

# Deepening our Understanding of Quality in Australia: Benchmarking Report

CHRIS WORKING PAPER #107

FROM THE AUSTRALIAN INSTITUTE OF HEALTH INNOVATION

DEEPENING OUR UNDERSTANDING OF QUALITY IN  
AUSTRALIA (DUQUA)

# Benchmarking Report

NAME OF HOSPITAL X

Australian Institute of Health Innovation

April 2019



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# Overview

## PROJECT OVERVIEW

The DUQuA study is an Australia-wide, NHMRC funded research project to identify how hospital quality management systems, leadership and culture in Australian hospitals are related to healthcare delivery quality and patient outcomes. It extends the work undertaken in the 'Deepening our Understanding of Quality improvement in Europe' (DUQuE) study, which examined the relationships between quality management systems, clinical processes, and patient outcomes in 188 hospitals across seven European countries. DUQuA is led by Professor Jeffrey Braithwaite of the Australian Institute of Health Innovation (AIHI), Macquarie University in collaboration with large public hospitals across Australia. The protocol paper was published in BMJ Open <http://bmjopen.bmj.com/content/5/12/e010349.full>

DUQuA received ethics approval and the results of the study will not be published in a way that enables individual participating hospitals to be identified. This report is confidential to your hospital.

DUQuA aimed to answer two primary research questions, depicted in *Figure 1*:

- What department level factors are associated with processes and outcomes for stroke, acute myocardial infarction (AMI), and hip fracture patients?
- What hospital level factors (including Emergency Department factors) are associated with processes and outcomes for stroke, AMI, and hip fracture patients? How much does each factor contribute to the total variation in outcomes?

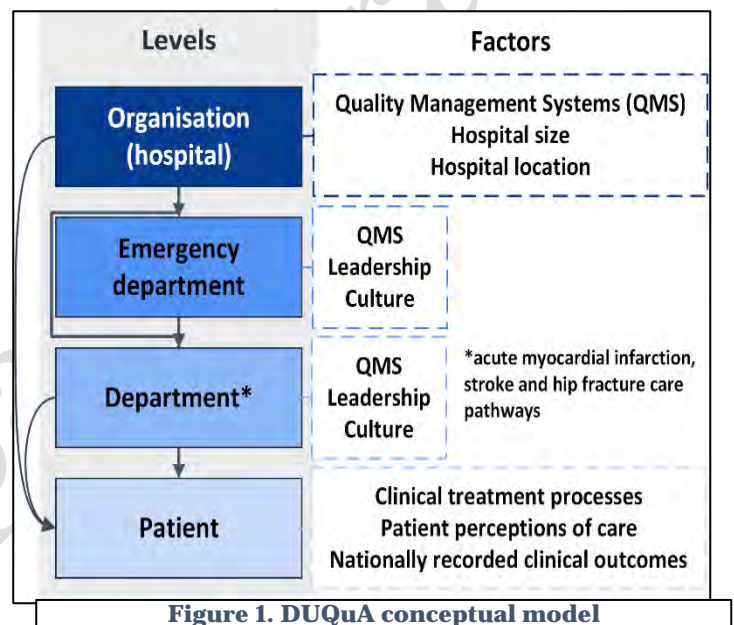


Figure 1. DUQuA conceptual model

### Data collection

This multi-level study involved data collection at organisation, Emergency Department (ED), care pathway department for AMI, stroke and hip fracture, and patient levels. The majority of data collection was undertaken by experienced External Quality Assessors during a one-day, on-site visit. There was also a clinical audit and staff and patient questionnaires.

### The DUQuA team

The DUQuA team are a group of researchers from the AIHI, Macquarie University. The **Chief Investigator** is Professor Jeffrey Braithwaite, Director of the Centre for Healthcare Resilience and Implementation Science (CHRIS) and Founding Director of AIHI. The **Lead Researchers** are Dr Robyn Clay-Williams, Lead for Human Factors and Resilience Research, CHRIS, AIHI; and Dr Natalie Taylor, Honorary Senior Research Fellow, CHRIS, AIHI.

# Executive Summary

Insert Text

The DUQuA team would like to thank [ ..... ] who was the local principal investigator for the project at this hospital.

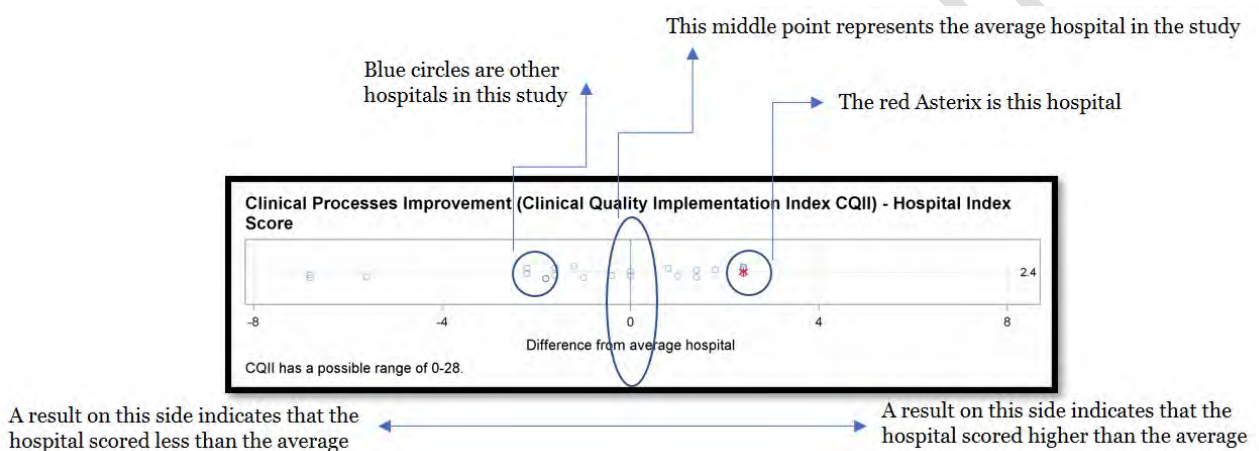
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## HOW TO INTERPRET OUR GRAPHS

Within each graph, the red asterisk represents the score for your hospital and the blue circles represent the other hospitals in the study. Most graphs compare the difference between your hospital and the average hospital in the study: if the difference is zero, your hospital has the same results as the average study hospital; if the difference is positive, your hospital scored higher than the average hospital; and if the difference is negative, your hospital scored lower than the average hospital.

Where the outcome was measured once per hospital the 'average hospital' was designated as the median of the study hospitals. Where the outcome was measured more than once, the hospital score was assigned as the median patient score in that hospital, and the 'average hospital' was once again the median of the hospital scores. Medians were preferred over other measures of centrality as most data was not normally distributed.

TO BE REPLACED WITH NEW TABLE FROM PEI

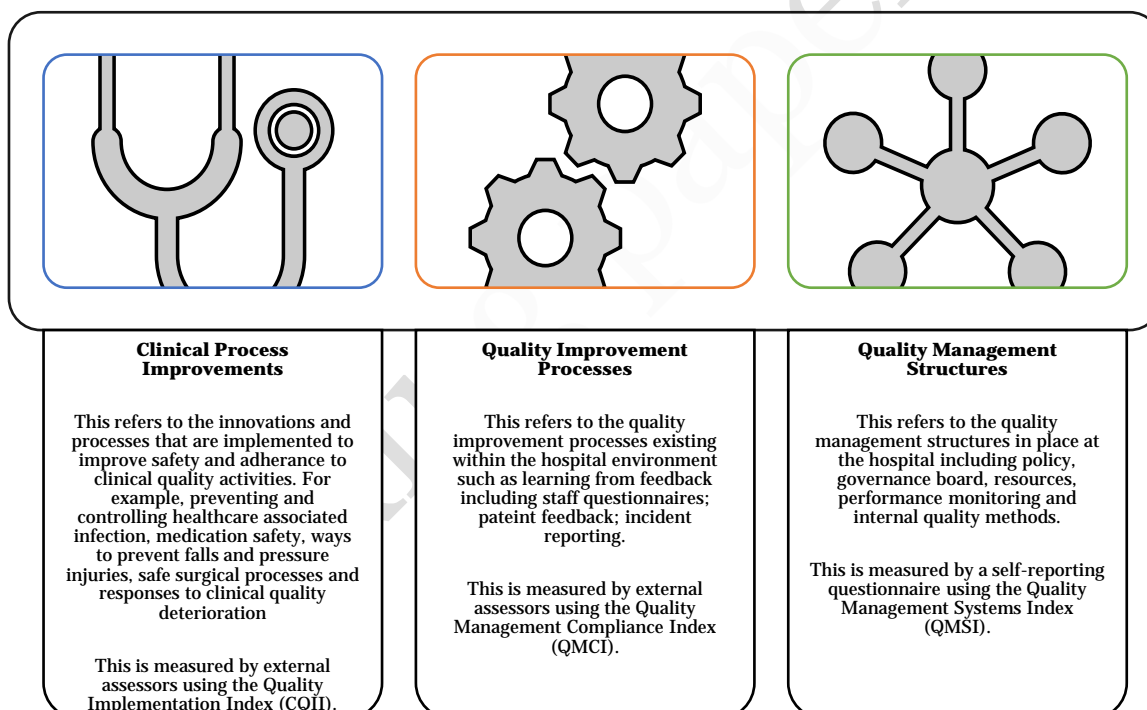


# Organisational Level Indicators

## RECOMMENDATIONS

In order to enhance adherence to quality standards in organisational level indicators, recommendations would be as follows .....

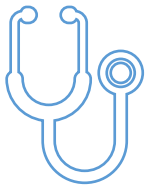
Organisational level quality processes are comprised of the following -





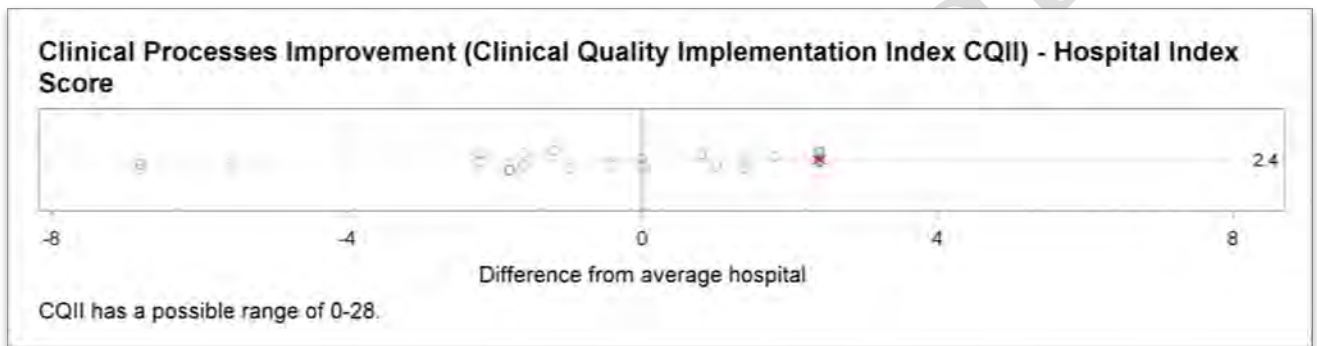
## ORGANISATIONAL LEVEL INDICATORS

The red Asterix indicates the relative performance of this hospital.

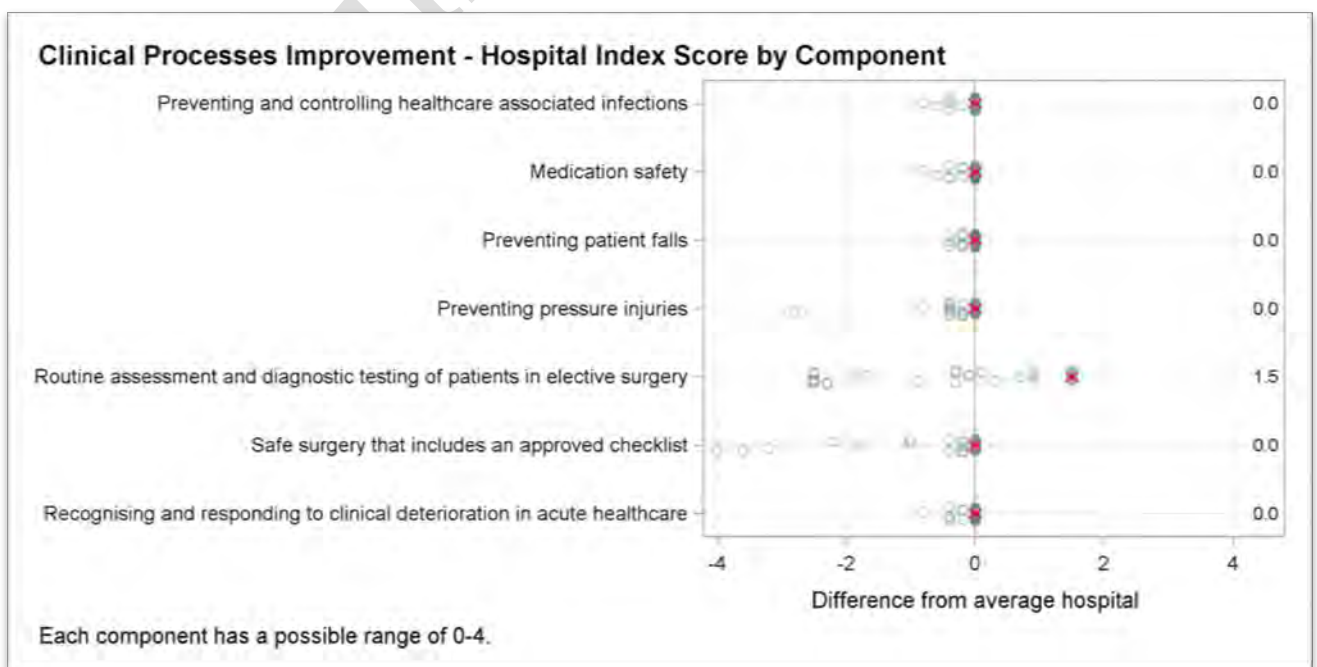


### Clinical Processes Improvement

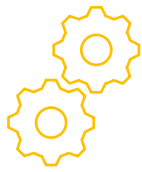
A1. This table shows the implementation of clinical quality activities in this hospital compared to others in the study.



A2. This table shows the implementation of clinical quality activities in this hospital compared to others in the study, against each component measured.

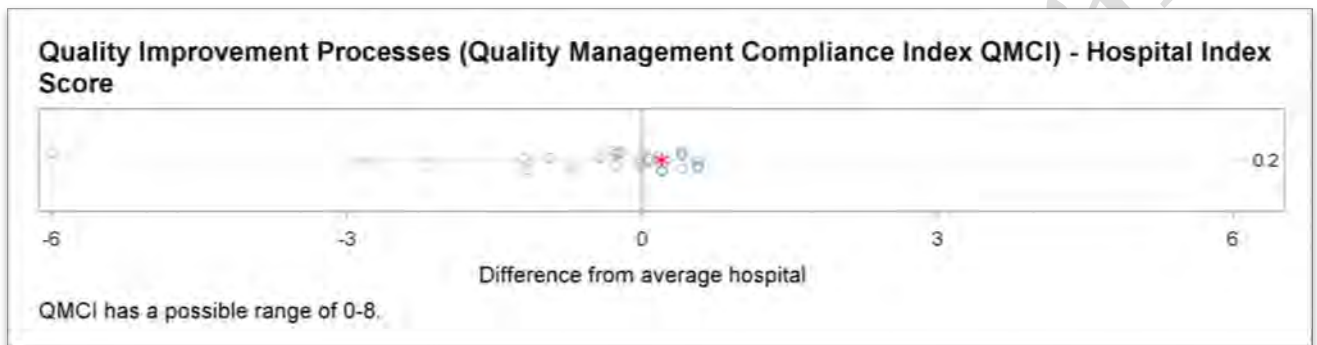




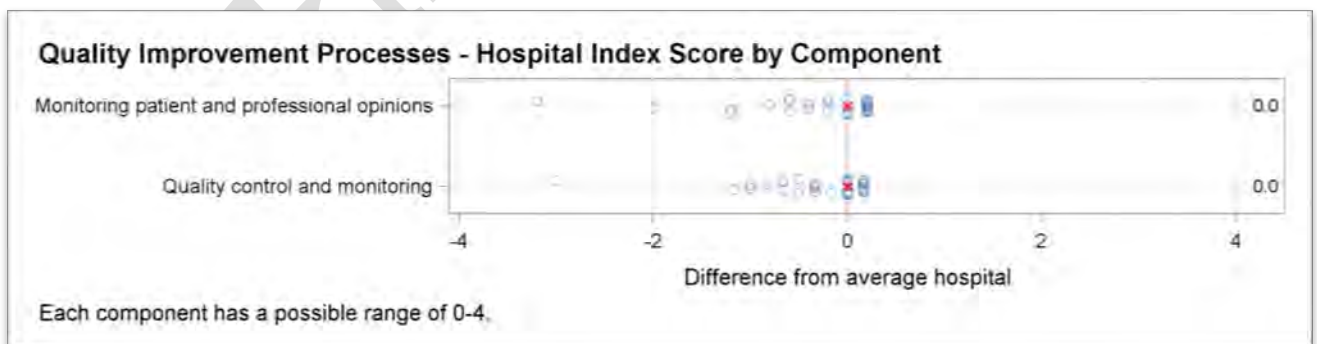


## Quality Improvement Process

A3. This table records the measure of quality improvement processes in the hospital.



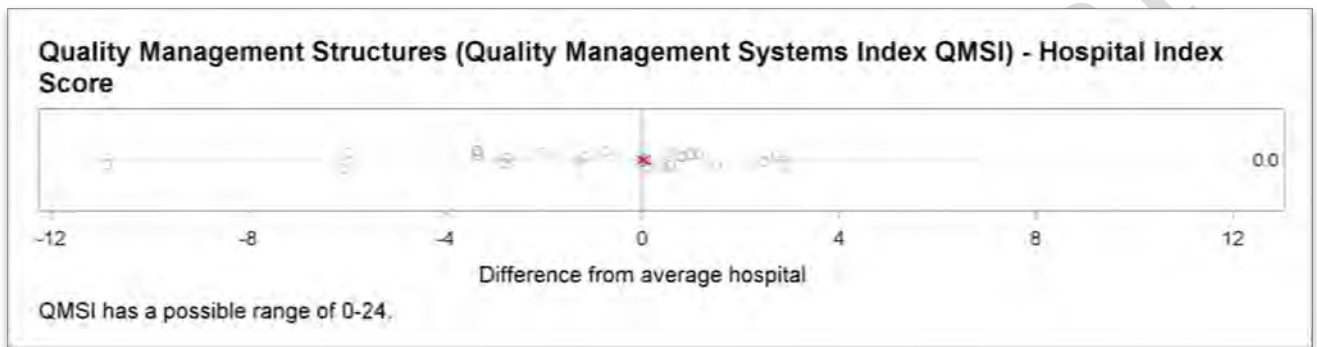
A.4 This table records the measure of quality improvement processes in the hospital by component.



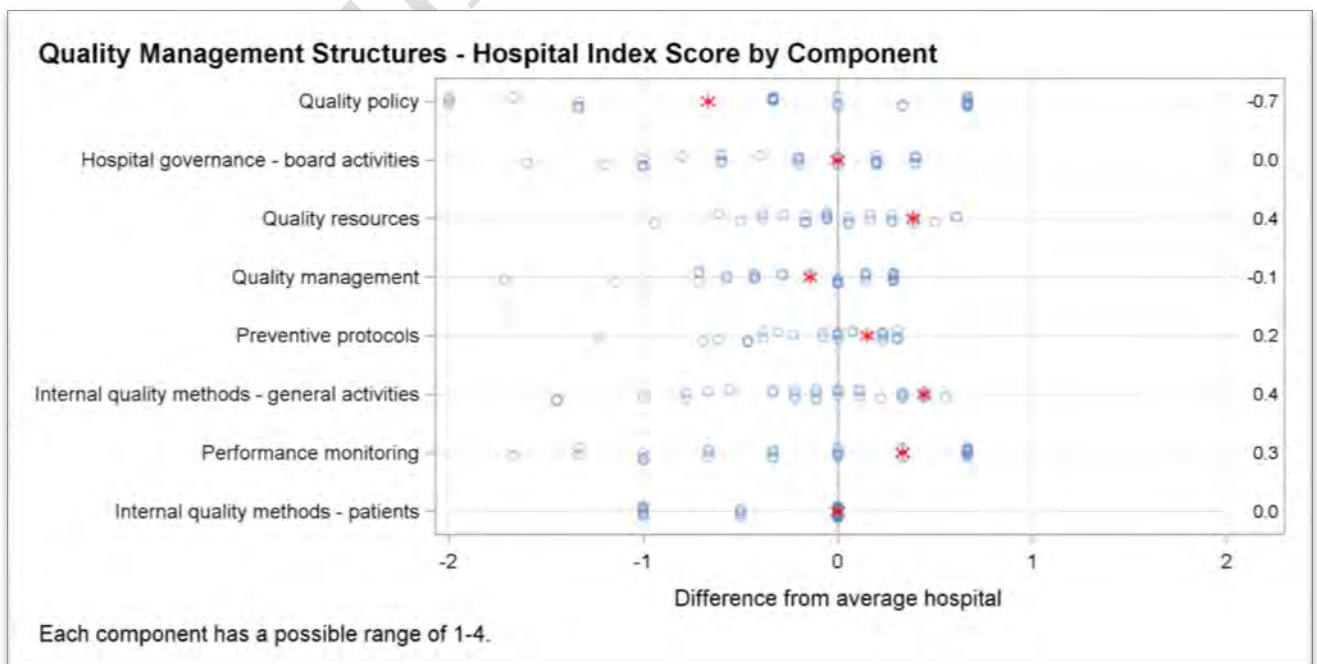


## Quality Management Structure

A5. Quality management structures were recorded in a questionnaire completed by the quality management team at the hospital.



A6. This table shows the quality management structures measure for each component.



# Acute Myocardial Infarction (AMI) Care Pathway

## RECOMMENDATIONS

This report provides the results for your hospital. To determine how quality management processes impact patient outcomes, the DUQuA study looked at quality measures on the clinician level and the patient level and reviewed randomly selected medical records for AMI patients.





If your hospital would like to enhance adherence to quality standards in the AMI care pathway, you may consider the following recommendations:

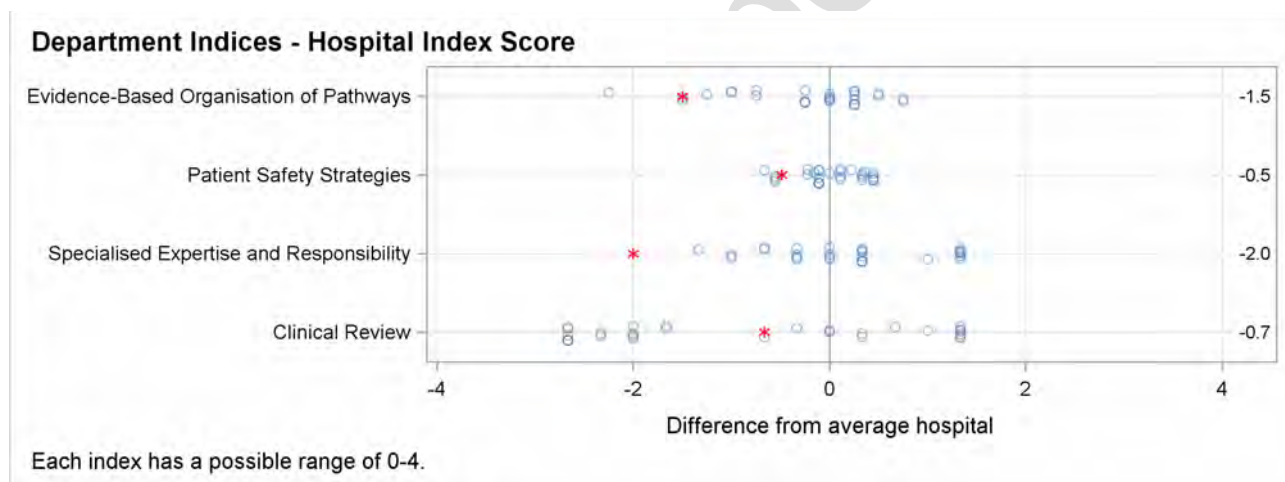
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## AMI LEVEL INDICATORS

The red Asterix indicates the relative performance of this hospital.

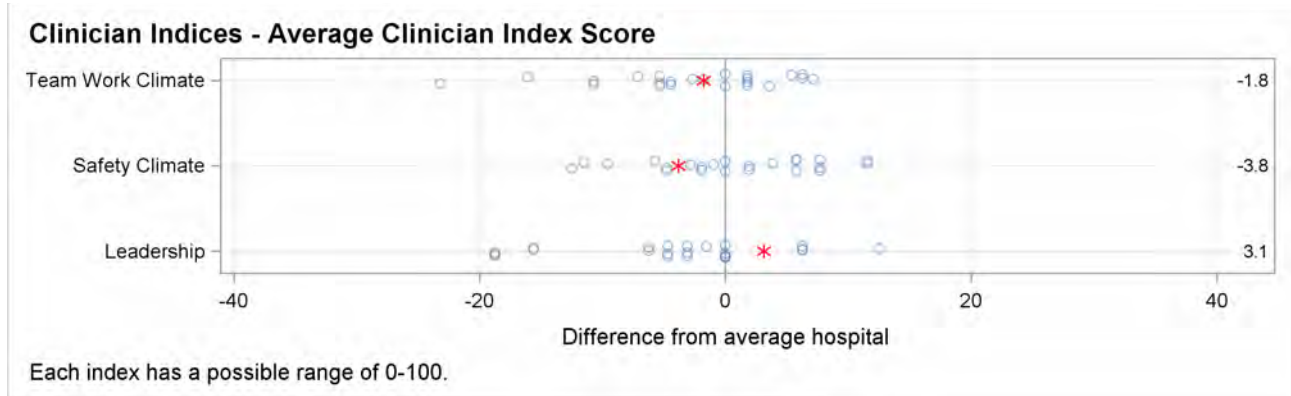
### B1. Heading

	What we looked at	How we measured it
	DUQuA looked at the AMI patient journey from admission to acute care management and discharge	The Evidence-Based Organisation of Pathways (EBOP) measurement looks at clinical processes
	DUQuA looked at what level of care on the AMI ward was in accordance with clinical practice guidelines	Patient Safety Strategies (PSS) measure the use of clinical practice guidelines
	DUQuA looked at the assignment of clinical responsibilities for AMI conditions and care	Specialised Expertise and Responsibility (SER) measures clinical responsibilities
	DUQuA looked at the audit and management of quality processes for AMI	Clinical Review (CR) measures the Quality management processes



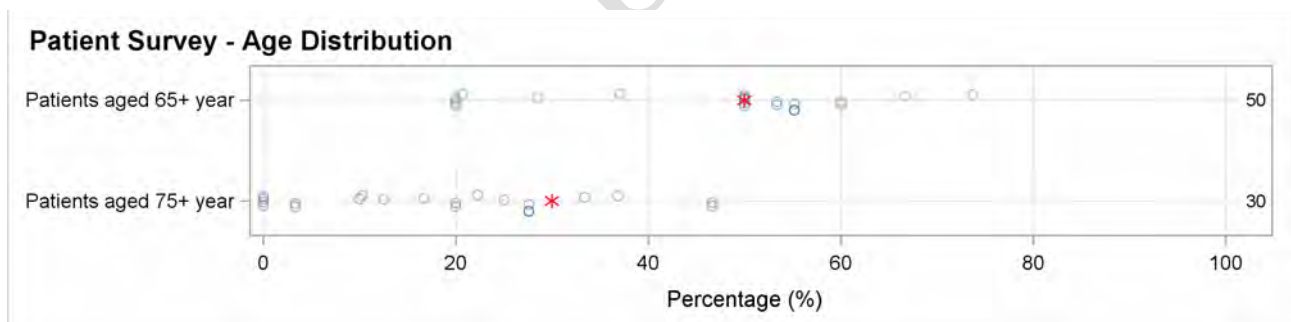
## B2. Culture and leadership

The clinician indices measure the culture and leadership of clinicians at your hospital. The culture measure consists of 'teamwork climate' and 'safety climate', and the leadership measure is a separate index. Data was collected through a questionnaire completed by a convenience sample of doctors, nurses and allied health professionals practising in the AMI department, at least 50% of their work time.

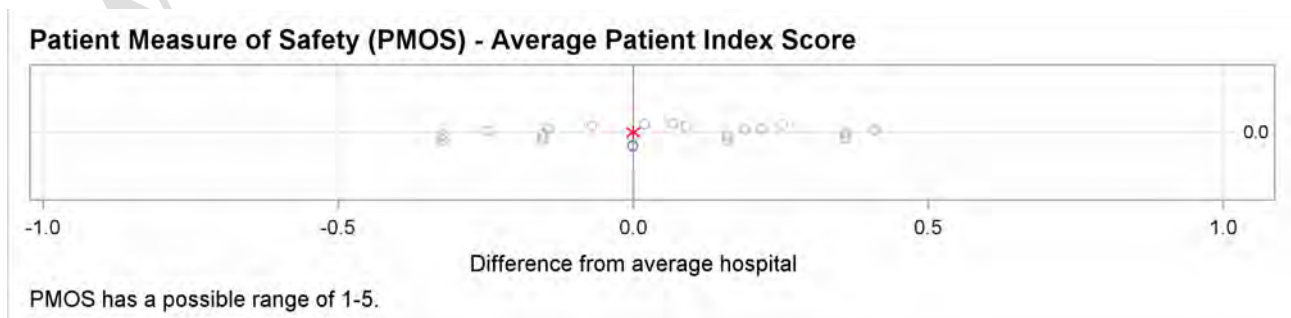


## B3. Patient Measure of Safety

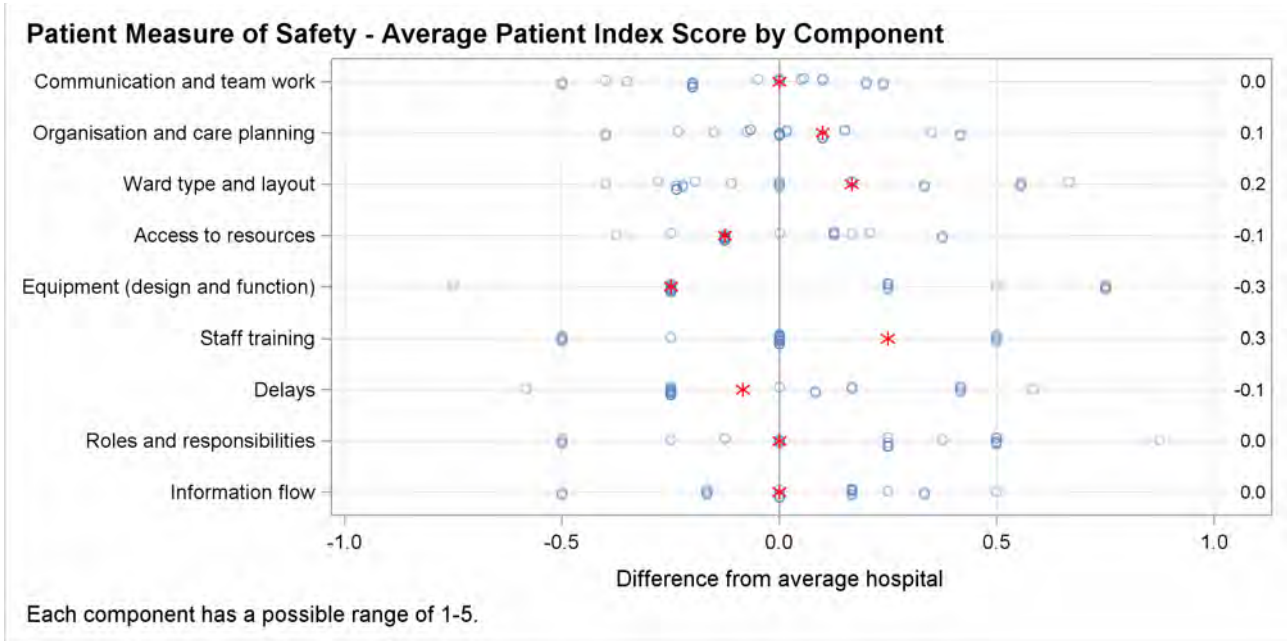
The patient measure of safety assesses patients' perceptions of the factors contributing to patient safety at your hospital. The measure consists of eight components, including communication and team work, organisation and care, access to resources, ward type and layout, information, staff roles and responsibilities, staff training, and equipment. Data was collected through a self-completed or staff-assisted questionnaire completed by consenting patients meeting the inclusion criteria. Patients were eligible if they were aged 18 years and older, if they had spent 50% or more of their time in the AMI department, and had been notified that they were soon to be discharged.



## B4. Heading



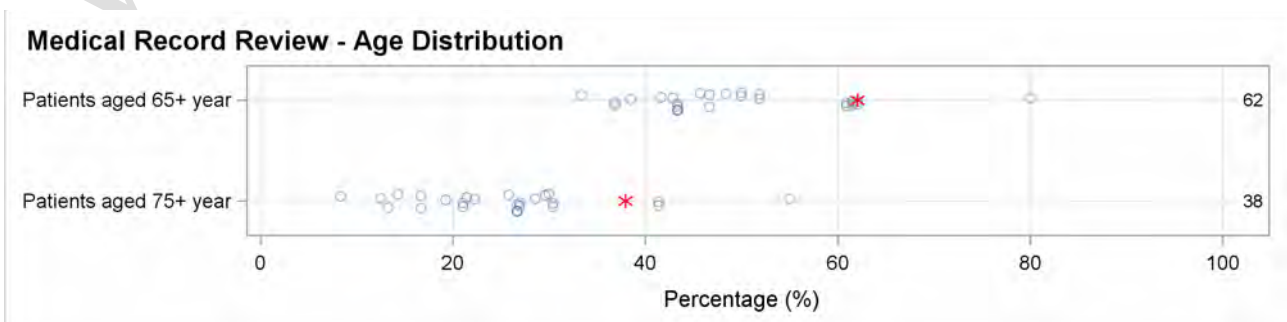
B5.



### B6. Medical Record Review

An audit of clinical treatment process indicators was undertaken for your hospital. Records of patients who met the following criteria were eligible for selection.

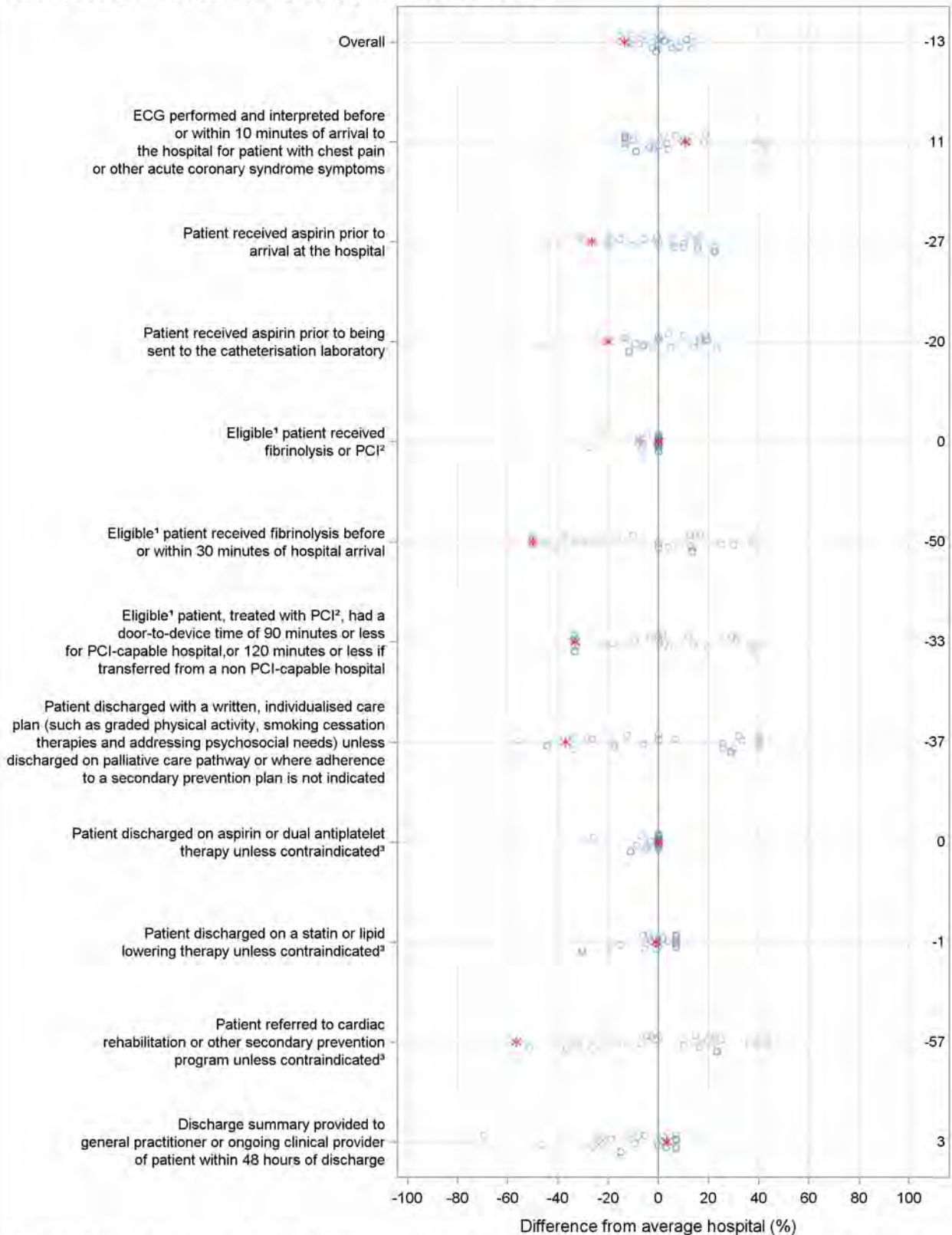
AMI inclusion criteria	Exclusion criteria
<p>Patients aged 18 years and older, admitted to the hospital between 01 September 2014 and 28 February 2015, with a principal diagnosis code of AMI according to:</p> <ul style="list-style-type: none"> <li>• ICD 10 I21 or ICD 10 I22 and</li> <li>• ECG changes associated with STEMI: new LBBB or persistent ST-segment elevation <math>\geq 1</math> mm in two or more contiguous ECG leads and</li> <li>• Blood sampling shows elevated serum markers of myocardial necrosis for creatine kinase MB form and troponins</li> </ul>	<p>Patients who were admitted to the hospital with a principal diagnosis other than those listed in the inclusion criteria</p>



B7. The medical record review closely examined treatment process for patients who met the criteria for AMI.



## Clinical Process Indicators - Average Adherence Score



<sup>1</sup>Eligibility for reperfusion: exclude patients who present at first emergency clinical contact more than 12 hours after symptom onset, or where reperfusion is contraindicated.

<sup>2</sup>Percutaneous Coronary Intervention (PCI) should only be given in hospitals with appropriately qualified clinicians and adequate infrastructure and facilities (Heart foundation REF). Evidence of transfer policies and procedures will be sought in non PCI-capable hospitals.

<sup>3</sup>Contraindications include: advanced care directives, being on a palliative care pathway, and clinical judgement. Contraindication must be documented.

At least one of the indicators had less than 10 responses from this hospital.



# Stroke Care Pathway

## RECOMMENDATIONS

This report provides the results for your hospital. To determine how quality management processes impact patient outcomes, the DUQuA study looked at quality measures on the clinician level and the patient level and reviewed randomly selected medical records for Stroke patients.





If your hospital would like to enhance adherence to quality standards in the Stroke care pathway, you may consider the following recommendations:

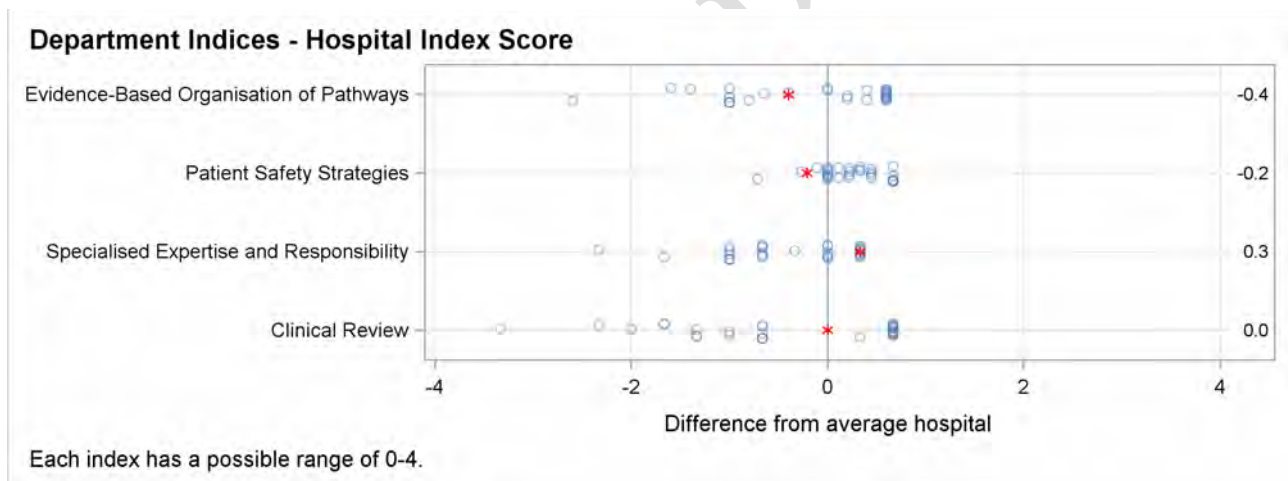
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## STROKE LEVEL INDICATORS

The red Asterix indicates the position of this hospital.

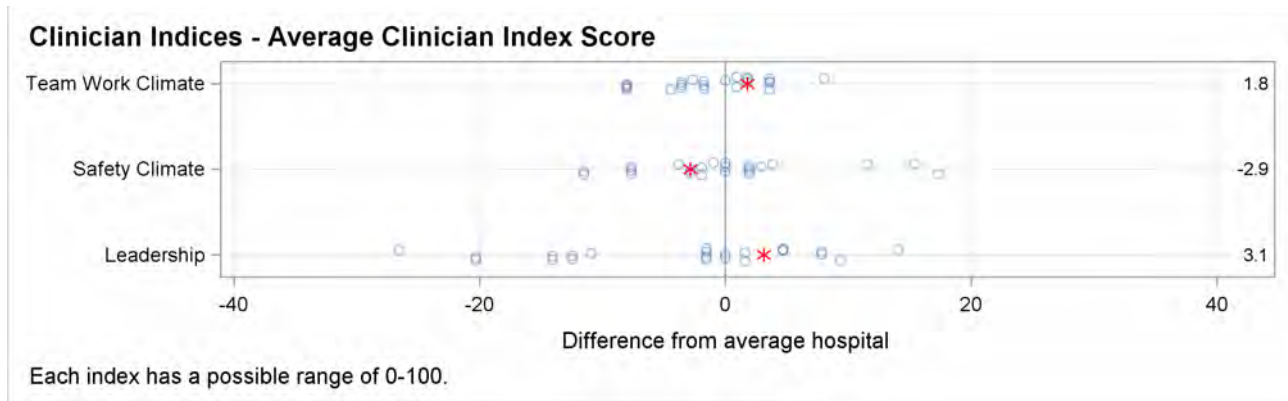
C1 Heading

	What we looked at	How we measured it
	DUQuA looked at the Stroke patient journey from admission to acute care management and discharge	The Evidence-Based Organisation of Pathways (EBOP) measurement looks at clinical processes
	DUQuA looked at what level of care on the Stroke ward was in accordance with clinical practice guidelines	Patient Safety Strategies (PSS) measure the use of clinical practice guidelines
	DUQuA looked at the assignment of clinical responsibilities for Stroke conditions and care	Specialised Expertise and Responsibility (SER) measures clinical responsibilities
	DUQuA looked at the audit and management of quality processes for Stroke	Clinical Review (CR) measures the Quality management processes



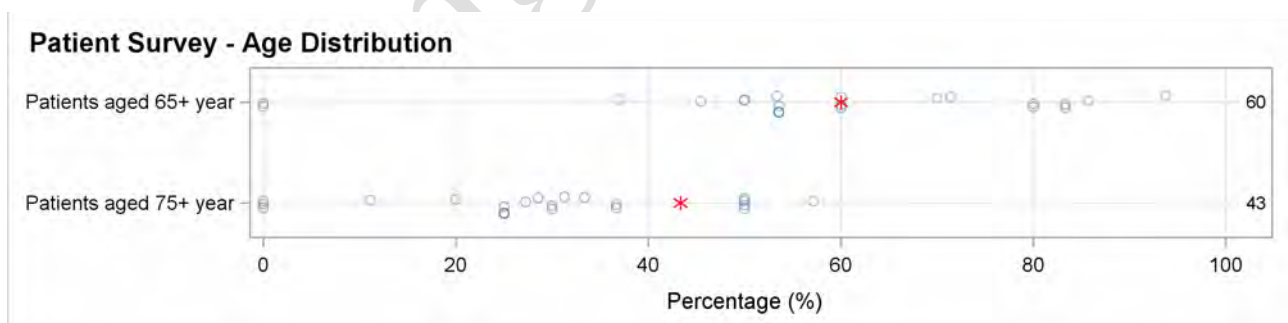
## C2. Culture and leadership

The clinician indices measure the culture and leadership of clinicians at your hospital. The culture measure consists of 'teamwork climate' and 'safety climate', and the leadership measure is a separate index. Data was collected through a questionnaire completed by a convenience sample of doctors, nurses and allied health professionals practising in the stroke department, at least 50% of their work time.

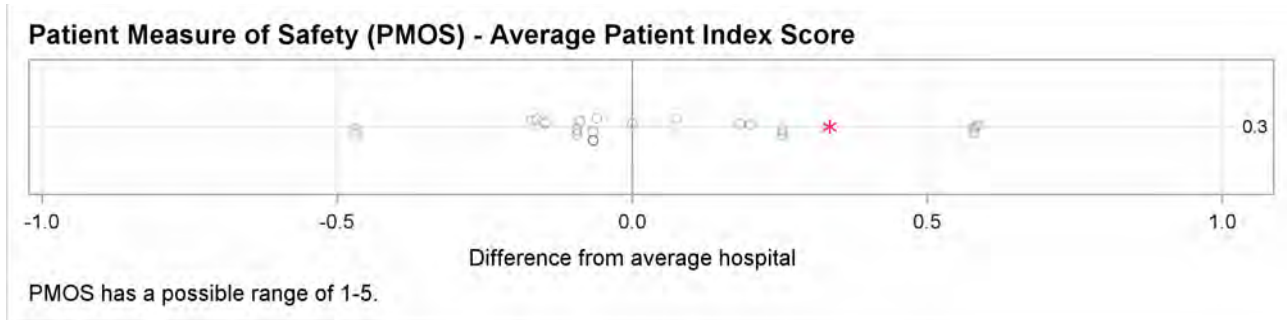


## C3. Patient Measure of Safety

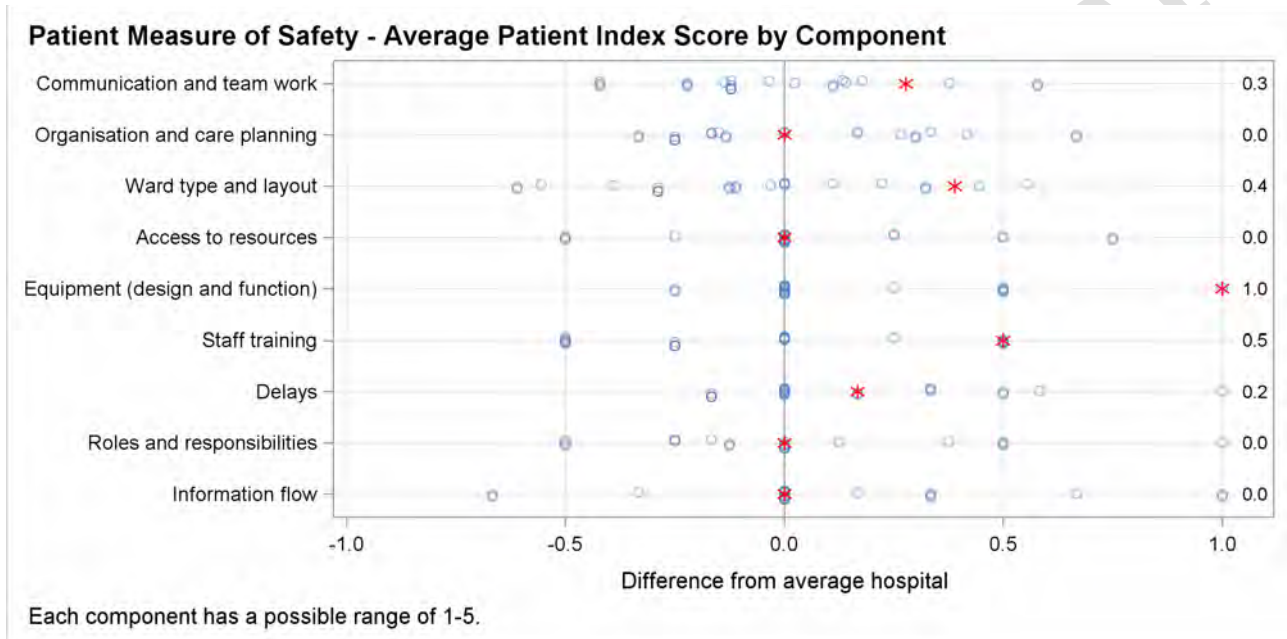
The patient measure of safety assesses patients' perceptions of the factors contributing to patient safety at your hospital. The measure consists of eight components, including communication and team work, organisation and care, access to resources, ward type and layout, information, staff roles and responsibilities, staff training, and equipment. Data was collected through a self-completed or staff-assisted questionnaire completed by consenting patients meeting the inclusion criteria. Patients were eligible if they were aged 18 years and older, if they had spent 50% or more of their time in the Stroke department, and had been notified that they were soon to be discharged.



#### C4. Heading



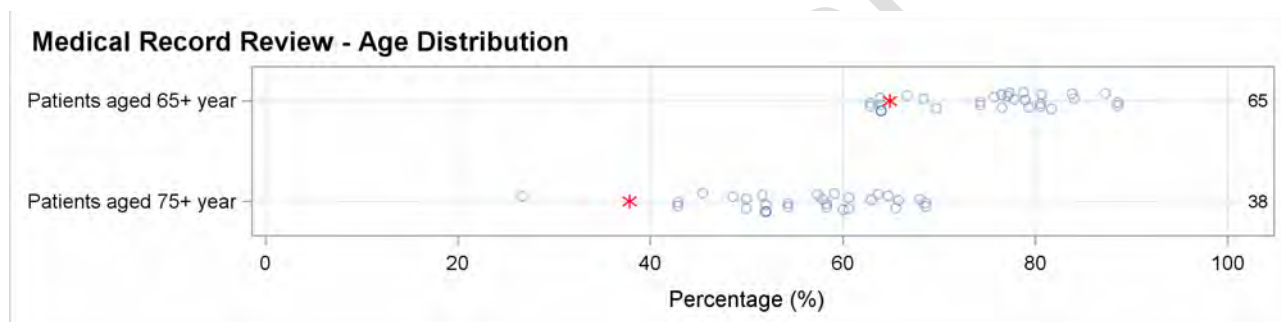
#### C5. Heading



C6. Medical Record Review

An audit of clinical treatment process indicators was undertaken for your hospital. Records of patients who met the following criteria were eligible for selection.

Stroke inclusion criteria	Exclusion criteria
<p>Patients aged 18 years and older, admitted to the hospital between 01 September 2014 and 28 February 2015, with a primary diagnosis code of acute ischaemic stroke OR not specified stroke. Include patients with a principal diagnosis code of:</p> <ul style="list-style-type: none"> <li>• ICD 10 I63 or</li> <li>• ICD 10 I64</li> </ul>	<p>Patients who were admitted to the hospital with a principal diagnosis other than those listed in the inclusion criteria</p>



C7 The medical record review closely examined treatment process for patients who met the criteria for stroke.

## Clinical Process Indicators - Average Adherence Score



<sup>1</sup>Eligibility for intravenous rt-PA: exclude patients who present at first emergency clinical contact more than 4.5 hours after symptom onset, patients with unknown time of onset, or patients where thrombolysis is contraindicated.

<sup>2</sup>Intravenous rt-PA should only be given in hospitals with appropriately qualified clinicians and adequate infrastructure and facilities (NSFREF). Evidence of transfer policies and procedures will be sought in hospitals without the capability to perform intravenous rt-PA.

<sup>3</sup>Contraindications include: advanced care directives, being on a palliative care pathway, and clinical judgement. Contraindication must be documented.

At least one of the indicators had less than 10 responses from this hospital.

# Hip Fracture Care Pathway

## RECOMMENDATIONS

This report provides the results for your hospital. To determine how quality management processes impact patient outcomes, the DUQuA study looked at quality measures on the clinician level and the patient level and reviewed randomly selected medical records for Hip Fracture patients.

If your hospital would like to enhance adherence to quality standards in the Hip Fracture care pathway, you may consider the following recommendations:





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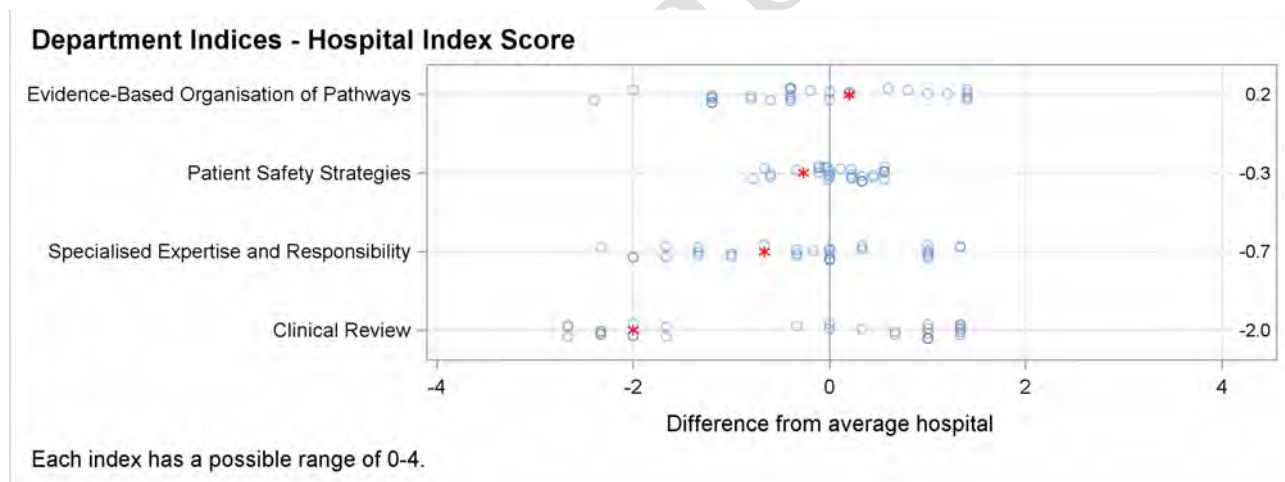


## HIP FRACTURE LEVEL INDICATORS

The red Asterix indicates the relative performance of this hospital.

### D1. Heading

	What we looked at	How we measured it
	DUQuA looked at the Hip Fracture patient journey from admission to acute care management and discharge	The Evidence-Based Organisation of Pathways (EBOP) measurement looks at clinical processes
	DUQuA looked at what level of care on the Hip Fracture ward was in accordance with clinical practice guidelines	Patient Safety Strategies (PSS) measure the use of clinical practice guidelines
	DUQuA looked at the assignment of clinical responsibilities for Hip Fracture conditions and care	Specialised Expertise and Responsibility (SER) measures clinical responsibilities
	DUQuA looked at the audit and management of quality processes for Hip Fracture	Clinical Review (CR) measures the Quality management processes



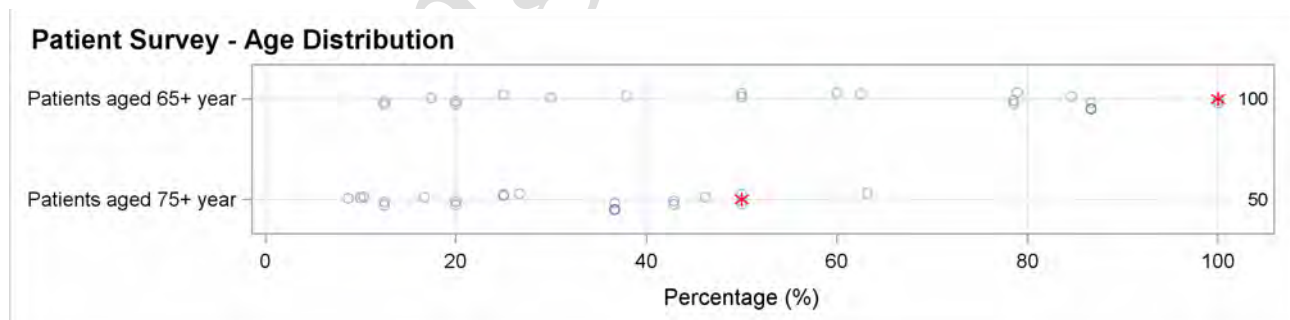
## D2. Culture and leadership

The clinician indices measure the culture and leadership of clinicians at your hospital. The culture measure consists of 'teamwork climate' and 'safety climate', and the leadership measure is a separate index. Data was collected through a questionnaire completed by a convenience sample of doctors, nurses and allied health professionals practising in the hip fracture department at least 50% of their work time.

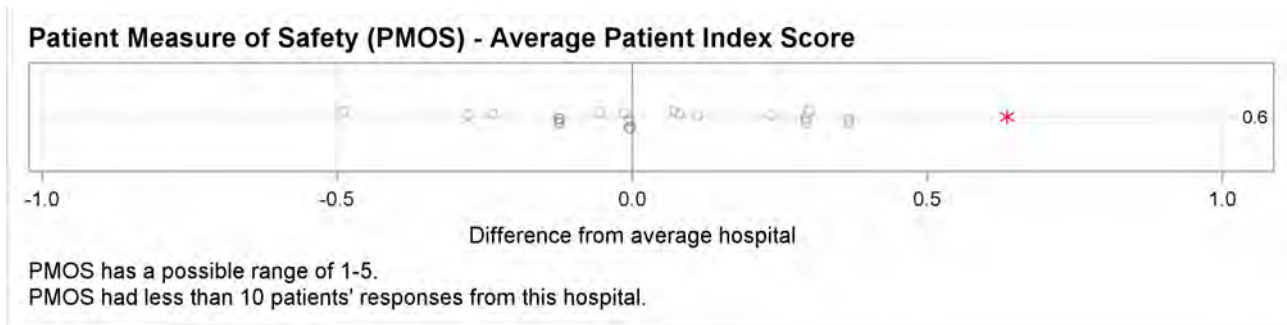


## D3. Patient Measure of Safety

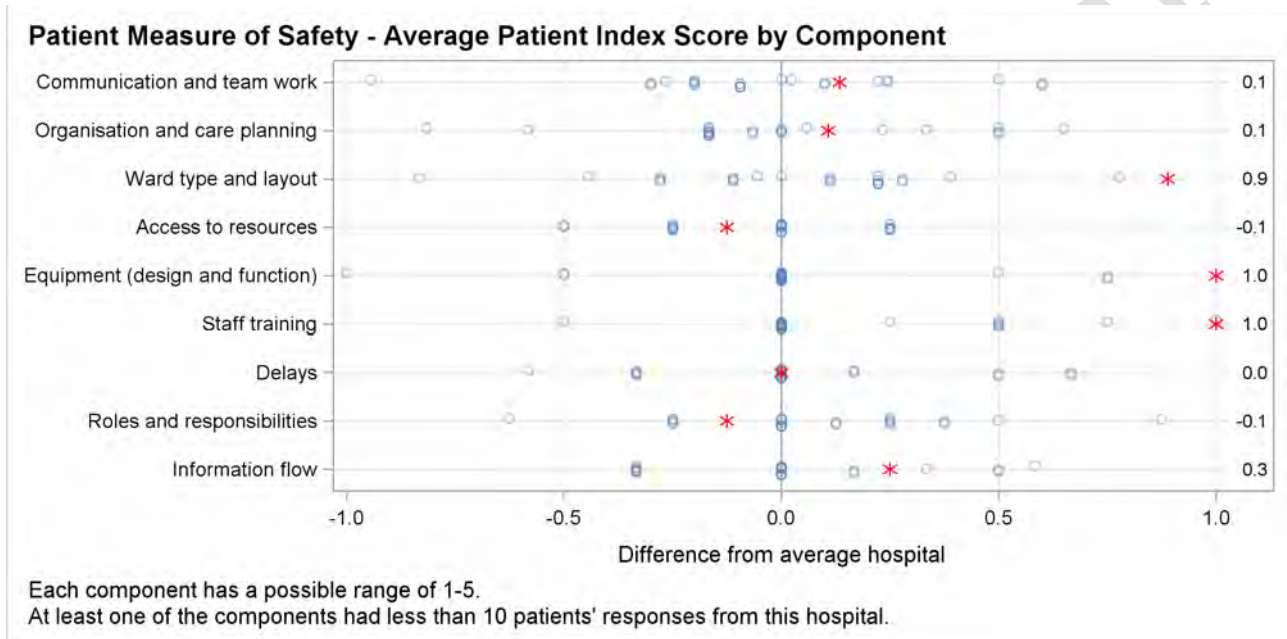
The patient measure of safety assesses patients' perceptions of the factors contributing to patient safety at your hospital. The measure consists of eight components, including communication and team work, organisation and care, access to resources, ward type and layout, information, staff roles and responsibilities, staff training, and equipment. Data was collected through a self-completed or staff-assisted questionnaire completed by consenting patients meeting the inclusion criteria. Patients were eligible if they were aged 18 years and older, if they had spent 50% or more of their time in the Hip Fracture department, and had been notified that they were soon to be discharged.



#### D4. Heading



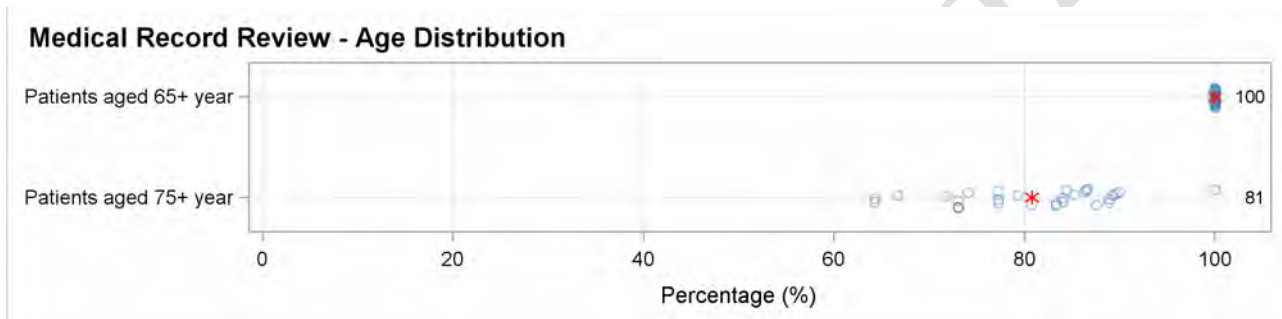
#### D5. Heading



**D6. Medical Record Review**

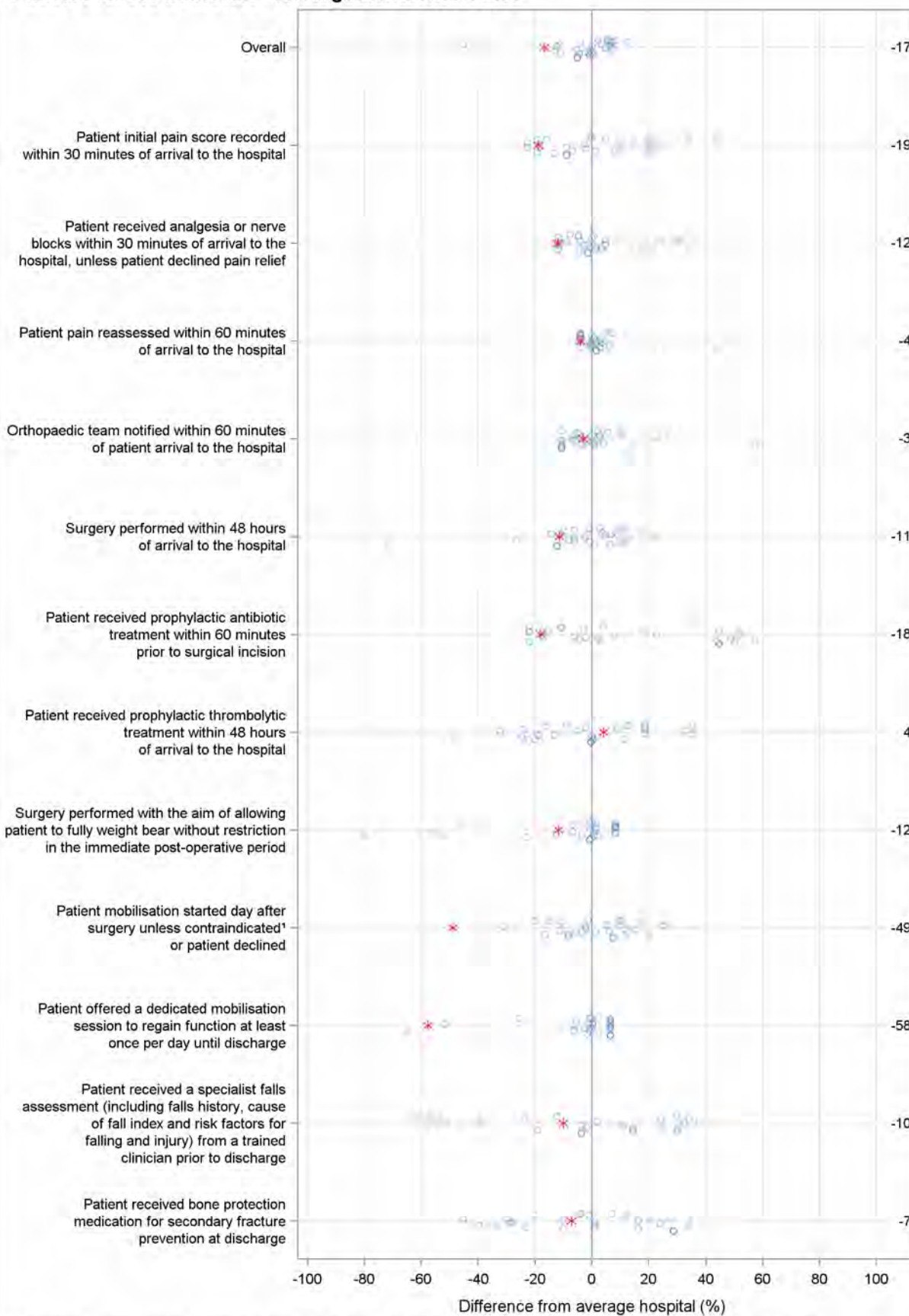
An audit of clinical treatment process indicators was undertaken for your hospital. Records of patients who met the following criteria were eligible for selection.

Hip Fracture inclusion criteria	Exclusion criteria
Patients aged 65 years and older, admitted to the hospital between 01 September 2014 and 28 February 2015, with at least one of the principal diagnosis criteria of: <ul style="list-style-type: none"> <li>• Fractura colli femoris (ICD 10 S72.0) or</li> <li>• Fractura pertrochanterica (ICD 10 S72.1) or</li> <li>• Fractura subtrochanterica femoris (ICD 10 S72.2)</li> </ul>	Patients who were admitted to the hospital with a principal diagnosis other than those listed in the inclusion criteria



D7. The medical record review closely examined treatment process for patients who met the criteria for Hip Fracture.

### Clinical Process Indicators - Average Adherence Score



\*Contraindications include: advanced care directives, being on a palliative care pathway, and clinical judgement. Contraindication must be documented.

# Emergency Department Care Pathway

## RECOMMENDATIONS

This report provides the results for your hospital. To determine how quality management processes impact patient outcomes, the DUQuA study looked at quality measures on the clinician level and the patient level and reviewed randomly selected medical records for ED patients.





If your hospital would like to enhance adherence to quality standards in the ED care pathway, you may consider the following recommendations:

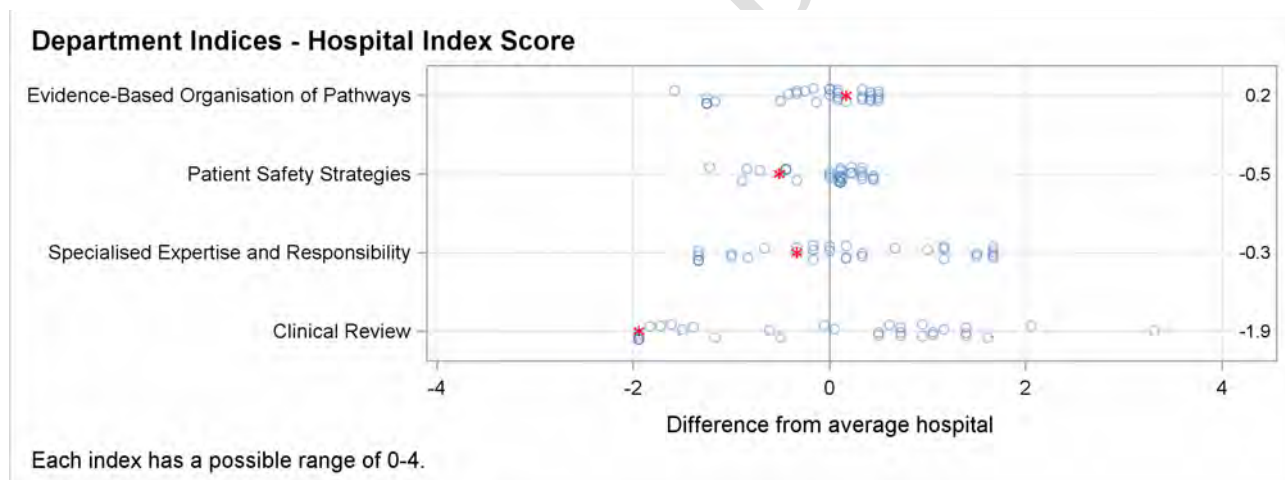
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## ED LEVEL INDICATORS

The red Asterix indicates the position of this hospital.

### E1. Heading

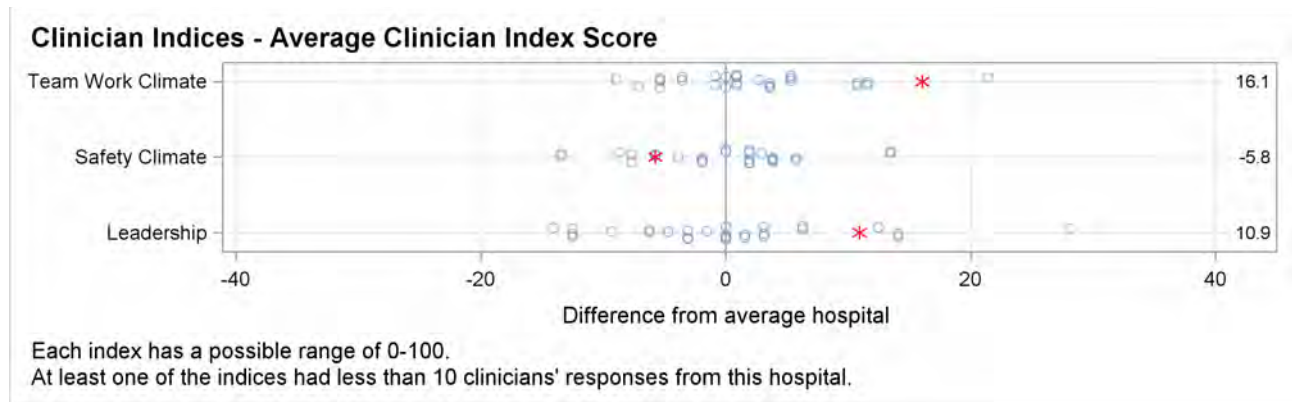
	What we looked at	How we measured it
	DUQuA looked at the ED patient journey from admission to acute care management and discharge	The Evidence-Based Organisation of Pathways (EBOP) measurement looks at clinical processes
	DUQuA looked at what level of care on the ED was in accordance with clinical practice guidelines	Patient Safety Strategies (PSS) measure the use of clinical practice guidelines
	DUQuA looked at the assignment of clinical responsibilities for ED conditions and care	Specialised Expertise and Responsibility (SER) measures clinical responsibilities
	DUQuA looked at the audit and management of quality processes for ED	Clinical Review (CR) measures the Quality management processes





## E2. Culture and leadership

The clinician indices measure the culture and leadership of clinicians at your hospital. The culture measure consists of 'teamwork climate' and 'safety climate', and the leadership measure is a separate index. Data was collected through a questionnaire completed by a convenience sample of doctors, nurses and allied health professionals practising in the Emergency Department, at least 50% of their work time.



## FURTHER READING

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Please contact the DUQuA team if you would like to discuss this report or require further information

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[Dr Natalie Taylor](#)

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