less opportunity to develop clinical pathways because of the smaller numbers of patients.
- The extent of external benchmarking was highest in the Principal Referral and Specialised hospitals and this activity decreased with the decreasing size of hospitals.

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Introduction

Queensland Health is a large, complex organisation, which delivers a broad range of hospital and community-based health services from many different locations and types of hospitals. Measuring the quality of these services is a huge and complicated task.

The Purpose of this Report

This report will provide a snapshot for the community, health service managers and Government on the performance of its public hospitals and the activities Queensland Health is undertaking to address any problems identified.

It aims to improve the accountability of health services by:

measuring the quality of services and reporting this to the public;

informing the community on aspects of health care thereby assisting and encouraging public debate and community participation in decisions regarding improvements in health care;

improving Queensland Health's responsiveness to community needs and expectations by encouraging participation and feedback; and

establishing an ongoing process that reports on performance and supports continuous improvement.

Scope

This report represents the first stage of a process of measurement. The focus at this stage is on the largest single component of Queensland Health services – **hospital inpatient services**. It is planned to extend this focus over the next three years to cover most of Queensland health services such as outpatient, emergency and community services.

Though no single measure or indicator can represent a measure of the quality of health care services, Queensland Health believes that there needs to be a systematic, comprehensive performance assessment of Queensland's public health care system.

To address this, Queensland Health has developed a 'balanced scorecard' approach to measurement, which is currently being used in a number of other countries. The scorecard identifies indicators across four different perspectives or quadrants. It helps service providers and the public to judge the performance of the Queensland health system and plan improvements. This measurement method has been applied across the public hospital system.

The four quadrants are:

1. Clinical Utilisation and Outcomes
This measures the clinical performance of hospitals for a number of diseases, conditions and surgical procedures.

2. Patient Satisfaction
This measures patients' perceptions of and satisfaction with their hospital experience.

3. Efficiency
This measures how hospitals manage their resources.

4. System Integration and Change
This measures a hospital's ability to adapt to its changing health care environment.

The quadrants are described in detail in the next chapter 'The Measurement Method'.

The process of measuring performance has identified the need to improve the measurement capacity itself. Some measures for possible inclusion are currently available while others require considerable developmental work.

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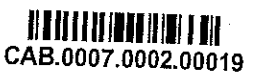

This report outlines how Queensland Health has approached the method of measurement together with the results of this measurement. It compares the results across the groups of hospitals as well as with national performance data.

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Request for Feedback

To help Queensland Health continue to develop the type of report that is valued by and of use to the public, we would appreciate any feedback and comments on this report.

For further information, suggestions or comments, please feel free to contact:

General Manager Health Services
Office of the Director General
Queensland Health
GPO Box 48
Brisbane QLD 4001
Australia

Facsimile: 07 3234 0987

We also invite you to visit our website at: http://www.health.qld.gov.au
The technical papers supporting this report are also available on the website.

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Queensland Public Hospital Services

The Australian health care system is a mixture of services provided by both the public and private sectors. The Commonwealth Government of Australia funds the Queensland Government to provide public hospital services under the 'Australian Health Care Agreement' (AHCA).

The population of Queensland was 3,655,139 in 2001 and is growing faster than any other State in Australia at 8.5 percent[1].

To serve this increasing population, Queensland Health delivers its services through **38 District Health Services.**

Within these Districts there are approximately 200 hospitals and outpatient facilities, 70 Community Health Centres and 21 State Government Residential Facilities.

The range of services provided include:

- hospital inpatient services
- outpatient services
- emergency services
- community services
- mental health services
- aged care services
- and public health and health promotion programs

Queensland Public Hospitals Network

Queensland Health hospitals offer an increasingly complex range of services as described below:

- The smallest, often remote facilities provide outpatient services with the ability to assess and transfer patients to a higher level of care. They may provide basic inpatient services for patients who are not seriously ill.
- The next group of hospitals provides the services already described plus some specialist services.
- The next larger group of hospitals is capable of undertaking complex services on high-risk patients plus basic patient services with some specialist care.
- The larger hospitals offer basic services for their local catchment areas and more specialised services for complex cases across a range of specialties for their region.
- A limited number of hospitals provides services on a state-wide or zonal basis. These services are required for a relatively small number of patients, using specialised facilities and equipment and involve a high level of clinical complexity such as surgery for coronary artery bypass.

These hospitals are distributed across Queensland. The large, highly specialised hospitals are located in more densely populated metropolitan areas.

The figure below shows the distribution of public hospital beds across metropolitan, rural and remote areas and compares this with the national distribution.

There is not an exact geographic fit between population distribution and the distribution of hospital services. Hospitals based in central locations may also serve patients who live in rural and remote areas.

The higher rate of beds outside metropolitan areas also balances other health service differences such as the shortages of medical practitioners in rural and remote areas[2]. Many of the rural and

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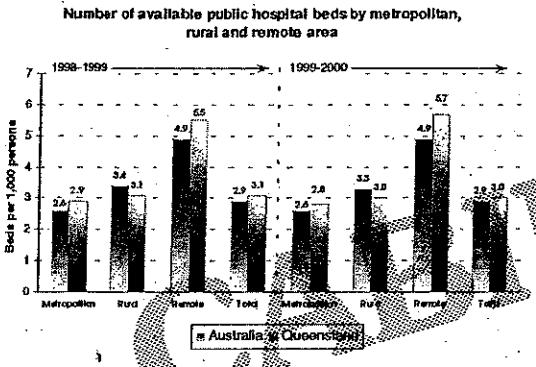
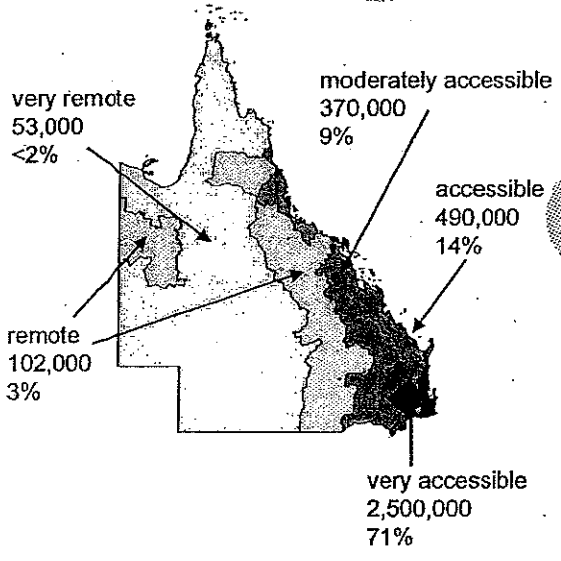
remote hospitals have a high proportion of nursing home type patients who, in metropolitan areas, are cared for in nursing homes or hostels.



Source: (Steering Committee for the Review of Commonwealth/State Service Provision) 2001, Report on Government Services 2001, AusInfo, Canberra

Because of Queensland's large geographical area, equitable and fair service provision requires a balance between providing services close to where patients live, and the provision of highly specialised services. Not every service can be provided at every facility. Services are therefore provided through the network of hospitals described above, where patients are referred and transferred to more specialised levels of service as required. These arrangements vary from specialty to specialty but enable patients to be treated by the most appropriate and closest service required.



The map shows the population of Queensland in the year of 1999 rated according to access to services using information from the Accessibility/ Remoteness Index of Australia[3].

Hospital services vary depending on the local and regional population, distance from the southeast corner and the ability to attract and retain staff. Other factors include the availability of support services such as pharmacy, intensive care and radiology as well as the specialty skills of the medical and nursing staff.

Access to Services:

Patient Travel Subsidy Scheme: This Scheme provides direct assistance to patients and in some cases their carers (escorts) to enable patients to access specialist medical services from which they are isolated. The Scheme subsidises travel and accommodation costs to eligible patients and their carers.

Patient Retrieval System: Queensland Health is responsible for the emergency retrieval and transfer of sick patients from rural and remote areas of Queensland to centres equipped to manage their condition. Most patients are brought to Brisbane or Townsville using medical teams drawn from the major hospitals in those cities. A small but significant number of patients are also transferred to Toowoomba, Rockhampton and Cairns. Other coastal towns such as Bundaberg and Mackay receive patients when appropriate.

Using small aeroplanes, helicopters and road transport, the retrieval service operates statewide seven days a week. It works in collaboration with the Royal Flying Doctor Service, Queensland Ambulance Service, Queensland Emergency Services and with various Community Helicopter operators. Patients of all categories and all ages are transported.

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The service is also supported by the Queensland Health flying surgeon, flying paediatrician and flying obstetrician/gynaecologist. These staff are based in rural centres across Queensland.

Rebuilding Hospitals

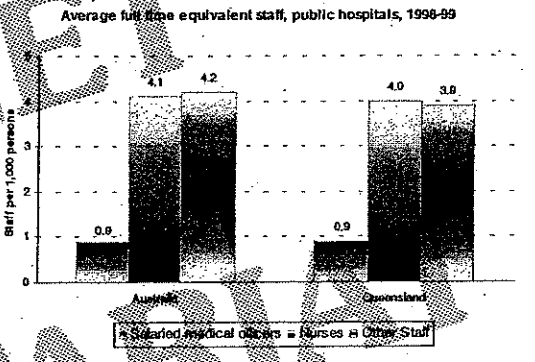
A decade-long task of the rebuilding and re-equipping of these public hospitals as well as community, primary, and multi-purpose health services is nearing completion.

This *Statewide Health Building Program* for Queensland Health is the largest public health rebuilding program ever undertaken in Australia.

Planning activities were undertaken for each of the major hospitals in Queensland and the program has managed over 50 large projects and an additional 100 smaller projects. The capital works program also provides for infrastructure development and maintenance for mental health, aged care residential and rural services, information technology and equipment replacement.

Workforce

The workforce of Queensland Health is its major asset and resource for delivery of services. Approximately 60,000 staff in both clinical and support roles are involved in delivering these services.



Source: (Steering Committee for the Review of Commonwealth/State Service Provision) 2001, Report on Government Services 2001, AusInfo, Canberra

These 60,000 staff comprise in excess of 40,000 full time equivalent positions within Queensland Health. The figure shows a breakdown of staffing into medical, nursing and other staff. Other staff includes allied health staff, administrative and operational staff.

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The Measurement Method

This report aims to provide the public of Queensland with a set of indicators which, though not directly measuring the quality of health care, draws attention to issues possibly related to quality and provides comparisons between hospitals. The focus is on providing clinicians and the public with the necessary information to improve services, where required.

The scope of the measurement study

Sixty hospitals are included in this study. These represent **94 percent of the public hospital activity and 86 percent of the available beds** (Hospitals with a budget of less than two million dollars per year have been excluded from the study).

These 60 hospitals also cover most serious emergency cases and provide extensive day and outpatient facilities.

Some of the hospitals have specialised units attached to them such as Sub-Acute and Non-Acute patient units, Palliative Care, Geriatric Evaluation and Maintenance, Psychogeriatric and Rehabilitation units. This report examines inpatient data only for these hospitals.

Indicator

An indicator is a measurement tool, screen or flag that is used as a guide to monitor, evaluate and improve the quality of client care, clinical services, support services and organisational functions that affect client outcomes. (Canadian Council on Health Services Accreditation 1996).

How hospitals are measured and compared

The report is based on objective, quantitative data that are consistent across the major Queensland public hospitals. The method of reporting relies on statistical rather than anecdotal evidence of the quality of care provided by public hospitals. Each quadrant contains a set of indicators developed through a two-step process of:

- identifying those indicators already in use within Queensland Health and elsewhere and
- expert review of these existing indicators for their relevance and feasibility.

...Indicators should actually measure what they are intended to (validity); they should provide the same answer if measured by different people in similar circumstances (reliability); they should be able to measure change (sensitivity); and, they should reflect changes only in the situation concerned. In reality, these criteria are difficult to achieve, and indicators, at best, are indirect or partial measures of a complex situation[4].

The Hospital Balanced Scorecard

The Hospital Balanced Scorecard is used as a framework for reporting this set of indicators. The Scorecard links the indicators across four quadrants representing different aspects of health care measurement.

1. **Clinical Utilisation and Outcomes**
2. **Patient Satisfaction**
3. **Efficiency**
4. **System Integration and Change**

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Clinical Utilisation and Outcomes	Patient Satisfaction
Describes the clinical performance of hospitals and refers to such things as clinical efficiency and quality of care.	Examines patients' perceptions of their hospital experience including their perceptions of overall quality of care and the outcomes of their care.
Efficiency	**System Integration and Change**
Describes how hospitals use their resources. It refers to the cost of a hospital's services and its resource management.	Describes a hospital's ability to adapt to the changing health care environment. It examines how clinical information technologies, work processes and hospital-community relationships function within the hospital system.

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This balanced scorecard is similar to work undertaken in Ontario, Canada aimed at developing a comprehensive set of hospital performance results. The Ontario Hospital Association first tested their framework in the production of a 1998 scorecard report. This report has been refined and broadened with work continuing on expanding the Ontario scorecard beyond inpatient activity in the 2001 report[5].

A National Health Performance Framework has been adapted from the Canadian Institute for Health Information framework and established nationally. It is designed to provide a structure for appraising how well the health system is performing. The framework is expected to support benchmarking for health system improvement and to provide information on national health system performance[6]. It consists of three tiers: Health Status and Outcomes, Determinants of Health and Health System Performance. Health System Performance has been grouped into nine dimensions described as:

- Effective
- Appropriate
- Efficient
- Responsive
- Accessible
- Safe
- Continuous
- Capable
- Sustainable.

Each of the indicators developed for the balanced scorecard provides information across one or more of these dimensions.

Data Adjustment

Where possible, the data have been analysed to account for potentially confounding factors such as different levels of patient risk in the population (risk-adjustment). The goal of these adjustments has been to provide the most meaningful benchmarking data possible. However, some variations remain across the State in patient risk factors, in care before admission and in documentation and coding practices. These cannot be accounted for at this time.

Caution should therefore be used when interpreting the results. Indicator results are based on data for one year only. Data were not available for trend analysis as this is a first report.

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Peer Groups

In the benchmarking process, the way in which hospitals are grouped is important so as to ensure we are comparing 'apples with apples'. A number of factors affect the outcomes of services provided by hospitals. There is a link between the number of procedures conducted by clinicians, their skill in performing these procedures and resulting outcomes for patients. Similarly, the size of a hospital and its location will affect the types of services that are provided by that hospital, the range of clinicians required and the degree of their specialisation.

By grouping hospitals that are of similar size, provide similar types and volumes of services and are in similar areas, the influence of these factors on patient outcomes is reduced. This allows for the services provided across the hospitals in a group to be compared in terms of quality and outcomes in the fairest possible manner.

Peer groupings for hospitals are provided in the following table and are represented on the following maps.

Principal Referral and Specialised Hospitals represent 56 percent of the total public hospital activity and 49 percent of the available beds. They include:

- Royal Brisbane Hospital/Royal Women's Hospital
- Royal Children's Hospital
- Mater Public Children's Hospital
- Mater Public Mothers' Hospital
- Mater Public Adult Hospital
- The Prince Charles Hospital
- Princess Alexandra Hospital
- Nambour Hospital
- Gold Coast Hospital
- Cairns Base Hospital
- Toowoomba Hospital
- The Townsville Hospital

Large Hospitals represent 28 percent of the total public hospital activity and 22 percent of the available beds. They include:

- Bundaberg Hospital
- Caboolture Hospital
- Gladstone Hospital
- Hervey Bay Hospital
- Maryborough Hospital
- Rockhampton Hospital
- Redcliffe Hospital
- Mackay Base Hospital
- Mt Isa Hospital
- Logan Hospital
- Queen Elizabeth II Jubilee Hospital
- Redland Hospital
- Ipswich Hospital

Medium Hospitals represent 5 percent of the total public hospital activity and 6 percent of the available beds. They include:

- Caloundra Hospital
- Gympie Hospital
- Kingaroy Hospital
- Atherton Hospital
- Ingham Hospital
- Innisfail Hospital
- Proserpine Hospital
- Beaudesert Hospital
- Dalby Hospital
- Warwick Hospital

Small Hospitals represent 5 percent of the total public hospital activity and 9 percent of the available beds. They include:

- Ayr Hospital
- Barcaldine Hospital
- Biloela Hospital
- Bowen Hospital
- Charleville Hospital
- Charters Towers Hospital
- Cherbourg Hospital
- Chinchilla Hospital
- Cunnamulla Hospital
- Emerald Hospital
- Goondiwindi Hospital
- Joyce Palmer Health Service (Palm Island)
- Island Medical Service
- Longreach Hospital
- Mareeba District Hospital
- Miles Hospital
- Mossman Hospital
- Roma Hospital
- St George Hospital
- Stanthorpe Hospital
- Thursday Island Hospital
- Tully Hospital
- Weipa Hospital
- Wynnum Hospital
- Yeppoon Hospital

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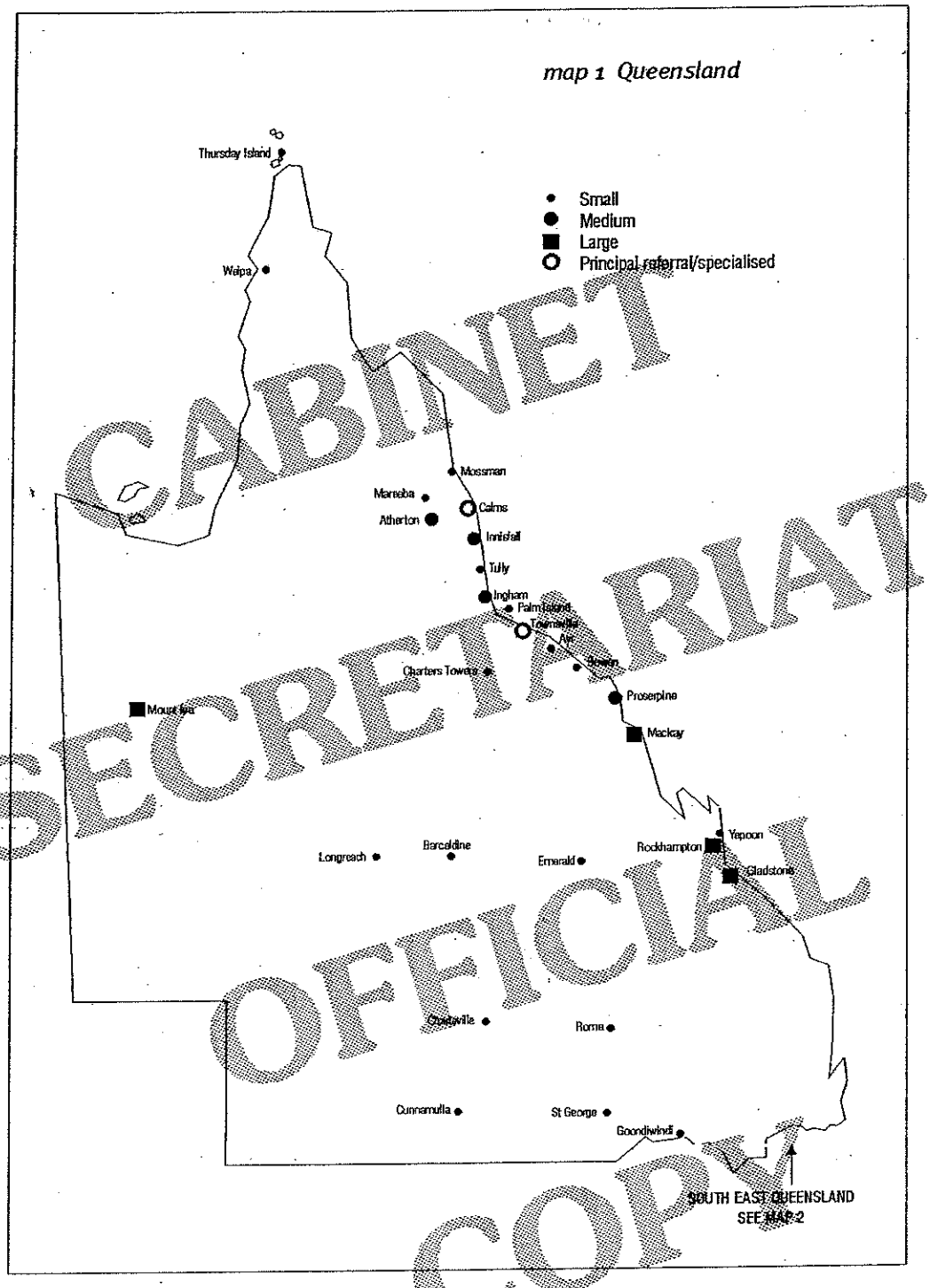

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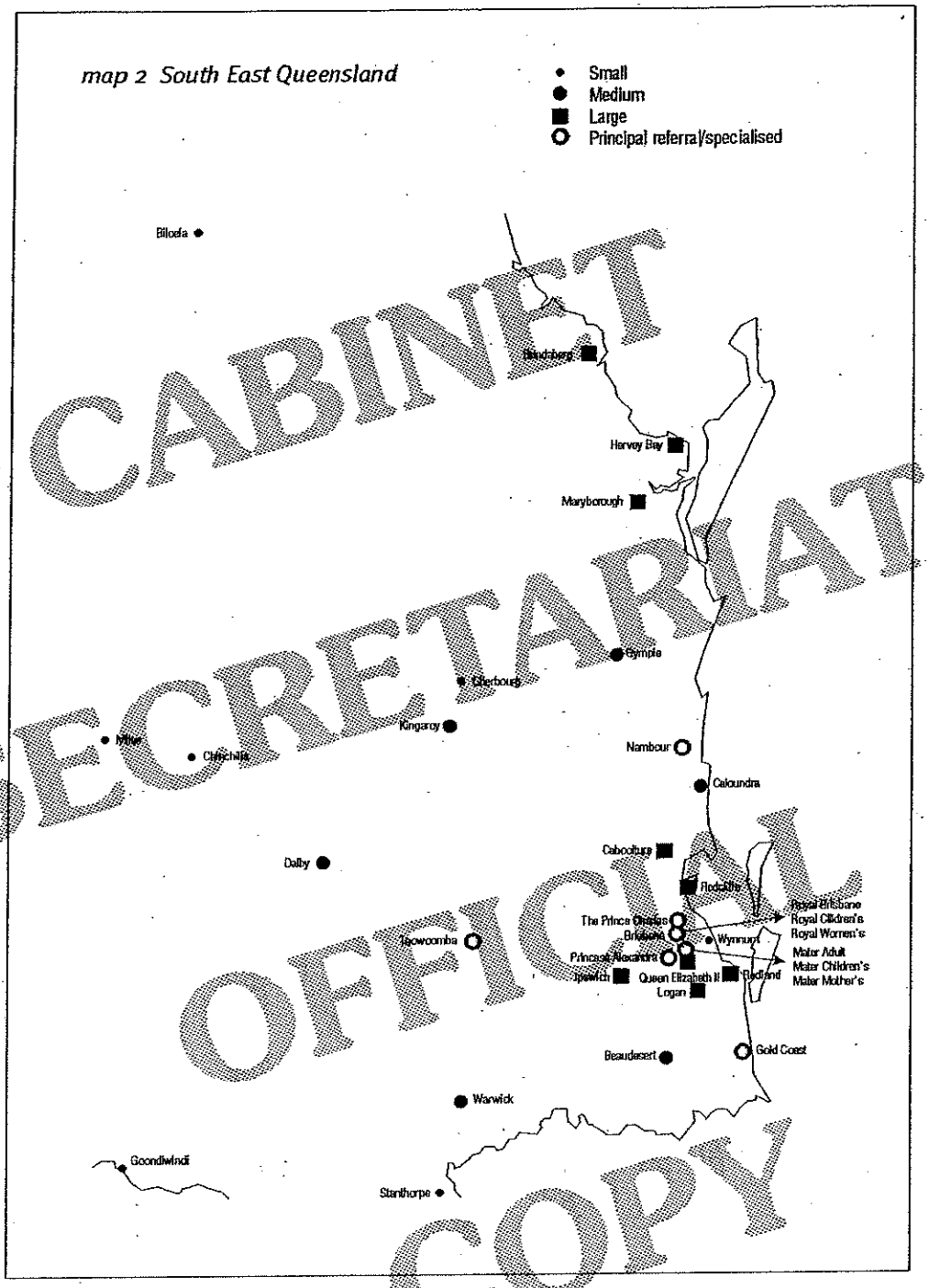

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Clinical Utilisation and Outcomes

Indicators that represent the quality of health care have been developed within a number of clinical areas. These are representative of a large part of hospital activity and include:

1. **Cardiovascular Disease**
   - Acute Myocardial Infarction (Heart Attack)
   - Heart Failure
   - Stroke
2. **Women's Health**
   - Hysterectomy
   - Maternity (vaginal and caesarean deliveries)
3. **Orthopaedic Surgery**
   - Knee Replacement
   - Hip Replacement
   - Fractured Neck of Femur
4. **Respiratory Conditions**
   - Pneumonia
   - Asthma
5. **General Surgery**
   - Colorectal Carcinoma
   - Diabetic Foot

Clinical indicators in these areas were chosen in discussions with Queensland Health clinicians. Common indicators used across most conditions are described below.

Mortality Rate: This measures the number of patients who died in hospital following an admission for a relevant condition or procedure. Patient outcomes can be affected by many factors which include diagnosis, treatment, procedures performed, as well as age, sex and other health problems or co-morbidities.

Long Stay Rate: This is defined as the number of records where the patient's stay in hospital equalled or exceeded the long stay point, divided by the total number of records in the cohort. (Note that cases of in-hospital mortality are excluded from all calculations involving long stays.) For the purposes of this project, the long stay point was chosen as the day closest to the 90th percentile of all eligible length of stays within the study cohort. For example, 90% of patients in the heart failure cohort stayed in hospital for less than 14 days. Therefore, the number of eligible patients with heart failure who remained in hospital for 14 days or longer, divided by the total number of patients admitted for heart failure is the long stay rate for heart failure.

Complication Rate: This indicator identifies the proportion of patients who exhibited a range of complications resulting from treatment in hospital. The development of complications while in hospital can be related to the health status of the patient upon admission and/or the quality of the care provided by the hospital.

The development and refinement of these indicators will continue over the next few years when it will be possible to identify trends in outcomes. Comparisons can then be made across hospital groups to assist the process of improving care as hospitals benefit from the experiences of one another.

Some factors to be aware of in the interpretation of the results include:

- Findings are based on a **single** year of data, 1999-2000. These findings may therefore be found to be inconclusive due to variations over time. Analysis

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over a number of years will improve confidence in interpreting the results.

- It is not certain to what extent the risk-adjustment corrects for differences in the patient populations.
- In general, more complex cases are treated in the Principal Referral and Specialised group of hospitals.
- Some variation may occur as a result of data collection practices in hospitals as opposed to actual clinical differences.
- Data for all indicators excludes same day patients.

Summary of Indicator Results

The indicator results are presented to show comparisons between the peer group means and the mean for the study cohort as a whole (shown as 'State' in the graphs). The figures show the ***observed*** results for each indicator. Risk-adjusted results are then documented in the text together with comparisons of outcomes for patients admitted as public or private. Comparisons with national data are also reported, where this data was available.

Findings

* There was significant variation between the hospital peer groups for about half of the indicators that were examined, after the data had been risk-adjusted. Some of the key findings include:
  - in-hospital mortality rates for heart attack, heart failure and stroke were all lower in the Principal Referral and Specialised hospitals;
  - long stay rates for maternity services and patients undergoing hysterectomy were generally higher for smaller hospitals;
  - long stay rates for asthma, and to a lesser extent for pneumonia, were lower in Medium and Small hospitals; and,
  - complication rates for colorectal cancer surgery were lower for the Large peer group of hospitals, while amputation rates due to diabetic foot were lower in smaller hospitals.

* Comparisons with national figures are based on data provided to Queensland Health by the Australian Institute of Health and Welfare (AIHW). Generally, Queensland public hospital indicator rates were at or below the rates for public hospitals throughout the rest of Australia, with the exceptions of in-hospital mortality for stroke, hysterectomy for women under 35 years of age and caesarean section rate.

* Indicators that showed statistically significant differences in outcomes for patients who were admitted to public hospitals as public or private patients included:
  - long stay rates for hysterectomy, and hip and knee replacement surgery, which were all lower for private patients, while private patients had a higher long stay rate for heart failure;
  - complications of surgery rates were lower for private patients for hip and knee replacements and hysterectomy;
  - the hysterectomy rate for women aged under 35 years was lower for those admitted as private patients; and,
  - rates for caesarean section, induction and severe perineal tears were all higher for women admitted as private patients.

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Cardiovascular Disease

Cardiovascular disease (circulatory disease) comprises diseases of the heart and blood vessels. A leading cause is atherosclerosis that partially or totally blocks the arteries with fatty deposits. Atherosclerosis affects various parts of the circulation.

Coronary heart disease occurs when atherosclerosis is present in the coronary arteries that supply blood to the heart itself. This can present as **angina pectoris** (chest pain), **acute myocardial infarction** (heart attack) and/or **heart failure**.

Atherosclerosis of the arteries supplying blood to the brain can cause **strokes**.

Atherosclerosis of the peripheral blood vessels such as those supplying blood to the legs can lead to leg ulcers, gangrene and amputation. This condition is made worse when diabetes is present.

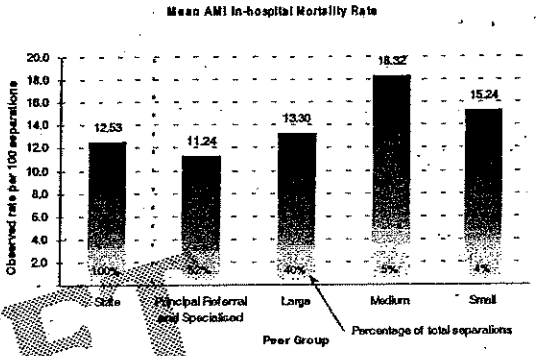
Cardiovascular disease continues to be the leading cause of death and disability in Australia even though there have been major advances in its prevention and treatment.

Acute Myocardial Infarction (AMI)

Acute Myocardial Infarction (AMI) or 'heart attack' is defined as the rapid onset of severe symptoms associated with necrosis or death of the myocardium (heart muscle), resulting from a lack of blood supply. The severity of the 'attack' depends largely on the size and location of the tissue damage.

♦ AMI - In-hospital Mortality Rate

This indicator measures the rate of patients who have died in hospital within 30 days of an admission for AMI.



Comments

The Large (13.3 per 100 separations), Medium (18.3 per 100 separations) and Small (15.2 per 100 separations) hospital peer groups were all found to have higher observed mortality rates compared to Principal Referral and Specialised hospitals (11.2 per 100 separations).

After risk-adjusting the data the findings were as follows:

- The differentials between the hospital peer groups were even greater than for the observed rates. For example, the likelihood of in-hospital mortality for Medium hospitals was almost three times as high and for Small hospitals more than two and a half times as high, compared to Principal Referral and Specialised hospitals.
- There was no statistically significant difference between the results for hospitals with a cardiologist or a general physician specialist in relation to mortality. However, hospitals with a general practitioner as the admitting physician had a 96 percent higher chance of death occurring compared to those hospitals with a cardiologist.
- Whether a patient was admitted to the public hospital as a public or a private patient had no statistically significant impact on their outcome for in-hospital mortality.

Queensland's in-hospital mortality rate for AMI is approximately 15.7 percent lower than the national average (Australia excluding Queensland).

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NOTE: For those patients who have had an AMI, thrombolysis or primary coronary angioplasty may be indicated. Either of these processes decreases the damage to the heart by improving the blood supply to the affected area. In the absence of contraindications, it is recommended that this process of restoring blood flow be commenced as soon as possible as the 'time to lysis' or 'time to angioplasty' can predict the outcome of care. Though thrombolysis treatment is available throughout Queensland the geographical distances patients need to travel and the delay in reaching medical help may influence the outcome of their care. Proportionately fewer patients can access angioplasty as this service is only available in three Principal Referral and Specialised hospitals.

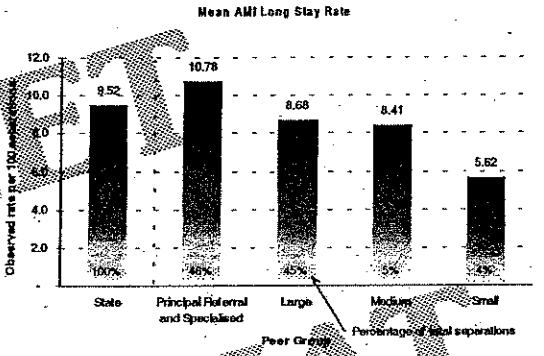
Improvement Activities

Acute Chest Pain Assessment

Following a review of services provided for patients with acute chest pain at The Prince Charles Hospital, an 'acute chest pain assessment service' has been established. It provides a structured approach to patient management. General practitioners now have a referral service to assist in the determination of a clear diagnosis and treatment plan for patients presenting with acute chest pain. This structured approach to triage and clinical assessment in the hospital setting has facilitated the rapid diagnosis and treatment of patients at high risk, and the early identification and discharge of low risk patients. Effective communication channels have been established to ensure a seamless transition for ongoing patient management by outpatient and community services. This model of care is transferable to other health care settings and the hospital has taken the lead in ensuring this service pathway becomes widely adopted.

♦ AMI - Long Stay Rate

This indicator measures the rate of patients who remained in hospital for 12-30 days (long stay) following an admission for AMI.



Comments

The rate of long stays was highest for the peer group of Principal Referral and Specialised hospitals (10.8 per 100 separations) and lowest for Small hospitals (5.6 per 100 separations).

After risk-adjusting the data the findings were as follows:

- Despite the apparent differences in the observed rates, the hospital peer groups showed no significant differences for the rate of long stays after risk-adjustment.
- Patients of general physician specialists were 33 percent less likely to have a long stay compared with patients of cardiologists. Patients of general practitioners were less than half as likely to have a long stay as patients of cardiologists.
- Whether a patient was admitted to a public hospital as a public or a private patient had no statistically significant impact on their chance of having a long stay.

Queensland's average length of stay for AMI was 2.8 percent lower than the national average (Australia excluding Queensland).

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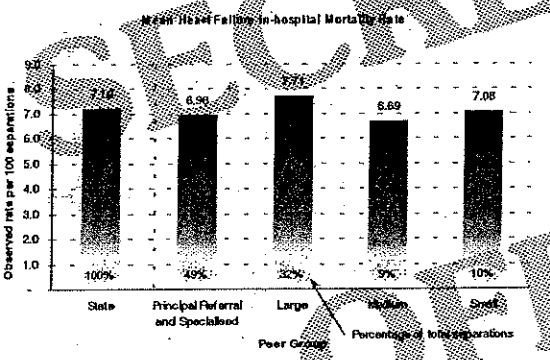
Heart Failure

Heart failure is a chronic form of heart disease resulting from a damaged heart muscle. The heart is then unable to pump blood adequately to the rest of the body. It is mainly caused by the occurrence of AMI (heart attack), hypertension or damaged heart valves and is the third largest cause of cardiovascular death in Australia. More women die from heart failure than men. However, rates for both have been steadily decreasing over the last 10 years. 90 percent of the deaths from heart failure occur in the 75 and over age group[7].

♦ Heart Failure - In-hospital Mortality Rate

This indicator measures the rate of patients who have died in hospital within 30 days of an admission for heart failure.



Comments

The observed in-hospital mortality rates were quite similar for each of the hospital peer groups, ranging from 6.7 per 100 separations for Medium hospitals to 7.7 per 100 separations for Large hospitals.

After risk-adjusting the data, the findings were as follows:

- The Large and Small hospital peer groups were both found to have a significantly higher likelihood of in-hospital mortality compared with Principal Referral and Specialised hospitals (32 percent and 74 percent higher respectively).
- There was no statistically significant difference between the results for hospitals with a cardiologist or a general physician specialist in relation to in-hospital mortality. However, hospitals with a general practitioner as the admitting physician had a 59 percent higher probability of death occurring compared to those hospitals with a cardiologist.
- Whether a patient was admitted to a public hospital as a public or private patient had no statistically significant impact on their outcome for mortality.

Queensland's in-hospital mortality for heart failure was marginally lower than the national average (Australia excluding Queensland).

NOTE: Chronic heart failure is associated with high morbidity rates and annual mortality rates of greater than 30% in patients with severe symptoms[8]. In these severe cases of heart failure, admission to an intensive care unit with Continuous Positive Airways Pressure ventilation or intubation may be necessary. This technology is available in the larger and more specialised facilities only. The restricted access to investigatory services (such as cardiac ultrasound to assess heart function), specialist consultation and allied health professionals (such as clinical pharmacists) in more remote locales may be other factors accounting for comparatively higher mortality rates noted in smaller hospitals staffed by general practitioners.

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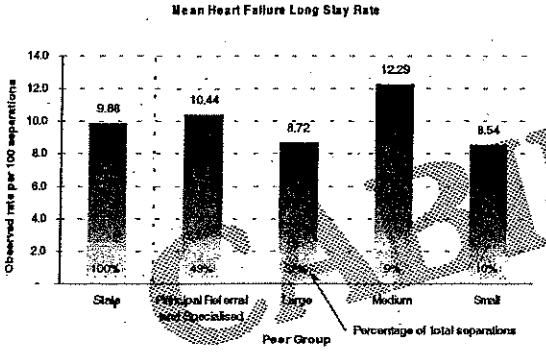
♦ Heart Failure - Long Stay Rate

This indicator measures the rate of patients who remained in hospital for 14-30 days (long stay) following an admission for heart failure.



Comments

Small and Large peer group hospitals had the lowest long stay rates (8.5 and 8.7 per 100 separations respectively), while Medium hospitals had an observed long stay rate of 12.3 per 100 separations.

After risk-adjusting the data, the findings were as follows:

- No significant differences were found in the likelihood of long stays across any of the hospital peer groups.
- Patients admitted by a general physician specialist were 25 percent less likely to have a long stay for heart failure than patients who were admitted by a cardiologist. However, there was no significant variation in the chances of having a long stay between patients who were admitted by a general practitioner compared to those admitted by a cardiologist.
- Patients admitted as private patients to a public hospital were 43 percent more likely to have a long stay than patients who were admitted as public patients.

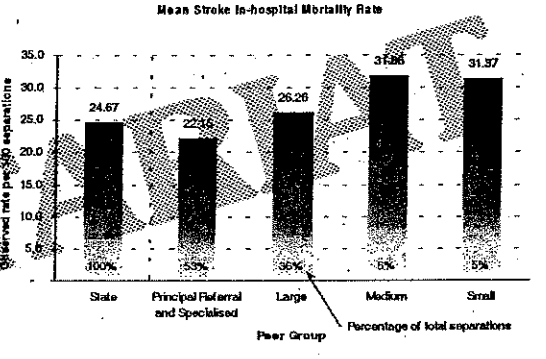
Queensland's average length of stay for heart failure was 8.6 percent lower than the national average (Australia excluding Queensland).

Stroke

A stroke can occur when blood supply to the brain is suddenly blocked or there is bleeding into the brain. Damage to the brain subsequently occurs and this may affect the ability to move various body parts and/or the ability to communicate.

♦ Stroke - In-hospital Mortality Rate

This indicator measures the rate of patients who have died in hospital after an admission for stroke.



Comments

The Large (26.3 per 100 separations), Medium (31.9 per 100 separations) and Small (31.4 per 100 separations) hospital peer groups were all found to have higher observed mortality rates compared to Principal Referral and Specialised hospitals (22.1 per 100 separations).

After risk-adjusting the data, the findings were as follows:

- The differentials in the likelihood of in-hospital mortality for each of the peer groups increased in comparison to Principal Referral and Specialised hospitals. Separations at Large hospitals were 32 percent more likely to result from death, while in-hospital mortality was 62 percent more likely for Medium hospitals and 49 percent more likely for the Small peer group hospitals.
- Whether a patient was admitted to a public hospital as a public or private patient had no statistically significant

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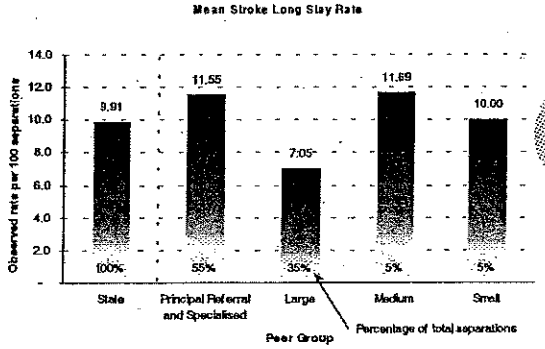
impact on their outcome for in-hospital mortality.

Queensland's in-hospital mortality for stroke was higher than the national average (Australia excluding Queensland). However, Queensland patients admitted for stroke are less likely to be discharged to a nursing home than those in the rest of Australia and therefore have a higher rate of in-hospital mortality. The nursing home discharge rate plus the mortality rate is similar for Queensland and the rest of Australia.

NOTE: Stroke is not a homogeneous condition. There are clear pathological sub-types with over 100 potential underlying causes. To assist in the diagnosis of type and therefore the appropriate treatment, there is clinical consensus that most patients with acute stroke should undergo CT brain scanning as soon as possible (preferably within 48 hours). This facility is not available in smaller, rural and remote hospitals. The absence of dedicated acute stroke units in many non-tertiary hospitals may further explain the comparatively higher rates of stroke death noted in these sites.

♦ Stroke - Long Stay Rate

This indicator measures the rate of patients who remained in hospital for 66 days or longer (long stay) following an admission for stroke.



Comments

The observed rates of long stays varied from 7.0 per 100 separations for the Large hospitals peer group up to 11.6 per 100 separations for Principal Referral and Specialised hospitals and 11.7 per 100 separations for Medium hospitals.

After risk-adjusting the data, the findings were as follows:

- Separations from Large hospitals were found to be 40 percent less likely to result in a long stay than were separations from Principal Referral and Specialised hospitals. However, there was no significant difference for Medium or Small hospitals in comparison to Principal Referral and Specialised hospitals.
- Whether a patient was admitted to a public hospital as a public or private patient had no statistically significant impact on the probability of a long stay occurring for stroke.

Queensland's average length of stay for stroke was 10.5 percent lower than the national average (Australia excluding Queensland).

Improvement Activities

Stroke Unit

The Royal Brisbane Hospital's Stroke Unit commenced services in 2001 with a dedicated and experienced team of doctors, nurses and allied health professionals. The aim is to provide the highest standard of care to stroke patients and to be a focus for stroke-related research. In collaboration with the University of Queensland's Centre for Magnetic Resonance and using the new research MRI scanner, studies of acute stroke pathophysiology using advance MRI techniques are underway.

The Unit assists physicians in regional, rural and remote centres to manage their patients through an outreach programme. This will be extended over the next 12 months using telehealth technology to allow patients outside Brisbane access to the Stroke Unit's expertise.

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Women's Health

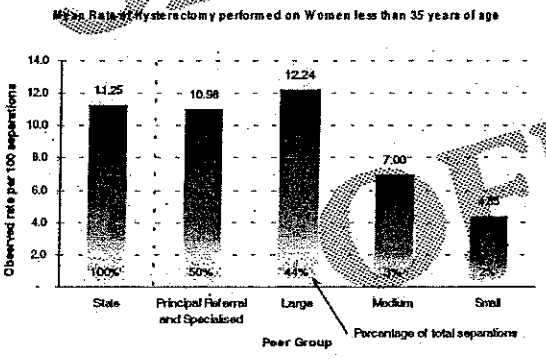
Hysterectomy

Hysterectomy is one of the most common surgical procedures performed on women apart from those related to pregnancy, such as caesarean section. It involves the removal of the uterus through an incision in the abdomen, or through the vagina.

It is one form of treatment for common gynaecological conditions such as fibroids and uterine prolapse. It can be associated with a number of complications such as excessive bleeding, infection or injury to other organs and it is recommended that it only be performed once conservative treatments have failed.

♦ Hysterectomy - Under 35 years of age Rate

This indicator measures the rate of patients aged less than 35 years being admitted for a hysterectomy procedure.



Comments

The observed rates of hysterectomy performed on women aged less than 35 years varied from 4.3 per 100 separations for the Small hospitals peer group up to 12.2 per 100 separations for Large hospitals.

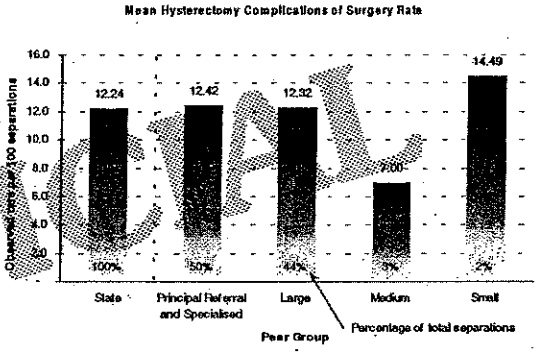
After risk-adjusting the data, the findings were as follows:

- Small hospitals were found to have a likelihood of hysterectomy for women below the age of 35 years that was just over a third of that recorded by Principal Referral and Specialised hospitals. However, the difference was of only marginal statistical significance. The risk-adjusted results for Medium and Large Hospitals did not differ significantly from the Principal Referral and Specialised group of hospitals.
- Patients admitted as private patients to public hospitals were 30 percent less likely to be under 35 years old when they had a procedure for hysterectomy.

Queensland's rate of hysterectomy performed on women less than 35 years was 6.5 percent higher than the national average (Australia excluding Queensland).

♦ Hysterectomy - Complications of Surgery Rate

This indicator identifies the rate of possible complications resulting from treatment in hospital for hysterectomy.



Comments

Medium hospitals had the lowest observed rate of complications (7.0 per 100 separations) while Small hospitals (14.5 per 100 separations) had the highest rate.

After risk-adjusting the data, the findings were as follows:

- Separations from Medium Hospitals were only half as likely to have complications of surgery due to hysterectomy as were those from Principal Referral and Specialised hospitals. The risk-adjusted chance of complications of surgery at Large and Small Hospitals did not differ significantly from the result for the

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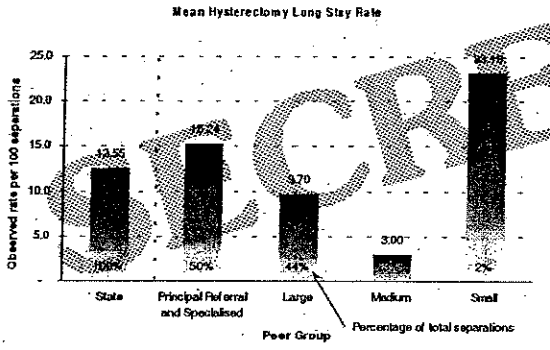
Principal Referral and Specialised hospitals group.

- Compared to public patients, patients admitted as private patients to public hospitals were 56 percent less likely to have a complication of surgery due to hysterectomy.

Queensland's complications of surgery rate for hysterectomy was seven percent lower than the national average (Australia excluding Queensland).

♦ Hysterectomy - Long Stay Rate

This indicator measures the rate of patients who remained in hospital for 6-30 days (long stay) for an admission for a hysterectomy.



Comments

There were large variations in the observed rate of long stays for hysterectomy across the various hospital peer groups. Medium hospitals had the lowest rate of long stays at 3.0 per 100 separations, while in contrast the long stay rate at Small hospitals was 23.1 per 100 separations.

After risk-adjusting the data, the findings were as follows:

- Both Large and Medium hospitals were found to have a significantly lower likelihood of a long stay compared with Principal Referral and Specialised hospitals (40 percent and 86 percent lower respectively). In contrast, the likelihood of a long stay for patients at Small hospitals was 74 percent higher when compared to Principal Referral and Specialised hospitals.
- Patients admitted as private patients to a public hospital were just over half (53 percent) as likely to have a long stay as were public patients.

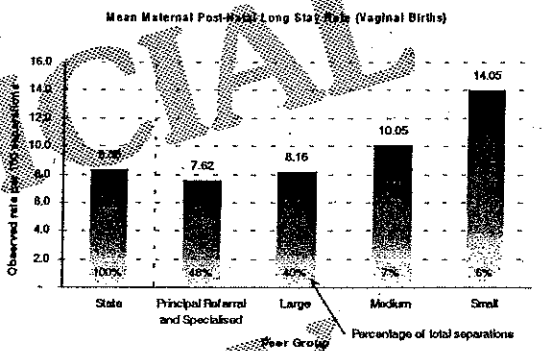
Queensland's average length of stay for hysterectomy was 13 percent lower than the national average (Australia excluding Queensland).

Maternity Services

Maternity services specifically relating to pregnancy, childbirth and the puerperium accounted for the third highest number of separations in public hospitals in Australia in 1999-2000 and accounted for 9 percent of total hospital separations[9].

♦ Maternal Post-Natal - Long Stay Rate (Vaginal Birth)

This indicator measures the number of women giving birth vaginally who remained in hospital for between 5 and 30 days.



Comments

There was an apparent correlation between the size (and perhaps location) of the hospital and the observed rate of long stays. Principal Referral and Specialised hospitals had the lowest rate of long stays (7.6 per 100 separations), while the highest rate was recorded by the Small peer group hospitals (14.0 per 100 separations).

After risk-adjusting the data, the findings were as follows:

- Large, Medium and Small hospitals were all found to have a significantly

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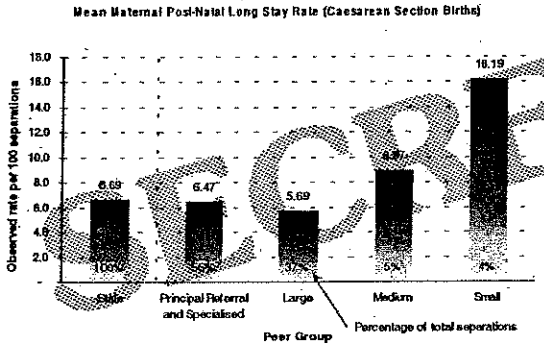
higher likelihood of maternal post-natal long stay for vaginal births compared to Principal Referral and Specialised hospitals (20 percent, 71 percent and 170 percent (or more than 2.5 times higher respectively).

Queensland's average length of stay of vaginal birth without complicating factors was 20 percent lower than the national average.

♦ Maternal Post-Natal - Long Stay Rate (caesarean section)

This indicates the number of women who remained in hospital for between 7 and 30 days following a caesarean section.



Comments

The results follow a fairly similar pattern to those found for vaginal births, except that the Large peer group hospitals have the lowest observed rate of maternal post-natal long stays (5.7 per 100 separations). Once again, the long stay rate observed for Small hospitals is much higher, at 16.2 per 100 separations.

After risk-adjusting the data, the findings were as follows:

- Medium and Small Hospitals were both found to have a significantly higher probability of a maternal post-natal long stay for caesarean sections compared to Principal Referral and Specialised hospitals. The likelihood for Medium Hospitals was nearly two and a half times as high, while for Small hospitals the chances of a long stay were over five times higher. However, there was no significant difference in the likelihood of a post-natal long stay between Principal Referral and Specialised hospitals and the Large hospitals peer group.

Queensland's average length of stay for caesarean birth without complicating factors was 21.8 percent lower than the national average.

Standard Primiparae

A standard primipara is defined in this study as a woman having her first baby who is aged between 20 and 34 years, having no medical complications and having a single baby that presents head first in labour and is delivered between 37 to 41 weeks gestation. These women are considered to be low risk and intervention rates in the form of caesarean section and inductions should therefore be low in this population[10]. High rates indicate a need for investigation.

Caesarean Section

A Caesarean section is the delivery of a baby by incision through the abdominal wall and uterus.

The rate of caesarean section varies considerably among countries from about 5 percent to over 25 percent of all births. The optimal rate is not known, but from national data available, little improvement in outcome appears to occur when rates rise above a rate of about seven percent[11]. Caesarean section is an operation and as such, is accompanied by varying degrees of risk. Haemorrhage, infection and mortality are more common in women who have a caesarean section than among women who deliver vaginally. Although the overall caesarean section rate cannot determine inappropriate use, examining the variation in rates across hospitals and regions may identify areas where caesarean rates can be reduced[12].

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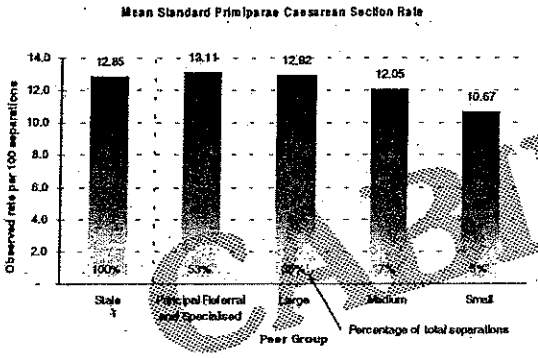
♦ Standard Primiparae - Caesarean Section Rate

This measures the number of women having their first baby who underwent a caesarean section.



Comments

The observed rates of caesarean sections were reasonably similar, varying from 10.7 per 100 separations for the Small peer group hospitals up to 13.1 per 100 separations for the Principal Referral and Specialised hospital group.

After risk-adjusting the data, the findings were as follows:

- There was no significant difference in the likelihood of a caesarean section occurring for any of the hospital peer groups.
- Patients admitted as private patients to public hospitals were over two and a half times more likely to have a caesarean section when compared to public patients.

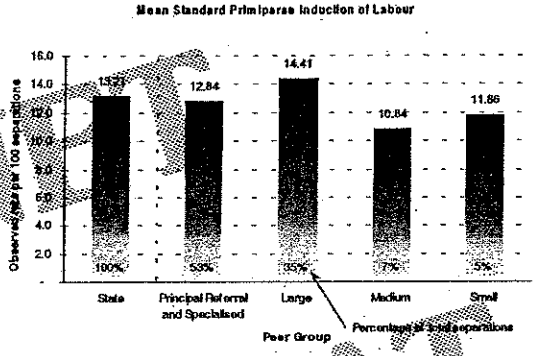
Queensland's caesarean section rate for all births was 6.8 percent higher than the national average.

Induction of Labour

Induction before the cervix is ready for labour may lead to a 'cascade' of interventions with high rates of induction failure, protracted and exhausting labours, a high caesarean rate and other complications[13].

♦ Standard Primiparae - Induction Rate

This measures the number of women having their first baby who underwent an induction of labour.



Comments

There was no obvious pattern in the spread of the observed rates of induction of labour across the hospital peer groups. Medium hospitals had the lowest rate of inductions (10.8 per 100 separations) while Large hospitals collectively had the highest rate of inductions (14.4 per 100 separations).

After risk-adjusting the data, the findings were as follows:

- There was no significant variation in the probability of induced births occurring for standard primiparae for any of the hospital peer groups.
- Women admitted as private patients to public hospitals were more than two and a quarter times as likely to have an induction of labour as were women under public care.

Queensland's induction rate for all births was 3.8 percent lower than the national average.

♦ Standard Primiparae - 3rd or 4th Degree Perineal Tears

This indicates the number of women having their first baby who sustained a third or fourth degree perineal tear during a vaginal birth.

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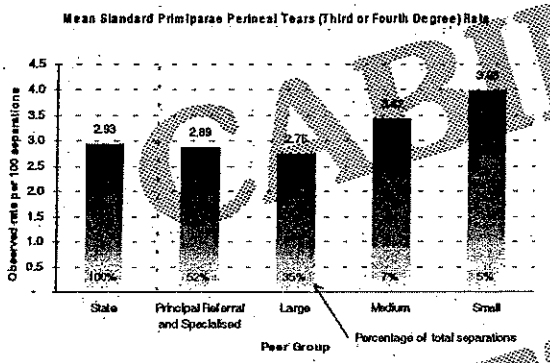
These are tears of the perineum extending to the anal sphincter often as a result of an episiotomy. There is no evidence to support claims that liberal use of episiotomy reduces the risk of severe perineal trauma, improves perineal healing, prevents foetal trauma or reduces the risk of urinary stress incontinence after delivery[14].



Comments

The observed rates of third or fourth degree perineal tears only showed minor variation across the hospital peer groups, ranging from 2.8 per 100 separations for the Large hospitals to 4.0 per 100 separations for the Small hospital group.

After risk-adjusting the data, the findings were as follows:

- There was no significant difference in the likelihood of a third or fourth degree perineal tear occurring between any of the hospital peer groups.
- Women under private care in public hospitals were two and a quarter times more likely to have a third or fourth degree perineal tear than women who were public patients.

The Queensland rate for perineal tears was marginally less than the national rate.

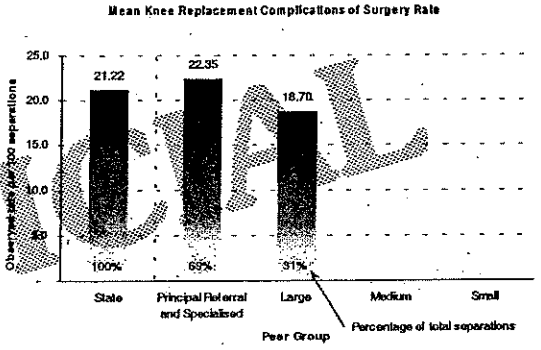
Orthopaedic Conditions

Knee Replacement

Knee replacement procedures are performed in an attempt to alleviate the pain and decreased mobility associated with disease of the knee joint. The majority of people receiving this type of intervention are middle-aged to elderly people with chronic arthritic conditions that can no longer be managed by other treatments. The increase in the ageing population is having a large effect on the rate of knee replacement procedures being required and undertaken.

♦ Knee Replacement - Complications of Surgery Rate

This measures the number of patients admitted for a knee replacement where a complication of the surgery resulted.



Comments

The observed rates of complications following surgery for knee replacement were 22.3 per 100 separations for Principal Referral and Specialised hospitals and 18.7 per 100 separations for Large peer group hospitals. This procedure was not conducted in the Medium and Small peer group hospitals.

After risk-adjusting the data, the findings were as follows:

- There was no significant difference found in the likelihood of complications of surgery between the peer groups of Large hospitals and

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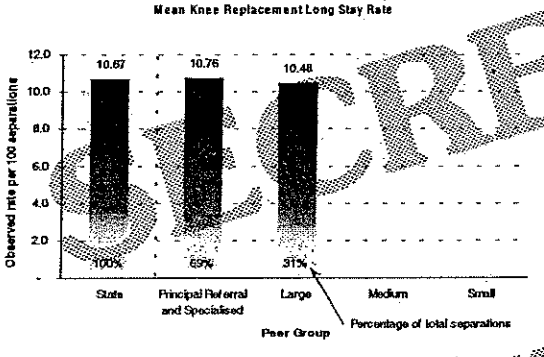
Principal Referral and Specialised hospitals.

- Patients admitted as private patients to public hospitals were less than half as likely to have a complication of surgery than were public patients.

Queensland's complications of surgery rate for knee replacement was around 15 percent lower than the national average (Australia excluding Queensland).

♦ Knee Replacement - Long Stay Rate

This measures the rate of patients who remained in hospital for at least 14 days (long stay) following an admission for knee replacement surgery.



Comments

There was only a marginal difference in the observed rates of long stays for Principal Referral and Specialised hospitals (10.8 per 100 separations) and Large hospitals (10.5 per 100 separations). This procedure was not conducted in the Medium and Small peer group hospitals.

After risk-adjusting the data, the findings were as follows:

- There was very little difference in the likelihood of a long stay occurring at either Principal Referral and Specialised hospitals or Large hospitals.
- Patients admitted as private patients to public hospitals were 41 percent less likely to have a long stay when compared to public patients.

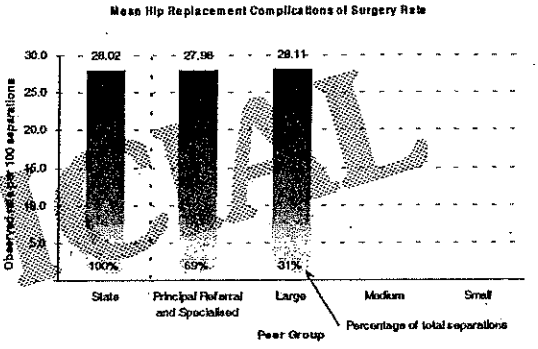
Queensland's average length of stay for knee replacement was 8.2 percent lower than the national average (Australia excluding Queensland).

Hip Replacement

These procedures are primarily performed to relieve pain, stiffness and deformity caused by disease of the hip joint such as osteoarthritis. Disease of the hip joint is age-related and as people are living longer the incidence is increasing. Hip replacement procedures are very cost-effective but outcomes have been seen to vary, particularly in relation to technical success, patient satisfaction and morbidity.

♦ Hip Replacement - Complications of Surgery Rate

This measures the number of patients admitted for a hip replacement where a complication of the surgery resulted.



Comments

There was very little difference in the observed rates of complications of surgery for Principal Referral and Specialised hospitals (28.0 per 100 separations) and Large hospitals (28.1 per 100 separations). This procedure was not conducted in the Medium and Small peer group hospitals.

After risk-adjusting the data, the findings were as follows:

- There was still very little variation in the likelihood of complications of surgery between Large hospitals and Principal Referral and Specialised hospitals.

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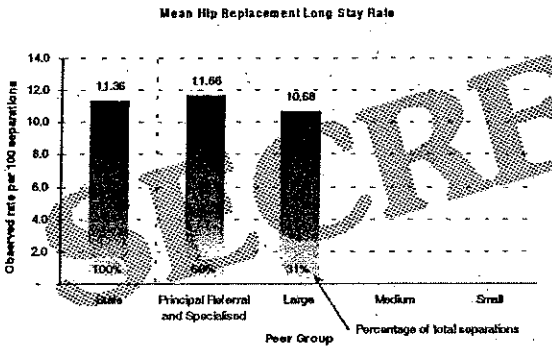
- Patients who were admitted as private patients in public hospitals were 45 percent less likely to have complications of surgery than those who were admitted as public patients.

Queensland's complications of surgery rate for hip replacement was almost 10 percent lower than the national average (Australia excluding Queensland).

♦ Hip Replacement - Long Stay Rate

This indicator measures the rate of patients who remained in hospital for 15 days or longer (long stay) following an admission for hip replacement surgery.



Comments

Principal Referral and Specialised hospitals had a slightly higher observed rate of long stays for hip replacement surgery in comparison to the peer group of Large hospitals (11.7 and 10.7 per 100 separations respectively). The Medium and Small hospitals do not perform this procedure.

After risk-adjusting the data, the findings were as follows:

- There was no statistically significant difference in the chances of a long stay occurring for either Large Hospitals or Principal Referral and Specialised hospitals.
- Patients who were admitted as private patients in public hospitals were 47 percent less likely to have a long stay than those who were admitted as public patients.

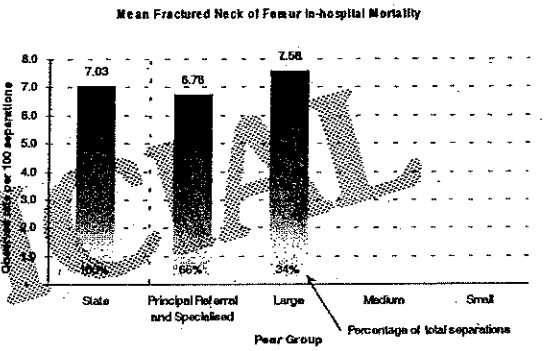
Queensland's average length of stay for hip replacement was 9.5 percent lower than the national average (Australia excluding Queensland).

Fractured Neck of Femur

Fractured neck of femur is a condition that commonly affects the elderly population, and requires hospital admission. As the age of our population is increasing so will the number of admissions for fractured neck of femur. This condition is more common in women, with rates of approximately four women out of every 100 women over the age of 85[15]

♦ Fractured Neck of Femur - In-Hospital Mortality Rate

This indicator measures the rate of patients who have died in hospital following an admission for fractured neck of femur.



Comments

Separations from Large hospitals were slightly more likely to result in in-hospital mortality compared to Principal Referral and Specialised hospitals (7.6 and 6.8 per 100 separations respectively). This procedure was not conducted in the Medium and Small peer group hospitals.

After risk-adjusting the data, the findings were as follows:

- There was no statistically significant difference in the chance of in-hospital mortality occurring for either Large hospitals or Principal Referral and Specialised hospitals.

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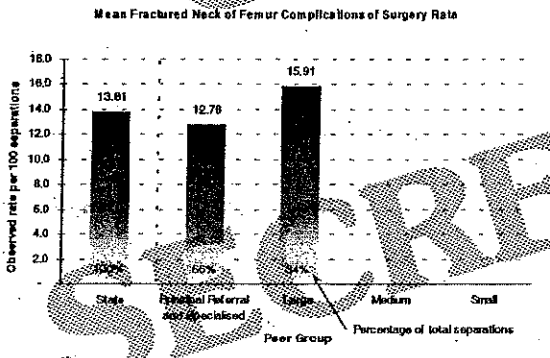
- Whether a patient was admitted as a public or private patient to a public hospital had no statistically significant impact on in-hospital mortality.

Queensland's in-hospital mortality for fractured neck of femur was marginally lower than the national average (Australia excluding Queensland).

♦ Fractured Neck of Femur - Complications of Surgery Rate

This measures the number of patients admitted for a fractured neck of femur where a complication of surgery resulted.



Comments

The observed rate of complications following surgery for fractured neck of femur was somewhat higher for the Large hospitals peer group compared to the Principal Referral and Specialised hospitals (15.9 and 12.8 per 100 separations respectively.) The Medium and Small hospitals do not perform this procedure.

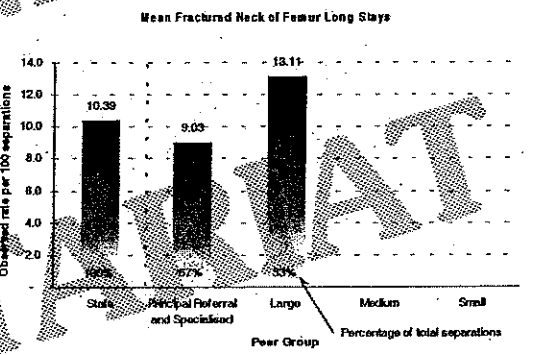
After risk-adjusting the data, the findings were as follows:

- There was no statistically significant difference in the probability of complications of surgery for either Large hospitals or Principal Referral and Specialised hospitals.
- Patients admitted as private patients to public hospitals were just over a third as likely as public patients to have complications of surgery, although the result is only of borderline statistical significance.

Queensland's complications of surgery rate for fractured neck of femur is 32.9 percent lower than the national average (Australia excluding Queensland).

♦ Fractured Neck of Femur - Long Stay Rate

This indicator measures the rate of patients who remained in hospital for 47 days or longer (long stay) following an admission for fractured neck of femur surgery.



Comments

The observed rates of long stays following surgery for fractured neck of femur were 9.0 per 100 separations for Principal Referral and Specialised hospitals and 13.1 per 100 separations for Large peer group hospitals. This procedure was not conducted in the Medium and Small peer group hospitals.

After risk-adjusting the data, the findings were as follows:

- Large hospitals were found to have a significantly higher likelihood of a long stay occurring (almost 50 percent higher) compared to Principal Referral and Specialised hospitals.
- Whether a patient was admitted as a public or private patient to a public hospital made very little difference to their chances of having a long stay.

Queensland's average length of stay for fractured neck of femur is equal to the national average (Australia excluding Queensland).

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Improvement Activities

Falls Prevention

Since falls and fractures are preventable, so fractured neck of femurs can be prevented. Falls prevention strategies therefore have the potential to reduce the incidence of this condition. The *Falls Prevention Best Practice Guidelines for Public Hospitals and State Government Residential Aged Care Facilities* aim to prevent falls and fall-related injuries in people aged 60 and over, in Queensland public hospitals and State Government Residential Aged Care Facilities. They have been developed and distributed within Queensland Health to standardise practices to prevent falls.

These guidelines assist clinicians by:

- identifying patients at risk of falls
- providing strategies to prevent patients falling and
- providing ways to reduce the injuries caused by falls.

A learning package educates staff about falls prevention and management.

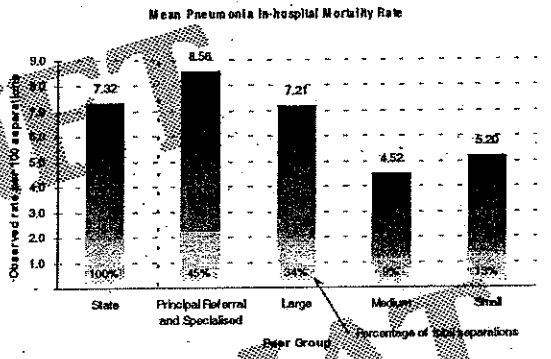
Respiratory conditions

Pneumonia

Pneumonia is a major cause of morbidity and mortality. It is a potentially preventable disease and is mainly due to bacterial infection. For the period 1999-2000 there were over 44,000 separations for influenza and pneumonia from Australian public hospitals. Over 8,000 of these were in Queensland[16]. For the purpose of this report, community-acquired pneumonia as the principal cause for admission to hospital has been examined.

♦ Pneumonia - In-hospital Mortality Rate

This indicator measures the rate of patients who have died in hospital within 30 days of an admission for pneumonia.



Comments

The observed rates of in-hospital mortality varied from 4.5 per 100 separations for the Medium hospitals peer group up to 8.6 per 100 separations for Principal Referral and Specialised hospitals.

After risk-adjusting the data, the findings were as follows:

- Although the observed in-hospital mortality rate was highest for Principal Referral and Specialised hospitals, the Large, Medium and Small hospital groups showed no significant differences in their likelihood of in-hospital mortality compared with this group.
- Patients admitted as private patients to public hospitals had a 46 percent higher chance of in-hospital mortality compared to public patients, although the statistical significance of this result was only marginal.

Queensland's in-hospital mortality for pneumonia is very similar to the national average (Australia excluding Queensland).

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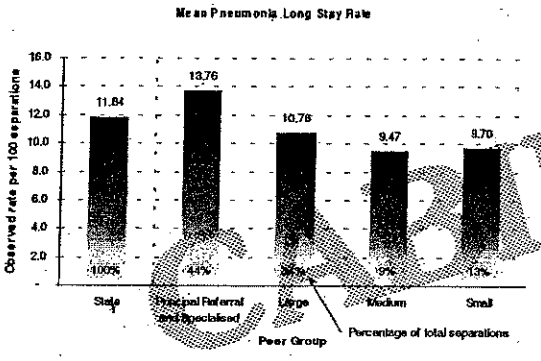
♦ Pneumonia - Long Stay Rate

This indicator measures the rate of patients who remained in hospital between 12-30 days (long stay) following an admission for pneumonia.



Comments

A similar pattern was found as for in-hospital mortality due to pneumonia, with Medium hospitals having the lowest observed rate of long stays (9.5 per 100 separations), while Principal Referral and Specialised hospitals had the highest rate at 13.8 per 100 separations.

After risk-adjusting the data, the findings were as follows:

- Medium Hospitals were found to have a 30 percent lower likelihood of long stays compared to Principal Referral and Specialised hospitals. However, neither the Large or Small hospital peer groups differed significantly from the Principal Referral and Specialised hospitals in their probability of a long stay occurring for pneumonia.
- Whether a patient was admitted as a public or private patient to a public hospital had no statistically significant impact on their chance of having a long stay.

Queensland's average length of stay for pneumonia was 7.3 percent lower than the national average (Australia excluding Queensland).

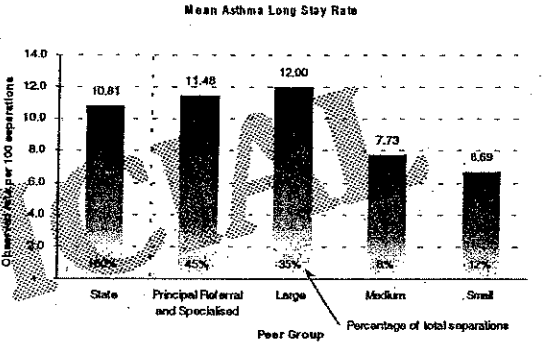
Asthma

Asthma is a chronic disease of the airways that can cause obstruction of the airways in response to various stimuli. It mainly affects young people. The symptoms range from mild to severe but are reversible if managed appropriately.

Asthma appears in the top ten causes of disease burden in Australia. The prevalence of asthma in Australia is almost four times higher than in other similar countries[17]. The cost of asthma to the community has been estimated to be around $700m per year[18].

♦ Asthma - Long Stay Rate

This indicator measures the rate of patients who remained in hospital for 7-30 days (long stay) following an admission for asthma.



Comments

The observed rates of long stays for asthma were similar for Principal Referral and Specialised hospitals and Large hospitals (11.5 and 12.0 per 100 separations respectively). However, the long stay rates were considerably lower for the peer groups of Medium hospitals (7.7 per 100 separations) and Small hospitals (6.7 per 100 separations).

After risk-adjusting the data, the findings were as follows:

- Medium and Small hospitals were both found to have significantly lower likelihoods of long stays occurring (53 percent and 58 percent lower

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respectively) compared to Principal Referral and Specialised hospitals. However, there was very little difference in the probability of a long stay at Large hospitals in relation to Principal Referral and Specialised hospitals.

- Whether a patient was admitted as a public or a private patient to a public hospital had a negligible impact on their chances of having a long stay.

Queensland's average length of stay for asthma was 13.1 percent lower than the national average (Australia excluding Queensland).

General Surgery

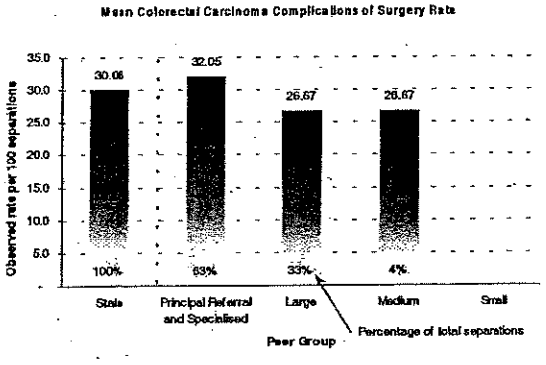
Colorectal Carcinoma

Almost 85 percent of colorectal carcinoma occurs in people over the age of 55. It is newly detected in over 11,000 people per year and is the second most common cancer in both men and women[19].

Surgery is the main and most effective treatment, with many patients requiring surgery six months post diagnosis[20].

♦ Colorectal Carcinoma - Complications of Surgery Rate

This indicator identifies the number of complications resulting from surgery for colorectal carcinoma.



Comments

Both the Large and Medium hospital peer groups had an observed rate of complications of surgery for colorectal cancer of 26.7 per 100 separations, which was considerably lower than the rate of 32.0 per 100 separations recorded by Principal Referral and Specialised hospitals.

No Small hospitals performed these procedures.

After risk-adjusting the data, the findings were as follows:

- Large Hospitals were found to have a significantly lower likelihood of complications than Principal Referral and Specialised hospitals (29 percent lower). Although the observed rate for Medium hospitals was the same as that for Large hospitals, the difference in the probability of complications of surgery occurring at either Medium hospitals or Principal Referral and Specialised hospitals was not significant.
- Whether a patient was admitted as a public or a private patient to a public hospital had no statistically significant impact on their outcome for complications of surgery.

Queensland's complications of surgery rate for colorectal carcinoma was 14 percent lower than the national average (Australia excluding Queensland).

♦ Colorectal Carcinoma - Long Stay Rate

This indicates the number of patients who remained in hospital for 19 days or longer (long stay) following an admission for colorectal carcinoma surgery.

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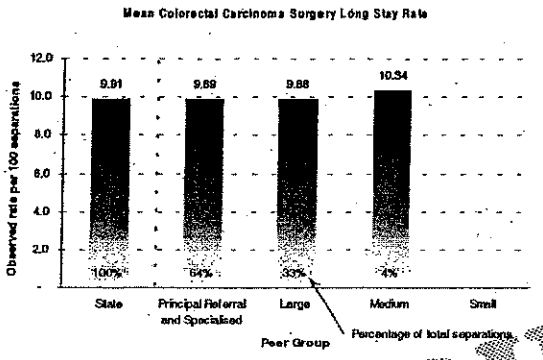


Comments

The observed rates of long stays were similar for each of the hospital peer groups, ranging from 9.9 per 100 separations for both Principal Referral and Specialised hospitals and Large hospitals, to 10.3 long stays per 100 separations for Medium hospitals.

No Small hospitals performed these procedures.

After risk-adjusting the data, the findings were as follows:

- There were no significant differences between the Principal Referral and Specialised hospitals and the other hospital peer groups.
- Whether a patient was admitted as a public or a private patient to a public hospital had no statistically significant impact on their outcome for long stays.

Queensland's average length of stay for colorectal carcinoma was 11.4 percent lower than the national average (Australia excluding Queensland).

Diabetic Foot

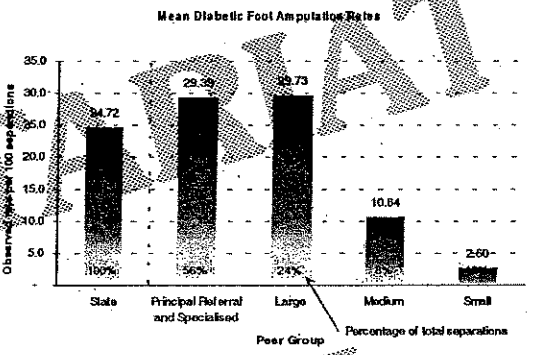
Diabetes results from increased blood glucose levels due to an inadequate production of the glucose metabolising hormone insulin, and/or resistance to its action. It is a chronic disease that is often associated with heart disease, stroke, blindness, renal disease and lower limb amputations.

In Australia, diabetes is the seventh leading cause of death. It affects approximately four percent of the population over 40 years of age[21].

The development of foot or leg ulcers in people with diabetes is associated with nerve damage, lack of blood supply or both. Serious infection originating from a diabetic ulcer is the most common reason for amputation.

♦ Diabetic Foot - Amputation Rates

This indicator measures the number of patients who were admitted for diabetic foot, where an amputation of the foot or leg occurred.



Comments

The observed rates of amputations for diabetic foot were similar for Principal Referral and Specialised hospitals and Large hospitals (29.4 and 29.7 per 100 separations respectively). In contrast, the amputation rates were much lower for the peer groups of Medium hospitals (10.6 per 100 separations) and Small hospitals (2.6 per 100 separations).

After risk-adjusting the data, the findings were as follows:

- Medium and Small hospitals were both found to have significantly lower likelihoods of amputation when compared against Principal Referral and Specialised hospitals. The probability of an amputation occurring at Medium hospitals was less than a third of that for Principal Referral and Specialised hospitals, and the likelihood of an amputation at Small Hospitals was 95 percent lower. However, there was very little

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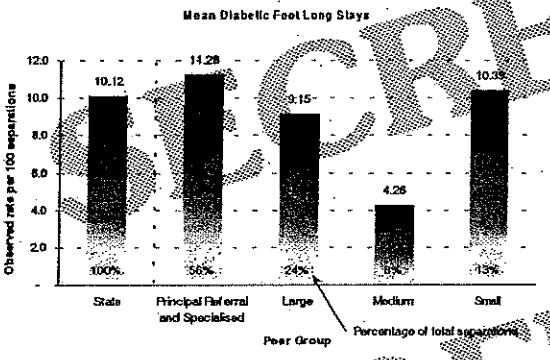
difference in the chances of an amputation being performed at Large hospitals in comparison to Principal Referral and Specialised hospitals.

- Whether a patient was admitted as a public or private patient to a public hospital had no statistically significant impact on their chance of having an amputation.

Reliable national comparative data were not available for diabetic foot amputation rates.

♦ Diabetic Foot - Long Stay Rate

This indicator measures the rate of patients who remained in hospital for 30 days or longer (long stay) following an admission for diabetic foot.



Comments

There was no obvious pattern in the spread of the observed long stay rates across the hospital peer groups. Medium hospitals had the lowest rate of long stays (4.3 per 100 separations) while Principal Referral and Specialised hospitals had the highest rate of long stays (11.3 per 100 separations).

After risk-adjusting the data, the findings were as follows:

- There appeared to be a considerable amount of variation in the observed long stay rates between the hospital peer groups. However, because the number of separations was relatively small, these differences did not reach statistical significance.
- Whether a patient was admitted as a public or a private patient to a public hospital had no statistically significant effect on their chance of having a long stay.

Reliable national comparative data were not available for diabetic foot average length of stay.

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Improvement Activities State Highlights

Queensland Health is undertaking a number of activities and programs aimed at specifically addressing the need for improvement in clinical care and the reduction of variation in clinical practice across the State.
Some of these activities are outlined below.

The Primary Clinical Care Manual

This manual is a major clinical resource for health professionals working in rural and remote locations and is the result of a partnership between Queensland Health and the Royal Flying Doctor Service (Queensland Section). It was first published in 1998. After being reviewed the second edition was published in June 2001.

The Manual provides clear and concise clinical care guidelines and health management protocols, for indigenous health workers, registered nurses and medical officers working in rural and remote Queensland.

The interventions in the Manual are based on the best available evidence and information on best practice from experienced health professionals working in rural and isolated practice areas and sexual health programs throughout Queensland.

The main beneficiaries will be the many rural and remote/isolated area communities and patients who will have greatly improved access to quality primary health care, delivered by nurses using evidence-based protocols in a supportive environment.

Transition Programs for nurses

To assist nurses to develop the knowledge and skills necessary to practise competently and safely in a new clinical environment, Queensland Health has developed and continues to develop educational programs for a range of clinical areas. These programs comprise theoretical and practical components, include formal assessments and are being articulated into tertiary level courses. Programs will be available in the following areas:

- Aged care
- Emergency
- High dependency
- Intensive care (adult and paediatric)
- Medicine/Surgery
- Neonatal
- Perioperative
- Oncology
- Paediatric and Child Health
- Perioperative
- Renal

Clinical Pathways

Evidence-based clinical pathways (see page 54) are being developed across the State to improve the quality and efficiency of clinical care.

Cairns Base Hospital – Building on significant work already undertaken at Cairns Base Hospital in orthopaedics, clinical pathways are being implemented in general surgery and day surgery.

Ipswich Hospital – As part of a strategy to optimise the efficiency of the day surgery service, a standardised day surgery pathway is to be introduced.

Queen Elizabeth II Jubilee Hospital – As part of a reorganisation of orthopaedic surgery services, clinical pathways will be introduced for hip and knee replacement surgery and a variety of procedures undertaken at day surgery such as arthroscopy.

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Infection Control

Queensland Health is conducting a program aimed at improving infection control within hospitals. The *Queensland Health Infection Control Guidelines 2001* have been developed and a *Public Health Services Infection Control* website has been established at:
http://www.health.qld.gov.au/infectioncontrol/

Other activities under this program include:

- the introduction of a standardised electronic tracking and management information system for sterilised instrument packs;
- examination of reprocessing of high cost single-use medical devices;
- the development of a training package for reprocessing of flexible endoscopic equipment and accessories;
- improved prevention and management of pressure ulcers and care of wounds;
- exploration of models of infection control service delivery.

Collectively, 24 Queensland hospitals form the *Centre for Healthcare Related Infection Surveillance and Prevention* network.

Improved use of Medicines

The aim of the program is to improve the quality use of medicines, with a focus on the prevention of adverse drug events for patients. Strategies will include:

- employing pharmacists in the pre-admission clinic of hospitals to help patients to have better understanding of medicine use before coming into hospital for surgery;
- developing a discharge medication record which lists the medicines a patient is to take when they leave hospital. A copy can be sent to the local general practitioner and Community Pharmacy Program;
- improving medicine education for patients and other health professionals;
- developing methods of communication between the hospital and community;
- upgrading pharmacy computer systems currently being used in Queensland Health hospitals, with the aim of providing linked patient medicines information across all hospitals.

The project is developing improved access, appropriateness, safety and effectiveness of medication use within Queensland Health and is focused on consumer involvement to meet their needs.

Integrated Risk Management

In Queensland Health, risks are defined as the chance of anything happening that would have a negative impact upon our ability to provide high quality health services.

Good risk management will ensure that the management of risk is based on informed decision-making, realistic and measurable objectives and the analysis of outcomes.

Queensland Health is taking a systematic approach to the management of risk by developing an *Integrated Risk Management Framework* and education for Queensland Health staff in risk management is currently underway.

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Patient Satisfaction

Patient-centred care is a priority for Queensland Health and measuring the effectiveness of health care delivery also involves measuring patients' satisfaction with this care. Patients' assessments of their health and quality of life, and their satisfaction with the quality of health care services are as important as many clinical and efficiency measures.

There are regular comments and reviews of health care services appearing in the media. Patients are more knowledgable about health care today and are demanding more information about services and more evidence about the quality of these services.

Individual units and wards of hospitals have regularly undertaken patient satisfaction surveys through the use of both standard and specially developed questionnaires. However, patient satisfaction had not been measured across Queensland public hospitals at a state level. As a result, Queensland Health has been unable to make comparisons across its hospitals.

In order to measure patient perceptions of the care provided by the majority of public hospitals in Queensland, Queensland Health commissioned a Patient Satisfaction Survey in September and October 2001. There were 10,414 responses which represented a 44 percent response rate.

The questionnaire was designed to measure patient perceptions of a range of factors that contributed to their care. These include:

Access and Admission

- How long did you wait for admission?
- Did you receive, and how clear was any written information?
- What were the staff attitudes before admission?
- What were the staff attitudes at admission?
- How clear was the explanation of hospital routines?
- Were your needs and wants considered?
- How long did you wait for a bed after you arrived at hospital?

Complaints Management

- Did staff respond to your problems?
- Were staff willing to listen to your problems?

Discharge and Followup

- How convenient was the time of discharge?
- Did you receive information about how to look after your condition?
- Were post-discharge service arrangements adequate?

General Patient Information

- Were you treated with respect?
- Were staff members helpful?
- Were the nurses responsive to your needs?
- Were staff available for your needs?

Physical Environment

- Was the hospital clean?
- Was the food good?
- Was the environment restful?
- Did you have enough privacy in your room?
- Were the toilets and showers clean?

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Treatment and Related Information

- How well did the doctors explain your treatment?
- Did the staff communicate with each other?
- Did you receive help to relieve pain?
- Did you have the opportunity to ask questions?
- Was the purpose of medicines explained to you?
- Did you receive an explanation of side-effects?

The report *Patient Satisfaction in Queensland Health Acute Care Public Hospitals, State Summary Report* has been published and can be found on the Queensland Health Internet website. The address is:

http://www.health.qld.gov.au/quality/survey.html

The results of this statewide survey showed that overall, most patients (89 percent) were *satisfied* with their hospital stay, with 59 percent being *very satisfied.*

Four measures that received the highest commendation from patients were:

- cleanliness of rooms
- attitudes of staff spoken to before admission
- courtesy of nurses
- helpfulness of staff.

Areas requiring improvement include:

- discharge planning processes
- access and admission processes
- provision of clear treatment related information
- management of patient complaints.

Mental Health patients showed a lower level of overall satisfaction of around 72 percent, which is consistent with the findings of the "Consumer and Carer Satisfaction Survey" of Adult Mental Health Services, reported by the Victorian Department of Human Services in June, 2000.

Other findings suggest that patients from a non-English speaking background were more dissatisfied particularly in the areas of access and admission, the general patient and treatment information that they received, and in the management of their complaints.

Patients undergoing surgery perceived their care to be significantly better than both medical and maternity patients do. However, all three groups had a significantly higher overall satisfaction rate than was found for Mental Health patients.

Another finding was that private patients in public hospitals were more satisfied with the treatment and information they received as well as their discharge planning.

These findings indicate that the entire hospital experience, from admission, through aspects of the hospital stay, to discharge, impacts on a patient's perception of their hospital stay. Hence any effort to improve hospital services must be broad-based, targeting all areas of hospital services, rather than specific functional areas.

Areas of good performance

Principal Referral and Specialised Category: Patients were more satisfied with their care at The Prince Charles and Royal Women's Hospitals.

Large Hospital Category: Patients were more satisfied with their care at the Caboolture, Redland, Hervey Bay and Maryborough Hospitals.

Medium Hospital Category: Patients were more satisfied with their care at the Proserpine and Atherton Hospitals.

Small Hospital Category: Patients were more satisfied with their care at the Biloela, Wynnum, Bowen and Charleville Hospitals.

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Improvement Activities State Highlights

Review of Patient Election Form and Patient Charter Materials

Arising out of the need to ensure patients are informed of and understand their rights and responsibilities for their health care, Queensland Health undertook an extensive review of patient information materials. Following this review a new Patient Election Form and *'Your Choice'* pamphlet have been developed. Queensland Health has also revised the Patient Charter *'Making the Most of a Visit to Your Health Service'* according to language and readability guidelines. The revised Patient Election Form will:

- continue to allow patients to choose public or private treatment;
- enable patients to consent to the release of their admission, demographic and medical details to specific funding agencies.

The aim is to provide materials that are of value to, and accessible by patients and staff. An education package has been developed and will be available to all Queensland Health staff who use the materials.

Doctor-Patient Communication Workshops

Training is being provided to clinicians in the use of effective communication techniques that achieve positive clinician-patient interactions and greater patient cooperation. It is recognised that clear communication, healthy clinician-patient relationships and the involvement of patients as partners in care are important ethical and human rights issues and improve patient satisfaction.

Informed Consent

This activity aims to provide enough details for the patient to give a valid consent:

- through information at the appropriate level to allow for understanding;
- through effective processes which are practical enough to be used;

so that the patient has improved access to the information.

The program will provide medical staff with a variety of methods to assist them in the consenting process with their patients.

The consent forms developed will provide a structured interview process which will be of particular benefit to the medical staff who are involved in the consent process, particularly at the pre-admission stage.

Guidelines To Assist Clinicians Prepare Written Information For Patients

Clinicians need to provide valid, understandable and easily accessible information to give patients a voice in all their health care decisions.

Patients receive a large range of health and clinical information presented in a variety of qualities, language styles and currency. Queensland Health staff expressed the need for guidelines that would assist them in developing written consumer information. The staff of the Gold Coast Health Services District have established a set of guidelines and tools to assist health professionals prepare evidence-based patient information. These guidelines address the need to consider language, format and content in patient information to ensure relevance, appropriateness and a better understanding of the information. These tools will provide the foundation for an electronic package to assist clinicians throughout Queensland Health.

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Discharge Planning Workshops

Discharge planning has been identified as a need by public hospitals over a number of years. The need for improvements in this area was also identified through the state-wide satisfaction survey as documented earlier.

Major areas of concern for patients in regard to discharge planning have been the post-discharge arrangements made by the hospital eg. outpatient appointments and the lack of written information about how to look after their condition on their return home.

In response to these needs, Discharge Planning Workshops are being delivered to public hospitals across the State. The emphasis of these workshops is that hospital and community staff work together to identify ways they can improve discharge planning. As a result of these workshops, the types of initiatives that hospitals have committed to undertake include the following:

- to improve communication processes between the hospital and community services;
- commence planning for the patient's discharge needs early in the admission and involve relevant staff;
- improve patient education and the need for written materials and guidelines in regard to their condition and treatment, availability, eligibility and access to community services;
- encourage active participation of the patient, their family and general practitioner in the discharge planning process;
- provide better information and education to all health care staff about discharge planning and patient referral processes;
- explore better ways to ensure that general practitioners receive timely discharge information from the hospital;
- standardise practice in relation to discharge processes.

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Efficiency

To deliver good quality health services, Queensland Health needs to manage its financial and human resources efficiently. This becomes increasingly difficult in a changing environment where the demands for health care are growing in the face of continuing constraints on the capacity of governments to fund health care services.

Just as it is important to measure the results of clinical care using clinical indicators documented in a previous chapter, the ability to measure the technical efficiency of hospitals is essential for the efficient management of resources. Efficient use of resources is critical to a hospital's ability to provide the right amount of quality services.

Measures of technical efficiency are, therefore, an important component of a report on hospital performance. If an individual hospital's utilisation is consistently higher than comparable hospitals, capacity to increase service delivery is lower.

Indicators reported in this quadrant can be classified into two broad categories:

- **Activity of the service:** number of separations; length of stay and bed occupancy.
- **Cost of the service:** cost of catering; energy costs and cost per weighted separation.

The data used for this quadrant are from administrative, workforce and financial databases routinely used by Queensland Health.

Measures of Activity

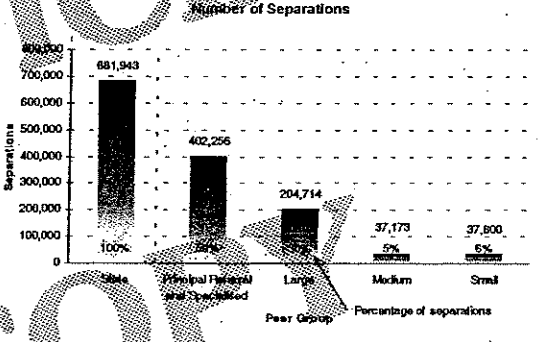
♦ Number of Separations

The number of separations reflects the total number of patients completing an episode of care.

Episode of Care

An episode of care is a phase of treatment for an admitted patient. It may correspond to a patient's entire hospital stay or the hospital stay may be divided into separate episodes of care of different types, such as acute care, palliative care and rehabilitation care (AIHW).

This measure does not eliminate differences due to the varying severity of illness of patients at each hospital. Hence, caution is required in making comparisons across hospital peer groups.



Comments

- Acute public hospital separations for Queensland represented 18.3 percent of the total number of separations nationally in 1999-00[22]. Queensland ranked third after New South Wales and Victoria for total public hospital separations.

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♦ Length of Stay

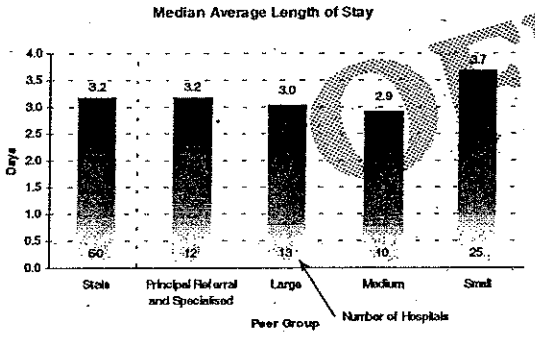
Length of Stay
Length of stay is the period of time that a patient stayed in hospital. The Average Length of Stay for all acute inpatient separations from hospital over a given period of time is calculated as

$$\frac{\text{Total Occupied Bed days}}{\text{Separations}}$$

The effective use of hospital beds can decrease the overall cost of providing health care. By ensuring that the best available treatment is delivered, the length of stay for each patient can be minimised.

This is achieved by reducing the complications of care such as infections which lead to longer stays in hospital and result in poorer health outcomes.

This indicator provides a measure of the efficient use of beds, where more efficient use (possibly indicated by a shorter length of stay) may enable increased access and use of beds.



Comments

- The graph shows that the state-wide length of stay across the 60 hospitals is 3.2 days.
- The Small hospital group had the highest average length of stay while the Medium hospital group had the lowest length of stay.

The state-wide length of stay is considerably shorter than the national average length of stay of 3.9 days for public acute hospitals. There was no change nationally from the previous year. Most of the reductions in average length of stay overall are a result of increasing proportions of patients undergoing day surgery, rather than reductions in length of stay for inpatient stays[23].

♦ Occupancy Rates (Bed day efficiency)

This measures the degree to which hospital beds are filled across hospitals.

It provides an indication of where there may be higher or lower levels of occupancy, and thereby identifies where there might be 'under or over-servicing' or inappropriate discharges. At occupancy rates above 85 percent, risks of a bed crisis become discernible. At a rate above 90 percent the hospital system may be subject to regular bed crises[24].

Occupied bed day
Every day the patient is admitted is an occupied bed day.

On the other hand, depressed occupancy rates may cause excess hospital capacity which in turn may affect the financial viability of the hospital system[25].

Beds available
This is the number of beds (occupied or not) that are set up and can be staffed and occupied by admitted patients at relatively short notice. It does not include surgical tables, recovery trolleys, delivery beds or cots for neonates.

Occupancy rates may be maintained at an optimal level by varying the combination of patient numbers and bed numbers. Queensland Health is continually reviewing its policies and strategies for bed management to optimise the bed occupancy across the State and meet the needs of the public.

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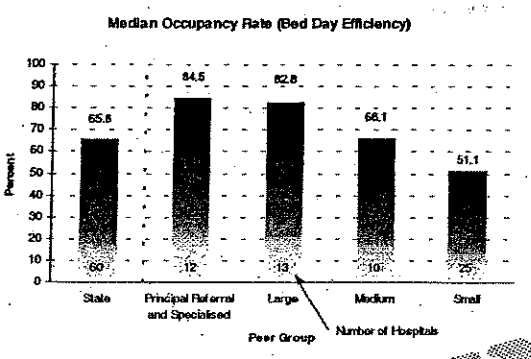


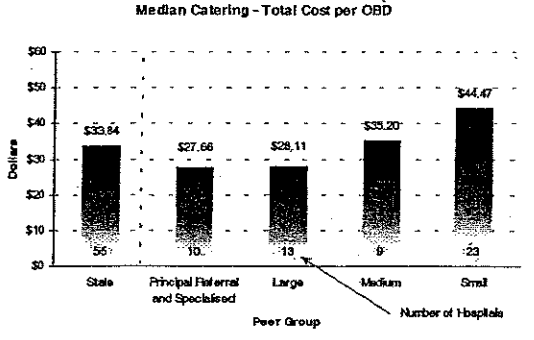
Comments

- This shows that the state-wide median occupancy rate across the 60 hospitals is 65.6 percent. The Principal Referral and Specialised hospital group had the highest rate while the Small hospital group had the lowest rate. This median is based on the middle point for all the hospitals and therefore is weighted more towards the rates for the Small hospitals.
- The state mean occupancy rate for the 60 hospitals is higher than the median at 79.1 percent. This figure takes into account the greater proportion of activity which occurs in the Principal Referral and Specialised and Large hospital groups which represent approximately 83 percent of the available hospital beds.

Measures of Cost

♦ Catering labour and non-labour costs

This provides a measure of the total cost of catering per occupied bed day, which may identify areas for improvement.



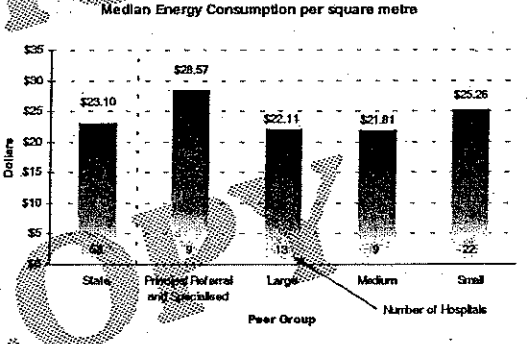
Comments

- This shows that, for the 55 hospitals for which data were available, the state-wide median catering cost per patient was $33.84.
- The Principal Referral and Specialised hospital group had the lowest cost of $27.66 while the Small hospital group had the highest cost of $44.47. This may be due to higher overhead costs relative to lower activity levels.
- The state mean for catering costs is lower than the median at $30.49. This takes into account the greater proportion of activity which occurs in the Principal Referral and Specialised and Large hospital groups (88% of occupied bed days) and the efficiencies in volume which those groups can achieve.

No national comparative data were available for this indicator.

♦ Energy expended per square metre

This provides a measure of energy efficiency and may identify areas of inefficient use.



Comments

- This shows that, for the 53 hospitals for which data were available, the state-wide median energy cost per square metre was $23.10.
- The Principal Referral and Specialised hospital group had the highest cost of $28.57 while the Medium hospital group had the lowest cost of $21.81.

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- The state mean for energy consumption costs is higher than the median at $26.63. This takes into account the greater proportion of activity which occurs in the Principal Referral and Specialised hospital group and greater energy use in these large and technically complex hospitals.

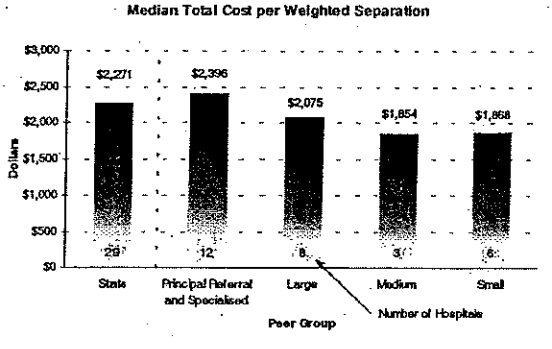
No national comparative data were available for this indicator.

♦ Total cost per weighted separation

Weighted Separation
This is a way of describing services by the amount of resource they use – the higher the weight the higher the level of resources used on average.

This is the average total treatment cost of each weighted separation. It includes overhead costs as well as labour and consumables used in direct patient care.

It provides an estimate of the average cost associated with acute admitted patients. Variations in costs between hospitals may indicate that efficiency gains in the more expensive hospitals may be possible.



Comments

- This shows that for the 28 hospitals for which data were available, the state-wide median cost per weighted separation was $2,271.

- The Principal Referral and Specialised hospital group had the highest cost of $2,396 while the Medium hospital group had the lowest cost of $1,868.
- The statewide mean cost per weighted separation is higher than the median at $2,348. This figure takes into account the greater proportion of activity which occurs in the Principal Referral and Specialised hospital group and the higher cost per weighted separation generated by this group compared with the other peer groups.

Queensland's total cost per weighted separation is approximately 91 percent of the national cost per weighted separation[26].

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System Integration and Change

Health care services are constantly challenged by change brought on by:

- a rapid growth in technology and an increasing reliance on new techniques for diagnosis and treatment;
- increasing complexity of health care;
- a rapidly ageing population;
- better informed health care consumers with higher expectations of health services;
- the possibility of shortages of appropriately trained and skilled professionals in areas such as nursing and some medical specialties.

Health Technology

Health technology covers a broad range of medical diagnostic and treatment technologies used in the delivery of health care eg. cardiac catheters used in the treatment of heart disease or bone densitometry imaging used in assessing bone mineral density.

Health care services need to position themselves appropriately to meet these challenges by ensuring that there are systems to allow and support change and that the current and future workforce has the necessary skills to manage change.

Many of these challenges have been documented in the *Smart State: Health 2020* documents that are available on the Queensland Health Internet site: http://www.health.qld.gov.au/Health2020/documents.htm

This quadrant report is the first attempt to examine how Queensland Health is managing system integration and change at a state-wide level. Indicators have been developed to measure a hospital's ability to:

- ensure the continuity of care of its patients;
- provide a health service based on skills and knowledge of its staff;
- provide strong infrastructure such as workforce, facilities and equipment so that the hospital can be innovative and flexible and respond to the changing community needs;
- provide uninterrupted, coordinated care across programs, practitioners and organisations, over time.

Indicators

To develop the indicators, two broad questions were asked.

1. How well placed are public hospitals to develop and implement new practices that meet future health care changes, demands and challenges? Indicators of this include:
   - **Accreditation Rates**
   - **Workforce Management**
   - **Use of Information**
   - **Telehealth Usage**
   - **Benchmarking**
2. To what extent do major public hospitals integrate their services with other acute and community-based services? Indicators of this include:
   - **Clinical Pathways**
   - **Facilitating Continuity of Care**

A survey instrument was forwarded to District Managers for completion in November 2001.

The response rate was 100 percent. (Indicators for this quadrant were applicable to 59 hospitals.) The results of this survey are detailed below.

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Accreditation

Accreditation is a formal process undertaken by Queensland Health where an authorising body assesses a health care facility regarding its compliance with a set of standards.

Queensland Health requires all public health facilities to develop management systems for both clinical and non-clinical services that comply with endorsed quality system standards[27]. The two main quality system standards recommended by Queensland Health for hospital accreditation are:

- Evaluation and Quality Improvement Program (EQuIP) with Australian Council on Health Care Standards (ACHS) and
- Australian Health and Community Services Standards (AHCSS) with the Quality Improvement Council (QIC).

This indicator identifies the number of hospitals accredited by an organisation recommended by Queensland Health at 30 March 2002.

Number of facilities	2002
Number of hospitals with full accreditation status on 30 March 2002	43
Accreditation with ACHS	34
Accreditation with QIC	9

11 Small hospitals and 4 Medium hospitals were partially accredited.

Workforce Management

Strong links have been identified between the quality of services and a skilled workforce. The shortage of appropriately trained and skilled staff is an issue that hasboth a current and far reaching impact on the delivery of quality health services. There is a growing recognition of the importance of recruitment, retention and staff development due to the scarcity of health professionals. Two issues have been identified as high priority workforce management issues for Queensland Health.

These are:

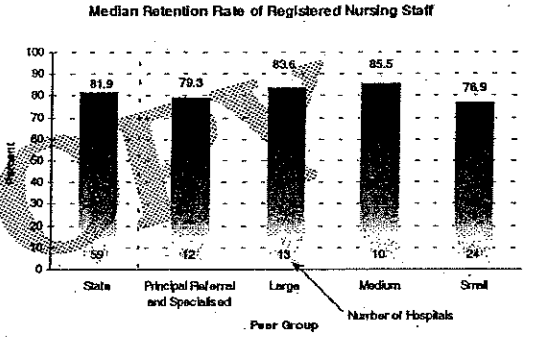
- Turnover of staff
- Age of staff.

These issues are of particular importance to the nursing workforce as it is the largest professional component in Queensland Health. The shortage of and difficulty in retaining nursing staff has been noted nationally and internationally. It is important for Queensland Health to retain skilled and experienced staff, rather than continually replace them with new graduates.

Despite the problem of excessive turnover of nursing staff, the average age of nursing staff is increasing and there is a growing risk that a large number will reach retirement age within a short period of time which will result in the bulk loss of expertise.

♦ Workforce - Retention rate of registered nursing staff

This indicator measures what percentage of registered nursing staff was retained after one year of service (excluding new graduates).
(Time period: Aug 2000–Aug 2001)



NOTE: These rates are derived from hospital level data, so represent nursing staff movements between hospitals and not necessarily nursing staff lost to Queensland Health.

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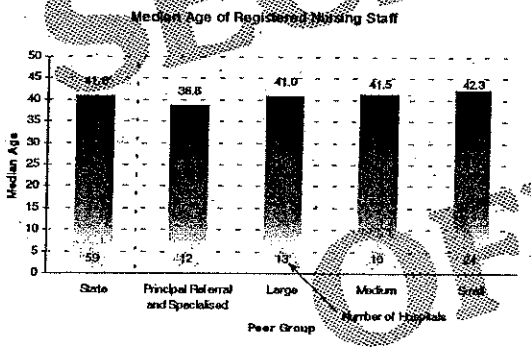
Comments

- The median retention rate for registered nursing staff after one year of service is similar for Large and Medium hospitals.
- Two Small hospitals (Chinchilla and Stanthorpe) and one Medium hospital (Warwick) retained more than 90 percent of their registered nursing staff following one year of service compared to a Principal Referral & Specialised hospital (Royal Children's Hospital) and a Large hospital (Mackay Base) where the highest retention rate were 84 percent and 88.1 percent respectively.

♦ Workforce - Median age of registered nursing staff

This indicator shows the median age of registered nursing staff (following one year of service) at August 2001.



Comments

- Principal Referral and Specialised hospitals have the lowest median age of registered nursing staff and differ from the State median age by more than two years.
- Large, Medium and Small hospitals have similar median ages of registered nursing staff.
- One Principal Referral and Specialised and 3 Small hospitals have a median age for registered nursing staff below 35.
- One Small hospital had the highest median age of registered nursing staff of 51 years.

Improvement Activities

Nursing Website

Queensland Health has developed a nursing website: www.thinknursing.com. This website:

- promotes and markets nursing to encourage school students to consider nursing as a future career;
- provides an information resource for qualified nurses about options for future career development and progression;
- hosts an Internet recruitment campaign to increase national and international exposure of vacant Queensland Health nursing positions with the aim of producing a larger pool of qualified candidates to fill nursing vacancies across the State.

Use of Information

Effective communication and care planning between acute care facilities, primary care providers and community health workers will reduce duplication and fragmentation of services. Effective communication also improves working relationships across services and organisations[28]. To assist this, there is a need for supportive infrastructure and systems.

Electronic technology can:

- assist timely communication
- improve the quality of patient records
- reduce the time it takes to receive diagnostic reports
- reduce the number of medication errors
- assist timely patient follow-up.

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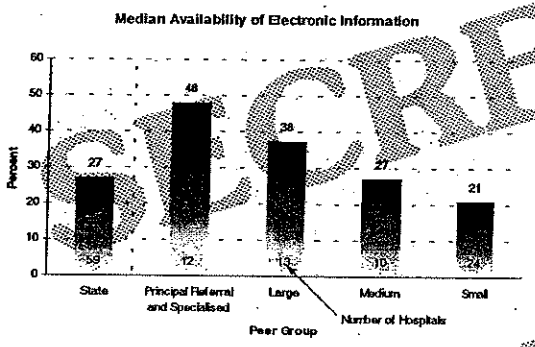
♦ Availability of electronic information

This indicator measures the availability of electronic information in the following areas:

- *patient registration and admission systems*
- *medical images (eg. x-rays, CT scans)*
- *reports of diagnostic imaging results*
- *diagnostic laboratory results*
- *transcribed reports*
- *pharmacy/drug profiles*
- *clinical pathways*
- *progress reports.*

Points were aggregated and reported as a percentage against the total possible score for this indicator.



Comments

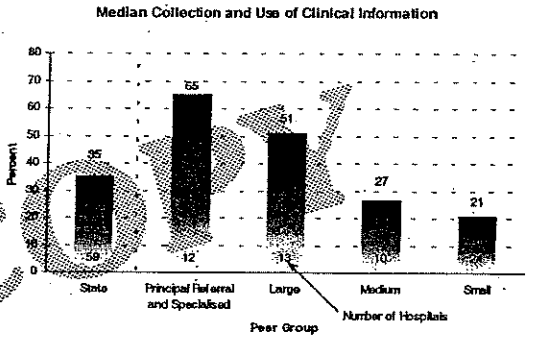
- The median for Principal Referral and Specialised hospitals of 48 percent is higher than the median for Large, Medium and Small hospitals and is considerably higher than the State median of 27 percent.
- One Principal Referral & Specialised (Townsville Hospital) and one Large hospital (Logan Hospital) scored considerably higher than the other hospitals across the States for the availability of electronic information.
- The graph shows a wide spread of measures for this indicator across the peer groups. This availability depends upon the ability of staff to access and use electronic information and this ability is higher in the more complex environment of the Principal Referral and Specialised hospital group. However, there is some scope to expand the access to, and skills in the use of electronic information systems in smaller hospitals.

♦ Collection and use of clinical information

This indicator measures the extent to which information is collected and used in the following areas:

- *Unplanned return to operating theatre*
- *Hospital acquired infection*
- *Adverse drug reaction*
- *Unplanned injury of organ during surgery*
- *Unplanned transfer to Intensive Care Unit*
- *Unplanned readmission*
- *In hospital mortality*
- *Hospital acquired injury*
- *Functional status of rehabilitation and elderly patients*
- *Complication rate*
- *Proportion of day patients*
- *Time between admission and surgery*
- *Unplanned presentation to emergency department within 48 hours.*

Points were aggregated and reported as a percentage against the total possible score for this indicator.



Comments

- Principal Referral and Specialised hospitals scored significantly higher with two hospitals scoring above 80 percent (Royal Brisbane Hospital and Cairns Base Hospital).

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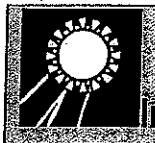
- The highest score for Large hospitals was Ipswich at 70 percent. The highest scoring Medium hospital was Proserpine and Tully scored highest for Small hospitals.
- The graph shows a wide spread of measures for this indicator across the peer groups. The collection and use of electronic information supports the more complex activities and environment of the Principal Referral and Specialised hospital group.



Improvement Activities

Clinical Information System

Queensland Health has embarked on a Clinical Information System (CIS) Project. The vision for this project is to provide a patient-centric Electronic Health Record across the continuum of care. Due to the size and scale of such a project, the implementation of the CIS will be incremental in nature. The first phase of the project will focus on the implementation of the following across Queensland Health acute hospitals:

- Electronic results reporting (radiology and pathology)
- Electronic ordering of radiology pathology and medications
- Drug administration
- Discharge summaries
- Rules based decision support
- Patient problem lists.

Subsequent phases will introduce more advanced clinical information systems such as clinical notes, care pathways and complex decision support and extend the implementation to non-acute facilities.

Telehealth Usage

Telehealth makes health care available to a much wider section of the population and has a particular benefit for remote communities by reducing the effects of professional isolation[29]. It also allows for links with centres of excellence so that good clinical practice can be shared. It can provide access to standard clinical guidelines, evidence-based practice, case conferencing and remote clinical supervision[30].

Telehealth is the use of technology (eg. Videoconferencing) that enables clinical care to be provided to a patient who is geographically separated from the treating clinician. It can be used by all types of health care practitioners.

Queensland's health system is highly decentralised with large population centres outside the south-east corner of the State. To address this challenge, there are 240 Queensland Health sites that have access to telehealth facilities.

Current usage rates for videoconferencing are approximately 2,000 per month. Using this technology, 200-300 patients per month currently receive health services within their own community, without the need to travel. Telehealth services include direct consultation with health care providers and the provision of second opinion and support services, to assist local health service providers with complex cases.

The telehealth network is also used extensively for staff educational activities across the State.

♦ Telehealth Usage

To measure the extent to which telehealth is used by public hospitals in this study, each hospital was asked if they provided or received telehealth in a range of clinical areas. One point was awarded for each telehealth clinical application provided or received. These points were aggregated and expressed as a percentage of the total possible score.

It was found that Telehealth usage is low across the State.

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- Three hospitals scored beween 40 and 50 percent in telehealth usage. Of these hospitals, 2 were Medium and 1 was a Large hospital. The remaining hospitals scored below 20 percent.
- Eleven hospitals reported no telehealth usage at all.

Improvement Activities

Telehealth

A Queensland Health project is working to establish a system which makes the use of telehealth easier so that it is a feasible and practical means for delivering health services. The program is also developing training modules for clinicians to improve their skills in its use. A range of technical and clinical training modules has been developed and trialed and these are being integrated into the mainstream training which is currently being offered by the Statewide Telehealth Services.

Clinical Pathways

Clinical Pathways are standard, evidence-based multi-disciplinary management plans, which identify an appropriate sequence of treatment, timeframes, milestones and expected outcomes for a particular patient group.

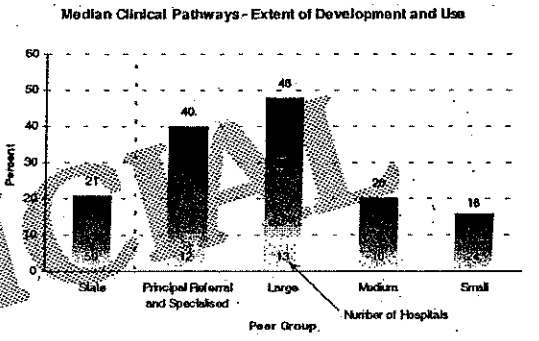
'Multi-disciplinary' refers to the involvement of all the different professions contributing to a patient's care, working together with the patient in the planning and delivery of that care.

Internationally, clinical pathways have been used successfully to improve quality of care by increasing team communication and patient satisfaction. Efficiency gains have also been achieved by decreasing lengths of stay.

♦ Clinical Pathways – extent of development and use.

This indicator measures the extent of clinical pathway development and use in the areas of:

- *Total Hip Replacement*
- *Total Knee Replacement*
- *Fractured Neck of Femur*
- *Colorectal Carcinoma*
- *Caesarean section*
- *Small for Gestational Age babies*
- *Perinatal Mortality*
- *Hysterectomy*
- *Asthma*
- *Pneumonia*
- *Chronic Obstructive Pulmonary Disease*
- *Stroke*
- *Heart Failure*
- *Heart Attack*



Comments

- Overall, Principal Referral and Specialised and Large hospitals scored higher in clinical pathway development and use than Medium and Small hospitals.
- Two Small hospitals show outstanding achievements in the use of clinical pathways though they were not necessarily developed locally. These are the St George and Yeppoon hospitals.
- The graph shows a wide spread of measures for this indicator across the peer groups. Clinical pathways are developed for clinical activities involving high volumes of patients

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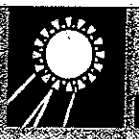
with particular conditions. The Principal Referral and Specialised hospital group therefore shows a higher score for their development and use than smaller hospitals. These smaller hospitals do not generally have the levels of activity to be able to develop clinical pathways though they can use pathways for patients along a continuum of care.

Use of Clinical Pathways in particular areas (Medical, Surgical, and Obstetrics and Gynaecology)

- Across the State, clinical pathways were shown to be developed and used at similar levels in selected medical and obstetric and gynaecological areas.
- Both Principal Referral and Specialised and Large hospitals show a higher level of development and use of clinical pathways in selected surgical areas as compared to the other areas. However, pathways were least developed in some surgical areas for Medium and Small hospitals.
- Medium hospitals scored highest in selected medical areas compared to the other areas and Small hospitals scored highest in selected obstetric and gynaecological areas.



Improvement Activities

Clinical Pathways

Clinical pathways have been in use in a variety of forms for many years. They involve the use of clinical evidence, the coordination of care, and continuously monitoring and responding to changing needs of patients and new treatment methods.

Queensland Health is conducting a program to ensure a consistent and coordinated approach to the development, implementation and evaluation of clinical pathways. It is aiming at minimising any duplication of effort in pathway development and reducing unnecessary variation in clinical practice.

The program has developed pathways for total hip replacement, total knee replacement and appendectomy, as well as a pathway for a number of day surgery procedures.

Managing Organisational Change

The development of new ways of delivering health care involves significant changes to work practices. Queensland Health has developed a series of guides to assist the management of the change processes. The guides provide a step by step process to ensure all the key elements of change, including evaluation of the impact of change, are addressed. The guides include:

- *Managing Organisational Change*
- *Tools and Processes for Implementing Organisational Change*
- *Supporting Employees through Organisational Change*
- *Changing Models of Care Framework*

They are available on the Queensland Health Internet web site at: http://www.health.qld.gov.au

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Benchmarking

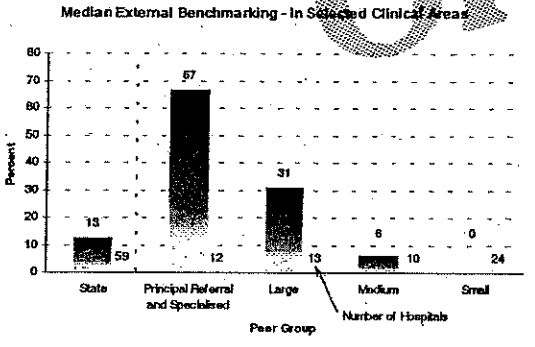
Benchmarking provides a 'yardstick' of performance and can be a powerful diagnostic tool for identifying where improvements are possible[31]. It is a method which enables the hospital to examine its care over time, and/or to compare its care with peers (comparable organisations) or with 'best practice'.

The formation of Hospital Benchmarking Roundtables and Consortia is also an indication of commitment from hospitals towards benchmarking. These forums provide an opportunity to look at results across hospitals, discuss what factors may account for any differences and take any steps necessary to improve care.

♦ External Benchmarking in selected areas

This indicator measures the extent to which the hospital engages in external benchmarking activities in selected clinical areas.

The score represents the number of clinical areas where there was benchmarking activity from 17 selected areas. This score is then expressed as a percentage of the total possible score.



Comments

- All Principal Referral and Specialist hospitals participated in some external benchmarking activities and half achieved a score of more than 66 percent.
- Half the Large Hospitals achieved a score of more than 30 percent.
- 2 Large, 5 Medium and 19 Small hospitals do not show any activity in external benchmarking activities.
- The Royal Brisbane, Gold Coast, Caboolture and Proserpine Hospitals all achieved the maximum possible score.
- The graph shows a wide spread of measures for this indicator across the peer groups. Benchmarking is well established for clinical activities involving high volumes of patients with particular conditions. The Principal Referral and Specialised hospital group therefore shows a higher score for external benchmarking than the smaller hospitals. These small hospitals do not have the levels of activity needed for benchmarking in the selected conditions.

Facilitating Continuity of Care

Continuity of Care

This refers to the provision of continuous health care of patients across the 'boundaries' between community and hospital care, between public and private care and across different service providers.

Continuity of care is expected to improve health outcomes because relevant clinical information is shared among all practitioners caring for the patient. It is shared across and between institutions and across and between care settings. Continuity of care is linked with improved health outcomes and shows improved preventative care as well as early identification of patient's psychosocial problems. Other benefits include fewer emergency hospitalisations, fewer hospitalisations in general; shorter lengths of stay and better patient understanding of and satisfaction with their care[32].

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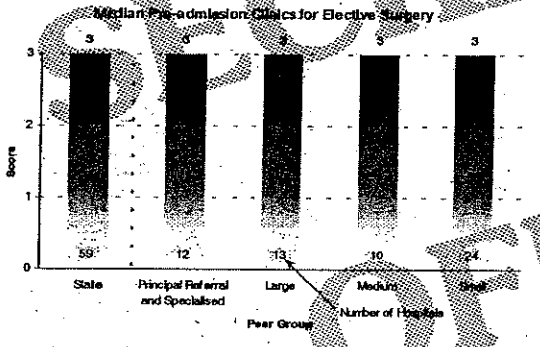
Continuity of care requires a range of processes, some of which include:

- admission processes for elective surgery
- provision of discharge summaries to general practitioners
- use of electronic discharge summaries
- shared care for maternity care
- referrals to cardiac rehabilitation.

♦ Admission process - use of pre-admission clinic for elective surgery

This indicator measures how well hospitals use pre-admission clinics for elective surgery.

The total possible score was 5 representing the availability of pre-admission clinics, the identification of patients requiring referral and how often appropriate patients were referred.



Comments

- The median for all peer groups was the same across the State. Most hospitals use a pre-admission clinic and processes for elective surgery. Only one hospital each in Principal Referral and Specialised, Medium and Small peer groups did not have a preadmission clinic for elective surgery as compared to Large hospitals, where all had a preadmission clinic for elective surgery.

Variation in performance was minimal. This indicator was not applicable to five Small hospitals which did not provide elective surgery.

♦ Provision of discharge summaries to general practitioners

This indicator measures how committed hospitals are to the provision of discharge summaries to local general practitioners. Diabetes related conditions were used as an example.

The scores measured the presence of and compliance with policies regarding the provision of discharge summaries to general practitioners.

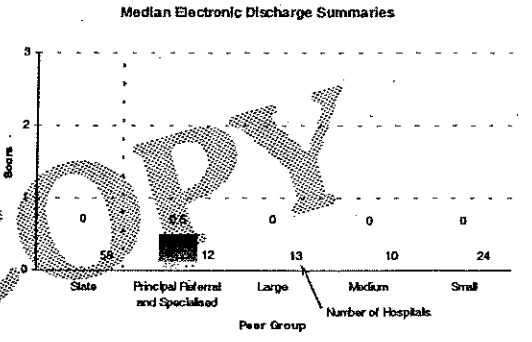
Across the State, more than half the hospitals provided discharge summaries. Of those that did not, 6 were Large Hospitals and 8 were Small Hospitals.

This indicator was not applicable to three Small hospitals.

♦ Provision of electronic discharge summaries to general practitioners.

This indicator measures how often hospitals provided electronic discharge summaries to local general practitioners within 24 hours.

The scores range from three representing 'nearly all the time' to 0 representing 'not provided'.



Comments

Three Principal Referral and Specialised hospitals provide electronic discharge summaries to local general practitioners within 24 hours of discharge. All other hospitals' scores were notably low

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indicating very limited implementation of electronic provision.

♦ Shared ante and post natal care

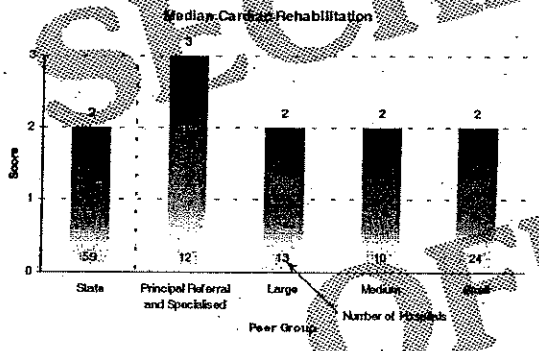
This indicator measures to what extent hospitals are committed to sharing antenatal and postnatal care with local general practitioners.

It was found that all Principal Referral and Specialist hospitals have a formal shared care arrangement in maternity care with their local general practitioners. Three Large, one Medium and seven Small hospitals do not have such arrangements.

This indicator is not applicable to hospitals which do not provide maternity services.

♦ Cardiac rehabilitation

This indicator measures how often hospitals refer eligible patients to comprehensive cardiac rehabilitation.



Comments

- The majority of hospitals with access to cardiac rehabilitation services referred most of their patients to these services.

Improvement Activities State Highlights

Service Integration Workshops: 'Bringing Partners Together'

Integration of services means all types and levels of service working together to provide good health care. It involves good communication with patients and each other and good admission and discharge processes that ensure care is planned and delivered in a coordinated way. It is approach that places the patient as the centre of the process.

This philosophy recognises that improving the health status of Queenslanders should be a partnership between Queensland Health, other health providers and the Queensland community.

Queensland Health and the Mater University of Queensland Centre for General Practice & Primary Health Care Integration are conducting integration workshops 'Bringing Partners Together'. These bring together Queensland Health, non-government and general practitioners to work towards improving the continuity of care. Through these workshops, Queensland Health is seeking practical ways to improve the process of service integration and overcome barriers that currently exist that prevent services working together.

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Glossary of Terms

Comorbidity	Diseases(s) that coexist(s) in a patient in addition to the principal condition that is the subject of treatment.
Complication	An adverse patient event related to medical intervention, especially an event that is an expected consequence of, or that sometimes occurs in relation to the patient's disease and its treatment.
Diagnosis	The process of categorising a patient or deciding the nature of the disease based on the patient's characteristics, symptoms, signs and signals.
Efficiency	The production of maximum output for any given set of inputs. Alternatively, using the minimum inputs for the required service.
Mean (Average)	A measure of central tendency which is commonly referred to as the average. It is calculated by the sum of the observations divided by the number of observations.
Median	A measure of central tendency. The simplest division of a set of measurements is in two parts – the lower and the upper half. The point on the scale that divides the group in this way is called the 'median'.
Morbidity	Any departure, subjective or objective, from a state of physiological or psychological well-being.
Mortality	Loss of life or number of deaths from a particular cause.
Observed rate	This is the rate at which the event that is being measured actually occurs during the study period.
Private patient	An eligible person who elects to be treated as a private patient and elects to be responsible for paying fees.
Public Patient	An eligible person who receives or elects to receive public hospital services free of charge.
Risk Adjustment	A statistical procedure that 'adjusts' for the association between one or more risk factors and a performance measure.

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Measured Quality

Hospital Report

Purpose

The purpose of this report is to provide data on a set of core indicators measuring the quality of services across major Queensland public hospitals.

This report represents the first stage of a process of measurement. The focus currently is on the largest single component of Queensland Health services – hospital inpatient services. It is planned to extend this focus over the next three years to cover most of Queensland health services such as outpatient, emergency and community services.

The report has been developed from an organisational development perspective, with a focus on continuous quality improvement and providing clinicians and management with the necessary data to act as change agents in improving services where required. Queensland Health must continue to develop and maintain quality health care services, which meet the identified needs of our community.

The major challenge for Queensland Health is to develop the flexibility and the willingness to be responsive to our changing environment, to changing technologies and to changing treatments. This means being able to view our services rationally and objectively, to make necessary adjustments, to take advantage of fresh opportunities and to deal with emerging problems in new and creative ways.

No single indicator or measure may adequately represent the quality of health care services. Queensland Health believes that there needs to be an ongoing systematic, comprehensive performance assessment of Queensland's public health care system.

A Hospital Balanced Scorecard

A balanced scorecard approach is used as the framework for evaluating the quality of hospital services. The balanced scorecard has been used in a number of international quality monitoring programs with varying definitions of the scorecard quadrants. Our balanced scorecard identifies performance indicators across four perspectives or quadrants.

The following quadrants are used for this report.

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Clinical Utilisation and Outcomes	Patient Satisfaction
Describes the clinical performance of hospitals and refers to such things as clinical efficiency and quality of care.	Examines patients' perceptions of their hospital experience including their perceptions of overall quality of care and outcomes of care.
Efficiency	**System Integration and Change**
Describes how hospitals utilise their resources. It refers to a hospital's cost of service, resource management and human resource allocations.	Describes a hospital's ability to adapt to a changing health care environment. More specifically, it examines how clinical information technologies, work processes and hospital-community relationships function within the hospital system.

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Methodology: Selecting Indicators

The report is based on objective, quantitative data that are consistent across the major Queensland public hospitals. The methodology focuses on statistical rather than anecdotal evidence of the quality of care provided by public hospitals.

Each quadrant contains indicators of the quality of services provided or of our capacity and readiness to provide quality services. They were selected following a two step process which consisted of (1) identifying quality indicators in use within Queensland Health and those being used by other health organisations and (2) expert review of these existing indicators for their relevance and feasibility.

The criteria broadly applied in final selection of indicators were Clinical Significance (burden, usefulness), Data Quality (definable, accessible, meaningful), and Amenability to Change. Where possible, data has been adjusted to account for potentially confounding factors such as different levels of risk in the patient population. The goal of these adjustments has been to provide the most meaningful benchmarking data possible.

An Overview of the Indicators Used

Clinical Utilisation and Outcomes

In the clinical utilisation and outcomes quadrant, the data used was standard and routinely reported to Queensland Health in either the Admitted Patient Data Collection or the Perinatal Data Collection. Data were analysed relating to fourteen sentinel clinical conditions (covering medical, surgical and obstetrics/gynaecology treatment). The principal outcome indicators that were used for most conditions/procedures were in-hospital mortality and long stay rates. Other outcomes that were used for

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specific conditions or procedures included complications from surgery and discharge to a nursing home.

Logistic regression is used on the data in the clinical utilisation and outcomes quadrant to adjust for possible differences between hospitals (in most cases adjustment is for the age, sex and comorbidities of patients). It is important to realise that risk-adjustment can only reduce, but not eliminate, the effects of casemix differences. The ability to calculate confidence intervals for the resulting values is due to the availability of individual patient record data for this quadrant. The calculation of confidence intervals provides an assessment of the statistical precision of the estimate. The narrower the confidence interval, the more precise the estimate.

The time frame to perform the initial analysis in the clinical utilisation and outcomes quadrant meant that upon commencement the most recent data available was from the fiscal year 1999/2000.

Patient Satisfaction

For the patient satisfaction quadrant, the data source was a specially commissioned patient satisfaction survey sent to a stratified sample of patients in all reported hospitals. For larger hospitals, the stratified sample enabled the separate assessment of medical, surgical and maternity patients. Performance measures were analysed from six elements of patient care, ranging across the spectrum from admission to discharge.

Weighting of patient characteristics to the hospital population is used on the data in the patient satisfaction quadrant and is an acceptable method used to adjust for possible confounding factors. Adjusting for differences in the types of patients seen at particular hospitals is important because certain groups of patients might systematically report lower levels of satisfaction than other groups. The ability to calculate confidence intervals is again due the availability of individual record data for this quadrant.

Efficiency

For the efficiency quadrant, the data sources were administrative, workforce and financial databases routinely used by Queensland Health. The performance measures relate to both efficiency outcomes such as the relative costs of providing services and to the known drivers of efficiency such as workforce management and the efficient use of facilities such as bed and patient management.

Due to summary data only being available for the efficiency quadrant, it is not possible to allow for casemix differences or to test for statistical significance on the result for the hospital.

Variations between hospital reported data captured from corporate office and data reported within some hospitals have been encountered within the efficiency quadrant. For the purposes of consistency in this report, the corporate office data has been presented. Specific issues have been documented internally to enable further investigation in an attempt to resolve the issues raised.

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System Integration and Change

For the system integration and change quadrant, the sources of data were a mixture of routinely collected information and a specifically designed survey questionnaire completed by all reported hospitals. The performance indicators used cover the following key elements:

- Continuity of care, for example, the processes used by hospitals to effectively link to other service providers;
- The systematic use of evidence-based practice, for example, use of benchmarking and use of clinical pathways; and,
- Planning and management of services (measures relating to the use of information, particularly electronic information).

As identified in the efficiency quadrant, due to summary data only being available for each hospital for the system integration and change quadrant, it is not possible to allow for casemix differences or to test for statistical significance on the result for the hospital.

For a detailed description of the methodology and precise description of the indicators developed and used, refer to the "Technical Supplement for the Measured Quality Hospital Report, July 2002".

The analyses of outcome indicators cannot be definitive. They are best viewed as a screening tool to stimulate interest in quality at individual hospitals, and to suggest useful avenues for further investigation. This approach is attractive as in-depth evaluations are costly and there is a need to identify where to target scarce resources for improving quality of care.

The process of measuring performance has identified the need to improve the measurement capacity itself. Some measures for possible inclusion are currently available while others require considerable developmental work.

Hospital Peer Groupings

The way in which hospitals are categorised has important implications for the validity of benchmarking data.

A number of factors affect the outcomes of services provided by hospitals. For instance, there is a significant body of evidence that shows a correlation between the number of certain procedures conducted by clinicians, their skill in performing the procedure and associated outcomes for patients. Similarly, the size of a hospital and its location (eg. provincial city, capital city) will affect the types of services that are provided by a hospital, the range of clinicians employed and their level of skill.

By categorising hospitals into groups that provide similar types and volumes of services, the influence of these factors on patient outcomes is reduced. This allows for the services provided across the hospitals in a group to be compared in terms of quality and outcomes in the fairest possible manner.

Peer groupings used for hospitals in this Report are provided in Table 1.

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Table 1: Hospital Name and Peer Group

Hospital Name	Peer Group			
	Principal Referral and Specialised	Large	Medium	Small
Atherton Hospital			✓	
Barcaldine Hospital				✓
Biloela Hospital				✓
Bundaberg Hospital		✓		
Cairns Base Hospital	✓			
Charleville Hospital				✓
Cherbourg Hospital				✓
Cunnamulla Hospital				✓
Emerald Hospital				✓
Gold Coast Hospital	✓			
Gympie Hospital			✓	
Ingham Hospital			✓	
Ipswich Hospital		✓		
Joyce Palmer Health Service				✓
Logan Hospital		✓		
Mackay Base Hospital		✓		
Maryborough Hospital		✓		
Mater Misericordiae Public Childrens Hospital	✓			
Miles Hospital				✓
Mount Isa Hospital		✓		
Princess Alexandra Hospital	✓			
Queen Elizabeth II Jubilee Hospital		✓		
Redland Hospital		✓		
Roma Hospital				✓
Royal Childrens Hospital	✓			
Stanthorpe Hospital				✓
Thursday Island Hospital				✓
Townsville General Hospital (inc. Kirwan)	✓			
Warwick Hospital			✓	
Wynnum Hospital				✓

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Interpreting the Indicators and Future Reports

Caution needs to be exercised when interpreting the indicators, as data were not available for trend analysis. Most indicators are based on data for one year only. Consequently, the findings are indicative of quality rather than a conclusive statement of actual performance. While future reports will include trend analysis and commentary on strengths and areas for improvement, imprecision and statistical variation are factors that will always need to be considered even with the availability of data for more than one year.

The data for this hospital are presented as a one-page summary of overall performance, followed by the detailed results for all the performance measures used.

Overall Performance

The overall performance of this hospital has been provided by calculating three summary measures in each of the four quadrants being considered. This was achieved by expressing a hospitals score in selected indicators as a standard score. A standard score is a measure which expresses a raw score (such as an indicator score) as a relative score by calculating how many standard deviations the raw score is above or below a mean score.

Each summary measure was developed by

- Comparing the hospitals performance for each of the contributing indicators in each summary measure with the average performance of hospitals in the peer group
- Converted to a standard score by comparing the relative differences calculated above with the standard deviation of each indicator for the peer group
- Averaging the standard score for each summary measure by peer group, and
- Evaluating the average of the standard score with a measure of adequate performance ie within one standard deviation of a neutral standard score of zero.

The summary measures for each hospital were assigned to a three star system using the following criteria:

☆	Lower: Aggregated Hospital performance is more than one standard deviation below the peer mean.
☆☆	Average: Aggregated Hospital performance is within one standard deviation of the peer mean.
☆☆☆	Higher: Aggregated Hospital performance is more than one standard deviation above the peer mean.

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Data for all Performance Measures

For each quadrant, the performance score for each of the indicators is presented alongside a score which is representative of the average performance of your peer hospitals. Because of the nature of the data being used, there are two different types of comparison scores. For the clinical utilisation and outcomes and patient satisfaction quadrants, a mean score is provided as the hospital score is based on the mean value for that hospital and is therefore comparable to state and peer group means. For the efficiency and system integration and change quadrants, a median score is used as it is less sensitive to outliers and is commonly used as the measure of centrality in situations where there are a small number of observations.

More detailed peer statistics are provided in Attachment 1, enabling comparisons of this hospital's result with peer group performance and the state (60 in-scope hospitals) result.

To enable broader comparisons to be made, Attachment 2 provides overall performance data for each of the peer groups and the state (60 in-scope hospitals) result.

Missing Hospital Values

Hospital values may be missing for either of the following reasons:

Non-Reportable (N/R) – Values are non-reportable if the sample size at a facility was too small and therefore the results were not reported in order to protect patient and provider confidentiality.

Not Applicable (N/A) – Values are considered not applicable and therefore not reported if the performance indicator was not applicable to the hospital, or there was no data available.

Where to from here

As discussed previously, the report has been developed from an organisational development perspective, with a focus on continuous quality improvement and providing clinicians and management with the necessary data to act as change agents in improving services where required.

It is anticipated that this report will be used as a tool to further develop and improve service provision in the hospital setting. Suggested approaches include:

- The dissemination of information contained in the report to the relevant clinical, administrative and support staff within your hospital
- Further investigation of indicators and outcomes to identify possible causes of variation at the local level
- Networking with similar hospitals within your peer group to identify best practice approaches.

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- Identification and development of procedures and policies that lead to improved performance.
- A review of procedures and policies developed to ascertain their effectiveness and implementation of modifications required

Your feedback

Your feedback is appreciated as to the usefulness of the data provided and suggestions on indicators, analysis and presentation. Please direct your comments to Dr Steve Buckland, General Manager – Health Services, Office of the Director-General, Queensland Health, GPO Box 48, Brisbane, Qld 4001.

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Summary of Potential Reasons for Variance for CAIRNS HOSPITAL

Indicators Flagged:

CI01.1 Acute myocardial infarction – In hospital mortality (99.9% confidence level)
CI01.2 Acute myocardial infarction – Long stay rate (99.9% confidence level)
CI02.1 Heart failure –In hospital mortality (90-99.9% confidence level)
CI03.1 Stroke – In hospital mortality (<90% confidence level-not statistically significant)
CI04.1 Pneumonia – In hospital mortality (90-99.9% confidence level)
CI08.3 Hip replacement – Complications of surgery rate (90-99.9% confidence level)
CI09.1 Hysterectomy – Long stay rate (90-99.9% confidence level)
CI09.5 Hysterectomy – Blood transfusion rate (99.9% confidence level at the state level; 90-99.9% confidence level at the peer level)
CI10.3 Standard Primiparae – 3 and 4 degree Perineal tear rate (90-99.9% confidence level)
CI11.1 Small for gestational age – Birth rate (90-99.9% confidence level)
CI13.2 Maternal postnatal (caesarean)- Long stay rate (99.9% confidence level)

Responses:

The potential reasons for variance given by the Cairns Health Service District are summarised below:

- **Acute myocardial infarction mortality**: it is an apparent statistical aberration for that year, with most patients having the myocardial infarction as a result of other health problems.

- **Acute myocardial infarction long stay rate**: some patients were awaiting transfer to another unit for cardiac investigations or surgery. Measured Quality indicators excluded transfers out of the hospital, however, it is possible that these patients were discharged from Cairns, prior to travelling to the other centre.

- **Heart failure and pneumonia mortality**: the hospital identified a high proportion of elderly patients with severe comorbidities and end stage cardiac disease. Although Measured Quality indicators risk adjust for comorbidities and age, on audit, all heart failure patients (in this cohort) had end stage disease not amenable to treatment.

- **Acute myocardial infarction and hysterectomy long stay rates**: some of the increased length of stay was related to comorbidities. Although Measured Quality indicators risk adjust for comorbidities, the response indicated that these were still considered to have had a significant impact on the recorded lengths of stay.

- **Stroke mortality**: for some patients, planned conservative / palliative treatment was given if the prognosis was poor.

- **Pneumonia mortality and hip replacement complications of surgery rates**: some of the variation occurred as a result of coding / grouping which promotes pneumonia as the primary diagnosis, though the patient may actually die from another condition. Coding /grouping also led to the inclusion of revision hip

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surgery as a complication, though it may occur several years later and be an appropriate intervention when the prosthesis requires replacement.

- **Hip replacement complications of surgery and Hysterectomy long stay / blood transfusion rates**: in relation to the selected surgical procedures, the variance related to clinical reasons such as infection, complications with bone cement, postoperative bleeding /transfusion and postoperative confusion. The number of patients experiencing each of these complications was very small (1-4 patients) and no clinical trend was identifiable on audit of the charts.

- **Third and fourth degree perineal tears**: 6 of 14 women experienced tears as a result of spontaneous extension of an episiotomy. The remaining 8 had various clinical reasons such as instrumental deliveries, precipitate deliveries, previous scarring and connective tissues disorders. The number of patients for each of the latter reasons was very small (1 – 2) and no trend was evident on audit of the charts.

- **Caesarean sections long stay rate** reasons for long stays included:
  - nearly half of the patients with a long stay rate lived in remote areas outside of Cairns with no treatment options close to home and so could not be discharged home until safe to do so
  - clinical complications with the mother, such as pregnancy induced hypertension, gestational diabetes, post operative infections and depression
  - complications and treatment of the infant were involved in five of the long stay charts audited.

- **Small for gestational age**: no reason was given for this variance. However, the hospital has indicated that an audit is taking place. This indicator was expected to be higher for this hospital, and is being used as an indicator of appropriate referral to a tertiary centre from outlying areas where specialist services are not available.

As a result of investigating these variances, the Cairns Health Service District indicated that:

- since this data set, the AMI death rate has decreased dramatically to be well under the state average

- angiography services are now available in Cairns and hence patients do not have to wait or travel for angiography

- a neurologist is now employed who will address treatment of stroke within the hospital

- maternity outcomes had been discussed with the Director of Obstetrics & Gynaecology and the Nursing Director of Women's Health and no obvious trends reflecting clinical practice were noted.

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Measured Quality

Hospital Report

Cairns Base Hospital

Northern Zone

Principal Referral and Specialised Peer Group

July 2002

Version Number	Date	Comment
0.1	17 May 2002	Draft report for feedback
0.2	31 May 2002	Modification from feedback
0.3	26 June 2002	Modification from feedback

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Overall Performance

Cairns Base Hospital — **Northern Zone**

Peer Group: Principal Referral and Specialised

Clinical Utilisation and Outcomes

Medical	☆
Obstetrics & Gynaecology	☆
Surgical	☆☆
Overall	☆

Patient Satisfaction

Maternity	☆☆
Medical	☆
Surgical	☆☆
Overall	☆

Efficiency

Activity	☆☆☆
Cost of Service	☆☆
Staffing	☆☆
Overall	☆☆

System Integration and Change

Benchmarking and Clinical Pathways	☆☆
Continuity of Care	☆☆
Quality and Use of Information	☆☆
Overall	☆☆

Performance Compared to the Average

☆	Lower: Aggregated Hospital performance is more than one standard deviation below the peer mean.
☆☆	Average: Aggregated Hospital performance is within one standard deviation of the peer mean.
☆☆☆	Higher: Aggregated Hospital performance is more than one standard deviation above the peer mean.

Overall performance results are based on selected indicators within this report. Please refer to the indicators marked "+" within each quadrant report to identify those indicators used to calculate the overall performance of the hospital.

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Clinical Utilisation and Outcomes

Cairns Base Hospital — **Principal Referral and Specialised**

Northern Zone

Performance Indicator	Risk Adjusted Hospital Score: (Rate per 100 separations)	Peer Group Mean:	Significance:	Reference:
Acute Myocardial Infarction				
In-hospital Mortality	26.9	11.2	**	CI01.1
Long Stay Rates	27.5	10.8	**	CI01.2
Heart Failure				
In-hospital Mortality	12.2	7.0	*	CI02.1
Long Stay Rates	10.6	10.4		CI02.2
Stroke				
In-hospital Mortality	31.0	22.1		CI03.1
Long Stay Rates	18.6	11.6		CI03.2
Nursing Home Separations	9.0	11.7		CI03.4
Pneumonia				
In-hospital Mortality	13.9	8.6	*	CI04.1
Long Stays	9.4	13.8		CI04.2
Asthma				
Long Stay Rates	12.1	11.5		CI14.1
Hysterectomy				
Long Stay rates	21.2	15.2	*	CI09.1
Complications of Surgery	11.3	12.4		CI09.3
on Women < 35 years	11.7	11.0		CI09.4
Blood Transfusion Rates	7.4	3.7	**	CI09.5
Standard Primiparae				
C-section	12.1	13.1		CI10.1
Induction of Labour	13.4	12.8		CI10.2
Perineal Tears	6.3	2.9	*	CI10.3
Small for Gestational Age				
Small for Gestational Age	4.5	3.5	*	CI11.1
Maternal Post-Natal Long Stay Rate				
Vaginal Births	7.2	7.6		CI13.1
Caesarean Section Births	10.4	6.5	**	CI13.2
Diabetic Foot				
Long Stays	6.2	11.3		CI05.1
Amputation Rates	32.1	29.4		CI05.4
Fractured Neck of Femur				
In-hospital Mortality	9.1	6.8		CI06.1
Long Stays	9.9	9.0		CI06.2
Nursing Home Separations	33.6	21.3	*	CI06.5
Complications of Surgery	12.5	12.8		CI06.6
Knee Replacement				
Long Stays	9.1	10.8		CI07.1
Complications of Surgery	20.9	22.3		CI07.3
Hip Replacement				
Long Stay Rates	4.0	11.7		CI08.1
Complications of Surgery	40.4	28.0	*	CI08.3
Colorectal Carcinoma				
Long Stay Rates	8.8	9.9		CI15.1
Complications of Surgery	40.3	32.0		CI15.3

Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

+ Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 10/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

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Patient Satisfaction

Cairns Base Hospital

Principal Referral and Specialised

Northern Zone

	Hospital Score:	Peer Group Mean:	Significance:	Reference:
Service Type: [illegible] Hospital				
Access and Admission Index	59.2	64.1	**	PS01
Complaints Management Index	60.0	64.6	*	PS02
Discharge and Follow-up Index	55.3	61.4	**	PS03
General Patient Information Index	65.5	68.9	*	PS04
Overall Care Index	59.5	64.6	**	PS05
Physical Environment Index	55.4	62.3	**	PS06
Treatment & Related Information Index	60.6	65.3	**	PS07
Service Type: [illegible]				
Access and Admission Index	68.9	65.2		PS01
Complaints Management Index	67.4	63.3		PS02
Discharge and Follow-up Index	67.6	64.4		PS03
General Patient Information Index	68.3	65.1		PS04
+ Overall Care Index	68.3	64.4	*	PS05
Physical Environment Index	69.5	63.0	*	PS06
Treatment & Related Information Index	67.3	64.4		PS07
Service Type: [illegible]				
Access and Admission Index	58.3	63.0	*	PS01
Complaints Management Index	59.3	64.6	*	PS02
Discharge and Follow-up Index	51.6	60.2	*	PS03
General Patient Information Index	64.9	69.2	*	PS04
+ Overall Care Index	58.2	64.1	*	PS05
Physical Environment Index	52.8	62.0	**	PS06
Treatment & Related Information Index	59.9	65.5	*	PS07
Service Type: [illegible]				
Access and Admission Index	47.9	55.1		PS01
Complaints Management Index	44.3	54.4		PS02
Discharge and Follow-up Index	54.5	54.7		PS03
General Patient Information Index	53.0	57.6		PS04
Overall Care Index	48.6	54.8		PS05
Physical Environment Index	53.8	57.8		PS06
Treatment & Related Information Index	40.1	50.7		PS07
Service Type: Surgical				
Access and Admission Index	62.3	69.3	**	PS01
Complaints Management Index	64.4	68.2		PS02
Discharge and Follow-up Index	62.2	65.5		PS03
General Patient Information Index	70.2	72.8		PS04
+ Overall Care Index	64.2	68.4	*	PS05
Physical Environment Index	59.5	64.0	*	PS06
Treatment & Related Information Index	67.1	69.6		PS07

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Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

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+ Indicator has been used to determine overall performance.

Printed: 05/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

N/A - Not Applicable N/R - Not Reported

Efficiency

Cairns Base Hospital

Northern Zone

Principal Referral and Specialised

	Data Type:	Hospital Score:	Peer Group Median:	Reference:
Overall Performance Group: Above +				
Occupancy Rate (Bed Day Efficiency)	Percentage	104	84.5	EFF-17
Length of Stay	Days	2.94	3.18	EFF-19
Cancellation rate	Percentage	18.6	19.2	EFF-24
Overall Performance Group: Cost of Service +				
Total Cost / Weighted Separation	Dollars	2,309	2,396	EFF-25
Catering - total cost	Dollars	27.7	27.7	EFF-36a
Energy Consumption per square metre	Dollars	28.6	28.6	EFF-45.4
Overall Performance Group: Staffing +				
Hours of Sick Leave by Staff Category - Managerial And Clerical	Percentage	3.18	3.18	EFF-06.2
Hours of Sick Leave by Staff Category - Medical	Percentage	1.04	1.46	EFF-06.3
Hours of Sick Leave by Staff Category - Nursing	Percentage	3.25	3.57	EFF-06.4
Hours of Sick Leave by Staff Category - Operational	Percentage	3.63	3.63	EFF-06.5
Hours of Sick Leave by Staff Category - Professional	Percentage	2.54	2.57	EFF-06.6
Hours of Sick Leave by Staff Category - Technical	Percentage	3.77	2.88	EFF-06.7
Hours of Sick Leave by Staff Category - Trade And Artisans	Percentage	2.89	3.34	EFF-06.8
Hours of Sick Leave by Staff Category - Visiting Medical Officers	Percentage	0.28	1.36	EFF-06.9
Cost of Sick Leave by Staff Category - Managerial And Clerical	Dollars	1,132	1,151	EFF-08.2
Cost of Sick Leave by Staff Category - Medical	Dollars	729	1,102	EFF-08.3
Cost of Sick Leave by Staff Category - Nursing	Dollars	1,366	1,436	EFF-08.4
Cost of Sick Leave by Staff Category - Operational	Dollars	1,072	1,072	EFF-08.5
Cost of Sick Leave by Staff Category - Professional	Dollars	1,238	1,262	EFF-08.6
Cost of Sick Leave by Staff Category - Technical	Dollars	1,638	1,125	EFF-08.7
Cost of Sick Leave by Staff Category - Trade And Artisans	Dollars	1,009	1,135	EFF-08.8
Cost of Sick Leave by Staff Category - Visiting Medical Officers	Dollars	439	2,248	EFF-08.9
Cost of Work Cover	Dollars	0.72	1.05	EFF-11
Hours of Overtime by Staff Category - Managerial And Clerical	Percentage	1.53	0.63	EFF-14.2
Hours of Overtime by Staff Category - Medical	Percentage	16.3	16.3	EFF-14.3
Hours of Overtime by Staff Category - Nursing	Percentage	0.48	0.55	EFF-14.4
Hours of Overtime by Staff Category - Operational	Percentage	2.52	1.20	EFF-14.5
Hours of Overtime by Staff Category - Professional	Percentage	3.76	2.71	EFF-14.6
Hours of Overtime by Staff Category - Technical	Percentage	0.14	0.49	EFF-14.7
Hours of Overtime by Staff Category - Trade And Artisans	Percentage	4.48	4.47	EFF-14.8
Hours of Overtime by Staff Category - Visiting Medical Officers	Percentage	11.0	11.0	EFF-14.9
Cost of Overtime by Staff Category - Managerial And Clerical	Dollars	765	325	EFF-16.2
Cost of Overtime by Staff Category - Medical	Dollars	19,830	19,694	EFF-16.3
Cost of Overtime by Staff Category - Nursing	Dollars	300	326	EFF-16.4
Cost of Overtime by Staff Category - Operational	Dollars	1,238	592	EFF-16.5
Cost of Overtime by Staff Category - Professional	Dollars	3,154	2,195	EFF-16.6
Cost of Overtime by Staff Category - Technical	Dollars	88.6	299	EFF-16.7
Cost of Overtime by Staff Category - Trade And Artisans	Dollars	2,510	2,441	EFF-16.8
Cost of Overtime by Staff Category - Visiting Medical Officers	Dollars	22,933	22,933	EFF-16.9
Overall Performance Group: Not Summarised				
Full-Time Equivalent (FTE) Staff	Numeric	1,061	1,359	EFF-01
FTE Staff by Category - Managerial And Clerical	Numeric	156	178	EFF-02.2
FTE Staff by Category - Medical	Numeric	112	112	EFF-02.3
FTE Staff by Category - Nursing	Numeric	550	678	EFF-02.4
FTE Staff by Category - Operational	Numeric	167	199	EFF-02.5
FTE Staff by Category - Professional	Numeric	53.1	107	EFF-02.6
FTE Staff by Category - Technical	Numeric	2.37	6.61	EFF-02.7
FTE Staff by Category - Trade And Artisans	Numeric	10.9	18.4	EFF-02.8
FTE Staff by Category - Visiting Medical Officers	Numeric	9.74	11.0	EFF-02.9
Hours of Sick Leave	Percentage	2.99	3.22	EFF-05
Cost of Sick Leave	Dollars	1,200	1,293	EFF-07
Hours of Overtime	Percentage	3.30	2.86	EFF-13
Cost of Overtime	Dollars	2,954	2,634	EFF-15

+ Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

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System Integration and Change

Cairns Base Hospital

Northern Zone

Principal Referral and Specialised

	Type of Score:	Hospital Score:	Peer Group Median:	Reference
Benchmarking				
In selected clinical areas - external	Percentage	77.8	66.7	SIC06.3
Clinical Pathways				
Extent of development and use in selected clinical areas	Percentage	35.7	40.1	SIC07.1
Facilitating continuity of care				
Use of pre admission clinics for elective surgery	Max score 5	3/3	3	SIC08.1
Provision of discharge summaries to GPs	Max score 5	2/3	3	SIC08.2
Shared ante and post natal care	Max score 5	3/3	3	SIC08.3
Cardiac rehabilitation	Max score 3	3/3	3	SIC08.4
Provision of electronic discharge summaries to GPs	Max score 3	0/3	0.5	SIC08.5
Quality of Information				
Accuracy	Percentage	93.6	94	SIC04.1
Timeliness - Number of months on time	Months	7	5.5	SIC04.2a
Timeliness - Number of days late per month	Days	4	8.6	SIC04.2b
Use of Information				
Availability of electronic information	Percentage	29.2	47.9	SIC05.1
Collection and use of clinical information	Percentage	84.6	65.1	SIC05.2
Accreditation				
Accreditation	Yes/No	Yes	12/12	SIC01
Credentialling				
Credentialling	Yes/No	Yes	11/12	SIC02
Workforce Management				
Retention of Nursing Staff	Percentage	81.4	79.3	SIC03.1
Retention of Allied Health Staff	Percentage	83.8	74.5	SIC03.2
Median Age Nursing Staff	Years	40	38.8	SIC03.3
Benchmarking				
In selected clinical areas	Percentage	88.9	62.5	SIC06.1
In selected clinical areas - internal	Percentage	100	61.1	SIC06.2
Clinical Pathways				
Extent of development and use as per Ontario	Percentage	41.7	44.5	SIC07.2
Surgical (Orthopaedic) - extent of development and use	Percentage	85.7	76.8	SIC07.3a
Medical - extent of development and use	Percentage	26.2	26.2	SIC07.3b
O & G - extent of development and use	Percentage	0	53.6	SIC07.3c
Telehealth				
Extent of telehealth usage	Percentage	5.8	5.8	SIC09

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+ Indicators listed within this overall performance group have been used to determine overall performance.

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Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

N/A - Not Applicable N/R - Not Reported

Measured Quality

Hospital Report

Attachments

- Attachment 1.....Statistics – Quartiles per Indicator
- Attachment 2.....State Report

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Statistics - Quartiles per Indicator

Attachment 1

Cairns Base Hospital
Northern Zone

Principal Referral and Specialised

Indicator Number and Description:	Hospital Score	Peer Group Min	25th	Median	75th	Max
Overall Performance Group: Medical						
CI01.1 Acute Myocardial Infarction - In-hospital Mortality	26.9	5.7	7.5	8.9	13.5	26.9
CI01.2 Acute Myocardial Infarction - Long Stay Rates	27.5	5.1	7.4	10.3	13.5	27.5
CI02.1 Heart Failure - In-hospital Mortality	12.2	5.1	5.6	6.1	7.1	12.2
CI02.2 Heart Failure - Long Stay Rates	10.6	5.2	6.4	9.5	10.6	14.5
CI03.1 Stroke - In-hospital Mortality	31.0	17.7	19.8	21.7	27.0	31.0
CI03.2 Stroke - Long Stay Rates	15.6	6.6	9.2	10.7	11.9	17.5
CI03.4 Stroke - Nursing Home Separations	9.0	8.1	9.5	10.3	13.2	23.2
CI04.1 Pneumonia - In-hospital Mortality	13.9	5.5	6.7	7.5	8.9	13.9
CI04.2 Pneumonia - Long Stays	9.4	8.8	10.4	12.7	14.0	15.3
CI14.1 Asthma - Long Stay Rates	12.1	1.8	9.5	12.1	13.4	16.2
Overall Performance Group: Obstetrics & Gynaecology						
CI09.1 Hysterectomy - Long Stay rates	21.2	6.1	8.1	11.0	21.2	23.1
CI09.3 Hysterectomy - Complications of Surgery	11.3	7.6	8.4	11.3	11.6	36.3
CI09.4 Hysterectomy - on Women < 35 years	11.7	6.7	8.7	11.4	11.7	16.4
CI09.5 Hysterectomy - Blood Transfusion Rates	7.4	1.1	2.8	3.1	6.1	7.4
CI10.1 Standard Primiparae - C-section	12.1	5.3	10.6	12.1	14.3	17.2
CI10.2 Standard Primiparae - Induction of Labour	13.4	8.7	11.6	13.8	15.4	19.2
CI10.3 Standard Primiparae - Perineal Tears	6.3	1.0	1.8	2.4	3.3	6.3
CI11.1 Small for Gestational Age - Small for Gestational Age	4.5	2.8	3.1	3.4	3.9	4.5
CI13.1 Maternal Post-Natal Long Stay Rate (Vaginal Births)	7.2	1.8	3.5	7.2	9.1	17.3
CI13.2 Maternal Post-Natal Long Stay Rate (Caesarean Section Births)	10.4	1.7	3.5	5.7	9.5	11.8
Overall Performance Group: Surgical						
CI05.1 Diabetic Foot - Long Stays	6.2	6.2	9.7	10.8	12.0	20.1
CI05.4 Diabetic Foot - Amputation Rates	32.1	20.3	24.5	28.8	31.8	36.4
CI06.1 Fractured Neck of Femur - In-hospital Mortality	9.1	2.7	5.9	7.6	8.3	10.2
CI06.2 Fractured Neck of Femur - Long Stays	8.9	1.6	3.1	7.9	13.2	20.8
CI06.5 Fractured Neck of Femur - Nursing Home Separations	33.6	6.1	11.8	19.0	28.1	37.3
CI06.6 Fractured Neck of Femur - Complications of Surgery	12.5	5.8	10.0	11.8	17.4	22.9
CI07.1 Knee Replacement - Long Stays	9.1	3.9	7.9	9.1	17.3	21.3
CI07.3 Knee Replacement - Complications of Surgery	20.9	13.0	20.9	24.1	27.2	44.9
CI08.1 Hip Replacement - Long Stay Rates	4.0	4.0	10.1	12.6	13.2	21.8
CI08.3 Hip Replacement - Complications of Surgery	40.4	15.3	27.6	29.9	35.5	41.0
CI15.1 Colorectal Carcinoma - Long Stay Rates	8.8	2.6	5.5	7.5	9.1	16.1
CI15.3 Colorectal Carcinoma - Complications of Surgery	40.3	16.0	26.3	33.4	37.0	47.9
Patient Satisfaction						
Overall Performance Group: Maternity						
PS05 Overall Care Index Maternity	68.3	59.6	61.1	64.3	66.0	76.5
Overall Performance Group: Medical						
PS05 Overall Care Index Medical	58.2	58.2	62.5	63.4	65.7	72.9
Overall Performance Group: Surgical						
PS05 Overall Care Index Surgical	64.2	60.8	66.0	68.4	70.8	78.8
Overall Performance Group: Not Summarised						
PS01 Access and Admission Index Maternity	68.9	60.5	63.4	64.9	66.5	68.9
PS01 Access and Admission Index Medical	58.3	58.2	60.8	63.0	64.2	73.4
PS01 Access and Admission Index Mental Health	47.9	45.1	47.9	52.9	60.3	78.8
PS01 Access and Admission Index Surgical	62.3	58.4	66.8	69.4	71.1	82.2
PS01 Access and Admission Index All types combined	59.2	59.2	61.7	62.7	65.1	73.9
PS02 Complaints Management Index Surgical	64.4	63.4	65.5	68.2	69.9	76.8
PS02 Complaints Management Index Medical	59.3	56.3	61.4	63.9	65.4	73.9
PS02 Complaints Management Index Maternity	67.4	57.9	60.1	63.0	65.5	67.4
PS02 Complaints Management Index All types combined	60.0	60.0	62.9	63.9	65.8	73.1
PS02 Complaints Management Index Mental Health	44.3	44.3	48.9	53.0	60.8	68.8
PS03 Discharge and Follow-up Index Medical	51.6	51.6	58.0	60.2	61.8	68.5
PS03 Discharge and Follow-up Index All types combined	55.3	55.3	59.1	60.3	63.9	68.7

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:	Hospital Score	Peer Group Min	25th	Median	75th	Max
PS03 Discharge and Follow-up Index Maternity	67.6	56.5	62.1	66.0	67.9	88.9
PS03 Discharge and Follow-up Index Surgical	62.2	56.9	62.8	66.0	68.5	74.1
PS03 Discharge and Follow-up Index Mental Health	54.5	42.2	52.8	54.5	59.1	69.6
PS04 General Patient Information Index Surgical	70.2	68.6	70.7	72.5	74.1	82.7
PS04 General Patient Information Index All types combined	65.5	65.1	66.8	68.4	70.8	76.9
PS04 General Patient Information Index Maternity	68.3	59.5	63.1	64.3	68.1	83.4
PS04 General Patient Information Index Mental Health	53.0	50.8	53.4	56.5	58.1	78.2
PS04 General Patient Information Index Medical	64.9	64.5	66.3	68.5	70.3	78.0
PS05 Overall Care Index All types combined	59.5	59.5	62.7	63.9	66.0	72.8
PS05 Overall Care Index Mental Health	48.6	47.5	48.6	54.6	59.2	70.4
PS06 Physical Environment Index Medical	52.8	52.8	59.6	62.1	64.2	70.1
PS06 Physical Environment Index Mental Health	58.8	50.7	53.8	57.9	63.5	66.0
PS06 Physical Environment Index Surgical	59.5	55.2	59.8	63.4	68.7	75.2
PS06 Physical Environment Index Maternity	69.5	47.2	57.4	59.0	66.1	69.5
PS06 Physical Environment Index All types combined	55.4	55.4	59.1	61.5	64.4	70.7
PS07 Treatment & Related Information Index Medical	59.9	59.9	62.6	64.6	67.2	73.0
PS07 Treatment & Related Information Index Surgical	67.1	64.0	66.9	68.9	72.1	79.1
[illegible] Treatment & Related Information Index All types combined	60.6	60.6	63.4	64.6	66.6	72.3
Treatment & Related Information Index Maternity	67.3	57.8	60.1	65.5	67.9	83.3
PS07 Treatment & Related Information Index Mental Health	40.1	40.1	44.6	49.6	53.6	62.3
[illegible] Efficiency						
Overall Performance Group: Activity						
EFF-17 Occupancy Rate (Bed Day Efficiency)	104.2	48.2	66.6	84.5	90.0	104.2
EFF-19 Length of Stay	2.9	2.0	2.9	3.2	3.7	5.5
EFF-24 Cancellation rate	18.6	6.3	11.7	19.2	21.4	25.1
Overall Performance Group: Cost of Service						
EFF-25 Total Cost / Weighted Separation	2,309.3	1,650.9	2,282.9	2,396.0	2,506.8	3,101.6
EFF-36a Catering - total cost	27.7	20.7	26.8	27.7	30.2	39.6
EFF-45.4 Energy Consumption per square metre	28.6	19.2	21.0	28.6	29.4	42.5
Overall Performance Group: Staffing						
EFF-06.2 Hours of Sick Leave by Staff Category - Managerial And Clerical	3.2	2.7	3.1	3.2	3.5	4.0
EFF-06.3 Hours of Sick Leave by Staff Category - Medical	1.0	1.0	1.3	1.5	1.6	2.0
EFF-06.4 Hours of Sick Leave by Staff Category - Nursing	3.3	3.3	3.4	3.6	3.6	4.2
EFF-06.5 Hours of Sick Leave by Staff Category - Operational	3.6	3.2	3.5	3.6	3.9	4.4
EFF-06.6 Hours of Sick Leave by Staff Category - Professional	2.5	2.0	2.4	2.6	2.8	2.9
EFF-06.7 Hours of Sick Leave by Staff Category - Technical	3.8	1.5	2.5	2.9	3.4	4.3
EFF-06.8 Hours of Sick Leave by Staff Category - Trade And Artisans	2.9	2.9	3.1	3.3	4.1	4.6
[illegible].9 Hours of Sick Leave by Staff Category - Visiting Medical Officers	0.3	0.3	0.9	1.4	1.7	3.1
EFF-08.2 Cost of Sick Leave by Staff Category - Managerial And Clerical	1,132.2	907.6	1,102.0	1,151.2	1,189.5	1,542.0
EFF-08.3 Cost of Sick Leave by Staff Category - Medical	728.9	728.9	971.6	1,101.6	1,130.8	1,416.5
EFF-08.4 Cost of Sick Leave by Staff Category - Nursing	1,366.5	1,366.5	1,399.9	1,435.6	1,513.8	1,745.0
EFF-08.5 Cost of Sick Leave by Staff Category - Operational	1,072.3	939.0	1,038.3	1,072.3	1,128.8	1,285.7
EFF-08.6 Cost of Sick Leave by Staff Category - Professional	1,238.2	973.2	1,198.4	1,261.7	1,403.1	1,449.9
EFF-08.7 Cost of Sick Leave by Staff Category - Technical	1,638.4	706.9	1,001.4	1,125.1	1,638.4	1,850.0
EFF-08.8 Cost of Sick Leave by Staff Category - Trade And Artisans	1,009.2	991.1	1,037.0	1,134.6	1,309.8	1,457.6
EFF-08.9 Cost of Sick Leave by Staff Category - Visiting Medical Officers	438.6	438.6	1,244.6	2,247.8	3,039.8	5,379.2
EFF-11 Cost of Work Cover	0.7	0.5	0.9	1.1	1.5	2.2
EFF-14.2 Hours of Overtime by Staff Category - Managerial And Clerical	1.5	0.5	0.6	0.6	0.7	1.5
EFF-14.3 Hours of Overtime by Staff Category - Medical	16.3	13.7	14.1	16.3	18.7	19.8
EFF-14.4 Hours of Overtime by Staff Category - Nursing	0.5	0.2	0.4	0.6	0.6	1.1
EFF-14.5 Hours of Overtime by Staff Category - Operational	2.5	0.1	0.6	1.2	1.5	2.5
EFF-14.6 Hours of Overtime by Staff Category - Professional	3.8	0.9	1.8	2.7	3.6	4.2
EFF-14.7 Hours of Overtime by Staff Category - Technical	0.1	0.1	0.2	0.5	1.2	5.5
EFF-14.8 Hours of Overtime by Staff Category - Trade And Artisans	4.5	3.3	4.0	4.5	5.0	8.3
EFF-14.9 Hours of Overtime by Staff Category - Visiting Medical Officers	11.0	4.8	7.4	11.0	14.8	18.1
[illegible].2 Cost of Overtime by Staff Category - Managerial And Clerical	765.2	250.1	296.4	325.2	392.1	765.2
[illegible].3 Cost of Overtime by Staff Category - Medical	19,830.0	15,058.0	15,443.8	19,694.2	21,892.1	25,813.7
EFF-16.4 Cost of Overtime by Staff Category - Nursing	300.5	132.4	229.1	326.4	358.6	665.1
EFF-16.5 Cost of Overtime by Staff Category - Operational	1,238.4	57.1	283.9	592.1	741.9	1,238.4

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:	Hospital Score	Peer Group Min	25th	Median	75th	Max
EFF-16.6 Cost of Overtime by Staff Category - Professional	3,154.3	694.0	1,259.7	2,195.0	2,962.1	3,759.4
EFF-16.7 Cost of Overtime by Staff Category - Technical	88.6	86.8	113.9	298.9	683.3	3,831.4
EFF-16.8 Cost of Overtime by Staff Category - Trade And Artisans	2,509.5	1,793.3	2,221.6	2,441.1	2,852.2	4,825.5
EFF-16.9 Cost of Overtime by Staff Category - Visiting Medical Officers	22,933.3	7,118.5	15,123.0	22,933.3	31,408.5	41,722.5
Overall Performance Group: Not Summarised						
EFF-01 Full-Time Equivalent (FTE) Staff	1,060.6	705.4	1,058.7	1,359.3	1,433.5	3,681.8
EFF-02.2 FTE Staff by Category - Managerial And Clerical	155.6	115.2	155.6	177.6	198.9	548.7
EFF-02.3 FTE Staff by Category - Medical	112.2	48.9	85.3	112.2	173.3	349.0
EFF-02.4 FTE Staff by Category - Nursing	550.0	348.2	481.4	678.1	733.2	1,569.2
EFF-02.5 FTE Staff by Category - Operational	166.8	69.4	173.3	199.5	267.7	699.8
EFF-02.6 FTE Staff by Category - Professional	53.1	53.1	79.2	106.9	145.5	335.8
EFF-02.7 FTE Staff by Category - Technical	2.4	2.4	5.9	6.6	23.3	32.2
EFF-02.8 FTE Staff by Category - Trade And Artisans	10.9	10.9	14.6	18.4	41.6	69.5
EFF-02.9 FTE Staff by Category - Visiting Medical Officers	9.7	4.8	9.7	11.0	14.6	52.5
EFF-05 Hours of Sick Leave	3.0	2.9	3.2	3.2	3.3	3.6
EFF-07 Cost of Sick Leave	1,200.4	1,196.1	1,270.1	1,293.5	1,336.2	1,487.9
EFF-13 Hours of Overtime	3.3	1.8	2.8	2.9	3.2	3.9
EFF-15 Cost of Overtime	2,954.3	1,827.7	2,123.8	2,634.3	2,733.1	3,692.2
Overall Performance Group: System Navigation and Change						
Overall Performance Group: Benchmarking and Clinical Pathways						
SIC06.3 Benchmarking - In selected clinical areas - external	77.8	16.7	61.1	66.7	80.2	100.0
SIC07.1 Clinical Pathways - Extent of development and use	35.7	0.0	12.3	40.1	58.1	71.4
Overall Performance Group: Continuity of Care						
SIC08.1 Facilitating continuity of care - Use of pre admission clinics for elective surgery	3.0	0.0	3.0	3.0	3.0	3.0
SIC08.2 Facilitating continuity of care - Provision of discharge summaries to GPs	2.0	0.0	2.8	3.0	3.0	3.0
SIC08.3 Facilitating continuity of care - Shared ante and post natal care	3.0	3.0	3.0	3.0	3.0	3.0
SIC08.4 Facilitating continuity of care - Cardiac rehabilitation	3.0	1.0	2.8	3.0	3.0	3.0
SIC08.5 Facilitating continuity of care - Provision of electronic discharge summaries to GPs	0.0	0.0	0.0	0.5	1.5	3.0
Overall Performance Group: Quality and Use of Information						
SIC04.1 Quality of information - Accuracy	93.6	74.8	92.7	94.0	94.5	96.0
SIC04.2a Quality of Information - Timeliness - Number of months on time	7.0	0.0	2.8	5.5	6.3	9.0
SIC04.2b Quality of Information - Timeliness - Number of days late per month	4.0	0.0	3.3	8.6	14.9	82.7
SIC05.1 Use of Information - Availability of electronic information	29.2	25.0	43.8	47.9	54.7	72.9
SIC05.2 Use of Information - Collection and use of clinical information	84.6	28.6	57.9	65.2	77.1	95.7
Overall Performance Group: Not Summarised						
SIC01 Accreditation	1.0	1.0	1.0	1.0	1.0	1.0
SIC02 Credentialling	1.0	0.0	1.0	1.0	1.0	1.0
SIC03.1 Workforce Management - Retention of Nursing Staff	81.4	67.9	73.8	79.3	82.2	84.1
SIC03.2 Workforce Management - Retention of Allied Health Staff	83.8	66.7	71.8	74.5	78.6	83.8
SIC03.3 Workforce Management - Median Age Nursing Staff	40.0	34.0	37.8	38.8	39.6	41.0
SIC06.1 Benchmarking - In selected clinical areas	88.9	15.4	65.3	82.5	84.7	100.0
SIC06.2 Benchmarking - In selected clinical areas - internal	100.0	0.0	0.0	91.1	91.7	100.0
SIC07.2 Clinical Pathways - Extent of development and use as per Ontario	41.7	0.0	14.3	44.5	67.1	77.4
SIC07.3a Clinical Pathways - Surgical (Orthopaedic) - extent of development and use	85.7	0.0	2.7	76.8	84.8	85.7
SIC07.3b Clinical Pathways - Medical - extent of development and use	26.2	0.0	11.9	26.2	42.9	76.2
SIC07.3c Clinical Pathways - O & G - extent of development and use	0.0	0.0	3.6	53.6	64.3	85.7
SIC09 Telehealth - Extent of telehealth usage	5.8	0.0	2.9	5.8	15.4	19.2

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CAB.0007.0002.00092

Summary of Potential Reasons for Variance for
GOLD COAST HOSPITAL

Indicator Flagged:
CI05.1 Diabetic foot – Long stay rate (90-99.9% confidence level at the state level; <90% confidence level at the peer level)

Response:
This indicator was discussed with the hospital because it appeared as the highest risk adjusted score for the state and appeared double the state average for long stays for this indicator. However, its statistical significance was borderline 90-99.9% significant at the state level, less than 90% significant at the peer level and the numbers involved were very small. The observed rate of 5 long stay patients, when the expected rate was 2.32, resulted in the appearance of the hospital having a rate double that of the state average.
The Gold Coast Hospital offers a specialised service to diabetic patients and treats patients with significant complications of diabetes which can lead to long stay rates.

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Measured Quality

Hospital Report

Gold Coast Hospital

Southern Zone

Principal Referral and Specialised Peer Group

July 2002

Version Number	Date	Comment
0.1	17 May 2002	Draft report for feedback
0.2	31 May 2002	Modification from feedback
0.3	26 June 2002	Modification from feedback

CAB.0007.0002.00094

Overall Performance

Gold Coast Hospital **Southern Zone**

Peer Group: Principal Referral and Specialised

Clinical Utilisation and Outcomes		Patient Satisfaction	
Medical	☆☆	Maternity	☆
Obstetrics & Gynaecology	☆☆☆	Medical	☆☆
Surgical	☆☆	Surgical	☆☆
Overall	☆☆	**Overall**	☆
Efficiency		**System Integration and Change**	
Activity	☆☆	Benchmarking and Clinical Pathways	☆☆☆
Cost of Service	☆☆☆	Continuity of Care	☆☆☆
Staffing	☆☆	Quality and Use of Information	☆
Overall	☆☆	**Overall**	☆☆

Performance Compared to the Average

☆	Lower: Aggregated Hospital performance is more than one standard deviation below the peer mean.
☆☆	Average: Aggregated Hospital performance is within one standard deviation of the peer mean.
☆☆☆	Higher: Aggregated Hospital performance is more than one standard deviation above the peer mean.

Overall performance results are based on selected indicators within this report. Please refer to the indicators marked "+" within each quadrant report to identify those indicators used to calculate the overall performance of the hospital.

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Clinical Utilisation and Outcomes

Gold Coast Hospital — **Principal Referral and Specialised**

Southern Zone

Performance Indicator	Risk Adjusted Hospital Score: (Rate per 100 separations)	Peer Group Mean:	Significance:	Reference:
Acute Myocardial Infarction				
In-hospital Mortality	14.5	11.2		CI01.1
Long Stay Rates	7.4	10.8		CI01.2
Heart Failure				
In-hospital Mortality	7.1	7.0		CI02.1
Long Stay Rates	9.5	10.4		CI02.2
Stroke				
In-hospital Mortality	21.7	22.1		CI03.1
Long Stay Rates	10.7	11.6		CI03.2
Nursing Home Separations	9.5	11.7		CI03.4
Pneumonia				
In-hospital Mortality	5.5	8.6		CI04.1
Long Stays	14.0	13.8		CI04.2
Asthma				
Long Stay Rates	10.4	11.5		CI14.1
Hysterectomy				
Long Stay rates	11.0	15.2		CI09.1
Complications of Surgery	8.6	12.4		CI09.3
on Women < 35 years	8.3	11.0		CI09.4
Blood Transfusion Rates	3.1	3.7		CI09.5
Standard Primiparae				
C-section	10.4	13.1	*	CI10.1
Induction of Labour	8.7	12.8	*	CI10.2
Perineal Tears	2.6	2.9		CI10.3
Small for Gestational Age				
Small for Gestational Age	2.8	3.5		CI11.1
Maternal Post-Natal Long Stay Rate				
Vaginal Births	8.6	7.6		CI13.1
Caesarean Section Births	8.7	6.5	*	CI13.2
Diabetic Foot				
Long Stays	20.1	11.3	*	CI05.1
Amputation Rates	36.4	29.4		CI05.4
Fractured Neck of Femur				
In-hospital Mortality	6.3	6.8		CI06.1
Long Stays	13.4	9.0		CI06.2
Nursing Home Separations	21.3	21.3		CI06.5
Complications of Surgery	8.6	12.8	*	CI06.6
Knee Replacement				
Long Stays	9.2	10.8		CI07.1
Complications of Surgery	26.2	22.3		CI07.3
Hip Replacement				
Long Stay Rates	12.9	11.7		CI08.1
Complications of Surgery	27.6	28.0		CI08.3
Colorectal Carcinoma				
Long Stay Rates	7.5	9.9		CI15.1
Complications of Surgery	18.9	32.0	*	CI15.3

Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

+ Indicators listed within this overall performance group have been used to determine overall performance.

CAB.0007.0002.00096

Printed: 10/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

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Patient Satisfaction

Gold Coast Hospital — **Principal Referral and Specialised**

uthern Zone

	Hospital Score:	Peer Group Mean:	Significance:	Reference:
[redacted]				
Access and Admission Index	62.6	64.1		PS01
Complaints Management Index	63.5	64.6		PS02
Discharge and Follow-up Index	60.7	61.4		PS03
General Patient Information Index	69.1	68.9		PS04
Overall Care Index	62.7	64.5	*	PS05
Physical Environment Index	57.6	62.3	**	PS06
Treatment & Related Information Index	63.4	65.3		PS07
[redacted]				
Access and Admission Index	60.5	65.2	*	PS01
Complaints Management Index	57.9	63.3		PS02
Discharge and Follow-up Index	64.6	64.4		PS03
General Patient Information Index	63.3	65.1		PS04
+ Overall Care Index	59.6	64.4	*	PS05
Physical Environment Index	54.7	63.0	**	PS06
Treatment & Related Information Index	57.8	64.4	*	PS07
[redacted]				
Access and Admission Index	62.7	63.0		PS01
Complaints Management Index	64.9	64.6		PS02
Discharge and Follow-up Index	60.3	60.2		PS03
General Patient Information Index	69.7	69.2		PS04
+ Overall Care Index	63.1	64.1		PS05
Physical Environment Index	57.8	62.0	*	PS06
Treatment & Related Information Index	64.5	65.5		PS07
[redacted]				
Access and Admission Index	45.1	55.1		PS01
Complaints Management Index	47.1	54.4		PS02
Discharge and Follow-up Index	52.8	54.7		PS03
General Patient Information Index	50.8	57.6		PS04
Overall Care Index	47.5	54.8		PS05
Physical Environment Index	53.8	57.8		PS06
Treatment & Related Information Index	40.4	50.7		PS07
[redacted]				
Access and Admission Index	67.4	69.3		PS01
Complaints Management Index	65.8	68.2		PS02
Discharge and Follow-up Index	62.8	65.5		PS03
General Patient Information Index	73.6	72.8		PS04
+ Overall Care Index	66.3	68.4		PS05
Physical Environment Index	58.9	64.0	*	PS06
Treatment & Related Information Index	67.9	69.6		PS07

Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

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dicator has been used to determine overall performance.

ed: 05/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

N/A - Not Applicable N/R - Not Reported

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Efficiency

Gold Coast Hospital

Southern Zone

Principal Referral and Specialised

Data Type:	Hospital Score:	Peer Group Median:	Reference:

Occupancy Rate (Bed Day Efficiency)	Percentage	77.2	84.5	EFF-17
Length of Stay	Days	3.61	3.18	EFF-19
Cancellation rate	Percentage	21.6	19.2	EFF-24
Total Cost / Weighted Separation	Dollars	2,370	2,396	EFF-25
Catering - total cost	Dollars	24.3	27.7	EFF-36a
Energy Consumption per square metre	Dollars	19.8	28.6	EFF-45.4
Hours of Sick Leave by Staff Category - Managerial And Clerical	Percentage	3.57	3.18	EFF-06.2
Hours of Sick Leave by Staff Category - Medical	Percentage	1.95	1.46	EFF-06.3
Hours of Sick Leave by Staff Category - Nursing	Percentage	3.59	3.57	EFF-06.4
Hours of Sick Leave by Staff Category - Operational	Percentage	3.27	3.63	EFF-06.5
Hours of Sick Leave by Staff Category - Professional	Percentage	2.41	2.57	EFF-06.6
Hours of Sick Leave by Staff Category - Technical	Percentage	2.88	2.88	EFF-06.7
Hours of Sick Leave by Staff Category - Trade And Artisans	Percentage	3.04	3.34	EFF-06.8
Hours of Sick Leave by Staff Category - Visiting Medical Officers	Percentage	1.36	1.36	EFF-06.9
Cost of Sick Leave by Staff Category - Managerial And Clerical	Dollars	1,190	1,151	EFF-08.2
Cost of Sick Leave by Staff Category - Medical	Dollars	1,966	1,102	EFF-08.3
Cost of Sick Leave by Staff Category - Nursing	Dollars	1,436	1,436	EFF-08.4
Cost of Sick Leave by Staff Category - Operational	Dollars	972	1,072	EFF-08.5
Cost of Sick Leave by Staff Category - Professional	Dollars	1,198	1,262	EFF-08.6
Cost of Sick Leave by Staff Category - Technical	Dollars	1,125	1,125	EFF-08.7
Cost of Sick Leave by Staff Category - Trade And Artisans	Dollars	991	1,135	EFF-08.8
Cost of Sick Leave by Staff Category - Visiting Medical Officers	Dollars	2,248	2,248	EFF-08.9
Cost of Work Cover	Dollars	0.94	1.05	EFF-11
Hours of Overtime by Staff Category - Managerial And Clerical	Percentage	0.75	0.63	EFF-14.2
Hours of Overtime by Staff Category - Medical	Percentage	14.0	16.3	EFF-14.3
Hours of Overtime by Staff Category - Nursing	Percentage	0.39	0.55	EFF-14.4
Hours of Overtime by Staff Category - Operational	Percentage	1.54	1.20	EFF-14.5
Hours of Overtime by Staff Category - Professional	Percentage	2.71	2.71	EFF-14.6
Hours of Overtime by Staff Category - Technical	Percentage	0.49	0.49	EFF-14.7
Hours of Overtime by Staff Category - Trade And Artisans	Percentage	3.82	4.47	EFF-14.8
Hours of Overtime by Staff Category - Visiting Medical Officers	Percentage	16.4	11.0	EFF-14.9
Cost of Overtime by Staff Category - Managerial And Clerical	Dollars	392	325	EFF-16.2
Cost of Overtime by Staff Category - Medical	Dollars	15,058	19,694	EFF-16.3
Cost of Overtime by Staff Category - Nursing	Dollars	229	326	EFF-16.4
Cost of Overtime by Staff Category - Operational	Dollars	788	592	EFF-16.5
Cost of Overtime by Staff Category - Professional	Dollars	2,250	2,195	EFF-16.6
Cost of Overtime by Staff Category - Technical	Dollars	299	299	EFF-16.7
Cost of Overtime by Staff Category - Trade And Artisans	Dollars	2,133	2,441	EFF-16.8
Cost of Overtime by Staff Category - Visiting Medical Officers	Dollars	31,408	22,933	EFF-16.9
Full-Time Equivalent (FTE) Staff	Numeric	1,359	1,359	EFF-01
FTE Staff by Category - Managerial And Clerical	Numeric	143	178	EFF-02.2
FTE Staff by Category - Medical	Numeric	173	112	EFF-02.3
FTE Staff by Category - Nursing	Numeric	733	678	EFF-02.4
FTE Staff by Category - Operational	Numeric	173	199	EFF-02.5
FTE Staff by Category - Professional	Numeric	107	107	EFF-02.6
FTE Staff by Category - Technical	Numeric	5.85	6.61	EFF-02.7
FTE Staff by Category - Trade And Artisans	Numeric	13.2	18.4	EFF-02.8
FTE Staff by Category - Visiting Medical Officers	Numeric	11.0	11.0	EFF-02.9
Hours of Sick Leave	Percentage	3.21	3.22	EFF-05
Cost of Sick Leave	Dollars	1,324	1,293	EFF-07
Hours of Overtime	Percentage	2.96	2.86	EFF-13
Cost of Overtime	Dollars	2,639	2,634	EFF-15

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Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

CAB.0007.0002.00098

System Integration and Change

Gold Coast Hospital — **Principal Referral and Specialised**

uthern Zone

Type of Score:	Hospital Score:	Peer Group Median:	Reference

Benchmarking				
In selected clinical areas - external	Percentage	100	66.7	SIC06.3
Clinical Pathways				
Extent of development and use in selected clinical areas	Percentage	71.4	40.1	SIC07.1
Facilitating continuity of care				
Use of pre admission clinics for elective surgery	Max score 5	3/3	3	SIC08.1
Provision of discharge summaries to GPs	Max score 5	3/3	3	SIC08.2
Shared ante and post natal care	Max score 5	3/3	3	SIC08.3
Cardiac rehabilitation	Max score 3	3/3	3	SIC08.4
Provision of electronic discharge summaries to GPs	Max score 3	3/3	0.5	SIC08.5
Quality of Information				
uracy	Percentage	94.2	94	SIC04.1
Timeliness - Number of months on time	Months	0	5.5	SIC04.2a
Timeliness - Number of days late per month	Days	82.7	8.6	SIC04.2b
Use of Information				
Availability of electronic information	Percentage	47.9	47.9	SIC05.1
Collection and use of clinical information	Percentage	77.1	65.1	SIC05.2
Accreditation				
Accreditation	Yes/No	Yes	12/12	SIC01
Credentialling				
Credentialling	Yes/No	No	11/12	SIC02
Workforce Management				
Retention of Nursing Staff	Percentage	81.7	79.3	SIC03.1
Retention of Allied Health Staff	Percentage	71.9	74.5	SIC03.2
Median Age Nursing Staff	Years	39	38.8	SIC03.3
Benchmarking				
lected clinical areas	Percentage	100	62.5	SIC06.1
In selected clinical areas - internal	Percentage	100	61.1	SIC06.2
Clinical Pathways				
Extent of development and use as per Ontario	Percentage	77.4	44.5	SIC07.2
Surgical (Orthopaedic) - extent of development and use	Percentage	82.1	76.8	SIC07.3a
Medical - extent of development and use	Percentage	76.2	26.2	SIC07.3b
O & G - extent of development and use	Percentage	53.6	53.6	SIC07.3c
Telehealth				
Extent of telehealth usage	Percentage	0	5.8	SIC09

licators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

N/A - Not Applicable N/R - Not Reported

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Measured Quality

Hospital Report

Attachments

- Attachment 1.....Statistics – Quartiles per Indicator
- Attachment 2.....State Report

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:	Hospital Score	Peer Group Min	25th	Median	75th	Max	[redacted]

Gold Coast Hospital

Principal Referral and Specialised

Southern Zone

[redacted]

Overall Performance Group:	Medical							
CI01.1	Acute Myocardial Infarction - In-hospital Mortality	14.5	5.7	7.5	8.9	13.5	26.9	[redacted]
CI01.2	Acute Myocardial Infarction - Long Stay Rates	7.4	5.1	7.4	10.3	13.5	27.5	
CI02.1	Heart Failure - In-hospital Mortality	7.1	5.1	5.6	6.1	7.1	12.2	
CI02.2	Heart Failure - Long Stay Rates	9.5	6.2	6.4	9.5	10.6	14.5	
CI03.1	Stroke - In-hospital Mortality	21.7	17.7	19.8	21.7	27.0	31.0	
CI03.2	Stroke - Long Stay Rates	10.7	0.0	9.2	10.7	11.9	17.5	
CI03.4	Stroke - Nursing Home Separations	9.5	6.1	9.5	10.3	13.2	23.2	
CI04.1	Pneumonia - In-hospital Mortality	5.5	5.5	6.7	7.5	8.9	13.9	
CI04.2	Pneumonia - Long Stays	14.0	8.8	10.4	12.7	14.0	15.3	
CI14.1	Asthma - Long Stay Rates	10.4	1.8	9.5	12.1	13.4	16.2	
Overall Performance Group:	Obstetrics & Gynaecology							
CI09.1	Hysterectomy - Long Stay Rates	11.0	6.1	8.1	11.0	21.2	23.1	[redacted]
CI09.3	Hysterectomy - Complications of Surgery	8.8	7.6	8.8	11.3	11.6	36.3	
	Hysterectomy - on Women < 35 years	8.3	6.7	8.7	11.4	11.7	16.4	
CI	Hysterectomy - Blood Transfusion Rates	3.1	1.1	2.8	3.1	5.1	7.4	
CI10.1	Standard Primiparae - C-section	10.4	5.3	10.6	12.1	14.3	17.2	
CI10.2	Standard Primiparae - Induction of Labour	8.7	8.7	11.6	13.8	15.4	19.2	
CI10.3	Standard Primiparae - Perineal Tears	2.6	1.0	1.8	2.4	3.3	6.3	
CI11.1	Small for Gestational Age - Small for Gestational Age	2.8	2.8	3.1	3.4	3.9	4.5	
CI13.1	Maternal Post-Natal Long Stay Rate (Vaginal Births)	8.6	1.8	3.5	7.2	9.1	17.3	
CI13.2	Maternal Post-Natal Long Stay Rate (Caesarean Section Births)	8.7	1.7	3.5	5.7	9.5	11.8	
Overall Performance Group:	Surgical							
CI05.1	Diabetic Foot - Long Stays	20.1	6.2	9.7	10.8	12.0	20.1	[redacted]
CI05.4	Diabetic Foot - Amputation Rates	36.4	20.3	24.5	26.8	31.8	36.4	
CI06.1	Fractured Neck of Femur - In-hospital Mortality	6.3	2.7	6.9	7.6	9.3	10.2	
CI06.2	Fractured Neck of Femur - Long Stays	13.4	1.6	3.1	7.9	13.2	20.6	
CI06.5	Fractured Neck of Femur - Nursing Home Separations	21.3	6.1	11.6	16.0	28.1	37.3	
CI06.6	Fractured Neck of Femur - Complications of Surgery	8.6	5.8	10.0	11.8	17.4	22.9	
CI07.1	Knee Replacement - Long Stays	9.2	5.9	7.9	9.1	17.3	21.3	
CI07.3	Knee Replacement - Complications of Surgery	26.2	13.0	20.9	24.1	27.2	44.9	
CI08.1	Hip Replacement - Long Stay Rates	12.9	4.0	10.1	12.6	13.2	21.8	
CI08.3	Hip Replacement - Complications of Surgery	27.6	15.3	27.6	29.9	35.5	41.0	
	Colorectal Carcinoma - Long Stay Rates	7.5	2.6	5.5	7.5	9.1	16.1	
	Colorectal Carcinoma - Complications of Surgery	18.9	16.0	26.3	33.4	37.0	47.9	

[redacted]

Overall Performance Group:	Maternity							
CI05	Overall Care Index Maternity	59.6	59.6	61.1	64.3	66.0	76.5	[redacted]
Overall Performance Group:	Medical							
CI05	Overall Care Index Medical	53.1	58.2	62.5	63.4	65.7	72.9	
Overall Performance Group:	Surgical							
CI05	Overall Care Index Surgical	66.3	60.8	66.0	68.4	70.8	78.6	
Overall Performance Group:	Not Summarised							
CI01	Access and Admission Index All types combined	62.6	59.2	61.7	62.7	65.1	73.9	[redacted]
CI01	Access and Admission Index Mental Health	45.1	45.1	47.9	52.9	60.3	78.8	
CI01	Access and Admission Index Medical	62.7	58.2	60.8	63.0	64.2	73.4	
CI01	Access and Admission Index Surgical	67.4	58.4	66.8	69.4	71.1	82.2	
CI01	Access and Admission Index Maternity	60.5	60.5	63.4	64.9	66.5	68.9	
CI02	Complaints Management Index Surgical	65.8	63.4	65.5	68.2	69.9	76.8	
CI02	Complaints Management Index Mental Health	47.1	44.3	48.9	53.0	60.8	68.8	
CI02	Complaints Management Index Medical	64.9	56.3	61.4	63.9	65.4	73.9	
CI02	Complaints Management Index All types combined	63.5	60.0	62.9	63.9	65.8	73.1	
	Complaints Management Index Maternity	57.9	57.9	60.1	63.0	65.5	67.4	
CI3	Discharge and Follow-up Index All types combined	60.7	55.3	59.1	60.3	63.9	68.7	
CI3	Discharge and Follow-up Index Maternity	64.6	56.5	62.1	66.0	67.9	88.9	

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:		Hospital Score	Peer Group Min	25th	Median	75th	Max
'S03	Discharge and Follow-up Index Medical	60.3	51.6	58.0	60.2	61.8	68.5
'S03	Discharge and Follow-up Index Surgical	62.8	56.9	62.8	66.0	68.5	74.1
'S03	Discharge and Follow-up Index Mental Health	52.8	42.2	52.8	54.5	59.1	69.6
'S04	General Patient Information Index All types combined	69.1	65.1	66.8	68.4	70.8	76.9
'S04	General Patient Information Index Maternity	63.3	59.5	63.1	64.3	68.1	83.4
'S04	General Patient Information Index Medical	69.7	64.3	66.3	68.5	70.3	78.0
'S04	General Patient Information Index Mental Health	50.8	50.8	53.4	56.5	58.1	78.2
'S04	General Patient Information Index Surgical	73.6	68.6	70.7	72.5	74.1	82.7
'S05	Overall Care Index All types combined	62.7	59.6	62.7	63.9	66.0	72.8
'S05	Overall Care Index Mental Health	47.5	47.5	48.6	54.6	59.2	70.4
'S06	Physical Environment Index Surgical	58.9	55.2	59.8	63.4	68.7	75.2
'S06	Physical Environment Index All types combined	57.8	55.4	59.1	61.5	64.4	70.7
'S06	Physical Environment Index Maternity	54.7	47.2	57.4	59.0	66.1	69.5
'S06	Physical Environment Index Medical	57.8	52.8	59.6	62.1	64.2	70.1
'S06	Physical Environment Index Mental Health	53.8	50.7	53.8	57.9	63.5	66.0
'S07	Treatment & Related Information Index All types combined	63.4	60.6	63.4	64.8	66.5	72.3
'S07	Treatment & Related Information Index Maternity	57.8	57.8	60.1	65.5	67.9	83.3
	Treatment & Related Information Index Medical	64.5	59.9	62.6	64.8	67.2	73.0
	Treatment & Related Information Index Surgical	67.9	64.0	66.9	68.9	72.1	79.1
'S07	Treatment & Related Information Index Mental Health	49.4	49.4	44.5	49.8	53.6	62.3
Overall Performance Group:	**Activity**						
'F-17	Occupancy Rate (Bed Day Efficiency)	77.2	48.2	66.6	84.5	90.0	104.2
'F-19	Length of Stay	3.6	2.0	2.9	3.2	3.7	5.5
'F-24	Cancellation rate	21.6	6.3	11.7	19.2	21.4	25.1
Overall Performance Group:	**Cost of Service**						
'F-25	Total Cost / Weighted Separation	2,370.5	1,650.9	2,282.9	2,396.0	2,506.8	3,101.6
'F-36a	Catering - total cost	24.3	20.7	26.8	27.7	30.2	39.6
F-45.4	Energy Consumption per square metre	19.8	19.2	21.0	28.6	29.4	42.5
Overall Performance Group:	**Staffing**						
F-06.2	Hours of Sick Leave by Staff Category - Managerial And Clerical	3.6	2.7	3.1	3.2	3.5	4.0
F-06.3	Hours of Sick Leave by Staff Category - Medical	2.0	1.0	1.3	1.5	1.6	2.0
F-06.4	Hours of Sick Leave by Staff Category - Nursing	3.6	3.5	3.4	3.6	3.6	4.2
F-06.5	Hours of Sick Leave by Staff Category - Operational	3.3	3.2	3.5	3.6	3.9	4.4
F-06.6	Hours of Sick Leave by Staff Category - Professional	2.4	2.0	2.4	2.6	2.8	2.9
F-06.7	Hours of Sick Leave by Staff Category - Technical	2.9	1.5	2.5	2.9	3.4	4.3
F-06.8	Hours of Sick Leave by Staff Category - Trade And Artisans	3.0	2.9	3.1	3.3	4.1	4.6
.9	Hours of Sick Leave by Staff Category - Visiting Medical Officers	1.4	0.3	0.9	1.4	1.7	3.1
F-08.2	Cost of Sick Leave by Staff Category - Managerial And Clerical	1,189.5	907.6	1,102.0	1,151.2	1,189.5	1,542.0
F-08.3	Cost of Sick Leave by Staff Category - Medical	1,366.3	728.9	971.6	1,101.6	1,130.8	1,416.5
F-08.4	Cost of Sick Leave by Staff Category - Nursing	1,435.6	1,366.5	1,399.9	1,439.6	1,513.8	1,745.0
F-08.5	Cost of Sick Leave by Staff Category - Operational	971.9	939.0	1,039.3	1,072.3	1,128.8	1,285.7
F-08.6	Cost of Sick Leave by Staff Category - Professional	1,198.4	979.2	1,198.4	1,261.7	1,403.1	1,449.9
F-08.7	Cost of Sick Leave by Staff Category - Technical	1,125.1	706.9	1,001.4	1,125.1	1,638.4	1,850.0
F-08.8	Cost of Sick Leave by Staff Category - Trade And Artisans	991.1	991.1	1,037.0	1,134.6	1,309.8	1,457.6
F-08.9	Cost of Sick Leave by Staff Category - Visiting Medical Officers	2,247.8	438.6	1,244.6	2,247.8	3,039.8	5,379.2
F-11	Cost of Work Cover	0.9	0.5	0.9	1.1	1.5	2.2
F-14.2	Hours of Overtime by Staff Category - Managerial And Clerical	0.7	0.5	0.6	0.6	0.7	1.5
F-14.3	Hours of Overtime by Staff Category - Medical	14.0	13.7	14.1	16.3	18.7	19.8
F-14.4	Hours of Overtime by Staff Category - Nursing	0.4	0.2	0.4	0.6	0.6	1.1
F-14.5	Hours of Overtime by Staff Category - Operational	1.5	0.1	0.6	1.2	1.5	2.5
F-14.6	Hours of Overtime by Staff Category - Professional	2.7	0.9	1.8	2.7	3.6	4.2
F-14.7	Hours of Overtime by Staff Category - Technical	0.5	0.1	0.2	0.5	1.2	5.5
F-14.8	Hours of Overtime by Staff Category - Trade And Artisans	3.8	3.3	4.0	4.5	5.0	8.3
F-14.9	Hours of Overtime by Staff Category - Visiting Medical Officers	16.4	4.8	7.4	11.0	14.8	18.1
F-16.2	Cost of Overtime by Staff Category - Managerial And Clerical	392.1	250.1	296.4	325.2	392.1	765.2
F-16.3	Cost of Overtime by Staff Category - Medical	15,058.0	15,058.0	15,443.8	19,694.2	21,892.1	25,813.7
F-16.4	Cost of Overtime by Staff Category - Nursing	229.0	132.4	229.1	326.4	358.6	665.1
F-16.5	Cost of Overtime by Staff Category - Operational	787.5	57.1	283.9	592.1	741.9	1,238.4

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:		Hospital Score	Peer Group Min	25th	Median	75th	Max	[redacted]
E[illegible].8	Cost of Overtime by Staff Category - Professional	2,250.4	694.0	1,259.7	2,195.0	2,962.1	3,759.4	
EFF-16.7	Cost of Overtime by Staff Category - Technical	298.9	86.8	113.9	298.9	683.3	3,831.4	
EFF-16.8	Cost of Overtime by Staff Category - Trade And Artisans	2,132.8	1,793.3	2,221.6	2,441.1	2,852.2	4,825.5	
EFF-16.9	Cost of Overtime by Staff Category - Visiting Medical Officers	31,408.5	7,118.5	15,123.0	22,933.3	31,408.5	41,722.5	
Overall Performance Group:	Not Summarised							
EFF-01	Full-Time Equivalent (FTE) Staff	1,359.3	705.4	1,058.7	1,359.3	1,433.5	3,681.8	
EFF-02.2	FTE Staff by Category - Managerial And Clerical	143.1	115.2	155.6	177.6	198.9	548.7	
EFF-02.3	FTE Staff by Category - Medical	173.3	48.9	85.3	112.2	173.3	349.0	
EFF-02.4	FTE Staff by Category - Nursing	732.6	346.2	481.4	678.1	733.2	1,589.2	
EFF-02.5	FTE Staff by Category - Operational	173.3	88.4	173.3	199.5	267.7	699.8	
EFF-02.6	FTE Staff by Category - Professional	106.9	53.1	79.2	106.9	145.5	335.8	
EFF-02.7	FTE Staff by Category - Technical	5.9	2.4	5.9	6.6	23.3	32.2	
EFF-02.8	FTE Staff by Category - Trade And Artisans	13.2	10.9	14.6	18.4	41.6	69.5	
EFF-02.9	FTE Staff by Category - Visiting Medical Officers	11.0	4.8	9.7	11.0	14.6	52.5	
EFF-05	Hours of Sick Leave	3.2	2.9	3.2	3.2	3.3	3.6	
EFF-07	Cost of Sick Leave	1,324.0	1,196.1	1,270.1	1,293.5	1,336.2	1,487.9	
EFF-13	Hours of Overtime	3.0	1.8	2.5	2.9	3.2	3.9	
EFF-15	Cost of Overtime	2,638.8	1,827.7	2,123.5	2,634.3	2,733.1	3,692.2	
[illegible]	[illegible]							
Overall Performance Group:	Benchmarking and Clinical Pathways							
IC06.3	Benchmarking - In selected clinical areas - external	100.0	16.7	61.1	66.7	80.2	100.0	
IC07.1	Clinical Pathways - Extent of development and use	71.4	0.0	12.3	40.1	58.1	71.4	
Overall Performance Group:	Continuity of Care							
IC08.1	Facilitating continuity of care - Use of pre-admission clinics for elective surgery	3.0	0.0	3.0	3.0	3.0	3.0	
IC08.2	Facilitating continuity of care - Provision of discharge summaries to GPs	3.0	0.0	2.8	3.0	3.0	3.0	
IC08.3	Facilitating continuity of care - Shared ante and post natal care	3.0	3.0	3.0	3.0	3.0	3.0	
IC08.4	Facilitating continuity of care - Cardiac rehabilitation	3.0	1.0	2.8	3.0	3.0	3.0	
IC08.5	Facilitating continuity of care - Provision of electronic discharge summaries to GPs	3.0	0.0	0.0	0.5	1.5	3.0	
Overall Performance Group:	Quality and Use of Information							
IC04.1	Quality of information - Accuracy	94.2	74.8	92.7	94.0	94.5	96.0	
IC04.2a	Quality of information - Timeliness - Number of months on time	0.0	0.0	2.8	5.5	6.3	9.0	
IC04.2b	Quality of information - Timeliness - Number of days late per month	82.7	0.0	3.3	8.0	14.9	82.7	
IC05.1	Use of Information - Availability of electronic information	47.9	25.0	43.8	47.9	54.7	72.9	
IC05.2	Use of Information - Collection and use of clinical information	77.1	28.6	57.9	65.2	77.1	95.7	
Overall Performance Group:	Not Summarised							
IC01	Accreditation	1.0	1.0	1.0	1.0	1.0	1.0	
IC02	Credentialling	0.0	0.0	1.0	1.0	1.0	1.0	
[illegible]	Workforce Management - Retention of Nursing Staff	81.7	67.9	73.8	79.3	82.2	84.1	
IC[illegible]	Workforce Management - Retention of Allied Health Staff	71.9	66.7	71.8	74.5	78.6	83.8	
IC03.3	Workforce Management - Median Age Nursing Staff	39.0	34.0	37.8	38.8	39.6	41.0	
IC06.1	Benchmarking - In selected clinical areas	100.0	15.4	55.3	62.5	84.7	100.0	
IC06.2	Benchmarking - In selected clinical areas - internal	100.0	0.0	0.0	81.1	91.7	100.0	
IC07.2	Clinical Pathways - Extent of development and use as per Ontario	77.4	0.0	14.3	44.5	67.1	77.4	
IC07.3a	Clinical Pathways - Surgical (Orthopaedic) - extent of development and use	82.1	0.0	2.7	76.8	84.8	85.7	
IC07.3b	Clinical Pathways - Medical - extent of development and use	76.2	0.0	11.9	26.2	42.9	76.2	
IC07.3c	Clinical Pathways - O & G - extent of development and use	53.6	0.0	3.6	53.6	64.3	85.7	
IC09	Telehealth - Extent of telehealth usage	0.0	0.0	2.9	5.8	15.4	19.2	

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Summary of Potential Reasons for Variance for
MATER MISERICORDIAE ADULT HOSPITAL

Indicators Flagged:
CI09.3 Hysterectomy- Complications of surgery rate (99.9% confidence level)

Responses:
The potential reasons for variance given by the Mater Misericordiae Adult Hospital are summarised below.

- **Hysterectomy complications of surgery rates:** as a state wide referral centre, their client base includes patients who are sicker when they undergo surgery. Although Measured Quality indicators risk adjust for comorbidities and age, the response indicated that these were still considered by the hospital to have had a significant impact on the recorded complication rate.
  "Over coding" in some charts resulted in transient post procedural complications being coded as complications of the procedure. For example: temperature spikes (x1) to 38 degrees. Other recorded complications related to a comorbidity being coded as a complication of procedure. For example: post procedural pulmonary collapse with a history of atrial fibrillation/ tachycardia.
  Finally, some variation related to clinical postprocedural conditions such as pneumonia, wound complications, transfusions, enterotomy and temperatures. However, the number of patients experiencing each of the listed complications was small (1- 4 patients) and no particular trend could be identified.

As a result of investigating these variances, the Mater Misericordiae Adult Hospital indicated it would:

- suggest discharge summaries for oncological hysterectomy patients should always be done by the Registrar and not the Resident Medical Officer due to the complexities of cases

- note that some of the discharge summaries are very brief and do not give enough detail for the patients' general practitioners and the coders. More information or clarification of some of the conditions in the summary would be useful (for example, whether antibiotic use was prophylactic or therapeutic).

- suggest that Measured Quality indicators exclude pelvic malignancies (whether genital or otherwise) in future analyses. Genital tract malignancies had already been excluded. Other pelvic malignancies will be excluded in future. However, this issue related to only four patients in the total cohort.

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Measured Quality

Hospital Report

Mater Misericordiae Public Adult Hospital

Southern Zone

Principal Referral and Specialised Peer Group

July 2002

Version Number	Date	Comment
0.1	17 May 2002	Draft report for feedback
0.2	31 May 2002	Modification from feedback
0.3	26 June 2002	Modification from feedback

CAB.0007.0002.00105

Overall Performance

Mater Misericordiae Public Adult Hospital **Southern Zone**

Peer Group: Principal Referral and Specialised

Clinical Utilisation and Outcomes		Patient Satisfaction	
Medical	☆☆☆	Maternity	☆☆☆
Obstetrics & Gynaecology	☆	Medical	☆☆
Surgical	☆☆☆	Surgical	☆☆
Overall	☆☆	**Overall**	☆☆☆
Efficiency		**System Integration and Change**	
Activity	☆☆	Benchmarking and Clinical Pathways	☆
Cost of Service	☆☆	Continuity of Care	☆☆☆
		Quality and Use of Information	☆☆
Overall	☆☆	**Overall**	☆☆

Performance Compared to the Average

☆	Lower: Aggregated Hospital performance is more than one standard deviation below the peer mean.
☆☆	Average: Aggregated Hospital performance is within one standard deviation of the peer mean.
☆☆☆	Higher: Aggregated Hospital performance is more than one standard deviation above the peer mean.

Overall performance results are based on selected indicators within this report. Please refer to the indicators marked "+" within each quadrant report to identify those indicators used to calculate the overall performance of the hospital.

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Clinical Utilisation and Outcomes

Mater Misericordiae Public Adult Hospital — **Principal Referral and Specialised**

Southern Zone

erformance Indicator	Risk Adjusted Hospital Score: (Rate per 100 separations)	Peer Group Mean:	Significance:	Reference:
Acute Myocardial Infarction				
In-hospital Mortality	8.9	11.2		CI01.1
Long Stay Rates	5.2	10.8	*	CI01.2
Heart Failure				
In-hospital Mortality	5.5	7.0		CI02.1
Long Stay Rates	6.2	10.4		CI02.2
Stroke				
In-hospital Mortality	25.6	22.1		CI03.1
Long Stay Rates	0.0	11.6	*	CI03.2
Nursing Home Separations	8.1	11.7		CI03.4
Pneumonia				
In-hospital Mortality	5.9	8.6		CI04.1
Long Stays	13.4	13.8		CI04.2
Asthma				
Long Stay Rates	16.2	11.5		CI14.1
sterectomy				
Long Stay rates	20.5	15.2	*	CI09.1
Complications of Surgery	36.3	12.4	**	CI09.3
on Women < 35 years	8.7	11.0		CI09.4
Blood Transfusion Rates	7.3	3.7	*	CI09.5
Diabetic Foot				
Long Stays	10.7	11.3		CI05.1
Amputation Rates	20.3	29.4		CI05.4
Fractured Neck of Femur				
In-hospital Mortality	7.6	6.8		CI06.1
Long Stays	1.8	9.0	*	CI06.2
Nursing Home Separations	6.1	21.3	*	CI06.5
Complications of Surgery	10.5	12.8		CI06.6
Knee Replacement				
Long Stays	3.9	10.8	*	CI07.1
Complications of Surgery	27.2	22.3		CI07.3
Hip Replacement				
Long Stay Rates	13.2	11.7		CI08.1
Complications of Surgery	34.7	28.0		CI08.3
lorectal Carcinoma				
Long Stay Rates	6.0	9.9		CI15.1
Complications of Surgery	28.7	32.0		CI15.3

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Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

CAB.0007.0002.00107

+ Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 10/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

Patient Satisfaction

Mater Misericordiae Public Adult Hospital — **Principal Referral and Specialised**

Southern Zone

	Hospital Score:	Peer Group Mean:	Significance:	Reference:
[redacted]				
Access and Admission Index	65.1	64.1		PS01
Complaints Management Index	67.2	64.6		PS02
Discharge and Follow-up Index	64.9	61.4	*	PS03
General Patient Information Index	71.2	68.9	*	PS04
Overall Care Index	66.8	64.5	*	PS05
Physical Environment Index	61.3	62.3		PS06
Treatment & Related Information Index	70.6	65.3	**	PS07
[redacted]				
Access and Admission Index	N/R	65.2		PS01
Complaints Management Index	N/R	63.3		PS02
Discharge and Follow-up Index	88.9	64.4		PS03
General Patient Information Index	83.4	65.1		PS04
+ Overall Care Index	76.5	64.4		PS05
Physical Environment Index	58.3	63.0		PS06
Treatment & Related Information Index	83.3	64.4		PS07
[redacted]				
Access and Admission Index	63.2	63.0		PS01
Complaints Management Index	66.6	64.6		PS02
Discharge and Follow-up Index	63.3	60.2		PS03
General Patient Information Index	71.0	69.2		PS04
+ Overall Care Index	65.7	64.1		PS05
Physical Environment Index	60.2	62.0		PS06
Treatment & Related Information Index	69.9	65.5	*	PS07
[redacted]				
Access and Admission Index	71.0	69.3		PS01
Complaints Management Index	68.2	68.2		PS02
Discharge and Follow-up Index	67.8	65.5		PS03
General Patient Information Index	70.6	72.8		PS04
+ Overall Care Index	69.6	68.4		PS05
Physical Environment Index	65.8	64.0		PS06
Treatment & Related Information Index	71.6	69.6		PS07

Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

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+ Indicator has been used to determine overall performance.

Printed: 05/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

N/A - Not Applicable N/R - Not Reported

Efficiency

Mater Misericordiae Public Adult Hospital — **Principal Referral and Specialised**

Southern Zone

	Data Type:	Hospital Score:	Peer Group Median:	Reference:
Occupancy Rate (Bed Day Efficiency)	Percentage	66.6	84.5	EFF-17
Length of Stay	Days	2.92	3.18	EFF-19
Cancellation rate	Percentage	8.91	19.2	EFF-24
Total Cost / Weighted Separation	Dollars	2,287	2,396	EFF-25
Catering - total cost	Dollars	30.2	27.7	EFF-36a

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CAB.0007.0002.00109

+ Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

System Integration and Change

Mater Misericordiae Public Adult Hospital — **Principal Referral and Specialised**

Southern Zone

Type of Score:	Hospital Score:	Peer Group Median:	Reference
Benchmarking			
In selected clinical areas - external	Percentage	16.7	66.7	SIC06.3
Clinical Pathways			
Extent of development and use in selected clinical areas	Percentage	57.1	40.1	SIC07.1
Facilitating continuity of care			
Use of pre admission clinics for elective surgery	Max score 5	3/3	3	SIC08.1
Provision of discharge summaries to GPs	Max score 5	3/3	3	SIC08.2
Shared ante and post natal care	Max score 5	N/A	N/A	SIC08.3
Cardiac rehabilitation	Max score 3	N/A	N/A	SIC08.4
Provision of electronic discharge summaries to GPs	Max score 3	3/3	0.5	SIC08.5
Quality of Information			
Accuracy	Percentage	91.6	94	SIC04.1
Timeliness - Number of months on time	Months	7	5.5	SIC04.2a
Timeliness - Number of days late per month	Days	14	8.6	SIC04.2b
Use of Information			
Availability of electronic information	Percentage	52.1	47.9	SIC05.1
Collection and use of clinical information	Percentage	60	65.1	SIC05.2
Accreditation			
Accreditation	Yes/No	Yes	12/12	SIC01
Credentialling			
Credentialling	Yes/No	Yes	11/12	SIC02
Workforce Management			
Retention of Nursing Staff	Percentage	67.9	79.3	SIC03.1
Retention of Allied Health Staff	Percentage	66.7	74.5	SIC03.2
Median Age Nursing Staff	Years	39	38.8	SIC03.3
Benchmarking			
selected clinical areas	Percentage	15.4	62.5	SIC06.1
In selected clinical areas - internal	Percentage	0	61.1	SIC06.2
Clinical Pathways			
Extent of development and use as per Ontario	Percentage	66.7	44.5	SIC07.2
Surgical (Orthopaedic) - extent of development and use	Percentage	85.7	76.8	SIC07.3a
Medical - extent of development and use	Percentage	33.3	26.2	SIC07.3b
O & G - extent of development and use	Percentage	85.7	53.6	SIC07.3c
Telehealth			
Extent of telehealth usage	Percentage	3.8	5.8	SIC09

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+ Indicators listed within this overall performance group have been used to determine overall performance.

CAB.0007.0002.00110

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

N/A - Not Applicable N/R - Not Reported

Measured Quality

Hospital Report

Attachments

- Attachment 1.....Statistics – Quartiles per Indicator
- Attachment 2.....State Report

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Statistics - Quartiles per Indicator

Attachment 1

Mater Misericordiae Public Adult Hospital — **Principal Referral and Specialised**

Southern Zone

Indicator Number and Description:	Hospital Score	Peer Group Min	25th	Median	75th	Max	[redacted]
Overall Performance Group: Medical							
CI01.1 Acute Myocardial Infarction - In-hospital Mortality	8.9	5.7	7.5	8.9	13.5	26.9	
CI01.2 Acute Myocardial Infarction - Long Stay Rates	5.2	5.1	7.4	10.3	13.5	27.5	
CI02.1 Heart Failure - In-hospital Mortality	5.5	5.1	5.6	6.1	7.1	12.2	
CI02.2 Heart Failure - Long Stay Rates	6.2	5.2	6.4	9.5	10.6	14.5	
CI03.1 Stroke - In-hospital Mortality	28.6	17.7	19.8	21.7	27.0	31.0	
CI03.2 Stroke - Long Stay Rates	0.0	0.9	9.2	10.7	11.9	17.5	
CI03.4 Stroke - Nursing Home Separations	8.1	8.1	9.5	10.3	13.2	23.2	
CI04.1 Pneumonia - In-hospital Mortality	5.9	5.5	6.7	7.5	8.9	13.9	
CI04.2 Pneumonia - Long Stays	13.4	8.8	10.4	12.7	14.0	15.3	
CI14.1 Asthma - Long Stay Rates	16.2	1.8	9.5	12.1	13.4	16.2	
Overall Performance Group: Obstetrics & Gynaecology							
CI09.1 Hysterectomy - Long Stay rates	20.5	6.1	8.1	11.0	21.2	23.1	
CI09.3 Hysterectomy - Complications of Surgery	36.3	7.6	8.8	11.3	11.6	36.3	
Hysterectomy - on Women < 35 years	8.7	8.7	8.7	11.4	11.7	16.4	
CI09.5 Hysterectomy - Blood Transfusion Rates	7.3	1.1	2.8	3.1	6.1	7.4	
Overall Performance Group: Surgical							
CI05.1 Diabetic Foot - Long Stays	10.7	6.2	8.7	10.8	12.0	20.1	
CI05.4 Diabetic Foot - Amputation Rates	20.3	20.3	24.5	28.8	31.8	36.4	
CI06.1 Fractured Neck of Femur - In-hospital Mortality	7.6	2.7	6.9	7.6	9.3	10.2	
CI06.2 Fractured Neck of Femur - Long Stays	1.8	1.8	3.1	7.9	13.2	20.8	
CI06.5 Fractured Neck of Femur - Nursing Home Separations	6.1	6.1	11.8	19.0	28.1	37.3	
CI06.6 Fractured Neck of Femur - Complications of Surgery	10.5	5.8	10.0	11.8	17.4	22.9	
CI07.1 Knee Replacement - Long Stays	3.9	3.9	7.9	9.1	17.3	21.3	
CI07.3 Knee Replacement - Complications of Surgery	27.2	13.0	20.9	24.1	27.2	44.9	
CI08.1 Hip Replacement - Long Stay Rates	13.2	4.0	10.1	12.6	13.2	21.8	
CI08.3 Hip Replacement - Complications of Surgery	34.7	15.3	27.8	29.9	35.6	41.0	
CI15.1 Colorectal Carcinoma - Long Stay Rates	6.0	2.6	5.5	7.8	9.1	16.1	
CI15.3 Colorectal Carcinoma - Complications of Surgery	28.7	16.9	26.3	33.4	37.0	47.9	
[redacted]							
Overall Performance Group: Maternity							
CI05 Overall Care Index Maternity	76.5	59.6	61.1	64.3	66.0	76.5	
Overall Performance Group: Medical							
Overall Care Index Medical	65.7	58.2	62.5	63.4	65.7	72.9	
Overall Performance Group: Surgical							
CI05 Overall Care Index Surgical	69.6	60.8	66.0	68.4	70.8	78.8	
Overall Performance Group: Not Summarised							
CI01 Access and Admission Index Surgical	71.0	58.4	66.8	69.4	71.1	82.2	
CI01 Access and Admission Index Medical	63.2	58.2	60.8	63.0	64.2	73.4	
CI01 Access and Admission Index Maternity		60.5	63.4	64.9	66.5	68.9	
CI01 Access and Admission Index All types combined	65.1	59.2	61.7	62.7	65.1	73.9	
CI02 Complaints Management Index All types combined	67.2	60.0	62.9	63.9	65.8	73.1	
CI02 Complaints Management Index Maternity		57.9	60.1	63.0	65.5	67.4	
CI02 Complaints Management Index Medical	66.6	56.3	61.4	63.9	65.4	73.9	
CI02 Complaints Management Index Surgical	68.2	63.4	65.5	68.2	69.9	76.8	
CI03 Discharge and Follow-up Index Surgical	67.8	56.9	62.8	66.0	68.5	74.1	
CI03 Discharge and Follow-up Index All types combined	64.9	55.3	59.1	60.3	63.9	68.7	
CI03 Discharge and Follow-up Index Maternity	88.9	56.5	62.1	66.0	67.9	88.9	
CI03 Discharge and Follow-up Index Medical	63.3	51.6	58.0	60.2	61.8	68.5	
CI04 General Patient Information Index Medical	71.0	64.3	66.3	68.5	70.3	78.0	
CI04 General Patient Information Index Surgical	70.8	68.6	70.7	72.5	74.1	82.7	
CI04 General Patient Information Index Maternity	83.4	59.5	63.1	64.3	68.1	83.4	
CI04 General Patient Information Index All types combined	71.2	65.1	66.8	68.4	70.8	76.9	
CI05 Overall Care Index All types combined	66.8	59.5	62.7	63.9	66.0	72.8	
CI06 Physical Environment Index Surgical	65.8	55.2	59.8	63.4	68.7	75.2	

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:		Hospital Score	Peer Group Min	25th	Median	75th	Max	[redacted]
PS	Physical Environment Index Medical	60.2	52.8	59.6	62.1	64.2	70.1	
PS06	Physical Environment Index All types combined	61.3	55.4	59.1	61.5	64.4	70.7	
PS06	Physical Environment Index Maternity	58.3	47.2	57.4	59.0	66.1	69.5	
PS07	Treatment & Related Information Index Surgical	71.6	64.0	66.9	68.9	72.1	79.1	
PS07	Treatment & Related Information Index Medical	69.9	59.9	62.6	64.6	67.2	73.0	
PS07	Treatment & Related Information Index All types combined	70.6	60.6	63.4	64.8	66.5	72.3	
PS07	Treatment & Related Information Index Maternity	83.3	57.8	60.1	65.5	67.9	83.3	
[redacted]								
Overall Performance Group:	Activity							
EFF-17	Occupancy Rate (Bed Day Efficiency)	66.6	48.2	66.6	84.5	90.0	104.2	
EFF-19	Length of Stay	2.9	2.0	2.9	3.2	3.7	5.5	
EFF-24	Cancellation rate	8.9	6.3	11.7	19.2	21.4	25.1	
Overall Performance Group:	Cost of Service							
EFF-25	Total Cost / Weighted Separation	2,286.7	1,650.9	2,282.9	2,396.0	2,506.8	3,101.6	
EFF-36a	Catering - total cost	30.2	20.7	26.8	27.7	30.2	39.6	
[redacted]								
Overall Performance Group:	Benchmarking and Clinical Pathways							
	Benchmarking - In selected clinical areas - external	16.7	16.7	61.1	66.7	80.2	100.0	
	Clinical Pathways - Extent of development and use	57.1	0.0	12.3	40.1	58.1	71.4	
Overall Performance Group:	Continuity of Care							
IC08.1	Facilitating continuity of care - Use of pre admission clinics for elective surgery	3.0	0.0	3.0	3.0	3.0	3.0	
IC08.2	Facilitating continuity of care - Provision of discharge summaries to GPs	3.0	0.0	2.8	3.0	3.0	3.0	
IC08.3	Facilitating continuity of care - Shared ante and post natal care		3.0	3.0	3.0	3.0	3.0	
IC08.4	Facilitating continuity of care - Cardiac rehabilitation		1.0	2.8	3.0	3.0	3.0	
IC08.5	Facilitating continuity of care - Provision of electronic discharge summaries to GPs	3.0	0.0	0.0	0.5	1.5	3.0	
Overall Performance Group:	Quality and Use of Information							
IC04.1	Quality of information - Accuracy	91.8	74.8	92.7	94.0	94.5	96.0	
IC04.2a	Quality of information - Timeliness - Number of months on time	7.0	0.0	2.8	5.5	6.3	9.0	
IC04.2b	Quality of information - Timeliness - Number of days late per month	14.0	0.0	3.3	8.6	14.9	82.7	
IC05.1	Use of Information - Availability of electronic information	52.1	25.0	43.6	47.9	54.7	72.9	
IC05.2	Use of Information - Collection and use of clinical information	60.0	28.6	57.9	65.2	77.4	95.7	
Overall Performance Group:	Not Summarised							
IC01	Accreditation	1.0	1.0	1.0	1.0	1.0	1.0	
IC02	Credentialling	1.0	0.0	1.0	1.0	1.0	1.0	
IC03.1	Workforce Management - Retention of Nursing Staff	67.9	67.9	73.8	79.3	82.2	84.1	
IC03.2	Workforce Management - Retention of Allied Health Staff	66.7	66.7	71.8	74.5	78.6	83.8	
IC03.3	Workforce Management - Median Age Nursing Staff	39.0	34.0	37.8	38.8	39.6	41.0	
	Benchmarking - In selected clinical areas	15.4	15.4	55.3	62.5	84.7	100.0	
IC	Benchmarking - In selected clinical areas - internal	0.0	0.0	0.0	61.1	91.7	100.0	
IC07.2	Clinical Pathways - Extent of development and use as per Ontario	66.7	0.0	14.3	44.5	67.1	77.4	
IC07.3a	Clinical Pathways - Surgical (Orthopaedic) - extent of development and use	85.7	0.0	2.7	76.8	84.8	85.7	
IC07.3b	Clinical Pathways - Medical - extent of development and use	33.3	0.0	11.9	28.2	42.9	76.2	
IC07.3c	Clinical Pathways - O & G - extent of development and use	85.7	0.0	3.6	53.6	64.3	85.7	
IC09	Telehealth - Extent of telehealth usage	3.8	0.0	2.9	5.8	15.4	19.2	

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Measured Quality

Hospital Report

Mater Misericordiae Public Childrens Hospital

Southern Zone

Principal Referral and Specialised Peer Group

July 2002

Version Number	Date	Comment
0.1	17 May 2002	Draft report for feedback
0.2	31 May 2002	Modification from feedback
0.3	26 June 2002	Modification from feedback

CAB.0007.0002.00114

Overall Performance

Mater Misericordiae Public Childrens Hospital **Southern Zone**

Peer Group: Principal Referral and Specialised

Clinical Utilisation and Outcomes		Patient Satisfaction	
		Medical	☆☆
No indicators to report		Surgical	☆☆
Overall		**Overall**	☆☆
Efficiency		**System Integration and Change**	
Activity	☆☆	Benchmarking and Clinical Pathways	☆
Cost of Service	☆☆	Continuity of Care	☆
		Quality and Use of Information	☆☆
Overall	☆☆	**Overall**	☆☆

Performance Compared to the Average

☆	Lower: Aggregated Hospital performance is more than one standard deviation below the peer mean.
☆☆	Average: Aggregated Hospital performance is within one standard deviation of the peer mean.
☆☆☆	Higher: Aggregated Hospital performance is more than one standard deviation above the peer mean.

Overall performance results are based on selected indicators within this report. Please refer to the indicators marked "+" within each quadrant report to identify those indicators used to calculate the overall performance of the hospital.

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Clinical Utilisation and Outcomes

Mater Misericordiae Public Childrens Hospit **Principal Referral and Specialised**

Southern Zone

Performance Indicator

Risk Adjusted Hospital Score: (Rate per 100 separations)	Peer Group Mean:	Significance:	Reference:

No indicators to report

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Patient Satisfaction

Mater Misericordiae Public Childrens Hospital — **Principal Referral and Specialised**

Southern Zone

	Hospital Score:	Peer Group Mean:	Significance:	Reference:
[redacted]				
Access and Admission Index	61.0	64.1	*	PS01
Complaints Management Index	64.8	64.6		PS02
Discharge and Follow-up Index	59.1	61.4		PS03
General Patient Information Index	67.2	68.9		PS04
Overall Care Index	63.4	64.5		PS05
Physical Environment Index	61.4	62.3		PS06
Treatment & Related Information Index	67.2	65.3		PS07
[redacted]				
Access and Admission Index	60.6	63.0		PS01
Complaints Management Index	64.5	64.6		PS02
Discharge and Follow-up Index	58.6	60.2		PS03
General Patient Information Index	66.8	69.2		PS04
+ Overall Care Index	63.0	64.1		PS05
Physical Environment Index	61.0	62.0		PS06
Treatment & Related Information Index	66.8	65.5		PS07
[redacted]				
Access and Admission Index	68.9	69.3		PS01
Complaints Management Index	70.7	68.2		PS02
Discharge and Follow-up Index	69.4	65.5		PS03
General Patient Information Index	74.3	72.8		PS04
+ Overall Care Index	71.2	68.4		PS05
Physical Environment Index	69.2	64.0	*	PS06
Treatment & Related Information Index	74.6	69.6	*	PS07

Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

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[redacted]icator has been used to determine overall performance.

Printed: 05/07/2002. Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

N/A - Not Applicable N/R - Not Reported

Efficiency

Mater Misericordiae Public Childrens Hospital — **Principal Referral and Specialised**

Southern Zone

	Data Type:	Hospital Score:	Peer Group Median:	Reference:
Occupancy Rate (Bed Day Efficiency)	Percentage	48.2	84.5	EFF-17
Length of Stay	Days	2.01	3.18	EFF-19
Cancellation rate	Percentage	11.7	19.2	EFF-24
Total Cost / Weighted Separation	Dollars	2,271	2,396	EFF-25

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+ Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

System Integration and Change

Mater Misericordiae Public Childrens Hospital — **Principal Referral and Specialised**

uthern Zone

Type of Score:	Hospital Score:	Peer Group Median:	Reference
Benchmarking			
In selected clinical areas - external	Percentage	66.7	66.7	SIC06.3
Clinical Pathways			
Extent of development and use in selected clinical areas	Percentage	0	40.1	SIC07.1
Facilitating continuity of care			
Use of pre admission clinics for elective surgery	Max score 5	0/3	3	SIC08.1
Provision of discharge summaries to GPs	Max score 5	3/3	3	SIC08.2
Shared ante and post natal care	Max score 5	N/A	N/A	SIC08.3
Cardiac rehabilitation	Max score 3	N/A	N/A	SIC08.4
Provision of electronic discharge summaries to GPs	Max score 3	1/3	0.5	SIC08.5
Quality of Information			
...uracy	Percentage	83.5	94	SIC04.1
Timeliness - Number of months on time	Months	9	5.5	SIC04.2a
Timeliness - Number of days late per month	Days	0	8.6	SIC04.2b
Use of Information			
Availability of electronic information	Percentage	47.9	47.9	SIC05.1
Collection and use of clinical information	Percentage	61.5	65.1	SIC05.2
Accreditation			
Accreditation	Yes/No	Yes	12/12	SIC01
Credentialling			
Credentialling	Yes/No	Yes	11/12	SIC02
Workforce Management			
Retention of Nursing Staff	Percentage	71.7	79.3	SIC03.1
Retention of Allied Health Staff	Percentage	67.3	74.5	SIC03.2
Median Age Nursing Staff	Years	37	38.8	SIC03.3
Benchmarking			
...ected clinical areas	Percentage	50	62.5	SIC06.1
In selected clinical areas - internal	Percentage	0	61.1	SIC06.2
Clinical Pathways			
Extent of development and use as per Ontario	Percentage	0	44.5	SIC07.2
Surgical (Orthopaedic) - extent of development and use	Percentage	0	76.8	SIC07.3a
Medical - extent of development and use	Percentage	0	26.2	SIC07.3b
O & G - extent of development and use	Percentage	N/A	N/A	SIC07.3c
Telehealth			
Extent of telehealth usage	Percentage	5.8	5.8	SIC09

...icators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

N/A - Not Applicable N/R - Not Reported

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Measured Quality

Hospital Report

Attachments

- Attachment 1 .....Statistics – Quartiles per Indicator
- Attachment 2 .....State Report

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Statistics - Quartiles per Indicator

Attachment 1

Mater Misericordiae Public Childrens Hospital — **Principal Referral and Specialised**

Southern Zone

Indicator Number and Description:	Hospital Score	Peer Group Min	25th	Median	75th	Max	
Overall Performance Group: Medical							
PS05 Overall Care Index Medical	63.0	58.2	62.5	63.4	65.7	72.9	
Overall Performance Group: Surgical							
PS05 Overall Care Index Surgical	71.2	60.8	66.0	68.4	70.8	78.8	
Overall Performance Group: Not Summarised							
PS01 Access and Admission Index All types combined	61.0	59.2	61.7	62.7	65.1	73.9	
PS01 Access and Admission Index Medical	60.6	58.2	60.8	63.0	64.2	73.4	
PS01 Access and Admission Index Surgical	68.9	58.4	66.8	69.4	71.1	82.2	
PS02 Complaints Management Index All types combined	64.8	60.0	62.9	63.9	65.8	73.1	
PS02 Complaints Management Index Medical	64.5	56.3	61.4	63.9	65.4	73.9	
PS02 Complaints Management Index Surgical	70.7	63.4	65.5	68.2	69.9	76.8	
PS03 Discharge and Follow-up Index Surgical	69.4	56.9	62.8	66.0	68.5	74.1	
PS03 Discharge and Follow-up Index All types combined	59.1	55.3	59.1	60.3	63.6	68.7	
PS03 Discharge and Follow-up Index Medical	58.6	51.6	58.0	60.2	61.8	68.5	
PS[illegible] General Patient Information Index Surgical	74.3	68.6	70.7	72.5	74.1	82.7	
PS[illegible] General Patient Information Index Medical	66.8	64.3	66.3	68.5	70.3	78.0	
PS04 General Patient Information Index All types combined	67.2	65.1	66.8	69.4	70.8	76.9	
PS05 Overall Care Index All types combined	63.4	59.5	62.7	63.9	66.0	72.8	
PS06 Physical Environment Index Medical	61.0	52.8	59.6	62.1	64.2	70.1	
PS06 Physical Environment Index All types combined	61.4	55.4	59.1	61.5	64.4	70.7	
PS06 Physical Environment Index Surgical	69.2	55.2	59.8	63.4	68.7	75.2	
PS07 Treatment & Related Information Index All types combined	67.2	60.6	63.4	64.8	66.5	72.3	
PS07 Treatment & Related Information Index Medical	66.8	59.9	62.6	64.6	67.2	73.0	
PS07 Treatment & Related Information Index Surgical	74.6	64.0	66.9	68.9	72.1	79.1	
[illegible] Efficiency							
Overall Performance Group: Activity							
EFF-17 Occupancy Rate (Bed Day Efficiency)	48.2	48.2	66.6	84.5	90.0	104.2	
EFF-19 Length of Stay	2.0	2.0	2.9	3.2	3.7	5.5	
EFF-24 Cancellation rate	11.7	6.3	11.7	19.2	21.4	25.1	
Overall Performance Group: Cost of Service							
EFF-25 Total Cost / Weighted Separation	2,271.4	1,650.9	2,282.9	2,396.0	2,506.8	3,101.6	
[illegible] - System Integration (Clinical)							
Overall Performance Group: Benchmarking and Clinical Pathways							
[illegible] Benchmarking - In selected clinical areas - external	66.7	16.7	61.1	66.7	80.2	100.0	
SIC[illegible] Clinical Pathways - Extent of development and use	0.0	0.0	12.3	40.1	58.1	71.4	
Overall Performance Group: Continuity of Care							
SIC08.1 Facilitating continuity of care - Use of pre admission clinics for elective surgery	0.0	0.0	3.0	3.0	3.0	3.0	
SIC08.2 Facilitating continuity of care - Provision of discharge summaries to GPs	3.0	0.0	2.8	3.0	3.0	3.0	
SIC08.3 Facilitating continuity of care - Shared ante and post natal care	3.0	3.0	3.0	3.0	3.0	3.0	
SIC08.4 Facilitating continuity of care - Cardiac rehabilitation	3.0	1.0	2.8	3.0	3.0	3.0	
SIC08.5 Facilitating continuity of care - Provision of electronic discharge summaries to GPs	1.0	0.0	0.0	0.5	1.5	3.0	
Overall Performance Group: Quality and Use of Information							
SIC04.1 Quality of information - Accuracy	83.5	74.8	92.7	94.0	94.5	96.0	
SIC04.2a Quality of information - Timeliness - Number of months on time	9.0	0.0	2.8	5.5	6.3	9.0	
SIC04.2b Quality of information - Timeliness - Number of days late per month	0.0	0.0	3.3	8.6	14.9	82.7	
SIC05.1 Use of information - Availability of electronic information	47.9	25.0	43.8	47.9	54.7	72.9	
SIC05.2 Use of information - Collection and use of clinical information	61.5	28.6	57.9	65.2	77.1	95.7	
Overall Performance Group: Not Summarised							
SIC01 Accreditation	1.0	1.0	1.0	1.0	1.0	1.0	
SIC02 Credentialling	1.0	0.0	1.0	1.0	1.0	1.0	
SIC03.1 Workforce Management - Retention of Nursing Staff	71.7	67.9	73.8	79.3	82.2	84.1	
SIC03.2 Workforce Management - Retention of Allied Health Staff	67.3	66.7	71.8	74.5	78.6	83.8	
SIC[illegible] Workforce Management - Median Age Nursing Staff	37.0	34.0	37.8	38.8	39.6	41.0	
SIC06.1 Benchmarking - In selected clinical areas	50.0	15.4	55.3	62.5	84.7	100.0	
SIC06.2 Benchmarking - In selected clinical areas - internal	0.0	0.0	0.0	61.1	91.7	100.0	

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:		Hospital Score	Peer Group Min	25th	Median	75th	Max	[redacted]
SIC07.2	Clinical Pathways - Extent of development and use as per Ontario	0.0	0.0	14.3	44.5	67.1	77.4	
SIC07.3a	Clinical Pathways - Surgical (Orthopaedic) - extent of development and use	0.0	0.0	2.7	76.8	84.8	85.7	
SIC07.3b	Clinical Pathways - Medical - extent of development and use	0.0	0.0	11.9	26.2	42.9	76.2	
SIC07.3c	Clinical Pathways - O & G - extent of development and use		0.0	3.6	53.6	64.3	85.7	
SIC09	Telehealth - Extent of telehealth usage	5.8	0.0	2.9	5.8	15.4	19.2	

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CAB.0007.0002.00122

Summary of Potential Reasons for Variance for MATER MISERICORDIAE MOTHERS' HOSPITAL

Indicators Flagged:
CI10.1 Standard primiparae-Caesarean section rates (99.9% confidence level)

Responses:
The potential reasons for variance given by Mater Misericordiae Mothers' Hospital are summarised below.

Caesarean section rates:

- 13 out of 114 caesareans were elective.
- 74 out of 114 involved complications of labour.
- 27 out of 114 involved inductions of labour (no explanation was provided as to why these were caesareans).

No further comment was made by the hospital concerned.

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Measured Quality

Hospital Report

Mater Misericordiae Public Mothers Hospital

Southern Zone

Principal Referral and Specialised Peer Group

July 2002

Version Number	Date	Comment
0.1	17 May 2002	Draft report for feedback
0.2	31 May 2002	Modification from feedback
0.3	26 June 2002	Modification from feedback

CAB.0007.0002.00124

Overall Performance

Mater Misericordiae Public Mothers Hospital — **Southern Zone**

Peer Group: Principal Referral and Specialised

Clinical Utilisation and Outcomes		Patient Satisfaction	
Obstetrics & Gynaecology	☆☆	Maternity	☆☆
		Medical	☆☆
		Surgical	☆☆
Overall	☆☆	**Overall**	☆☆
Efficiency		**System Integration and Change**	
Activity	☆☆	Benchmarking and Clinical Pathways	☆☆☆
Cost of Service	☆☆☆	Continuity of Care	☆☆☆
		Quality and Use of Information	☆☆
Overall	☆☆	**Overall**	☆☆☆

Performance Compared to the Average

☆	Lower: Aggregated Hospital performance is more than one standard deviation below the peer mean.
☆☆	Average: Aggregated Hospital performance is within one standard deviation of the peer mean.
☆☆☆	Higher: Aggregated Hospital performance is more than one standard deviation above the peer mean.

Overall performance results are based on selected indicators within this report. Please refer to the indicators marked "+" within each quadrant report to identify those indicators used to calculate the overall performance of the hospital.

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Clinical Utilisation and Outcomes

Mater Misericordiae Public Mothers Hospital — **Principal Referral and Specialised**

Southern Zone

Performance Indicator

	Risk Adjusted Hospital Score: (Rate per 100 separations)	Peer Group Mean:	Significance:	Reference:
Hysterectomy				
Long Stay rates	6.1	15.2	*	CI09.1
Complications of Surgery	11.0	12.4		CI09.3
on Women < 35 years	11.4	11.0		CI09.4
Blood Transfusion Rates	2.9	3.7		CI09.5
Standard Primiparae				
C-section	17.2	13.1	**	CI10.1
Induction of Labour	13.8	12.8		CI10.2
Perineal Tears	2.4	2.9		CI10.3
Small for Gestational Age				
Small for Gestational Age	3.8	3.5	*	CI11.1
Maternal Post-Natal Long Stay Rate				
Vaginal Births	3.0	7.6	**	CI13.1
Caesarean Section Births	2.9	6.5	**	CI13.2

Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

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+ Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 10/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical

Patient Satisfaction

Mater Misericordiae Public Mothers Hospital — **Principal Referral and Specialised**

uthern Zone

	Hospital Score:	Peer Group Mean:	Significance:	Reference:
[redacted]				
Access and Admission Index	70.9	64.1	**	PS01
Complaints Management Index	66.5	64.6		PS02
Discharge and Follow-up Index	64.9	61.4	*	PS03
General Patient Information Index	71.2	68.9		PS04
Overall Care Index	66.5	64.5		PS05
Physical Environment Index	59.6	62.3		PS06
Treatment & Related Information Index	65.2	65.3		PS07
[redacted]				
Access and Admission Index	66.7	65.2		PS01
Complaints Management Index	65.2	63.3		PS02
Discharge and Follow-up Index	68.8	64.4	*	PS03
General Patient Information Index	64.7	65.1		PS04
+ Overall Care Index	63.4	64.4		PS05
Physical Environment Index	47.2	63.0	**	PS06
Treatment & Related Information Index	69.6	64.4	*	PS07
[redacted]				
Access and Admission Index	68.9	63.0		PS01
Complaints Management Index	56.3	64.6		PS02
Discharge and Follow-up Index	61.3	60.2		PS03
General Patient Information Index	67.9	69.2		PS04
+ Overall Care Index	63.6	64.1		PS05
Physical Environment Index	63.0	62.0		PS06
Treatment & Related Information Index	60.4	65.5		PS07
[redacted]				
Access and Admission Index	71.5	69.3		PS01
Complaints Management Index	68.2	68.2		PS02
Discharge and Follow-up Index	65.1	65.5		PS03
General Patient Information Index	72.3	72.8		PS04
+ Overall Care Index	67.2	68.4		PS05
Physical Environment Index	60.1	64.0		PS06
Treatment & Related Information Index	65.5	69.6		PS07

Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

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icator has been used to determine overall performance.

d: 05/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

N/A - Not Applicable N/R - Not Reported

Efficiency

Mater Misericordiae Public Mothers Hospital — **Principal Referral and Specialised**

Southern Zone

	Data Type:	Hospital Score:	Peer Group Median:	Reference:
Occupancy Rate (Bed Day Efficiency)	Percentage	64.9	84.5	EFF-17
Length of Stay	Days	3.21	3.18	EFF-19
Total Cost / Weighted Separation	Dollars	2,103	2,396	EFF-25

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Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

System Integration and Change

Mater Misericordiae Public Mothers Hospital — **Principal Referral and Specialised**

uthern Zone

Type of Score:	Hospital Score:	Peer Group Median:	Reference
Benchmarking			
In selected clinical areas - external	Percentage	87.5	66.7	SIC06.3
Clinical Pathways			
Extent of development and use in selected clinical areas	Percentage	64.3	40.1	SIC07.1
Facilitating continuity of care			
Use of pre admission clinics for elective surgery	Max score 5	3/3	3	SIC08.1
Provision of discharge summaries to GPs	Max score 5	3/3	3	SIC08.2
Shared ante and post natal care	Max score 5	3/3	3	SIC08.3
Cardiac rehabilitation	Max score 3	N/A	N/A	SIC08.4
Provision of electronic discharge summaries to GPs	Max score 3	3/3	0.5	SIC08.5
Quality of Information			
curacy	Percentage	94.2	94	SIC04.1
Timeliness - Number of months on time	Months	6	5.5	SIC04.2a
Timeliness - Number of days late per month	Days	17.7	8.6	SIC04.2b
Use of Information			
Availability of electronic information	Percentage	54.2	47.9	SIC05.1
Collection and use of clinical information	Percentage	61.7	65.1	SIC05.2
Accreditation			
Accreditation	Yes/No	Yes	12/12	SIC01
Credentialling			
Credentialling	Yes/No	Yes	11/12	SIC02
Workforce Management			
Retention of Nursing Staff	Percentage	70.5	79.3	SIC03.1
Retention of Allied Health Staff	Percentage	83.3	74.5	SIC03.2
Median Age Nursing Staff	Years	39.5	38.8	SIC03.3
Benchmarking			
lected clinical areas	Percentage	77.8	62.5	SIC06.1
In selected clinical areas - internal	Percentage	0	61.1	SIC06.2
Clinical Pathways			
Extent of development and use as per Ontario	Percentage	75	44.5	SIC07.2
Surgical (Orthopaedic) - extent of development and use	Percentage	N/A	N/A	SIC07.3a
Medical - extent of development and use	Percentage	N/A	N/A	SIC07.3b
O & G - extent of development and use	Percentage	64.3	53.6	SIC07.3c
Telehealth			
Extent of telehealth usage	Percentage	5.8	5.8	SIC09

dicators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

N/A - Not Applicable N/R - Not Reported

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Measured Quality

Hospital Report

Attachments

- Attachment 1.....Statistics – Quartiles per Indicator
- Attachment 2.....State Report

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:	Hospital Score	Peer Group Min	25th	Median	75th	Max	[redacted]

Mater Misericordiae Public Mothers Hospital — **Principal Referral and Specialised**

Southern Zone

[redacted]

Overall Performance Group: Obstetrics & Gynaecology

I09.1	Hysterectomy - Long Stay rates	6.1	6.1	8.1	11.0	21.2	23.1	[redacted]
I09.3	Hysterectomy - Complications of Surgery	11.0	7.6	8.8	11.3	11.6	36.3	
I09.4	Hysterectomy - on Women < 35 years	11.4	6.7	8.7	11.4	11.7	16.4	
I09.5	Hysterectomy - Blood Transfusion Rates	2.9	1.1	2.8	3.1	6.1	7.4	
I10.1	Standard Primiparae - C-section	17.2	5.3	10.6	12.1	14.3	17.2	
I10.2	Standard Primiparae - Induction of Labour	13.8	8.7	11.6	13.8	15.4	19.2	
I10.3	Standard Primiparae - Perineal Tears	2.4	1.0	1.8	2.4	3.3	6.3	
I11.1	Small for Gestational Age - Small for Gestational Age	3.8	2.8	3.1	3.4	3.9	4.5	
I13.1	Maternal Post-Natal Long Stay Rate (Vaginal Births)	3.0	1.8	3.5	7.2	9.1	17.3	
I13.2	Maternal Post-Natal Long Stay Rate (Caesarean Section Births)	2.9	1.7	3.5	5.7	9.5	11.8	

[redacted]

Overall Performance Group: Maternity

[redacted]	Overall Care Index Maternity	63.4	59.6	61.1	64.3	66.0	76.5	[redacted]

Performance Group: Medical

S05	Overall Care Index Medical	63.8	58.2	62.5	63.4	65.7	72.9	[redacted]

Overall Performance Group: Surgical

S05	Overall Care Index Surgical	67.2	60.8	66.0	68.4	70.8	78.8	[redacted]

Overall Performance Group: Not Summarised

S01	Access and Admission Index Surgical	71.5	58.4	66.8	69.4	71.1	82.2	[redacted]
S01	Access and Admission Index All types combined	70.9	59.2	61.7	62.7	65.1	73.9	
S01	Access and Admission Index Maternity	66.7	60.5	63.4	64.9	66.5	68.9	
S01	Access and Admission Index Medical	68.9	58.2	60.8	63.0	64.2	73.4	
S02	Complaints Management Index Maternity	65.2	57.9	60.1	63.0	65.5	67.4	
S02	Complaints Management Index Medical	56.3	56.3	61.4	63.9	65.4	73.9	
S02	Complaints Management Index All types combined	66.5	60.0	62.9	63.9	65.8	73.1	
S02	Complaints Management Index Surgical	68.2	63.4	65.5	68.2	69.9	76.8	
S03	Discharge and Follow-up Index All types combined	64.9	55.3	59.1	60.3	63.9	68.7	
S03	Discharge and Follow-up Index Maternity	68.8	56.5	62.1	66.0	67.9	88.9	
S03	Discharge and Follow-up Index Medical	61.5	51.6	58.0	60.2	61.8	68.5	
S03	Discharge and Follow-up Index Surgical	65.1	56.9	62.8	66.0	68.5	74.1	
S04	General Patient Information Index Maternity	64.7	59.5	63.1	64.3	68.1	83.4	
S04	General Patient Information Index Medical	67.9	64.3	66.3	68.5	70.3	78.0	
[redacted]	General Patient Information Index All types combined	71.2	65.1	66.8	68.4	70.6	76.9	
S04	General Patient Information Index Surgical	72.3	68.6	70.7	72.5	74.1	82.7	
S05	Overall Care Index All types combined	66.5	59.5	62.7	63.9	66.0	72.8	
S06	Physical Environment Index All types combined	59.6	55.4	59.1	61.5	64.4	70.7	
S06	Physical Environment Index Maternity	47.2	47.2	57.4	59.0	66.1	69.5	
S06	Physical Environment Index Medical	63.0	52.8	59.6	62.1	64.2	70.1	
S06	Physical Environment Index Surgical	60.1	55.2	59.8	63.4	68.7	75.2	
S07	Treatment & Related Information Index Surgical	65.5	64.0	66.9	68.9	72.1	79.1	
S07	Treatment & Related Information Index All types combined	65.2	60.6	63.4	64.8	66.5	72.3	
S07	Treatment & Related Information Index Maternity	69.6	57.8	60.1	65.5	67.9	83.3	
S07	Treatment & Related Information Index Medical	60.4	59.9	62.6	64.6	67.2	73.0	

[redacted]

Overall Performance Group: Activity

F-17	Occupancy Rate (Bed Day Efficiency)	64.9	48.2	66.6	84.5	90.0	104.2	[redacted]
F-19	Length of Stay	3.2	2.0	2.9	3.2	3.7	5.5	

Overall Performance Group: Cost of Service

F-25	Total Cost / Weighted Separation	2,103.5	1,650.9	2,282.9	2,396.0	2,506.8	3,101.6	[redacted]

[redacted]

Performance Group: Benchmarking and Clinical Pathways

C	Benchmarking - In selected clinical areas - external	87.5	16.7	61.1	66.7	80.2	100.0	[redacted]
C07.1	Clinical Pathways - Extent of development and use	64.3	0.0	12.3	40.1	58.1	71.4	

Overall Performance Group: Continuity of Care

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:		Hospital Score	Peer Group Min	25th	Median	75th	Max	[redacted]
SIC08.1	Facilitating continuity of care - Use of pre admission clinics for elective surgery	3.0	0.0	3.0	3.0	3.0	3.0	
SIC08.2	Facilitating continuity of care - Provision of discharge summaries to GPs	3.0	0.0	2.8	3.0	3.0	3.0	
SIC08.3	Facilitating continuity of care - Shared ante and post natal care	3.0	3.0	3.0	3.0	3.0	3.0	
SIC08.4	Facilitating continuity of care - Cardiac rehabilitation		1.0	2.8	3.0	3.0	3.0	
SIC08.5	Facilitating continuity of care - Provision of electronic discharge summaries to GPs	3.0	0.0	0.0	0.5	1.5	3.0	
Overall Performance Group:	Quality and Use of Information							
SIC04.1	Quality of Information - Accuracy	94.2	74.8	92.7	94.0	94.5	96.0	
SIC04.2a	Quality of Information - Timeliness - Number of months on time	6.0	0.0	2.8	5.5	6.3	9.0	
SIC04.2b	Quality of Information - Timeliness - Number of days late per month	17.7	0.0	3.3	8.6	14.9	82.7	
SIC05.1	Use of Information - Availability of electronic information	54.3	25.0	43.8	47.9	54.7	72.9	
SIC05.2	Use of Information - Collection and use of clinical information	91.7	28.8	57.9	65.2	77.1	95.7	
Overall Performance Group:	Not Summarised							
SIC01	Accreditation	1.0	1.0	1.0	1.0	1.0	1.0	
SIC02	Credentialling	1.0	0.0	1.0	1.0	1.0	1.0	
SIC03.1	Workforce Management - Retention of Nursing Staff	70.5	67.9	73.8	79.3	82.2	84.1	
SIC03.2	Workforce Management - Retention of Allied Health Staff	83.3	66.7	71.8	74.5	78.6	83.8	
SIC03.3	Workforce Management - Median Age Nursing Staff	39.5	34.0	37.8	38.8	39.6	41.0	
SIC06.1	Benchmarking - In selected clinical areas	77.8	15.4	55.8	62.5	84.7	100.0	
SIC06.2	Benchmarking - In selected clinical areas - Internal	0.0	0.0	0.0	61.1	91.7	100.0	
SIC07.2	Clinical Pathways - Extent of development and use as per Ontario	75.0	0.0	14.3	44.6	67.1	77.4	
SIC07.3a	Clinical Pathways - Surgical (Orthopaedic) - extent of development and use		0.0	2.7	76.8	84.8	85.7	
SIC07.3b	Clinical Pathways - Medical - extent of development and use		0.0	11.9	26.2	42.9	76.2	
SIC07.3c	Clinical Pathways - O & G - extent of development and use	64.3	0.0	3.6	53.6	64.3	85.7	
SIC09	Telehealth - Extent of telehealth usage	5.8	0.0	2.9	5.8	15.4	19.2	

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Summary of Potential Reasons for Variance for NAMBOUR HOSPITAL

Indicators Flagged:

CI07.1 Knee replacement –Long stay rate (90-99.9% confidence level)
CI08.2 Hip replacement-Long stay rate (90-99.9% confidence level)
CI13.1 Maternal Postnatal (vaginal births)- Long stay rate (99.9% confidence level)
CI13.2 Maternal Postnatal (caesarean births)-Long stay rate (99.9% confidence level)

Responses:

The potential reasons for variance given by Nambour Hospital (Sunshine Coast Health Service District) are summarised below.

- **Knee and hip replacement long stay rates**: the Executive Director of Medical Services considered that the hospital admitted a higher proportion of patients with comorbidities (using the American Society of Anaesthesiologists scores). Measured Quality indicators risk adjust for comorbidities, however, the response indicated that they were still considered to have a significant impact on the recorded lengths of stay. In addition, individual clinical practice of some consultants requires a certain degree of knee flexion prior to discharge (potentially resulting in a longer stay). There has also been a major increase in consultant personnel in orthopaedics since the data collection period.

- **Maternal long stay rates**: coding and documentation discrepancies impacted on the long stay rate for maternity. A review at the hospital, comparing the Hospital Based Corporate Information System (HBCIS) to the Perinatal Data Collection (PDC) data, revealed significant discrepancies in accurately reporting the mothers' discharge date.
  In addition, the District does not have a community based post natal home visit service which allows mothers to be discharged within 24 hours to 48 hours post delivery. The response indicated that the organisation believed the geography and demographics of the coast, when compared to metropolitan or city areas, did not lend itself to such a service.

As a result of investigating these variances, Nambour Hospital indicated that:

- a study is now being undertaken to compare the HBCIS discharge date with the PDC to confirm or exclude the concerns raised above.

- a review of more recent data will be undertaken to check the correlation between HBCIS and PDC and to identify any on-going problems. However, improvements have been made in the PDC reporting process since the period in question.

- an internal audit for quality of information reporting will be implemented.

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Measured Quality

Hospital Report

Nambour Hospital

Central Zone

Principal Referral and Specialised Peer Group

July 2002

Version Number	Date	Comment
0.1	17 May 2002	Draft report for feedback
0.2	31 May 2002	Modification from feedback
0.3	26 June 2002	Modification from feedback

CAB.0007.0002.00134

Overall Performance

Nambour Hospital **Central Zone**

Peer Group: Principal Referral and Specialised

Clinical Utilisation and Outcomes		Patient Satisfaction	
Medical	☆☆☆	Maternity	☆☆
Obstetrics & Gynaecology	☆☆	Medical	☆☆
Surgical	☆☆	Surgical	☆☆
Overall	☆☆	**Overall**	☆
Efficiency		**System Integration and Change**	
Activity	☆☆☆	Benchmarking and Clinical Pathways	☆
Cost of Service	☆☆☆	Continuity of Care	☆
Staffing	☆☆	Quality and Use of Information	☆☆
Overall	☆☆	**Overall**	☆☆

Performance Compared to the Average

☆	Lower: Aggregated Hospital performance is more than one standard deviation below the peer mean.
☆☆	Average: Aggregated Hospital performance is within one standard deviation of the peer mean.
☆☆☆	Higher: Aggregated Hospital performance is more than one standard deviation above the peer mean.

Overall performance results are based on selected indicators within this report. Please refer to the indicators marked "+" within each quadrant report to identify those indicators used to calculate the overall performance of the hospital.

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Clinical Utilisation and Outcomes

Nambour Hospital
Central Zone
Performance Indicator

Principal Referral and Specialised

	Risk Adjusted Hospital Score: (Rate per 100 separations)	Peer Group Mean:	Significance:	Reference:
Acute Myocardial Infarction				
In-hospital Mortality	7.5	11.2	*	CI01.1
Long Stay Rates	5.1	10.8	*	CI01.2
Heart Failure				
In-hospital Mortality	6.7	7.0		CI02.1
Long Stay Rates	6.6	10.4		CI02.2
Stroke				
In-hospital Mortality	21.0	22.1		CI03.1
Long Stay Rates	6.8	11.6		CI03.2
Nursing Home Separations	10.0	11.7		CI03.4
Pneumonia				
In-hospital Mortality	7.5	8.6		CI04.1
Long Stays	8.8	13.8		CI04.2
Asthma				
Long Stay Rates	9.5	11.5		CI14.1
Hysterectomy				
Long Stay rates	10.2	15.2		CI09.1
Complications of Surgery	11.5	12.4		CI09.3
on Women < 35 years	6.7	11.0	*	CI09.4
Blood Transfusion Rates	2.2	3.7		CI09.5
Standard Primiparae				
C-section	5.3	13.1	**	CI10.1
Induction of Labour	14.1	12.8		CI10.2
Perineal Tears	1.0	2.9	*	CI10.3
Small for Gestational Age				
Small for Gestational Age	4.1	3.5	*	CI11.1
Maternal Post-Natal Long Stay Rate				
Vaginal Births	17.3	7.6	**	CI13.1
Caesarean Section Births	11.8	6.5	**	CI13.2
Fractured Neck of Femur				
In-hospital Mortality	7.7	6.8		CI06.1
Long Stays	3.4	9.0	*	CI06.2
Nursing Home Separations	16.7	21.3		CI06.5
Complications of Surgery	17.0	12.8		CI06.6
Knee Replacement				
Long Stays	21.3	10.8	*	CI07.1
Complications of Surgery	24.1	22.3		CI07.3
Hip Replacement				
Long Stay Rates	20.4	11.7	*	CI08.1
Complications of Surgery	29.9	28.0		CI08.3
Colorectal Carcinoma				
Long Stay Rates	3.9	9.9		CI15.1
Complications of Surgery	33.9	32.0		CI15.3

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Statistical Significance

*	Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.
**	99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

Indicators listed within this overall performance group have been used to determine overall performance.

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Patient Satisfaction

Nambour Hospital — **Principal Referral and Specialised**

Central Zone

	Hospital Score:	Peer Group Mean:	Significance:	Reference:
[redacted]				
Access and Admission Index	62.8	64.1		PS01
Complaints Management Index	63.6	64.6		PS02
Discharge and Follow-up Index	59.0	61.4	*	PS03
General Patient Information Index	68.2	68.9		PS04
Overall Care Index	63.3	64.5		PS05
Physical Environment Index	61.6	62.3		PS06
Treatment & Related Information Index	64.0	65.3		PS07
[redacted]				
Access and Admission Index	64.3	65.2		PS01
Complaints Management Index	59.8	63.3		PS02
Discharge and Follow-up Index	57.6	64.4	*	PS03
General Patient Information Index	62.6	65.1		PS04
+ Overall Care Index	61.1	64.4	*	PS05
Physical Environment Index	59.3	63.0	*	PS06
Treatment & Related Information Index	60.2	64.4	*	PS07
[redacted]				
Access and Admission Index	61.0	63.0		PS01
Complaints Management Index	63.3	64.6		PS02
Discharge and Follow-up Index	56.2	60.2	*	PS03
General Patient Information Index	68.3	69.2		PS04
+ Overall Care Index	62.6	64.1		PS05
Physical Environment Index	62.2	62.0		PS06
Treatment & Related Information Index	63.5	65.5		PS07
[redacted]				
Access and Admission Index	69.1	55.1	*	PS01
Complaints Management Index	66.1	54.4	*	PS02
Discharge and Follow-up Index	69.6	54.7	*	PS03
General Patient Information Index	69.3	57.6	*	PS04
Overall Care Index	66.1	54.8	*	PS05
Physical Environment Index	63.5	57.8		PS06
Treatment & Related Information Index	62.3	50.7	*	PS07
[redacted]				
Access and Admission Index	64.9	69.3	*	PS01
Complaints Management Index	64.6	68.2		PS02
Discharge and Follow-up Index	62.8	65.5		PS03
General Patient Information Index	69.1	72.8	*	PS04
+ Overall Care Index	64.9	68.4	*	PS05
Physical Environment Index	59.8	64.0	*	PS06
Treatment & Related Information Index	67.5	69.6		PS07

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Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

[redacted]dicator has been used to determine overall performance.

Printed: 05/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

N/A - Not Applicable N/R - Not Reported

Efficiency

Nambour Hospital

Central Zone

Principal Referral and Specialised

	Data Type:	Hospital Score:	Peer Group Median:	Reference:
Occupancy Rate (Bed Day Efficiency)	Percentage	92.4	84.5	EFF-17
Length of Stay	Days	3.14	3.18	EFF-19
Cancellation rate	Percentage	6.33	19.2	EFF-24
Total Cost / Weighted Separation	Dollars	1,651	2,396	EFF-25
Catering - total cost	Dollars	27.6	27.7	EFF-36a
Energy Consumption per square metre	Dollars	28.6	28.6	EFF-45.4
Hours of Sick Leave by Staff Category - Managerial And Clerical	Percentage	3.28	3.18	EFF-06.2
Hours of Sick Leave by Staff Category - Medical	Percentage	1.54	1.46	EFF-06.3
Hours of Sick Leave by Staff Category - Nursing	Percentage	3.58	3.57	EFF-06.4
Hours of Sick Leave by Staff Category - Operational	Percentage	3.47	3.63	EFF-06.5
Hours of Sick Leave by Staff Category - Professional	Percentage	2.78	2.57	EFF-06.6
Hours of Sick Leave by Staff Category - Technical	Percentage	3.08	2.88	EFF-06.7
Hours of Sick Leave by Staff Category - Visiting Medical Officers	Percentage	2.17	1.36	EFF-06.9
Cost of Sick Leave by Staff Category - Managerial And Clerical	Dollars	1,164	1,151	EFF-08.2
Cost of Sick Leave by Staff Category - Medical	Dollars	1,131	1,102	EFF-08.3
Cost of Sick Leave by Staff Category - Nursing	Dollars	1,514	1,436	EFF-08.4
Cost of Sick Leave by Staff Category - Operational	Dollars	1,038	1,072	EFF-08.5
Cost of Sick Leave by Staff Category - Professional	Dollars	1,450	1,262	EFF-08.6
Cost of Sick Leave by Staff Category - Technical	Dollars	1,279	1,125	EFF-08.7
Cost of Sick Leave by Staff Category - Visiting Medical Officers	Dollars	3,287	2,248	EFF-08.9
Cost of Work Cover	Dollars	2.20	1.05	EFF-11
Hours of Overtime by Staff Category - Managerial And Clerical	Percentage	0.49	0.63	EFF-14.2
Hours of Overtime by Staff Category - Medical	Percentage	18.7	16.3	EFF-14.3
Hours of Overtime by Staff Category - Nursing	Percentage	0.38	0.55	EFF-14.4
Hours of Overtime by Staff Category - Operational	Percentage	0.81	1.20	EFF-14.5
Hours of Overtime by Staff Category - Professional	Percentage	4.19	2.71	EFF-14.6
Hours of Overtime by Staff Category - Technical	Percentage	0.15	0.49	EFF-14.7
Hours of Overtime by Staff Category - Visiting Medical Officers	Percentage	14.5	11.0	EFF-14.9
Cost of Overtime by Staff Category - Managerial And Clerical	Dollars	250	325	EFF-16.2
Cost of Overtime by Staff Category - Medical	Dollars	21,892	19,694	EFF-16.3
Cost of Overtime by Staff Category - Nursing	Dollars	229	326	EFF-16.4
Cost of Overtime by Staff Category - Operational	Dollars	284	592	EFF-16.5
Cost of Overtime by Staff Category - Professional	Dollars	3,759	2,195	EFF-16.6
Cost of Overtime by Staff Category - Technical	Dollars	86.8	299	EFF-16.7
Cost of Overtime by Staff Category - Visiting Medical Officers	Dollars	27,294	22,933	EFF-16.9
Full-Time Equivalent (FTE) Staff	Numeric	1,059	1,359	EFF-01
FTE Staff by Category - Managerial And Clerical	Numeric	179	178	EFF-02.2
FTE Staff by Category - Medical	Numeric	93.9	112	EFF-02.3
FTE Staff by Category - Nursing	Numeric	481	678	EFF-02.4
FTE Staff by Category - Operational	Numeric	192	199	EFF-02.5
FTE Staff by Category - Professional	Numeric	79.2	107	EFF-02.6
FTE Staff by Category - Technical	Numeric	25.5	6.61	EFF-02.7
FTE Staff by Category - Visiting Medical Officers	Numeric	8.19	11.0	EFF-02.9
Hours of Sick Leave	Percentage	3.24	3.22	EFF-05
Cost of Sick Leave	Dollars	1,336	1,293	EFF-07
Hours of Overtime	Percentage	2.86	2.86	EFF-13
Cost of Overtime	Dollars	2,634	2,634	EFF-15

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+ Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

System Integration and Change

Nambour Hospital — **Principal Referral and Specialised**

entral Zone

	Type of Score:	Hospital Score:	Peer Group Median:	Reference
Benchmarking				
In selected clinical areas - external	Percentage	61.1	66.7	SIC06.3
Clinical Pathways				
Extent of development and use in selected clinical areas	Percentage	6.1	40.1	SIC07.1
Facilitating continuity of care				
Use of pre admission clinics for elective surgery	Max score 5	3/3	3	SIC08.1
Provision of discharge summaries to GPs	Max score 5	3/3	3	SIC08.2
Shared ante and post natal care	Max score 5	3/3	3	SIC08.3
Cardiac rehabilitation	Max score 3	1/3	3	SIC08.4
Provision of electronic discharge summaries to GPs	Max score 3	0/3	0.5	SIC08.5
Quality of Information				
ccuracy	Percentage	96	94	SIC04.1
Timeliness - Number of months on time	Months	5	5.5	SIC04.2a
Timeliness - Number of days late per month	Days	12.3	8.6	SIC04.2b
Use of Information				
Availability of electronic information	Percentage	25	47.9	SIC05.1
Collection and use of clinical information	Percentage	51.4	65.1	SIC05.2
Accreditation				
Accreditation	Yes/No	Yes	12/12	SIC01
Credentialling				
Credentialling	Yes/No	Yes	11/12	SIC02
Workforce Management				
Retention of Nursing Staff	Percentage	80.9	79.3	SIC03.1
Retention of Allied Health Staff	Percentage	77	74.5	SIC03.2
Median Age Nursing Staff	Years	41	38.8	SIC03.3
Benchmarking				
elected clinical areas	Percentage	38.9	62.5	SIC06.1
In selected clinical areas - internal	Percentage	16.7	61.1	SIC06.2
Clinical Pathways				
Extent of development and use as per Ontario	Percentage	7.1	44.5	SIC07.2
Surgical (Orthopaedic) - extent of development and use	Percentage	10.7	76.8	SIC07.3a
Medical - extent of development and use	Percentage	4.8	26.2	SIC07.3b
O & G - extent of development and use	Percentage	3.6	53.6	SIC07.3c
Telehealth				
Extent of telehealth usage	Percentage	9.6	5.8	SIC09

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dicators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

N/A - Not Applicable N/R - Not Reported

Measured Quality

Hospital Report

Attachments

- Attachment 1.....Statistics – Quartiles per Indicator
- Attachment 2.....State Report

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:	Hospital Score	Peer Group Min	25th	Median	75th	Max	

Nambour Hospital
Central Zone

Principal Referral and Specialised

Overall Performance Group: Medical

CI01.1	Acute Myocardial Infarction - In-hospital Mortality	7.5	5.7	7.5	8.9	13.5	26.9	
CI01.2	Acute Myocardial Infarction - Long Stay Rates	5.1	5.1	7.4	10.3	13.5	27.5	
CI02.1	Heart Failure - In-hospital Mortality	6.7	5.1	5.6	6.1	7.1	12.2	
CI02.2	Heart Failure - Long Stay Rates	6.6	5.2	6.4	9.5	10.6	14.5	
CI03.1	Stroke - In-hospital Mortality	21.0	17.7	19.8	21.7	27.0	31.0	
CI03.2	Stroke - Long Stay Rates	6.9	6.8	9.2	10.7	11.9	17.5	
CI03.4	Stroke - Nursing Home Separations	10.0	8.1	9.5	10.3	13.2	23.2	
CI04.1	Pneumonia - In-hospital Mortality	7.5	5.5	6.7	7.5	8.9	13.9	
CI04.2	Pneumonia - Long Stays	8.8	8.8	10.4	12.7	14.0	15.3	
CI14.1	Asthma - Long Stay Rates	9.5	1.8	9.5	12.1	13.4	16.2	

Overall Performance Group: Obstetrics & Gynaecology

CI09.1	Hysterectomy - Long Stay rates	10.2	6.1	8.1	11.0	21.2	23.1	
CI09.2	Hysterectomy - Complications of Surgery	11.5	7.6	9.6	11.3	11.6	36.3	
CI09.3	Hysterectomy - on Women < 35 years	6.7	6.7	6.7	11.4	11.7	16.4	
CI09.5	Hysterectomy - Blood Transfusion Rates	2.2	1.1	2.8	5.1	6.1	7.4	
CI10.1	Standard Primiparae - C-section	5.3	5.3	10.6	12.1	14.3	17.2	
CI10.2	Standard Primiparae - Induction of Labour	14.1	8.7	11.6	13.8	15.4	19.2	
CI10.3	Standard Primiparae - Perineal Tears	1.0	1.0	1.8	2.4	3.3	6.3	
CI11.1	Small for Gestational Age - Small for Gestational Age	4.1	2.8	3.1	3.4	3.9	4.5	
CI13.1	Maternal Post-Natal Long Stay Rate (Vaginal Births)	17.3	1.8	3.5	7.2	9.1	17.3	
CI13.2	Maternal Post-Natal Long Stay Rate (Caesarean Section Births)	11.8	1.7	3.5	5.7	9.5	11.8	

Overall Performance Group: Surgical

CI06.1	Fractured Neck of Femur - In-hospital Mortality	7.7	2.7	6.9	7.6	9.3	10.2	
CI06.2	Fractured Neck of Femur - Long Stays	3.4	1.8	3.1	7.9	13.2	20.8	
CI06.5	Fractured Neck of Femur - Nursing Home Separations	16.7	8.1	11.8	19.0	28.1	37.3	
CI06.6	Fractured Neck of Femur - Complications of Surgery	17.0	5.6	10.0	11.8	17.4	22.9	
CI07.1	Knee Replacement - Long Stays	21.3	3.9	7.9	9.1	17.3	21.3	
CI07.3	Knee Replacement - Complications of Surgery	24.1	13.0	20.9	24.1	27.2	44.9	
CI08.1	Hip Replacement - Long Stay Rates	20.4	4.0	10.1	12.6	13.2	21.8	
CI08.3	Hip Replacement - Complications of Surgery	29.9	15.3	27.6	29.9	35.5	41.0	
CI15.1	Colorectal Carcinoma - Long Stay Rates	3.9	2.6	5.5	7.5	9.1	16.1	
CI15.3	Colorectal Carcinoma - Complications of Surgery	33.9	16.0	26.3	33.4	37.0	47.9	

Overall Performance Group: Maternity

CS05	Overall Care Index Maternity	61.1	59.6	61.1	64.3	66.0	76.5	

Overall Performance Group: Medical

CS05	Overall Care Index Medical	62.6	58.2	62.5	63.4	65.7	72.9	

Overall Performance Group: Surgical

CS05	Overall Care Index Surgical	64.9	60.8	66.0	68.4	70.8	78.8	

Overall Performance Group: Not Summarised

CS01	Access and Admission Index Surgical	64.9	58.4	66.8	69.4	71.1	82.2	
CS01	Access and Admission Index All types combined	62.8	59.2	61.7	62.7	65.1	73.9	
CS01	Access and Admission Index Maternity	64.3	60.5	63.4	64.9	66.5	68.9	
CS01	Access and Admission Index Medical	61.0	58.2	60.8	63.0	64.2	73.4	
CS01	Access and Admission Index Mental Health	69.1	45.1	47.9	52.9	60.3	78.8	
CS02	Complaints Management Index Surgical	64.6	63.4	65.5	68.2	69.9	76.8	
CS02	Complaints Management Index All types combined	63.6	60.0	62.9	63.9	65.8	73.1	
CS02	Complaints Management Index Maternity	59.8	57.9	60.1	63.0	65.5	67.4	
CS02	Complaints Management Index Medical	63.3	56.3	61.4	63.9	65.4	73.9	
CS02	Complaints Management Index Mental Health	66.1	44.3	48.9	53.0	60.8	68.8	
CS03	Discharge and Follow-up Index Maternity	57.6	56.5	62.1	68.0	67.9	88.9	
CS03	Discharge and Follow-up Index Surgical	62.8	56.9	62.8	66.0	68.5	74.1	
CS03	Discharge and Follow-up Index Medical	56.2	51.6	58.0	60.2	61.8	68.5	
CS03	Discharge and Follow-up Index All types combined	59.0	55.3	59.1	60.3	63.9	68.7	

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:		Hospital Score	Peer Group Min	25th	Median	75th	Max
PS03	Discharge and Follow-up Index Mental Health	69.6	42.2	52.8	54.5	59.1	69.6
PS04	General Patient Information Index Maternity	62.6	59.5	63.1	64.3	68.1	83.4
PS04	General Patient Information Index All types combined	68.2	65.1	66.8	68.4	70.8	76.9
PS04	General Patient Information Index Surgical	69.1	68.8	70.7	72.5	74.1	82.7
PS04	General Patient Information Index Mental Health	69.3	50.8	53.4	56.5	58.1	78.2
PS04	General Patient Information Index Medical	68.3	64.3	66.3	68.5	70.3	78.0
PS05	Overall Care Index Mental Health	66.1	47.5	48.6	54.6	59.2	70.4
PS05	Overall Care Index All types combined	63.3	59.5	62.7	63.9	66.0	72.8
PS06	Physical Environment Index Maternity	59.3	47.2	57.4	59.0	66.1	69.5
PS06	Physical Environment Index Medical	62.2	52.8	59.6	62.1	64.2	70.1
PS06	Physical Environment Index Mental Health	63.5	50.7	53.8	57.9	63.5	66.0
PS06	Physical Environment Index Surgical	59.9	55.2	59.8	63.4	68.7	75.2
PS06	Physical Environment Index All types combined	61.6	55.4	59.1	61.5	64.4	70.7
PS07	Treatment & Related Information Index Mental Health	62.3	40.1	44.5	49.6	53.6	62.3
PS07	Treatment & Related Information Index All types combined	64.0	60.6	63.4	64.8	66.5	72.3
PS07	Treatment & Related Information Index Maternity	60.2	57.8	60.1	65.5	67.9	83.3
PS07	Treatment & Related Information Index Surgical	67.5	64.0	66.9	68.6	72.1	79.1
[illegible]	Treatment & Related Information Index Medical	63.5	59.8	62.6	64.6	67.2	73.0
Overall Performance Group:	Activity						
EFF-17	Occupancy Rate (Bed Day Efficiency)	92.4	48.2	66.6	84.5	90.0	104.2
EFF-19	Length of Stay	3.1	2.0	2.9	3.2	3.7	5.5
EFF-24	Cancellation rate	6.3	6.3	11.7	19.2	21.4	25.1
Overall Performance Group:	Cost of Service						
EFF-25	Total Cost / Weighted Separation	1,650.9	1,650.9	2,282.9	2,396.0	2,506.8	3,101.6
EFF-36a	Catering - total cost	27.6	20.7	26.8	27.7	30.2	39.8
EFF-45.4	Energy Consumption per square metre	28.6	19.2	21.0	28.6	29.4	42.5
Overall Performance Group:	Staffing						
EFF-06.2	Hours of Sick Leave by Staff Category - Managerial And Clerical	3.3	2.7	3.1	3.2	3.5	4.0
EFF-06.3	Hours of Sick Leave by Staff Category - Medical	1.5	1.0	1.3	1.5	1.6	2.0
EFF-06.4	Hours of Sick Leave by Staff Category - Nursing	3.6	3.3	3.4	3.6	3.6	4.2
EFF-06.5	Hours of Sick Leave by Staff Category - Operational	3.5	3.2	3.5	3.6	3.9	4.4
EFF-06.6	Hours of Sick Leave by Staff Category - Professional	2.8	2.0	2.4	2.6	2.8	2.9
EFF-06.7	Hours of Sick Leave by Staff Category - Technical	3.1	1.5	2.5	2.9	3.4	4.3
EFF-06.9	Hours of Sick Leave by Staff Category - Visiting Medical Officers	2.2	0.3	0.9	1.4	1.7	3.1
EFF-08.2	Cost of Sick Leave by Staff Category - Managerial And Clerical	1,153.6	907.6	1,102.0	1,151.2	1,189.5	1,542.0
EFF-08.3	Cost of Sick Leave by Staff Category - Medical	1,130.8	728.9	971.6	1,101.6	1,130.8	1,416.5
EFF-08.4	Cost of Sick Leave by Staff Category - Nursing	1,513.8	1,366.5	1,399.9	1,435.6	1,513.8	1,745.0
EFF-08.5	Cost of Sick Leave by Staff Category - Operational	1,038.3	939.0	1,038.3	1,072.3	1,128.8	1,285.7
EFF-08.6	Cost of Sick Leave by Staff Category - Professional	1,449.9	973.2	1,198.4	1,261.7	1,403.1	1,449.9
EFF-08.7	Cost of Sick Leave by Staff Category - Technical	1,278.2	706.9	1,001.4	1,125.1	1,638.4	1,850.0
EFF-08.9	Cost of Sick Leave by Staff Category - Visiting Medical Officers	3,267.3	438.6	1,244.6	2,247.8	3,039.8	5,379.2
EFF-11	Cost of Work Cover	2.2	0.5	0.9	1.1	1.5	2.2
EFF-14.2	Hours of Overtime by Staff Category - Managerial And Clerical	0.5	0.5	0.6	0.8	0.7	1.5
EFF-14.3	Hours of Overtime by Staff Category - Medical	18.7	13.7	14.1	16.3	18.7	19.8
EFF-14.4	Hours of Overtime by Staff Category - Nursing	0.4	0.2	0.4	0.6	0.6	1.1
EFF-14.5	Hours of Overtime by Staff Category - Operational	0.6	0.1	0.6	1.2	1.5	2.5
EFF-14.6	Hours of Overtime by Staff Category - Professional	4.2	0.9	1.8	2.7	3.6	4.2
EFF-14.7	Hours of Overtime by Staff Category - Technical	0.1	0.1	0.2	0.5	1.2	5.5
EFF-14.9	Hours of Overtime by Staff Category - Visiting Medical Officers	14.5	4.8	7.4	11.0	14.8	18.1
EFF-16.2	Cost of Overtime by Staff Category - Managerial And Clerical	250.1	250.1	296.4	325.2	392.1	765.2
EFF-16.3	Cost of Overtime by Staff Category - Medical	21,892.1	15,058.0	15,443.8	19,694.2	21,892.1	25,813.7
EFF-16.4	Cost of Overtime by Staff Category - Nursing	229.1	132.4	229.1	326.4	358.6	665.1
EFF-16.5	Cost of Overtime by Staff Category - Operational	283.9	57.1	283.9	592.1	741.9	1,238.4
EFF-16.6	Cost of Overtime by Staff Category - Professional	3,759.4	694.0	1,259.7	2,195.0	2,962.1	3,759.4
EFF-16.7	Cost of Overtime by Staff Category - Technical	86.8	86.8	113.9	298.9	683.3	3,831.4
EFF-16.9	Cost of Overtime by Staff Category - Visiting Medical Officers	27,293.9	7,118.5	15,123.0	22,933.3	31,408.5	41,722.5
Overall Performance Group:	Not Summarised						
EFF-01	Full-Time Equivalent (FTE) Staff	1,058.7	705.4	1,058.7	1,359.3	1,433.5	3,881.8

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:		Hospital Score	Peer Group Min	25th	Median	75th	Max
[illegible]2.2	FTE Staff by Category - Managerial And Clerical	179.0	115.2	155.6	177.6	198.9	548.7
EFF-02.3	FTE Staff by Category - Medical	93.9	48.9	85.3	112.2	173.3	349.0
EFF-02.4	FTE Staff by Category - Nursing	481.4	346.2	481.4	678.1	733.2	1,589.2
EFF-02.5	FTE Staff by Category - Operational	191.5	88.4	173.3	199.5	267.7	699.8
EFF-02.6	FTE Staff by Category - Professional	79.2	53.1	79.2	106.9	145.5	335.8
EFF-02.7	FTE Staff by Category - Technical	25.5	2.4	5.9	6.6	23.3	32.2
EFF-02.9	FTE Staff by Category - Visiting Medical Officers	8.2	4.8	9.7	11.0	14.6	52.5
EFF-05	Hours of Sick Leave	3.2	2.8	3.2	3.2	3.3	3.6
EFF-07	Cost of Sick Leave	1,338.2	1,196.1	1,270.1	1,293.5	1,336.2	1,487.9
EFF-13	Hours of Overtime	2.9	1.9	2.5	2.9	3.2	3.9
EFF-15	Cost of Overtime	2,634.3	1,827.1	2,123.5	2,634.3	2,733.1	3,692.2
[illegible]							
Overall Performance Group:	Benchmarking and Clinical Pathways						
SIC06.3	Benchmarking - In selected clinical areas - external	61.1	16.7	61.1	66.7	80.2	100.0
SIC07.1	Clinical Pathways - Extent of development and use	6.1	0.0	12.3	40.1	58.1	71.4
Overall Performance Group:	Continuity of Care						
SIC08.1	Facilitating continuity of care - Use of pre admission clinics for elective surgery	3.0	0.0	3.0	3.0	3.0	3.0
[illegible]2	Facilitating continuity of care - Provision of discharge summaries to GPs	3.0	0.0	2.0	3.0	3.0	3.0
[illegible]	Facilitating continuity of care - Shared ante and post natal care	3.0	3.0	3.0	3.0	3.0	3.0
[illegible]C08.4	Facilitating continuity of care - Cardiac rehabilitation	1.0	1.0	2.0	3.0	3.0	3.0
SIC08.5	Facilitating continuity of care - Provision of electronic discharge summaries to GPs	0.0	0.0	0.0	0.5	1.5	3.0
Overall Performance Group:	Quality and Use of Information						
SIC04.1	Quality of Information - Accuracy	96.0	74.8	92.7	94.0	94.5	96.0
SIC04.2a	Quality of Information - Timeliness - Number of months on time	5.0	0.0	2.8	5.5	6.3	9.0
SIC04.2b	Quality of Information - Timeliness - Number of days late per month	12.3	0.0	3.3	8.6	14.9	82.7
SIC05.1	Use of Information - Availability of electronic information	25.0	25.0	43.8	47.9	54.7	72.9
SIC05.2	Use of Information - Collection and use of clinical information	51.4	28.6	57.9	65.2	77.1	95.7
Overall Performance Group:	Not Summarised						
SIC01	Accreditation	1.0	1.0	1.0	1.0	1.0	1.0
SIC02	Credentialling	1.0	0.0	1.0	1.0	1.0	1.0
SIC03.1	Workforce Management - Retention of Nursing Staff	80.9	67.9	73.8	79.3	82.2	84.1
SIC03.2	Workforce Management - Retention of Allied Health Staff	77.0	66.7	71.8	74.5	78.6	83.8
SIC03.3	Workforce Management - Median Age Nursing Staff	41.0	34.0	37.8	38.8	39.6	41.0
SIC06.1	Benchmarking - In selected clinical areas	38.0	15.4	55.3	62.5	84.7	100.0
SIC06.2	Benchmarking - In selected clinical areas - internal	16.7	0.0	0.0	61.1	91.7	100.0
SIC07.2	Clinical Pathways - Extent of development and use as per Ontario	7.1	0.0	14.3	44.5	67.1	77.4
SIC07.3a	Clinical Pathways - Surgical (Orthopaedic) - extent of development and use	10.7	0.0	2.7	76.8	84.8	85.7
[illegible]	Clinical Pathways - Medical - extent of development and use	4.8	0.0	11.9	26.2	42.9	76.2
[illegible]C	Clinical Pathways - O & G - extent of development and use	3.6	0.0	3.6	53.9	64.3	85.7
SIC09	Telehealth - Extent of telehealth usage	9.6	0.0	2.9	5.8	15.4	19.2

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Summary of Potential Reasons for Variance for PRINCESS ALEXANDRA HOSPITAL

Indicators Flagged:

CI03.2 Stroke- Long stay rate (90-99.9% confidence level)
CI06.2 Fractured neck of femur- Long stay rate (99.9% confidence level)
CI06.6 Fractured neck of femur – Complications of surgery rate (90-99.9% confidence level at the peer level; <90% confidence level at the state level- not statistically significant)
CI07.3 Knee replacement- Complications of surgery rate (90-99.9% confidence level at the state level; <90% confidence level at the peer level- not statistically significant)
CI08.3 Hip replacement – Complications of surgery rate (90-99.9% confidence level)

Responses:

The potential reason for variance given by the Princess Alexandra Hospital is summarised below.

- **Stroke and fractured neck of femur long stay rates:** the Princess Alexandra Hospital (PAH) has a large non-acute facility that acts as a referral centre for many other hospitals. Hospitals without facilities like these, would discharge/transfer their patients to another facility, thereby excluding these patients from the their counts. This would lead to PAH showing an prolonged length of stay when compared to other hospitals within its peer group.

With regard to the three indicators related to complications of surgery, these indicated a potential trend with complications of surgery, however, the confidence level for two of them is low, and the PAH will monitor the situation.

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Measured Quality

Hospital Report

Princess Alexandra Hospital

Southern Zone

Principal Referral and Specialised Peer Group

July 2002

Version Number	Date	Comment
0.1	17 May 2002	Draft report for feedback
0.2	31 May 2002	Modification from feedback
0.3	26 June 2002	Modification from feedback

CAB.0007.0002.00145

Overall Performance

Princess Alexandra Hospital **Southern Zone**

Peer Group: Principal Referral and Specialised

Clinical Utilisation and Outcomes		Patient Satisfaction	
Medical	☆☆	Medical	☆☆
Obstetrics & Gynaecology	☆☆☆	Surgical	☆☆
Surgical	☆☆		
Overall	☆☆	**Overall**	☆☆☆
Efficiency		**System Integration and Change**	
Activity	☆☆	Benchmarking and Clinical Pathways	☆☆
Cost of Service	☆	Continuity of Care	☆☆
Staffing	☆☆	Quality and Use of Information	☆☆
Overall	☆☆	**Overall**	☆☆

Performance Compared to the Average

☆	Lower: Aggregated Hospital performance is more than one standard deviation below the peer mean.
☆☆	Average: Aggregated Hospital performance is within one standard deviation of the peer mean.
☆☆☆	Higher: Aggregated Hospital performance is more than one standard deviation above the peer mean.

Overall performance results are based on selected indicators within this report. Please refer to the indicators marked "+" within each quadrant report to identify those indicators used to calculate the overall performance of the hospital.

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Clinical Utilisation and Outcomes

Princess Alexandra Hospital — **Principal Referral and Specialised**

Southern Zone

Performance Indicator	Risk Adjusted Hospital Score: (Rate per 100 separations)	Peer Group Mean:	Significance:	Reference:
Acute Myocardial Infarction				
In-hospital Mortality	10.7	11.2		CI01.1
Long Stay Rates	8.0	10.8		CI01.2
Heart Failure				
In-hospital Mortality	5.1	7.0		CI02.1
Long Stay Rates	9.7	10.4		CI02.2
Stroke				
In-hospital Mortality	19.5	22.1	*	CI03.1
Long Stay Rates	17.5	11.6	*	CI03.2
Nursing Home Separations	10.3	11.7		CI03.4
Pneumonia				
In-hospital Mortality	6.7	8.6		CI04.1
Long Stays	12.0	13.8		CI04.2
Asthma				
Long Stay Rates	6.8	11.5		CI14.1
Peer Performance Group: Obstetrics & Gynaecology				
Hysterectomy				
Long Stay rates	8.1	15.2		CI09.1
Complications of Surgery	7.6	12.4		CI09.3
on Women < 35 years	11.2	11.0		CI09.4
Blood Transfusion Rates	1.1	3.7		CI09.5
Peer Performance Group: Surgical				
Diabetic Foot				
Long Stays	12.4	11.3		CI05.1
Amputation Rates	23.9	29.4		CI05.4
Fractured Neck of Femur				
In-hospital Mortality	9.7	6.8		CI06.1
Long Stays	20.8	9.0	**	CI06.2
Nursing Home Separations	12.0	21.3	*	CI06.5
Complications of Surgery	18.5	12.8		CI06.6
Knee Replacement				
Long Stays	7.9	10.8		CI07.1
Complications of Surgery	27.4	22.3	*	CI07.3
Hip Replacement				
Long Stay Rates	12.3	11.7		CI08.1
Complications of Surgery	35.5	28.0	*	CI08.3
Colorectal Carcinoma				
Long Stay Rates	10.0	9.9		CI15.1
Complications of Surgery	32.9	32.0		CI15.3

Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

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+ Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 10/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

Patient Satisfaction

Princess Alexandra Hospital — **Principal Referral and Specialised**

Southern Zone

	Hospital Score:	Peer Group Mean:	Significance:	Reference:
[redacted]				
Access and Admission Index	62.2	64.1		PS01
Complaints Management Index	64.1	64.6		PS02
Discharge and Follow-up Index	59.2	61.4		PS03
General Patient Information Index	70.7	68.9		PS04
Overall Care Index	64.7	64.5		PS05
Physical Environment Index	65.6	62.3	*	PS06
Treatment & Related Information Index	66.2	65.3		PS07
[redacted]				
Access and Admission Index	63.6	63.0		PS01
Complaints Management Index	65.0	64.6		PS02
Discharge and Follow-up Index	60.1	60.2		PS03
General Patient Information Index	73.1	69.2	*	PS04
+ Overall Care Index	66.3	64.1		PS05
Physical Environment Index	67.1	62.0	*	PS06
Treatment & Related Information Index	68.4	65.5		PS07
[redacted]				
Access and Admission Index	47.3	55.1		PS01
Complaints Management Index	49.9	54.4		PS02
Discharge and Follow-up Index	42.2	54.2		PS03
General Patient Information Index	54.5	57.6		PS04
Overall Care Index	48.3	54.8	*	PS05
Physical Environment Index	50.7	57.8		PS06
Treatment & Related Information Index	45.8	50.7		PS07
[redacted]				
Access and Admission Index	68.1	69.3		PS01
Complaints Management Index	71.7	68.2	*	PS02
Discharge and Follow-up Index	68.3	65.5		PS03
General Patient Information Index	74.1	72.8		PS04
+ Overall Care Index	71.0	68.4	*	PS05
Physical Environment Index	71.1	64.0	**	PS06
Treatment & Related Information Index	73.4	69.6	*	PS07

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Statistical Significance

* Between 90% and 99.9% certain that the result for the facility is different than the cohort average. There is some evidence to suggest that these hospitals are performing differently compared to the mean of the facilities in the cohort, although there is a reasonable possibility that the result is due to chance.

** 99.9% certain that the result for the facility is different in comparison to the cohort average. There is little doubt that the performance indicator for the facility is significantly different from the mean for all hospitals in the peer group.

CAB.0007.0002.00148

+ Indicator has been used to determine overall performance.

Printed: 05/07/2002 Data for this quadrant has been adjusted in an attempt to allow for casemix differences between hospitals. The availability of individual patient records has also enabled the calculation of confidence intervals and thus the identification of statistical significance for these estimates.

N/A - Not Applicable N/R - Not Reported

Efficiency

Princess Alexandra Hospital — **Principal Referral and Specialised**

Southern Zone

	Data Type:	Hospital Score:	Peer Group Median:	Reference:
Occupancy Rate (Bed Day Efficiency)	Percentage	93.9	84.5	EFF-17
Length of Stay	Days	3.83	3.18	EFF-19
Cancellation rate	Percentage	25.1	19.2	EFF-24
Total Cost / Weighted Separation	Dollars	2,493	2,396	EFF-25
Catering - total cost	Dollars	39.6	27.7	EFF-36a
Energy Consumption per square metre	Dollars	32.4	28.6	EFF-45.4
Hours of Sick Leave by Staff Category - Managerial And Clerical	Percentage	3.49	3.18	EFF-06.2
Hours of Sick Leave by Staff Category - Medical	Percentage	1.74	1.46	EFF-06.3
Hours of Sick Leave by Staff Category - Nursing	Percentage	3.57	3.57	EFF-06.4
Hours of Sick Leave by Staff Category - Operational	Percentage	3.48	3.63	EFF-06.5
Hours of Sick Leave by Staff Category - Professional	Percentage	2.94	2.57	EFF-06.6
Hours of Sick Leave by Staff Category - Technical	Percentage	2.65	2.88	EFF-06.7
Hours of Sick Leave by Staff Category - Trade And Artisans	Percentage	3.34	3.34	EFF-06.8
Hours of Sick Leave by Staff Category - Visiting Medical Officers	Percentage	0.88	1.36	EFF-06.9
Cost of Sick Leave by Staff Category - Managerial And Clerical	Dollars	1,233	1,151	EFF-08.2
Cost of Sick Leave by Staff Category - Medical	Dollars	1,102	1,102	EFF-08.3
Cost of Sick Leave by Staff Category - Nursing	Dollars	1,439	1,436	EFF-08.4
Cost of Sick Leave by Staff Category - Operational	Dollars	1,050	1,072	EFF-08.5
Cost of Sick Leave by Staff Category - Professional	Dollars	1,330	1,262	EFF-08.6
Cost of Sick Leave by Staff Category - Technical	Dollars	1,028	1,125	EFF-08.7
Cost of Sick Leave by Staff Category - Trade And Artisans	Dollars	1,135	1,135	EFF-08.8
Cost of Sick Leave by Staff Category - Visiting Medical Officers	Dollars	1,139	2,248	EFF-08.9
Cost of Work Cover	Dollars	1.46	1.05	EFF-11
Hours of Overtime by Staff Category - Managerial And Clerical	Percentage	1.04	0.63	EFF-14.2
Hours of Overtime by Staff Category - Medical	Percentage	17.6	16.3	EFF-14.3
Hours of Overtime by Staff Category - Nursing	Percentage	0.22	0.55	EFF-14.4
Hours of Overtime by Staff Category - Operational	Percentage	0.45	1.20	EFF-14.5
Hours of Overtime by Staff Category - Professional	Percentage	1.75	2.71	EFF-14.6
Hours of Overtime by Staff Category - Technical	Percentage	1.24	0.49	EFF-14.7
Hours of Overtime by Staff Category - Trade And Artisans	Percentage	8.25	4.47	EFF-14.8
Hours of Overtime by Staff Category - Visiting Medical Officers	Percentage	4.85	11.0	EFF-14.9
Cost of Overtime by Staff Category - Managerial And Clerical	Dollars	619	325	EFF-16.2
Cost of Overtime by Staff Category - Medical	Dollars	19,694	19,694	EFF-16.3
Cost of Overtime by Staff Category - Nursing	Dollars	132	326	EFF-16.4
Cost of Overtime by Staff Category - Operational	Dollars	264	592	EFF-16.5
Cost of Overtime by Staff Category - Professional	Dollars	1,260	2,195	EFF-16.6
Cost of Overtime by Staff Category - Technical	Dollars	657	299	EFF-16.7
Cost of Overtime by Staff Category - Trade And Artisans	Dollars	4,826	2,441	EFF-16.8
Cost of Overtime by Staff Category - Visiting Medical Officers	Dollars	7,118	22,933	EFF-16.9
Full-Time Equivalent (FTE) Staff	Numeric	3,108	1,359	EFF-01
FTE Staff by Category - Managerial And Clerical	Numeric	512	178	EFF-02.2
FTE Staff by Category - Medical	Numeric	346	112	EFF-02.3
FTE Staff by Category - Nursing	Numeric	1,311	678	EFF-02.4
FTE Staff by Category - Operational	Numeric	497	199	EFF-02.5
FTE Staff by Category - Professional	Numeric	308	107	EFF-02.6
FTE Staff by Category - Technical	Numeric	23.3	6.61	EFF-02.7
FTE Staff by Category - Trade And Artisans	Numeric	58.3	18.4	EFF-02.8
FTE Staff by Category - Visiting Medical Officers	Numeric	52.5	11.0	EFF-02.9
Hours of Sick Leave	Percentage	3.22	3.22	EFF-05
Cost of Sick Leave	Dollars	1,280	1,293	EFF-07
Hours of Overtime	Percentage	3.18	2.86	EFF-13
Cost of Overtime	Dollars	2,733	2,634	EFF-15

+ Indicators listed within this overall performance group have been used to determine overall performance.

Printed: 05/07/2002 Summary data has been used for this quadrant. Consequently, it is not possible to allow for casemix differences or to identify statistical significance.

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System Integration and Change

Princess Alexandra Hospital — **Principal Referral and Specialised**

Southern Zone

	Type of Score:	Hospital Score:	Peer Group Median:	Reference
Benchmarking				
In selected clinical areas - external	Percentage	61.5	66.7	SIC06.3
Clinical Pathways				
Extent of development and use in selected clinical areas	Percentage	61	40.1	SIC07.1
Facilitating continuity of care				
Use of pre admission clinics for elective surgery	Max score 5	3/3	3	SIC08.1
Provision of discharge summaries to GPs	Max score 5	3/3	3	SIC08.2
Shared ante and post natal care	Max score 5	N/A	N/A	SIC08.3
Cardiac rehabilitation	Max score 3	2/3	3	SIC08.4
Provision of electronic discharge summaries to GPs	Max score 3	0/3	0.5	SIC08.5
Quality of Information				
Accuracy	Percentage	94.6	94	SIC04.1
Timeliness - Number of months on time	Months	0	5.5	SIC04.2a
Timeliness - Number of days late per month	Days	28	8.6	SIC04.2b
Use of Information				
Availability of electronic information	Percentage	43.8	47.9	SIC05.1
Collection and use of clinical information	Percentage	77.1	65.1	SIC05.2
Accreditation				
Accreditation	Yes/No	Yes	12/12	SIC01
Credentialling				
Credentialling	Yes/No	Yes	11/12	SIC02
Workforce Management				
Retention of Nursing Staff	Percentage	77.7	79.3	SIC03.1
Retention of Allied Health Staff	Percentage	75.4	74.5	SIC03.2
Median Age Nursing Staff	Years	35	38.8	SIC03.3
Benchmarking				
Selected clinical areas	Percentage	57.1	62.5	SIC06.1
In selected clinical areas - internal	Percentage	0	61.1	SIC06.2
Clinical Pathways				
Extent of development and use as per Ontario	Percentage	68.2	44.5	SIC07.2
Surgical (Orthopaedic) - extent of development and use	Percentage	71.4	76.8	SIC07.3a
Medical - extent of development and use	Percentage	54.8	26.2	SIC07.3b
O & G - extent of development and use	Percentage	57.1	53.6	SIC07.3c
Telehealth				
Extent of telehealth usage	Percentage	0	5.8	SIC09

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+ Indicators listed within this overall performance group have been used to determine overall performance.

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N/A - Not Applicable N/R - Not Reported

Measured Quality

Hospital Report

Attachments

- Attachment 1.....Statistics – Quartiles per Indicator
- Attachment 2.....State Report

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Statistics - Quartiles per Indicator

Attachment 1

Princess Alexandra Hospital — **Principal Referral and Specialised**

Southern Zone

Indicator Number and Description:	Hospital Score	Peer Group Min	25th	Median	75th	Max	[redacted]
Overall Performance Group: Medical							
CI01.1 Acute Myocardial Infarction - In-hospital Mortality	10.7	5.7	7.5	8.9	13.5	26.9	
CI01.2 Acute Myocardial Infarction - Long Stay Rates	8.0	5.1	7.4	10.3	13.5	27.5	
CI02.1 Heart Failure - In-hospital Mortality	5.1	5.1	5.6	6.1	7.1	12.2	
CI02.2 Heart Failure - Long Stay Rates	6.7	5.2	6.4	9.5	10.6	14.5	
CI03.1 Stroke - In-hospital Mortality	19.5	17.7	19.8	21.7	27.0	31.0	
CI03.2 Stroke - Long Stay Rates	17.5	0.0	9.2	10.7	11.9	17.5	
CI03.4 Stroke - Nursing Home Separations	10.3	8.1	9.5	10.3	13.2	23.2	
CI04.1 Pneumonia - In-hospital Mortality	6.7	5.5	6.7	7.5	8.9	13.9	
CI04.2 Pneumonia - Long Stays	12.0	8.8	10.4	12.7	14.0	15.3	
CI14.1 Asthma - Long Stay Rates	6.8	1.8	9.5	12.1	13.4	16.2	
Overall Performance Group: Obstetrics & Gynaecology							
CI09.1 Hysterectomy - Long Stay rates	8.1	6.1	8.1	11.0	24.2	23.1	
CI09.3 Hysterectomy - Complications of Surgery	7.6	7.6	8.8	11.3	11.6	36.3	
CI09.4 Hysterectomy - on Women < 35 years	11.2	6.7	8.7	11.4	11.7	16.4	
CI09.5 Hysterectomy - Blood Transfusion Rates	1.1	1.1	2.8	3.1	6.1	7.4	
Overall Performance Group: Surgical							
CI05.1 Diabetic Foot - Long Stays	12.4	6.2	9.7	10.8	12.0	20.1	
CI05.4 Diabetic Foot - Amputation Rates	23.9	20.3	24.5	28.8	31.8	36.4	
CI06.1 Fractured Neck of Femur - In-hospital Mortality	9.7	2.7	6.9	7.6	9.3	10.2	
CI06.2 Fractured Neck of Femur - Long Stays	20.8	1.8	3.1	7.9	13.2	20.8	
CI06.5 Fractured Neck of Femur - Nursing Home Separations	12.0	6.1	11.8	19.0	28.1	37.3	
CI06.6 Fractured Neck of Femur - Complications of Surgery	18.5	5.8	10.0	11.8	17.4	22.9	
CI07.1 Knee Replacement - Long Stays	7.9	3.9	7.9	9.1	17.3	21.3	
CI07.3 Knee Replacement - Complications of Surgery	27.4	13.0	20.9	24.1	27.2	44.9	
CI08.1 Hip Replacement - Long Stay Rates	12.3	4.0	10.1	12.6	13.2	21.8	
CI08.3 Hip Replacement - Complications of Surgery	35.5	15.3	27.5	29.9	35.5	41.0	
CI15.1 Colorectal Carcinoma - Long Stay Rates	10.0	2.6	5.5	7.6	9.1	16.1	
CI15.3 Colorectal Carcinoma - Complications of Surgery	32.9	16.0	26.3	33.4	37.0	47.9	
Patient Satisfaction							
Overall Performance Group: Medical							
PS05 Overall Care Index Medical	66.3	58.2	62.5	63.4	65.7	72.9	
Overall Performance Group: Surgical							
PS05 Overall Care Index Surgical	71.0	60.8	66.0	68.4	70.8	78.8	
Overall Performance Group: Not Summarised							
PS01 Access and Admission Index Surgical	68.1	58.4	66.8	69.4	71.1	82.2	
PS01 Access and Admission Index Medical	63.6	58.2	60.8	63.0	64.2	73.4	
PS01 Access and Admission Index Mental Health	47.3	45.1	47.9	52.8	60.3	78.8	
PS01 Access and Admission Index All types combined	62.2	59.2	61.7	62.7	65.1	73.9	
PS02 Complaints Management Index Surgical	71.7	63.4	65.5	68.2	69.9	76.8	
PS02 Complaints Management Index Medical	65.0	56.3	61.4	63.9	65.4	73.9	
PS02 Complaints Management Index Mental Health	49.9	44.3	48.9	53.0	60.8	68.8	
PS02 Complaints Management Index All types combined	64.1	60.0	62.9	63.9	65.8	73.1	
PS03 Discharge and Follow-up Index Surgical	68.3	56.9	62.8	66.0	68.5	74.1	
PS03 Discharge and Follow-up Index All types combined	59.2	55.3	59.1	60.3	63.9	68.7	
PS03 Discharge and Follow-up Index Mental Health	42.2	42.2	52.8	54.5	59.1	69.6	
PS03 Discharge and Follow-up Index Medical	60.1	51.6	58.0	60.2	61.8	68.5	
PS04 General Patient Information Index Mental Health	54.5	50.8	53.4	56.5	58.1	78.2	
PS04 General Patient Information Index Surgical	74.1	68.6	70.7	72.5	74.1	82.7	
PS04 General Patient Information Index Medical	73.1	64.3	66.3	68.5	70.3	78.0	
PS04 General Patient Information Index All types combined	70.7	65.1	66.8	68.4	70.8	76.9	
PS05 Overall Care Index All types combined	64.7	59.5	62.7	63.9	66.0	72.8	
PS05 Overall Care Index Mental Health	48.3	47.5	48.6	54.6	59.2	70.4	
PS06 Physical Environment Index All types combined	65.6	55.4	59.1	61.5	64.4	70.7	
PS06 Physical Environment Index Medical	67.1	52.8	59.6	62.1	64.2	70.1	

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CAB.0007.0002.00152

Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:		Hospital Score	Peer Group Min	25th	Median	75th	Max
PS05	Physical Environment Index Mental Health	50.7	50.7	53.8	57.9	63.5	66.0
PS06	Physical Environment Index Surgical	71.1	55.2	59.8	63.4	68.7	75.2
PS07	Treatment & Related Information Index Mental Health	45.8	40.1	44.5	49.6	53.6	62.3
PS07	Treatment & Related Information Index Medical	68.4	59.9	62.6	64.6	67.2	73.0
PS07	Treatment & Related Information Index All types combined	66.2	60.6	63.4	64.8	66.5	72.3
PS07	Treatment & Related Information Index Surgical	73.4	64.0	66.9	68.9	72.1	79.1
Overall Performance Group:	**Activity**						
EFF-17	Occupancy Rate (Bed Day Efficiency)	93.9	48.2	66.6	84.5	90.0	104.2
EFF-19	Length of Stay	3.6	2.0	2.9	3.2	3.7	5.5
EFF-24	Cancellation rate	25.1	6.3	11.7	19.2	21.4	25.1
Overall Performance Group:	**Cost of Service**						
EFF-25	Total Cost / Weighted Separation	2,492.8	1,650.9	2,282.9	2,396.0	2,506.8	3,101.6
EFF-36a	Catering - total cost	39.6	20.7	26.8	27.7	30.2	39.6
EFF-45.4	Energy Consumption per square metre	32.4	19.2	21.0	28.6	29.4	42.5
Overall Performance Group:	**Staffing**						
EFF-06.2	Hours of Sick Leave by Staff Category - Managerial And Clerical	3.5	2.7	3.1	3.2	3.5	4.0
EFF-06.3	Hours of Sick Leave by Staff Category - Medical	1.7	1.0	1.3	1.5	1.6	2.0
EFF-06.4	Hours of Sick Leave by Staff Category - Nursing	3.6	3.3	3.4	3.6	3.6	4.2
EFF-06.5	Hours of Sick Leave by Staff Category - Operational	3.5	3.2	3.5	3.6	3.9	4.4
EFF-06.6	Hours of Sick Leave by Staff Category - Professional	2.9	2.0	2.4	2.6	2.8	2.9
EFF-06.7	Hours of Sick Leave by Staff Category - Technical	2.7	1.5	2.5	2.9	3.4	4.3
EFF-06.8	Hours of Sick Leave by Staff Category - Trade And Artisans	3.3	2.9	3.1	3.3	4.1	4.6
EFF-06.9	Hours of Sick Leave by Staff Category - Visiting Medical Officers	0.9	0.3	0.9	1.4	1.7	3.1
EFF-08.2	Cost of Sick Leave by Staff Category - Managerial And Clerical	1,232.7	907.6	1,102.0	1,151.2	1,189.5	1,542.0
EFF-08.3	Cost of Sick Leave by Staff Category - Medical	1,101.6	728.9	971.6	1,101.6	1,130.8	1,416.5
EFF-08.4	Cost of Sick Leave by Staff Category - Nursing	1,438.7	1,366.5	1,399.9	1,435.6	1,513.8	1,745.0
EFF-08.5	Cost of Sick Leave by Staff Category - Operational	1,050.1	939.0	1,038.3	1,072.3	1,128.8	1,285.7
EFF-08.6	Cost of Sick Leave by Staff Category - Professional	1,329.7	973.2	1,198.4	1,261.7	1,403.1	1,449.9
EFF-08.7	Cost of Sick Leave by Staff Category - Technical	1,028.3	706.9	1,001.4	1,125.1	1,638.4	1,850.0
EFF-08.8	Cost of Sick Leave by Staff Category - Trade And Artisans	1,134.6	991.1	1,037.0	1,134.6	1,399.8	1,457.6
EFF-08.9	Cost of Sick Leave by Staff Category - Visiting Medical Officers	1,138.9	438.6	1,244.5	2,247.8	3,039.8	5,379.2
EFF-11	Cost of Work Cover	1.5	0.5	0.9	1.1	1.5	2.2
EFF-14.2	Hours of Overtime by Staff Category - Managerial And Clerical	1.0	0.5	0.6	0.6	0.7	1.5
EFF-14.3	Hours of Overtime by Staff Category - Medical	17.6	13.7	14.1	16.3	18.7	19.8
EFF-14.4	Hours of Overtime by Staff Category - Nursing	0.2	0.2	0.4	0.6	0.6	1.1
EFF-14.5	Hours of Overtime by Staff Category - Operational	0.5	0.1	0.6	1.2	1.5	2.5
EFF-14.6	Hours of Overtime by Staff Category - Professional	1.8	0.9	1.8	2.7	3.6	4.2
EFF-14.7	Hours of Overtime by Staff Category - Technical	1.2	0.1	0.2	0.5	1.2	5.5
EFF-14.8	Hours of Overtime by Staff Category - Trade And Artisans	8.3	3.3	4.0	4.5	5.0	8.3
EFF-14.9	Hours of Overtime by Staff Category - Visiting Medical Officers	4.8	4.6	7.4	11.0	14.8	18.1
EFF-16.2	Cost of Overtime by Staff Category - Managerial And Clerical	616.5	280.1	296.4	325.2	392.1	765.2
EFF-16.3	Cost of Overtime by Staff Category - Medical	19,694.2	15,056.0	15,443.8	19,694.2	21,892.1	25,813.7
EFF-16.4	Cost of Overtime by Staff Category - Nursing	132.4	132.4	229.1	326.4	358.6	665.1
EFF-16.5	Cost of Overtime by Staff Category - Operational	264.4	57.1	283.9	592.1	741.9	1,238.4
EFF-16.6	Cost of Overtime by Staff Category - Professional	1,259.7	694.0	1,259.7	2,195.0	2,962.1	3,759.4
EFF-16.7	Cost of Overtime by Staff Category - Technical	656.7	86.8	113.9	298.9	683.3	3,831.4
EFF-16.8	Cost of Overtime by Staff Category - Trade And Artisans	4,825.5	1,793.3	2,221.6	2,441.1	2,852.2	4,825.5
EFF-16.9	Cost of Overtime by Staff Category - Visiting Medical Officers	7,118.5	7,118.5	15,123.0	22,933.3	31,408.5	41,722.5
Overall Performance Group:	**Not Summarised**						
EFF-01	Full-Time Equivalent (FTE) Staff	3,108.0	705.4	1,058.7	1,359.3	1,433.5	3,681.8
EFF-02.2	FTE Staff by Category - Managerial And Clerical	511.8	115.2	155.6	177.6	198.9	548.7
EFF-02.3	FTE Staff by Category - Medical	345.9	48.9	85.3	112.2	173.3	349.0
EFF-02.4	FTE Staff by Category - Nursing	1,310.9	346.2	481.4	678.1	733.2	1,589.2
EFF-02.5	FTE Staff by Category - Operational	497.3	88.4	173.3	199.5	267.7	699.8
EFF-02.6	FTE Staff by Category - Professional	308.0	53.1	79.2	106.9	145.5	335.8
EFF-02.7	FTE Staff by Category - Technical	23.3	2.4	5.9	6.6	23.3	32.2
EFF-02.8	FTE Staff by Category - Trade And Artisans	58.3	10.9	14.6	18.4	41.6	69.5
EFF-02.9	FTE Staff by Category - Visiting Medical Officers	52.5	4.8	9.7	11.0	14.6	52.5

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Statistics - Quartiles per Indicator

Attachment 1

Indicator Number and Description:		Hospital Score	Peer Group Min	25th	Median	75th	Max
EFF-05	Hours of Sick Leave	3.2	2.9	3.2	3.2	3.3	3.6
EFF-07	Cost of Sick Leave	1,280.4	1,196.1	1,270.1	1,293.5	1,336.2	1,487.9
EFF-13	Hours of Overtime	3.2	1.8	2.5	2.9	3.2	3.9
EFF-15	Cost of Overtime	2,733.1	1,827.7	2,123.5	2,634.3	2,733.1	3,892.2
Overall Performance Group:	Benchmarking and Clinical Pathways						
SIC06.3	Benchmarking - In selected clinical areas - external	61.5	16.7	61.1	66.7	80.2	100.0
SIC07.1	Clinical Pathways - Extent of development and use	61.0	0.0	12.3	40.1	58.1	71.4
Overall Performance Group:	Continuity of Care						
SIC08.1	Facilitating continuity of care - Use of pre admission clinics for elective surgery	3.0	0.0	3.0	3.0	3.0	3.0
SIC08.2	Facilitating continuity of care - Provision of discharge summaries to GPs	3.0	0.0	2.8	3.0	3.0	3.0
SIC08.3	Facilitating continuity of care - Shared ante and post natal care		3.0	3.0	3.0	3.0	3.0
SIC08.4	Facilitating continuity of care - Cardiac rehabilitation	2.0	1.0	2.8	3.0	3.0	3.0
SIC08.5	Facilitating continuity of care - Provision of electronic discharge summaries to GPs	0.0	0.0	0.0	0.5	1.5	3.0
Overall Performance Group:	Quality and Use of Information						
SIC04.1	Quality of Information - Accuracy	94.6	74.8	92.7	94.0	94.6	96.0
SIC04.2a	Quality of Information - Timeliness - Number of months on time	0.0	0.0	2.8	5.8	6.3	9.0
[illegible]2b	Quality of Information - Timeliness - Number of days late per month	28.0	0.0	5.3	8.6	14.9	82.7
[illegible].1	Use of Information - Availability of electronic information	43.8	25.0	43.8	47.9	64.7	72.9
SIC05.2	Use of Information - Collection and use of clinical information	77.1	26.5	67.9	65.2	77.1	95.7
Overall Performance Group:	Not Summarised						
SIC01	Accreditation	1.0	1.0	1.0	1.0	1.0	1.0
SIC02	Credentialling	1.0	0.0	1.0	1.0	1.0	1.0
SIC03.1	Workforce Management - Retention of Nursing Staff	77.7	67.9	73.8	79.3	82.2	84.1
SIC03.2	Workforce Management - Retention of Allied Health Staff	75.4	66.7	71.8	74.5	78.6	83.8
SIC03.3	Workforce Management - Median Age Nursing Staff	35.0	34.0	37.8	38.8	39.6	41.0
SIC06.1	Benchmarking - In selected clinical areas	57.1	15.4	55.3	62.5	84.7	100.0
SIC06.2	Benchmarking - In selected clinical areas - internal	0.0	0.0	0.0	61.1	91.7	100.0
SIC07.2	Clinical Pathways - Extent of development and use as per Ontario	68.2	0.0	14.3	44.5	67.1	77.4
SIC07.3a	Clinical Pathways - Surgical (Orthopaedic) - extent of development and use	71.4	0.0	2.7	76.8	84.8	85.7
SIC07.3b	Clinical Pathways - Medical - extent of development and use	54.8	0.0	11.9	26.2	42.9	76.2
SIC07.3c	Clinical Pathways - O & G - extent of development and use	57.1	0.0	3.6	53.6	64.3	85.7
SIC09	Telehealth - Extent of telehealth usage	0.0	0.0	2.9	5.8	15.4	19.2

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Summary of Potential Reasons for Variance for PRINCE CHARLES HOSPITAL

Indicators Flagged:
CI14.1 Asthma- Long stay rates (90-99.9% confidence level)

The Prince Charles hospital was not considered to have sufficient variance to warrant investigation.

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