

# Levers for change in healthcare systems:

The role of performance measurement and reporting

**Jean-Frederic Levesque, MD, PhD**

Chief Executive Officer, Bureau of Health Information  
Conjoint Professor, Centre for Primary Health Care and Equity, UNSW

“Healthcare systems are complex and supporting them with knowledge is as fundamental as it is challenging”

**Levesque, Sutherland & Corscadden 2013**

- 1 Concepts
- 2 Knowledge organisations
- 3 Enablement
- 4 Insights

1

What do we mean by

**Performance?**

**Knowledge?**

**Enablement?**

“ Performance happens  
when structures, resources,  
providers and patients  
interact in real contexts ”

Levesque, Sutherland & Corscadden 2013

“ The difference between theory and practice is larger in practice than in theory ”

Hollnagel, Braithwaite & Wears 2013

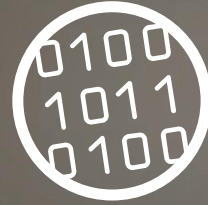
“ If actors perform on stage,  
athletes perform on the field,  
surgeons perform in surgical theatres  
and nurses perform at the bedside  
or in community centres ”

**Levesque, Sutherland & Corscadden 2013**





Data



Information



Knowledge



Action



Change



# Data

*Data represents the codification of real phenomena into a form that can be analysed*



# Information

*Data becomes information  
by interpretation*



# Knowledge

*Knowledge signifies understanding of real things or abstract concepts that data and information have enabled to decipher and analyse*

Hospital  
mortality

Unmet needs

Safety

Adverse  
events

Accessibility

Costs

Resources

Prevalence

Health risks

Satisfaction

Avoidable  
deaths

Disability

Quality of life

Health literacy

Team climate

Coordination

High users

Duplications

“ The application of performance indicators may involve simply reporting data to actors for accountability purposes, or it may involve, in addition, taking action to stimulate change

Leatherman 2002





# Action

*Knowledge supports action through  
behaviour and decisions*

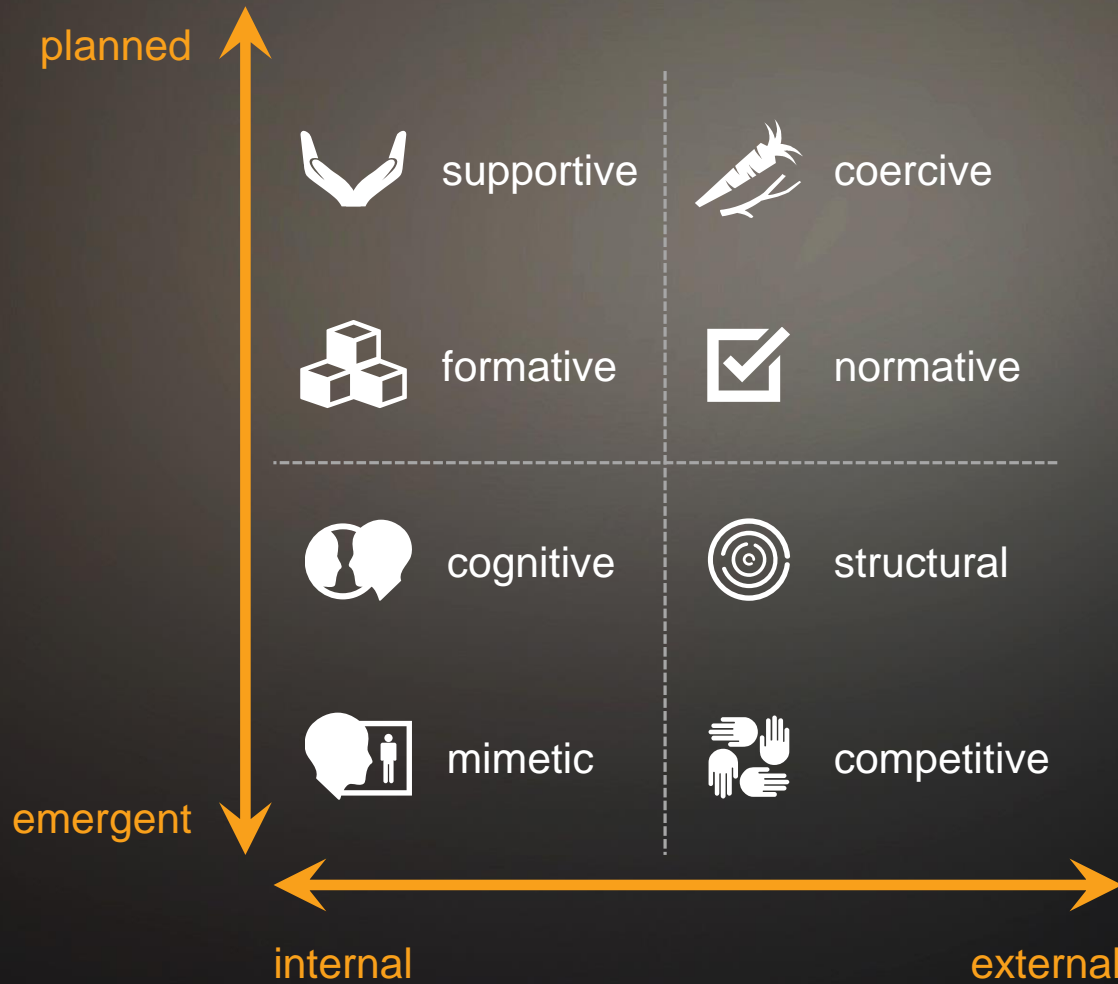


# Change

*Healthcare systems constantly change in terms of structures, processes and their outcomes*



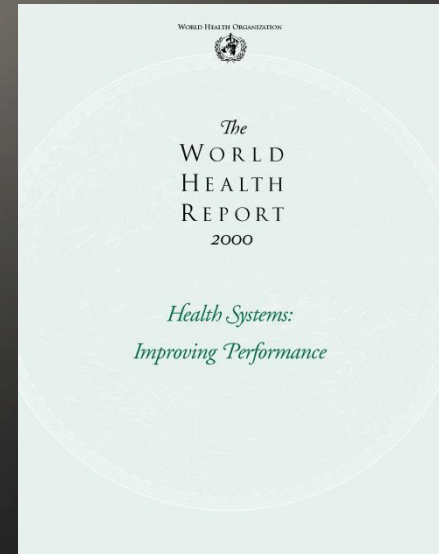
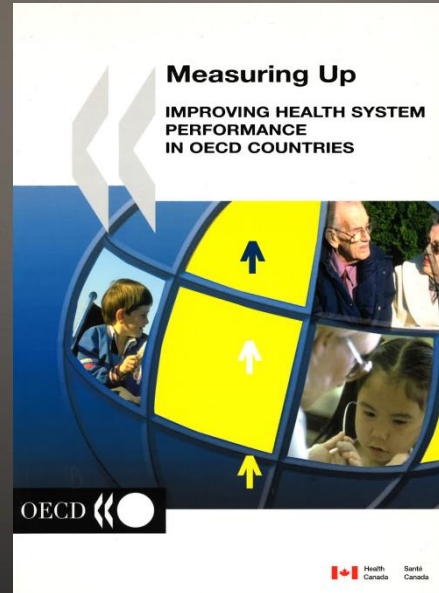
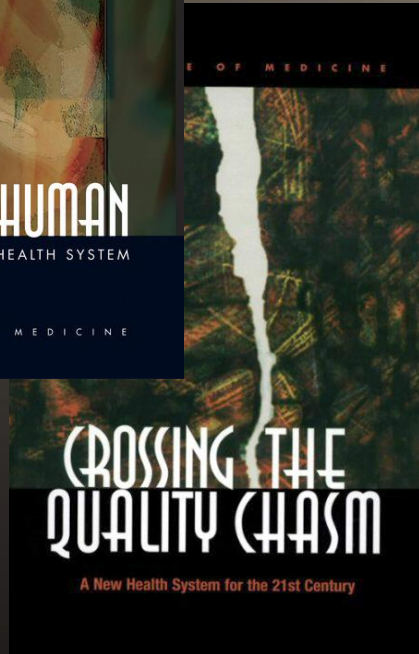
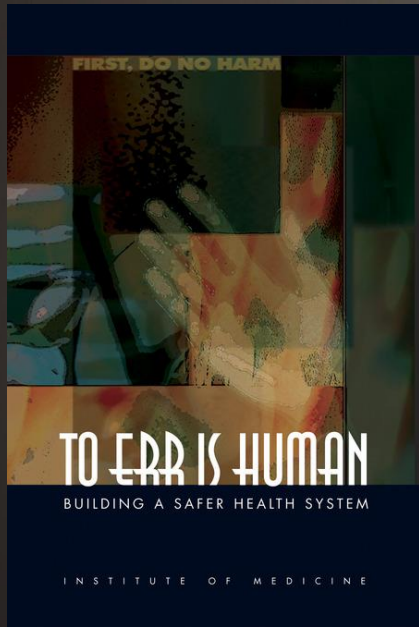
Cross-fertilisation  
Benchmarking  
Contract management  
Regulation  
Peer learning  
Nudge  
Monitoring  
Hug  
Awareness  
Shove  
Continuous education  
Training  
Provider feedback  
Judge  
Self-regulation  
Quality improvement  
Push  
Pay for outcomes  
Peer-pressure  
Monitoring  
Pay for performance  
Incentive



“

Multimodal approaches have the  
biggest impact”

OECD 2002



# Bureau of Health Information (BHI)

Ontario Care Quality Council

USA Institute for Health Improvement

National Health Performance Authority (NHPA)

Centres for Medicare and Medicaid Services (CMS)

Physician Consortium for Performance Improvement (AMA)

RAND Corporation

Australian Commission for Safety and Quality in Healthcare

Independent Hospital Pricing Authority

UK Care Quality Commission

The Nuffield Trust

National Quality Forum (NQF)

## The King's Fund

Leapfrog Group

Agency for Healthcare Research and Quality (AHRQ)

National Committee for Quality Assurance (NCQA)

Ambulatory Care Quality Alliance (AQA)

Hospital Quality Alliance (HQA)

USA Accountable Care Organisation

Quebec's Health and Welfare Commissioner

Joint Commission on Accreditation of Healthcare Organizations (JCAHO)

## Dr Foster

La haute autorité de santé France

Canadian Institute of Health Information

“Goals pursued and national context influence the mix of health system stewardship functions required to achieve health system goals”

**Veillard 2012**



2

# Knowledge organisations in New South Wales

Levers for change in healthcare systems: The role of performance measurement and reporting



Special Commission of Inquiry  
Acute Care Services in NSW Public Hospitals

**Final Report of the  
Special Commission of Inquiry  
Acute Care Services in  
NSW Public Hospitals**

Overview



Peter Garling SC  
27 November 2008





We are responsible for leading safety and quality improvement in the NSW public health system.



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22 May 2015  
[Click here for further information](#)

**Palliative Care Week**  
24 - 30 May 2015

**Feature Campaign**



Healthcare associated infections (HAIs) are a significant and growing problem in our health care system. Improving hand hygiene among health care workers is the single most effective intervention to reduce

**News**

**CLP Applications Open**  
6 May - Applications for the 2015 Exec. CLP cohort are now open

**Continuity of Medicines**  
9 Mar - The Medication Reconciliation Toolkit is now available



#### HETI App now available

More than 100 resources are now available for viewing on tablets and mobile devices. Download the HETI App now. [Read more](#)



#### Springboard Leadership & Management Portal

Find out more about leadership and management in health. [Read more](#)



#### Mental Health unSLOed

Register to be involved in a practical approach to supporting people with mental illness in non-mental health settings. [Read more](#)



#### The Clinical Supervision Training Space

A training portal where new, intermediate and advanced clinical supervisors can access training resources to suit their needs. [Read more](#)

## Health Education and Training Institute

HETI supports education and training for excellent health care across the NSW Health system. We work to ensure that world-class education and training resources are available to support the full range of roles across the public health system including patient care, administration and support services.

HETI's mission is to improve the health of NSW and the working lives of NSW Health staff through education and training.

Find out more about HETI's programs, courses and initiatives in the following areas:

**Medical • Nursing and Midwifery • Allied Health • Rural and Remote • Leadership • Clinical Supervision • Online Learning • Simulation • Statewide Programs**

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# Collaboration. Innovation. Better Healthcare.

The ACI works with clinicians, consumers and managers to design and promote better healthcare for NSW.

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We work with clinicians, consumers and managers to design and promote better healthcare for NSW.



### Resources

Evidence-based resources to promote better healthcare.



### Make it Happen

We offer a range of services to healthcare providers to design and promote better healthcare for NSW.



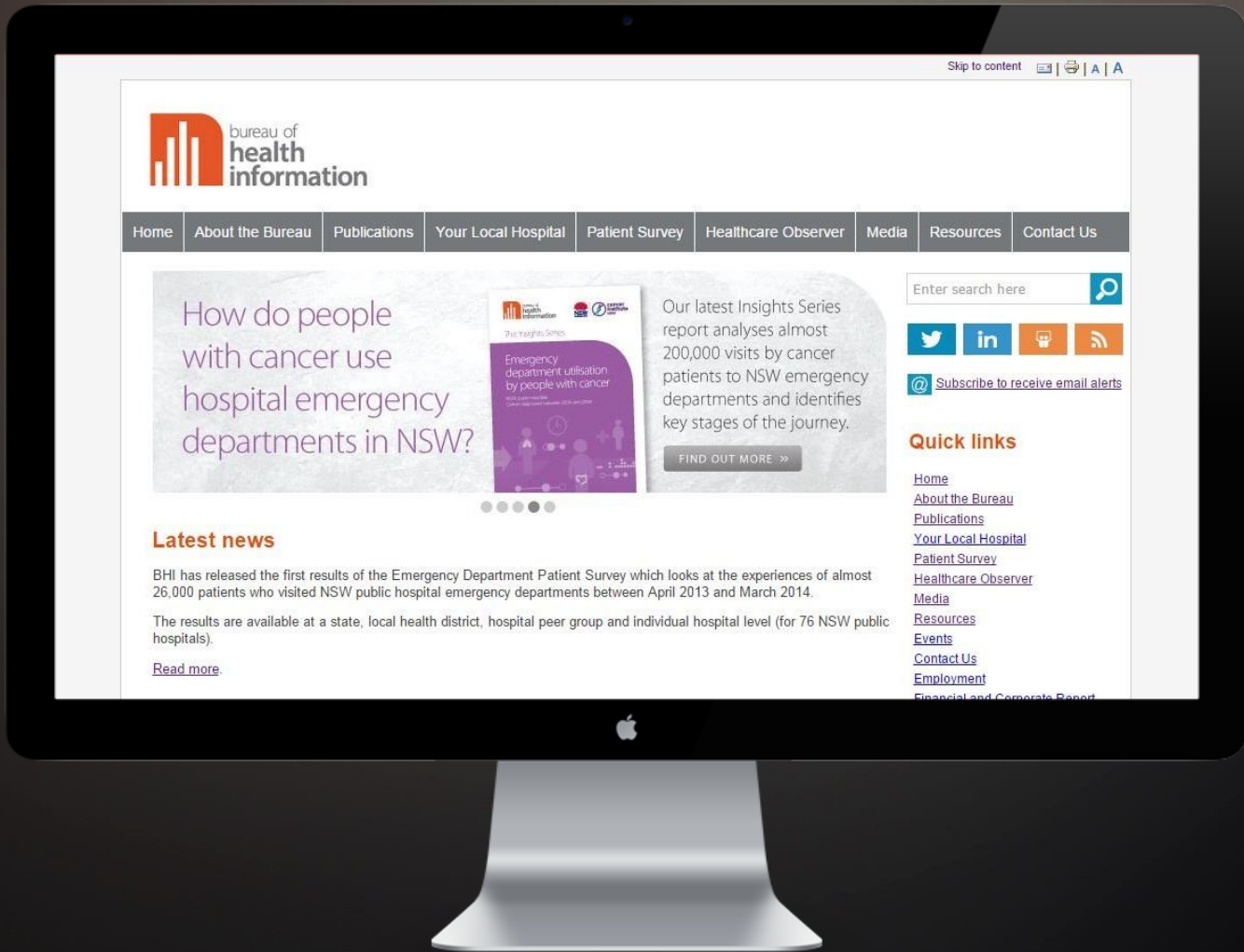
### Innovation Exchange

Learn, share and promote local innovations and improvements in healthcare.

Feedback



Levers for change in healthcare systems: The role of performance measurement and reporting



How do people with cancer use hospital emergency departments in NSW?

Our latest Insights Series report analyses almost 200,000 visits by cancer patients to NSW emergency departments and identifies key stages of the journey.

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Latest news

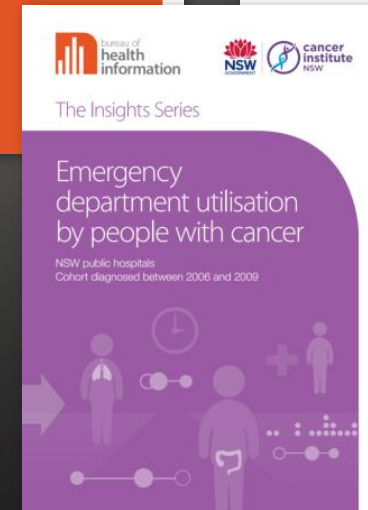
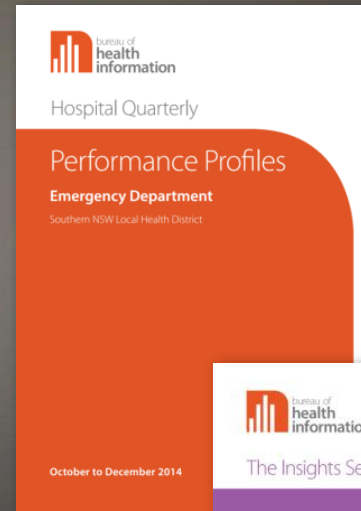
BHI has released the first results of the Emergency Department Patient Survey which looks at the experiences of almost 26,000 patients who visited NSW public hospital emergency departments between April 2013 and March 2014.

The results are available at a state, local health district, hospital peer group and individual hospital level (for 76 NSW public hospitals).

[Read more.](#)

# BHI reports

- Annual performance report
- Hospital Quarterly
- Insights into Care
- Patient Perspectives
- Snapshots, briefs, dashboards and profiles



“ The public reporting of information about the health system and hospital performance is essential for the future of NSW Health.

It is the single most important driver (or lever) for the creation of public confidence in the health system, engagement of clinicians, improvement and enhancement of clinical practice and cost efficiency.

”

Garling Report

# Wait times lag behind

## Hunter hospitals miss state targets

By ASHLEIGH GLEESON

THE Hunter's busiest hospitals have again fallen below the state target for emergency department wait times after a jump in patient demand, new data shows.

At John Hunter Hospital, 61 per cent of patients left the emergency department within four hours in the three months to December 2014, maintaining same period the previous year despite an extra 700 patients.

It meant the hospital, which saw 18,250 people over the quarter, again fell below the NSW target of 81 per cent of patients leaving emergency in four hours.

Maitland Hospital cleared 66 per cent in the four-hour window, despite also facing increased demand, while Calvary Mater and Belmont hospitals made slight improvements in 2015.

The waiting times were not helped by the 6600 people who attended the four emergency departments for non-urgent matters like minor cuts or abrasions. And 23,000 patients attended for semi-



urgent issues like earaches or sprained ankles.

Hunter New England's acting director of acute operations, Karen Kelly, said that people attending for non-urgent matters put a strain on staff trying to treat more serious conditions.

She also noted a number of changes implemented to make emergency departments more efficient.

"At John Hunter Hospital the emergency team, with the support from staff and services across the hospital, has been working hard to improve performance and embed the long-lasting changes which will lead to continued good results in the emergency department," Ms Kelly said.

The information was contained in the Bureau of Health Information's Hospital Quarterly, which also looks at elective surgery waiting times.

The report, issued on Wednesday, showed improvements were made with John Hunter

Hospital's ear, nose and throat surgeries, which recorded a 40 per cent drop in patients waiting for operations at the end of last year compared with December 2013.

Hospital general manager Debbie Bradley said three doctors were appointed to work exclusively in the ear, nose and throat outpatient clinic, along with an ear, nose and throat visiting medical officer surgeon.

The report also showed the total hip replacement average wait times at John Hunter had blown out to 166 days, almost double that in 2013.

Ms Kelly pointed out that it should receive that kind of surgery in 365 days.

"Demand for orthopaedic services in Hunter New England Health is high," she said. "Strategies have been implemented to help manage this demand, including distributing patients across specialist hospitals that have capacity to provide care sooner."

On the September quarter, when 67 per cent of people left the district's EDs within the four-hour benchmark.

BHI chief executive Dr Jean-Frederic Levesque said more than 636,000 people visited emergency departments throughout NSW from October to December.

He said the total time patients spent in the emergency depart-



### HOSPITAL REVIEW

## New data reveals surgeries on rise

By LYDIA ROBERTS

ARMADALE Hospital has lifted its game, with all elective surgeries performed on time between April and June this year.

In all, 328 operations were performed, mostly for general surgery but also for gynaecology, ophthalmology and orthopaedic procedures.

Comparatively, Tamworth Base Hospital recorded a 88 per cent success rate in conducting elective surgery on time.

Wagga Wagga Base Hospital, similar in size to Armadale, could only achieve a 91 per cent success rate for performing elective surgeries on time.

The data was published on Wednesday by the NSW health department.

It published quarterly updates of NSW public hospital performance.

The results are testament to the hard work of doctors and ... hospital staff

Health Minister Jillian Skinner said across the state, there had been a two per cent increase in the number of patients admitted to public hospitals, with Armadale Hospital experiencing a 1 per cent rise.

That meant 32 more patients sought surgery at Armadale compared with this time last year.

Most patients needed elective

surgery to remove cataracts, 195 operations, followed by knee replacements (54), hip replacements (26) and 12 cholecystectomies.

In all, 2312 patients were admitted for surgery at Armadale Hospital, with most admitted for day surgery.

Patients needing overnight care stayed an average four days at the hospital.

Also, 3732 people sought emergency surgery, with those being treated within eight minutes of arriving at hospital.

"Demand for hospital services continues to grow and it is the innovation and inspired work being done on the frontline which is ensuring patients are receiving quality, timely health care," Mrs Skinner said.

## Health report shows consistent turnaround improvement

LISA WACHSMUTH

PATIENTS have had shorter waiting times at hospital emergency departments across the Illawarra and Shoalhaven in the past quarter, according to new figures.

Almost 40,000 people visited EDs across the health district from October to December 2014 with 71 per cent leaving within four hours, according to the Bureau of Health Information's (BHI) Hospital Quarterly Report.

That figure is an improvement on the September quarter, when 67 per cent of people left the district's EDs within the four-hour benchmark.

BHI chief executive Dr Jean-Frederic Levesque said more than 636,000 people visited emergency departments throughout NSW from October to December.

He said the total time patients spent in the emergency depart-

ment was the shortest recorded for any October to December quarter over the past five years.

"Despite more patients visiting emergency departments, the report shows patients are spending less time in the emergency department overall," Dr Levesque said.

That was true at the individual hospitals throughout the Illawarra Shoalhaven.

At Wollongong Hospital, 71 per cent of patients left the ED within four hours in the December quarter, compared with 66 per cent in the previous quarter.

Seventy per cent of those presenting to Shellharbour Hospital ED left within the timeframe.

In October to December, as opposed to the 65 per cent of patients doing so from July to September.

At Shoalhaven Hospital the figure for the latest quarter was 61 per cent, compared with 59 per cent in the September quarter.

"Under Labor in 2010, just 47 per cent of patients were leaving the emergency department at Wollongong Hospital in four hours — it is now 71 per cent," NSW Health Minister Jillian Skinner said.

"This is a remarkable improvement, mirrored by many local hospitals, which demonstrates patients in the Illawarra are receiving best care under the Baird government."

"It is fantastic to see hospitals like Wollongong making this progress now as the improvements will only continue when the \$106 million redevelopment of the hospital is complete."

There were more than 54,000 elective surgeries performed across NSW in the past quarter, with 97 per cent on time.

# Long wait for improvement

## Hospitals lifting emergency response

MATT BAMFORD

WAITING times for serious cases in emergency departments can be up to three times longer in some Sydney hospitals than others, a quarterly performance review to be released today reveals.

The Bureau of Health Information found the state's most efficient hospital for category 2 cases from arrival at emergency to treatment was St Vincent's in Darlinghurst with an average of just four minutes.

Comparatively, the same category emergency patients in the Shire can wait up to 13 minutes for urgent treatment at Sutherland Hospital.

Category 2 patients are classed on the Australasian Triage Scale as those with imminently life-threatening injuries, in severe pain or needing time-critical treatment such as chest pain, severe burns or psychotic behaviour. Category 2 patients should begin treatment within 10 minutes of presenting at emergency departments.

The report found that overall, between April and June this year, more than 600,000 patients attended emergency departments — a 3 per cent rise on the same period last year and the highest recorded

for the quarter in two years. Of those, more than 168,000 were admitted to emergency, a 5 per cent increase on the same time last year.

The report showed the state's public hospitals were doing better across the board, with 72 per cent of patients leaving emergency departments within four hours — a 6 per cent improvement from April to June 2013.

Bureau of Health Information chief executive Dr Jean-Frederic Levesque said for those patients with more common injuries, like sprained ankles, waiting times had dropped across the state.

"There has been improvements for triage categories four and five, for whole of NSW, Category five has gone from 147 minutes (average wait) a year ago down to 133 minutes," Dr Levesque said.

Waiting times for elective surgery were on target, with 97 per cent of patients receiving surgery within the recommended time period and every patient needing urgent surgery receiving it on time.

"Hospitals have improved against most performance measures," Dr Levesque said.



Working together to lessen the impact of cancer



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Cancer in NSW

Research Grants and Funding

Prevention and Early Detection

Supporting Best Practice

Patient Support

Data and Statistics

About the Institute

## Quit and stay quit.

See the Aboriginal Quit Smoking mini series produced in partnership with NITV.

### iCanQuit

1 2 3



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#### Services for health professionals

- Canrefer: Cancer referrals
- eviQ: Cancer treatments online
- Research grants
- Cancer statistics
- Cancer notifications
- Centre for Health Record Linkage

#### Services for the public

- Breastscreen NSW
- Cervical screening



07 MAY 2015

#### Debunking breast screening myths

An initiative to increase awareness about the importance of regular



29 APRIL 2015

#### Paving the way for improved detection and treatment of mental illness in people with cancer



02 APRIL 2015

#### Artwork inspiring women to breast screen for good health

The Cancer Institute NSW this week unveiled artwork created by women





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- + Our people
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- + Strategic health plan 2014-2024
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- + Paediatric healthcare
- + Child protection and violence prevention
- + Youth health and wellbeing
- + Programs

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- + Media releases
- + Newsletters
- + Policy directives/ guidelines
- + Fact sheets/ brochures
- + Reports
- + Multimedia

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- + Events
- + Maternity and newborn training
- + Paediatric training
- + Child protection and violence prevention training
- + Youth health and wellbeing training
- + Educational Resources





Read the Strategic Plan and Report  
Read the Strategic Plan for Mental Health in NSW and accompanying report. >

Strategic Plan  
The Commission has developed a Strategic Plan for Mental Health in NSW

Agenda for change  
We are working with Government and community towards reform

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3

# Using information to enable performance in New South Wales

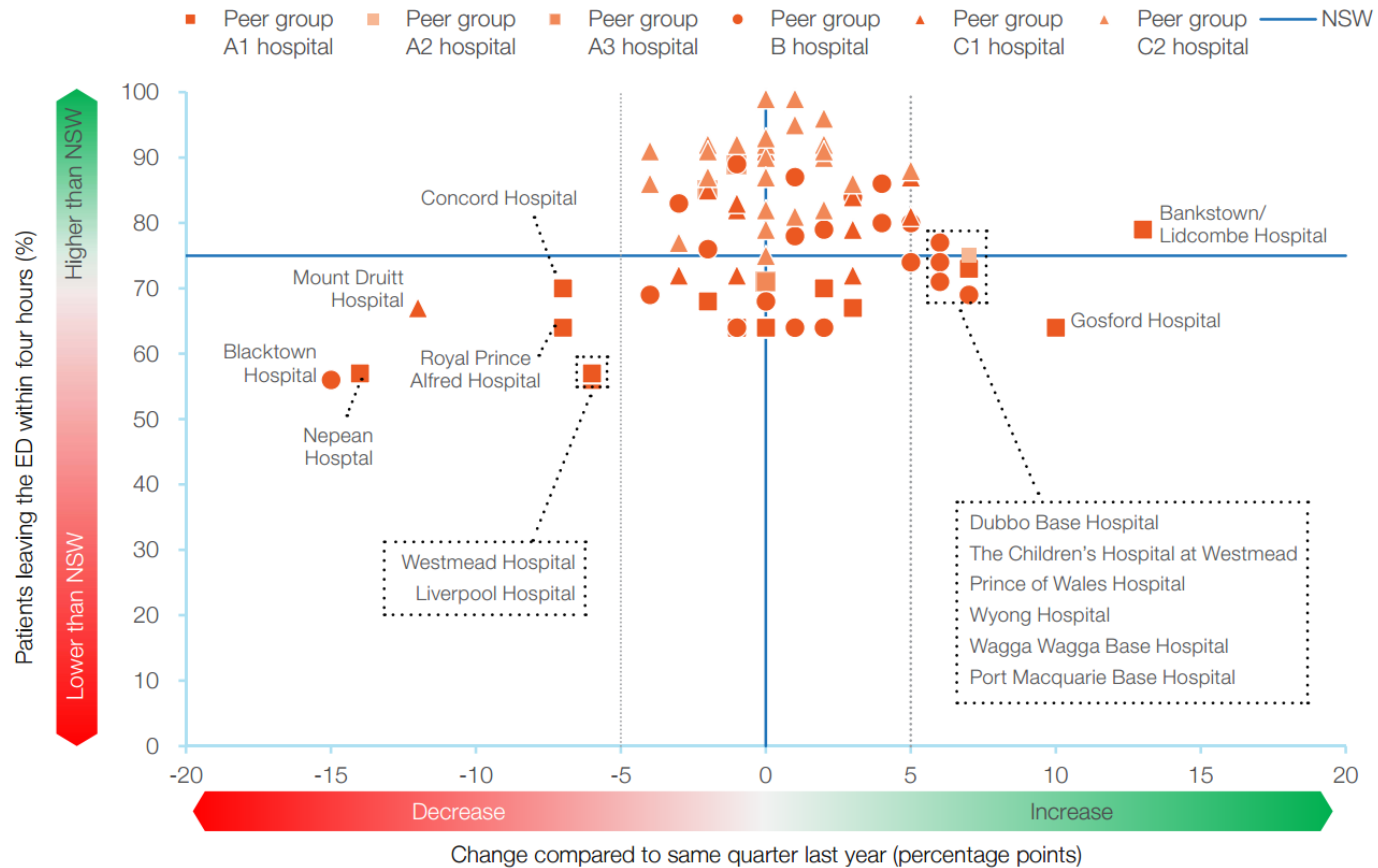
Levers for change in healthcare systems: The role of performance measurement and reporting

# Coercive and cognitive levers

The example of hospital timeliness performance measures

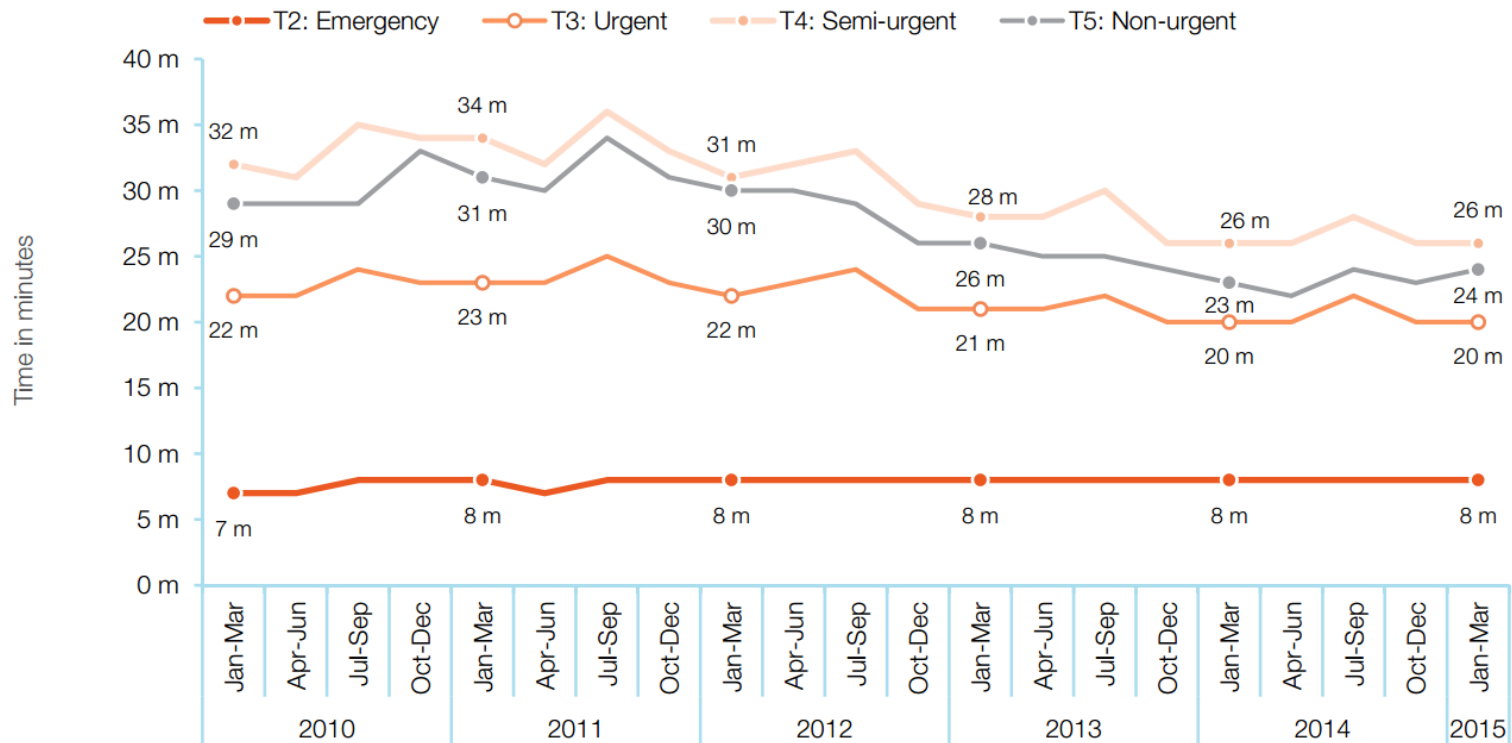


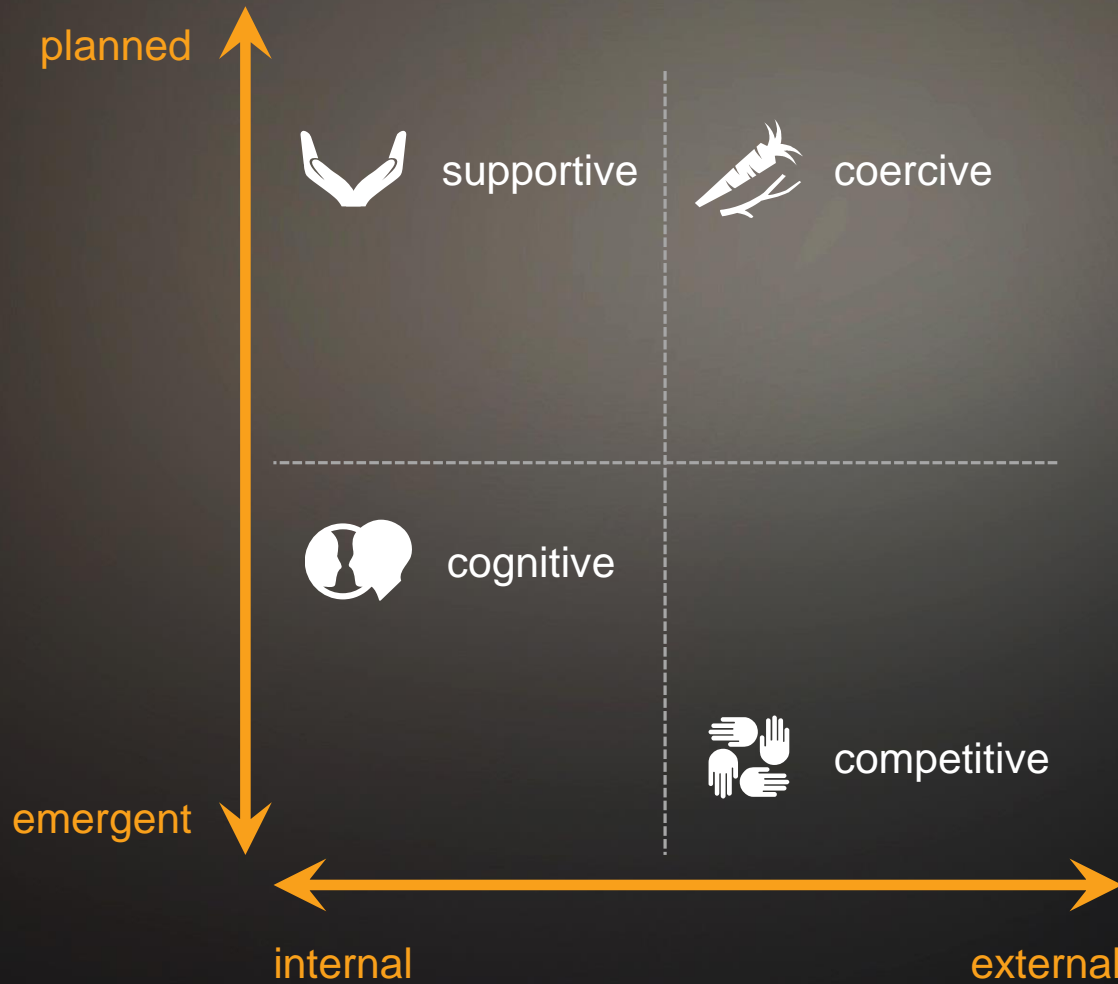
# Percentage of patients leaving in four hours – hospitals



# Time from presentation to treatment – NSW

Median time from presentation to starting treatment, by triage category, January 2010 to March 2015







# Normative and supportive levers

The example of mortality



# 30-day mortality following hospitalisation



Altogether, the five conditions included in this report account for around 20% of hospital mortality

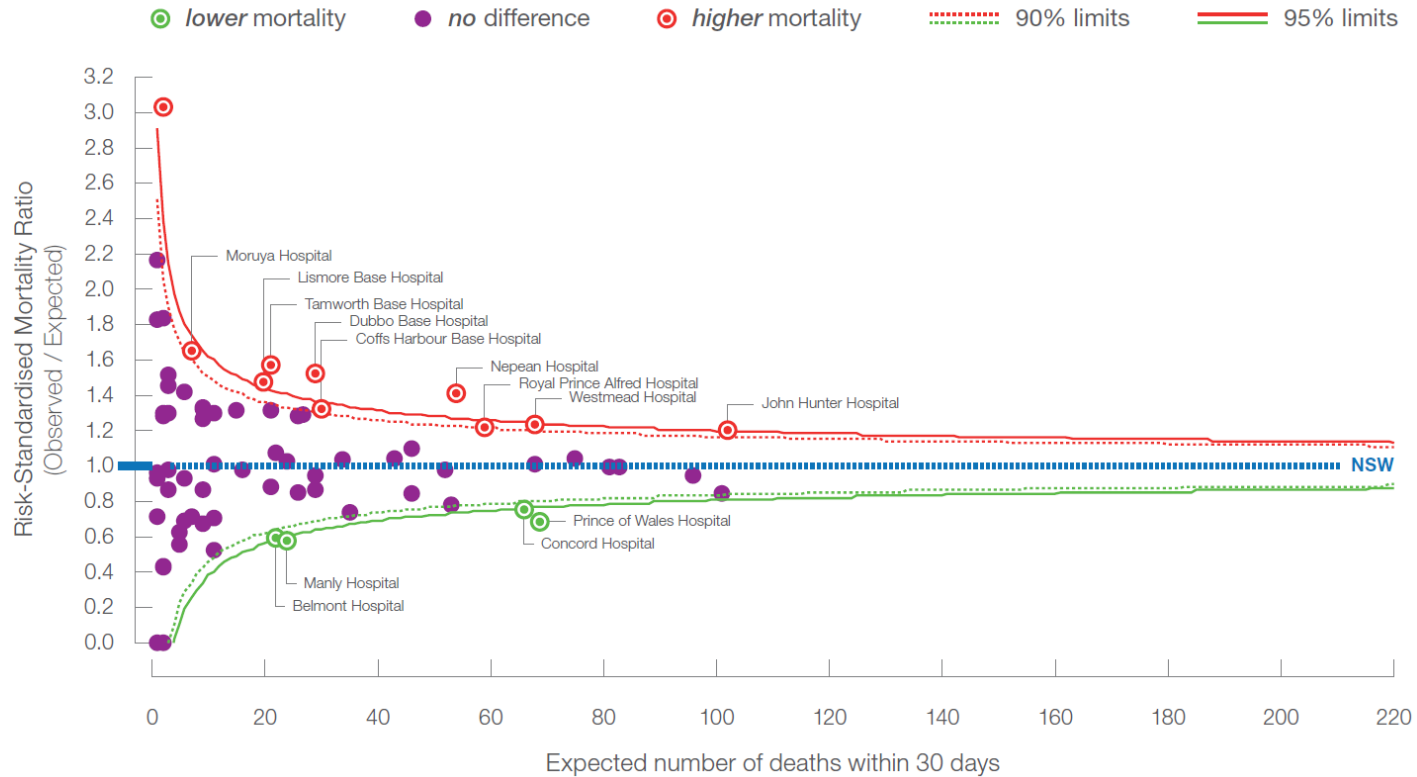


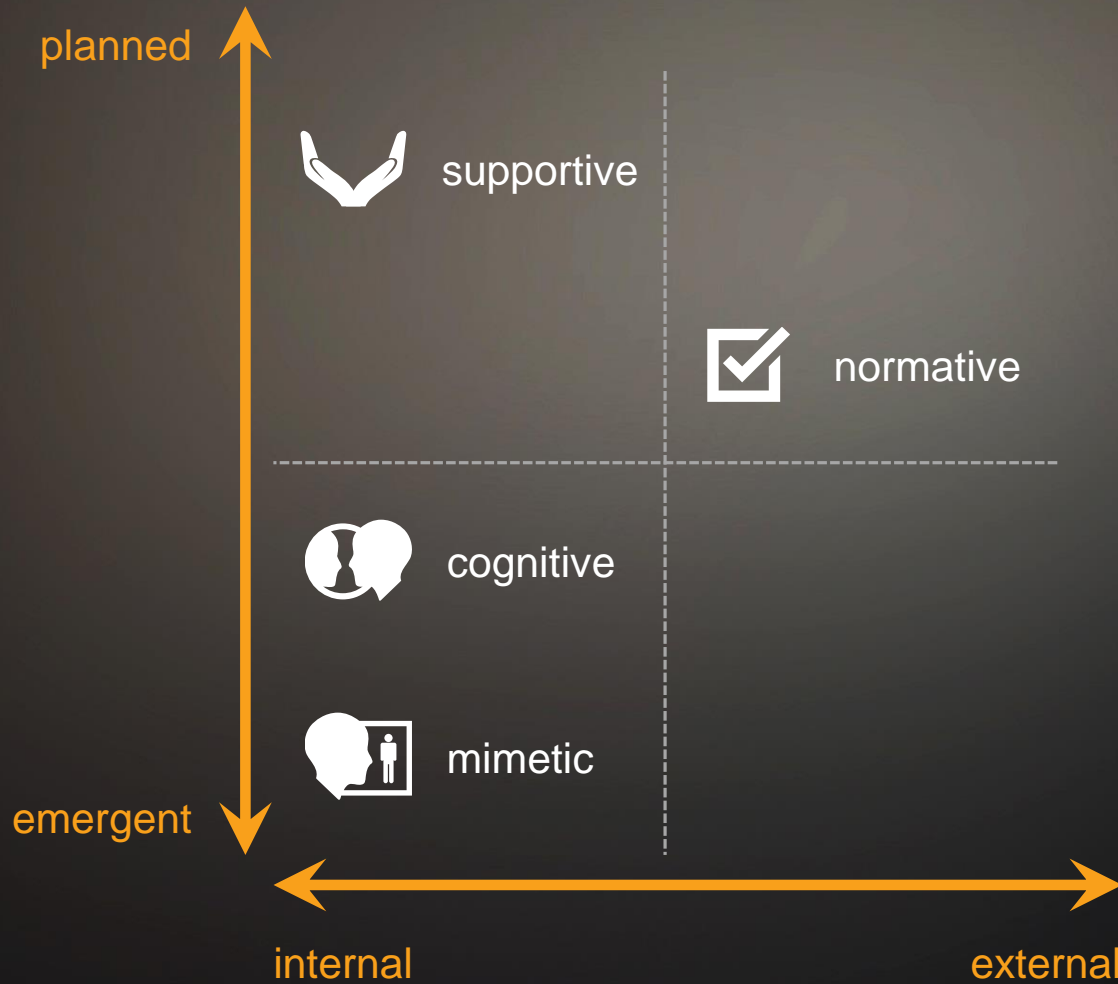
The vast majority of NSW hospitals did not have higher than expected mortality



# 30-day mortality following hospitalisation – hospital outliers

Figure 14: Ischaemic stroke 30-day risk-standardised mortality ratio, NSW public hospitals, July 2009 – June 2012 <sup>Δμ</sup>





# Normative and structural levers

The example of Cancer ED performance measures



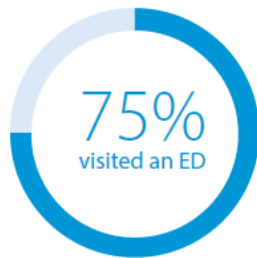
# ED use at the end of life – NSW

## Patterns of ED visits near the end of life



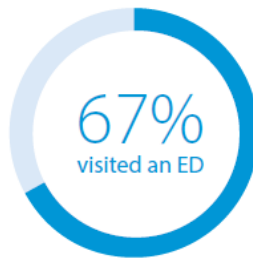
One in 5 people with cancer died within a year of diagnosis

Of those who died



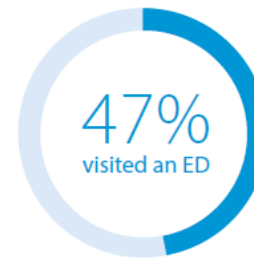
in the last  
**180 days** of life

Of those who died



in the last  
**90 days** of life

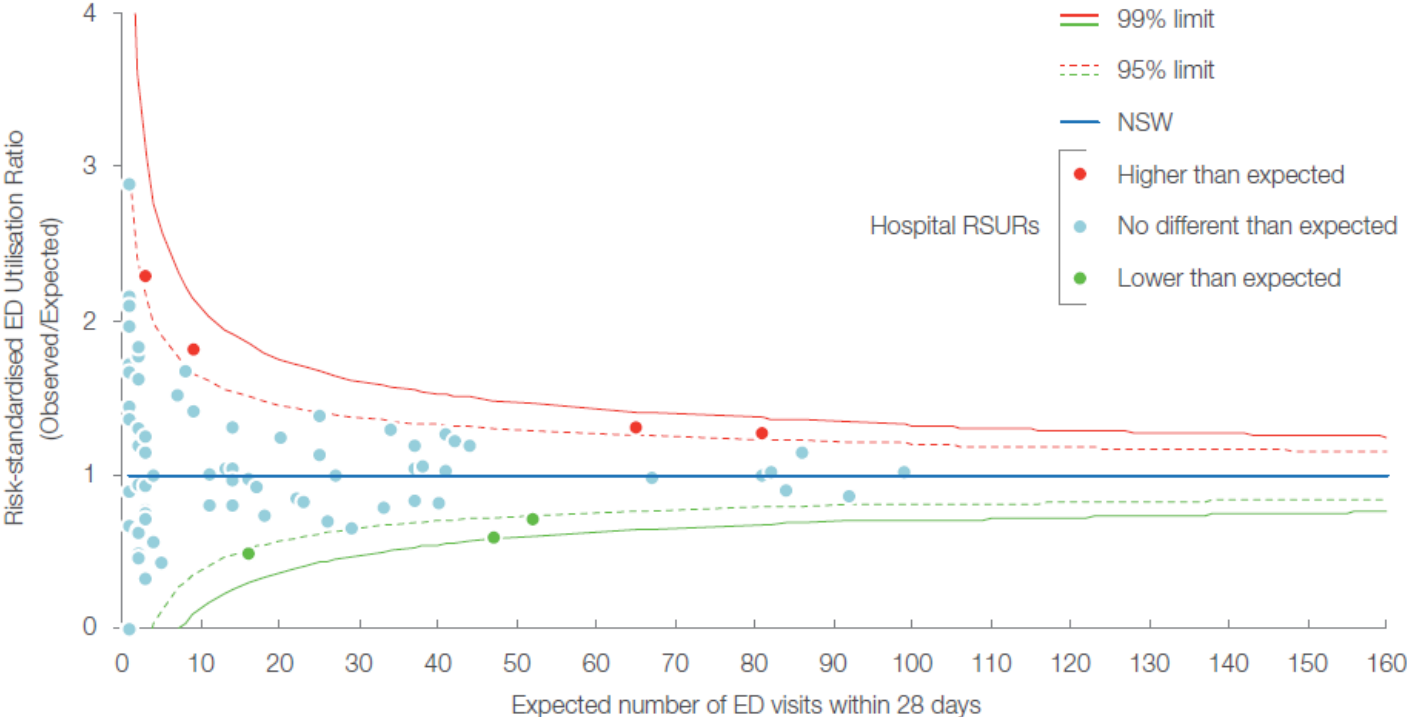
Of those who died

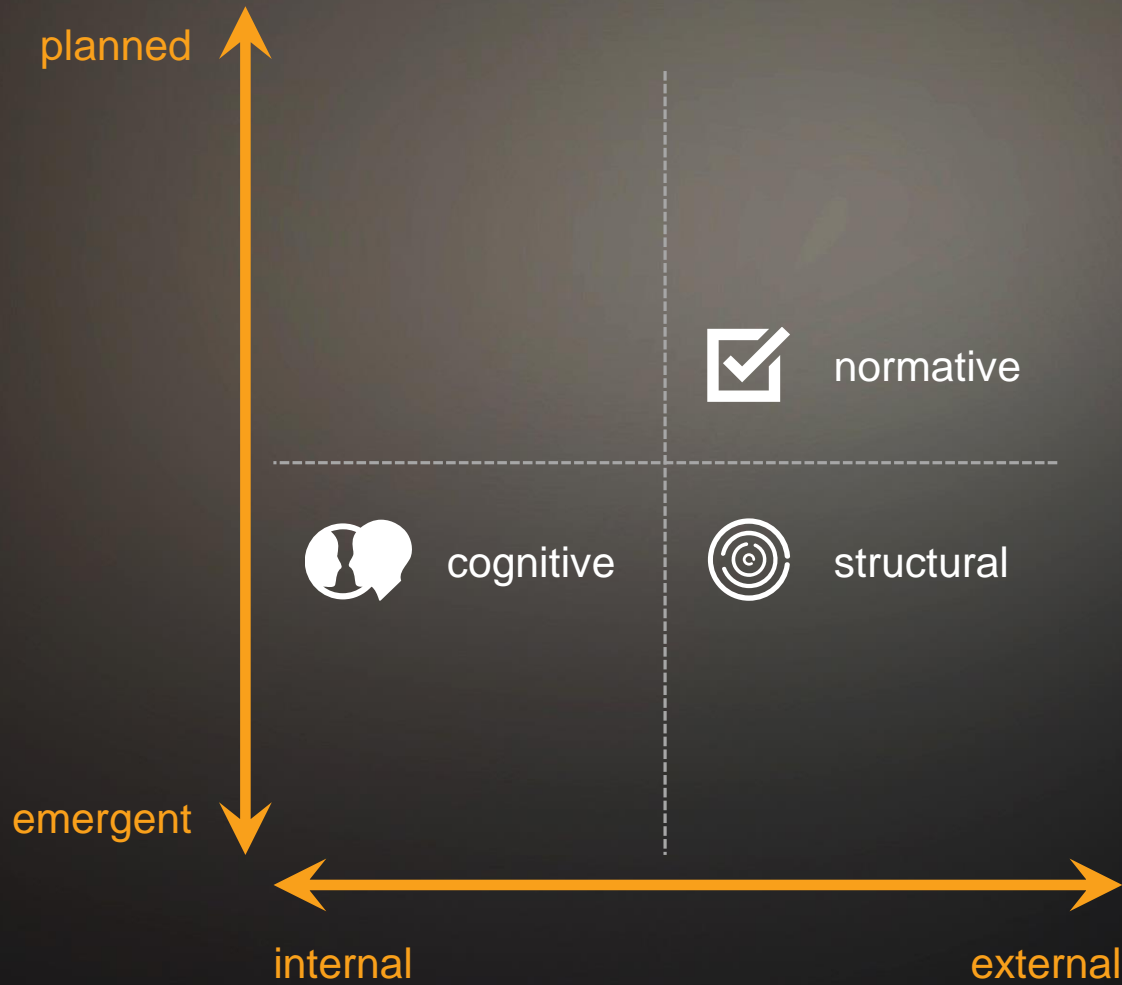


in the last  
**30 days** of life

# ED use for cancer patients – hospital outliers

Figure 22 Colorectal cancer risk-standardised utilisation ratios (RSURs), ED visits within 28 days of discharge from hospital, NSW public hospitals, adults diagnosed with colorectal cancer, 2006–2009°







# 4

## Insights from the NSW experience

“No organisation can use all levers all the time...some levers are synergistic, some are in tension”

“Small organisations are more agile and responsive... lack economies of scale and depth of resources”

“Specialisation brings focus and concentration of expertise... brings the risk of fragmentation and duplication”

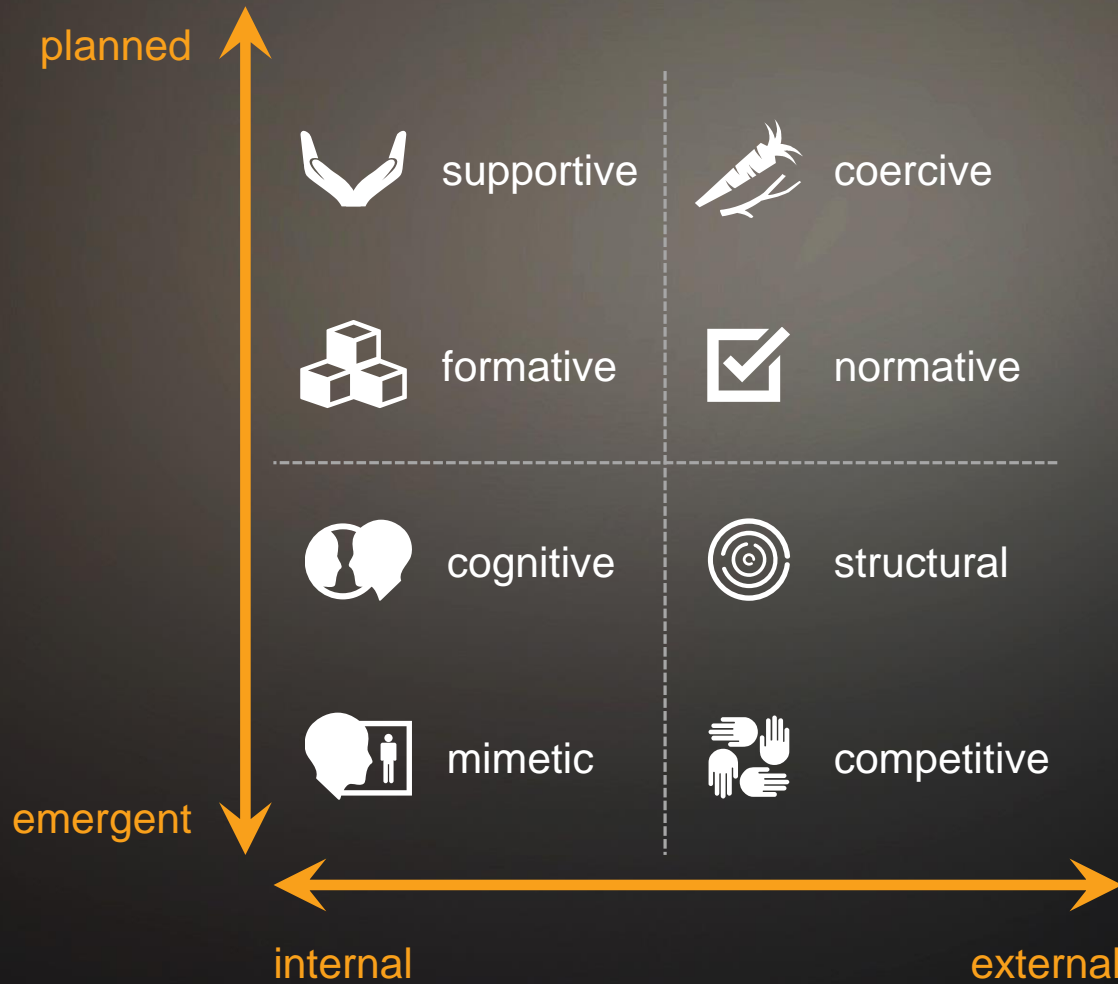
“Splitting and overlapping responsibilities enable emulation, competition and diversity and brings resilience”

“Multiple organisations  
can create confusion and impose  
burdens on stakeholders”

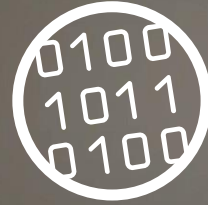
“A knowledge organisation acts in a negotiated space”

- 1 Concepts
- 2 Knowledge organisations
- 3 Enablement
- 4 Insights





Data



Information



Knowledge



Action

Change



# Thank you!