Innovation & Data Intelligence

For Nursing & Midwifery

Daniel Pocock, Director Clinical Governance
Mater Group.
It is the notion of “perfect performance” that we must abandon - Human error is the downside of having a brain
Background
Quality

Plan

Do

Act

Study
I trust in God, the rest must bring data — without it, you are just another person with an opinion
**What is Data?**

**Information** in raw or unorganized **form** (such as alphabets, numbers, or symbols) that refer to, or **represent**, conditions, ideas, or objects. Data is limitless and present everywhere in the **universe**.
What is Data?

Things **known** or **assumed as facts**, making the basis of **reasoning or calculation**.
The Australian Health Care System

• One of the top performing OECD countries
• 7th longest life expectancy at birth (82 yrs)
• Top 5 countries for survival after heart attack & cancer
• Spectacular declines in death from CVAD
• 8.9% GDP compared with OECD average 9.3%
The problem with healthcare

We only see part of the story
Australian Health Care System

ANTIMICROBIALS
Number of prescriptions dispensed

2013-2014

30,355,539

PER 1,000 PEOPLE

1199
Australia

842
United States

642
Canada

www.safetyandquality.gov.au/atlas
<table>
<thead>
<tr>
<th>DATE</th>
<th>12:00</th>
<th>13:00</th>
<th>13:30</th>
<th>14:00</th>
<th>15:00</th>
<th>16:00</th>
<th>17:00</th>
<th>21:00</th>
<th>23:30</th>
<th>00:30</th>
<th>03:00</th>
<th>07:00</th>
<th>11:00</th>
<th>12:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEMPERATURE</td>
<td>38.5+</td>
<td>38.0</td>
<td>37.6</td>
<td>37.3</td>
<td>36.5</td>
<td>36.0</td>
<td>36.5</td>
<td>37.0</td>
<td>37.8</td>
<td>37.6</td>
<td>37.0</td>
<td>36.4</td>
<td>36.5</td>
<td>35.8</td>
</tr>
<tr>
<td>SYSTOLIC BLOOD PRESSURE</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
<td>104/60</td>
</tr>
<tr>
<td>HEART RATE</td>
<td>85</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
</tr>
<tr>
<td>BREATHS</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

*PLEASE MEWS SCORE PATIENTS IN COLOURED AREAS AND CONSULT THE ALGORITHM*
LET'S HAVE ONE MORE AND THEN WE'LL GO!!
### Adult Deterioration Detection System (ADDS)

If any observation is in a shaded area, add up the Total ADDS Score and take the action required for that score.

- **Score 0**
- **Score 1**
- **Score 2**
- **Score 3**
- **Emergency call**

#### Actions Required

<table>
<thead>
<tr>
<th>Total ADDS Score 1–3</th>
<th>Total ADDS Score 4–5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record observations at least once every 4 hours</td>
<td>Ward doctor to review patient within 30 minutes</td>
</tr>
<tr>
<td>Carry out appropriate interventions as prescribed</td>
<td>Request review, and note on the back of this form</td>
</tr>
<tr>
<td>Manage fever, pain or distress</td>
<td>Notify Team Leader</td>
</tr>
<tr>
<td>Review O₂ delivery</td>
<td>Record observations at least once every 30 minutes</td>
</tr>
<tr>
<td>Consider informing Team Leader</td>
<td>If patient must leave ward area, Nurse must accompany patient</td>
</tr>
</tbody>
</table>

#### Total ADDS Score 6–7

- Registrar to review patient within 30 minutes
- Request review, and note on the back of this form
- Registrar to ensure Consultant is notified
- Ward doctor to attend
- If patient must leave ward area, Intern and Nurse must accompany patient

#### Total ADDS Score ≥ 8

- Consider Emergency call
- Registrar to review patient within 10 minutes
- Request review, and note on the back of this form
- Registrar to ensure Consultant is notified
- If patient must leave ward area, Registrar and Nurse must accompany patient

---

**Emergency call if:**

- Any observation is in a purple area
- Airway threat
- Respiratory or cardiac arrest
- New drop in C₂ saturation < 80%
- Sudden fall in level of consciousness
- Seizure
- You are seriously worried about the patient but they do not fit the above criteria
NSQHSS 10 standards
Minimum performance expectations, processes & structures for organisations.

Clinical Care Standards
Minimally agreed best practice statement of care patients should be able to access by health professionals and service for a specific condition.

Atlas of Variation
Illumination of the variation in health care provisions across Australia. Considers Underuse of effective care; Overuse of marginal benefit care; Overuse of low value or supply sensitive care.

Hospital Complications List
Tool for local monitoring of safety and quality (at best) – screening tool to flag areas for further consideration

Best Practice Pricing
Drawing on national guidelines and the clinical care standards – examine local and international schemes, clinical pathways for embedding consensus on ‘best practice’ and scope of a nation best practice pricing model.

mercy . dignity . care . commitment . quality
Performance & Accountability Framework

Agencies
- COAG Reform Council
- Australian Commission on Safety and Quality in Health Care
- National Health Performance Authority

Products
- Comparison of national, state and territory performance
- ACSQHC standards and guidelines
- Comparisons of LHN, hospital (public and private) and Medicare Local performance
- Reports on jurisdictional performance
- Recommendations of whether to pay reward funding
- Hospital Performance Reports
- Healthy Communities Reports

Indicators
- National Healthcare Agreement & National Partnership indicators
- ACSQHC indicators
- National Health Performance Authority indicators

Other reporting:
- AIHW flagship reports
- RoGs annual comparisons
- Aboriginal and Torres Strait Islander Health Performance Framework
- Public reporting by state and territory governments
- National Mental Health Report

Pro-existing reporting incorporated by the Framework
Established by or with the creation of the Framework
Reporting outside of the framework
STONEBRIDGE
CHURCH OF GOD

Honk if you love Jesus text while driving if you want to meet Him.

Sun. School
10:00 AM

Sun. Worship
11:00 AM & 6:00 PM

Wed.
7:00 PM

Pastor Floyd Ingram
121,077 patient separations

10,004 clinical incidents
- 1 SAC
- 2 446 SAC 1
- 249 SAC 2
- 2409 SAC 3
- 497 near miss
- 3285 adverse outcome

Of these, 174 were healthcare acquired infections

RCA & Incident Review System Themes
- Handover, communication, discharge planning
- Serious adverse event
- Clinical assessment and treatment
- Equipment and maintenance
- Process and environment
- Safety management
- Staff safety
- Surgical safety - communication and teamwork
- Recognition and response to deterioration
- Communication, documentation, and checking
- Process failures and cognitive failures

1.3% rate of orthopaedic arthroplasty surgical site infections. Improved from 1.9% in 2015-16.

1.5 HCAHPS cranial neurological distress at discharge. Improved from 84% in 2015-16.

83% completion and review of injury risk assessment. Improved from 78% in 2011.

96% of patients had an episode of pain. Improved from 81% in 2015-16.

92% of patients were discharged within 24 hours of surgical procedure. Improved from 85% in 2015.

2% of patients had an episode of pain. Improved from 3.4% in 2015. National Health Authority target is 1.5%.

82% rate of hand hygiene compliance at Mater South Brisbane. Same as 2015-16.

# COMPLAINTS

COMPLAINT CARE STANDARDS

Mater proactively addresses and monitors the components of care in each of the six Australian Commission on Health and Safety’s Clinical Care Standards.

MATER IMPROVEMENT FRAMEWORK
Funnel plot of HBN HSMRs for Jul 2016 - Jun 2017 compared to the combined HBN HSMR for the 2016-2017 financial year.
CNAK05 Proportion of Medical/Surgical patient days Over 21 Days

Comparison with peers (2017 Jan - 2017 Jun)

Formula: [Count of acute patient days for patients with patient days > 21.0 days in medical & surgical service lines] / [Count of acute patient days for patients in medical & surgical service lines]

Source: Casemix

Inclusions:
- patient days > 21 (Details about patient days in Appendix A)
- DRGs in medical and surgical service lines
- Only includes Acute and Newborn care-types

Exclusions:
- Dialysis (DRG L612) episodes
- Same day DRGs
- Episodes with HITH care
CNAK55 Rate of major hospital-acquired complications

Comparison with peers (2017 Jan - 2017 Jun)

Stubborn Red (last 3 periods)

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>6</td>
<td>1.3%</td>
</tr>
<tr>
<td>24</td>
<td>1.2%</td>
</tr>
<tr>
<td>30</td>
<td>1.1%</td>
</tr>
<tr>
<td>39</td>
<td>1.0%</td>
</tr>
<tr>
<td>46</td>
<td>1.0%</td>
</tr>
<tr>
<td>37</td>
<td>1.0%</td>
</tr>
<tr>
<td>56</td>
<td>1.0%</td>
</tr>
<tr>
<td>41</td>
<td>1.8%</td>
</tr>
<tr>
<td>16</td>
<td>1.8%</td>
</tr>
<tr>
<td>20</td>
<td>1.8%</td>
</tr>
<tr>
<td>13</td>
<td>1.8%</td>
</tr>
<tr>
<td>24</td>
<td>2.0%</td>
</tr>
<tr>
<td>16</td>
<td>2.0%</td>
</tr>
<tr>
<td>26</td>
<td>2.2%</td>
</tr>
<tr>
<td>63</td>
<td>2.2%</td>
</tr>
<tr>
<td>345</td>
<td>2.2%</td>
</tr>
<tr>
<td>36</td>
<td>2.4%</td>
</tr>
<tr>
<td>40</td>
<td>2.4%</td>
</tr>
<tr>
<td>116</td>
<td>2.8%</td>
</tr>
<tr>
<td>87</td>
<td>2.0%</td>
</tr>
<tr>
<td>156</td>
<td>2.0%</td>
</tr>
<tr>
<td>159</td>
<td>2.0%</td>
</tr>
<tr>
<td>113</td>
<td>3.1%</td>
</tr>
<tr>
<td>229</td>
<td>3.6%</td>
</tr>
<tr>
<td>206</td>
<td>3.7%</td>
</tr>
<tr>
<td>297</td>
<td>3.7%</td>
</tr>
<tr>
<td>18</td>
<td>3.7%</td>
</tr>
<tr>
<td>171</td>
<td>3.9%</td>
</tr>
<tr>
<td>277</td>
<td>4.0%</td>
</tr>
<tr>
<td>493</td>
<td>4.1%</td>
</tr>
<tr>
<td>12</td>
<td>4.2%</td>
</tr>
<tr>
<td>574</td>
<td>4.3%</td>
</tr>
<tr>
<td>195</td>
<td>4.5%</td>
</tr>
<tr>
<td>306</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Numerator
Denominator

Formula: [episodes with major HAC] / [Total episodes]

Source: Casemix

Description: % of overnight episodes where the patient had a hospital acquired complication

Acute and mental health care types, limited to overnight episodes only.

Details: An episode with a major hospital acquired complication is determined by the presence of one or more specified diagnosis codes with a condition onset flag indicating that the complication occurred during the episode of care.

The list of complications is derived from the ACHSC's Hospital Acquired Complications list. For more details visit the Glossary section of https://data.catholicalliance.org.au

mercy . dignity . care . commitment . quality
Exercise – Improve Data Visualisation

• Improve how this data is:
  – Visualised
  – Utilised

• What else might you do to add value:

• Who does this work & why?
Call Bell Intro

2,121,698
Number of Calls

2,709
Average Calls Per Day

1.92 : 1
Ratio of Call Bell to Occupied Beds by Shift

8.82 : 1
Ratio of Call Bell to Nurse by Shift

4.59 : 1
Ratio of Occupied Beds to Nurse by Shift

01 Nov 16 12:00 AM to 15 Nov 17 18:03 AM

Note: The source for Nursing data is from Trendcare
Analytics & Performance

Call Bell Intro

6,366
Number of Calls

70%
Percent of Nurse Calls

1.44:1
Ratio of Call Bell to Occupied Beds by Shift

7.51:1
Ratio of Call Bell to Nurse by Shift

5.23:1
Ratio of Occupied Beds to Nurse by Shift

Last 4 Weeks

Note: The source for Nursing data is from TrendCare

Sort Calculation Descending
Swap Colour Sort
View Summary

mercy . dignity . care . commitment . quality
Analytics & Performance

Please select a Question Number above to see the results in this chart.

Promoter Score per Question

<table>
<thead>
<tr>
<th>Question</th>
<th>%</th>
<th>Count of responses*</th>
<th>Promoter Score</th>
<th>Detractor</th>
<th>Net Promoter Score</th>
<th>Category</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>28</td>
<td>29</td>
<td>-</td>
<td>3</td>
<td>26</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Discharge Whrd</td>
<td>28</td>
<td>29</td>
<td>60</td>
<td>11</td>
<td>49</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>Stream</td>
<td>28</td>
<td>29</td>
<td>-</td>
<td>3</td>
<td>26</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Specialty</td>
<td>28</td>
<td>29</td>
<td>-</td>
<td>3</td>
<td>26</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Gender</td>
<td>28</td>
<td>29</td>
<td>-</td>
<td>3</td>
<td>26</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Discharge Month</td>
<td>28</td>
<td>29</td>
<td>-</td>
<td>3</td>
<td>26</td>
<td>12</td>
<td>1</td>
</tr>
</tbody>
</table>

* Categories where the answer was a promoter, passive or detractor.
Q34 - Feedback

3562878
Really friendly but professional attitude by the nurses, surgeons and other staff.

3601881
I had very good care from the nurses and therapists - they were very caring.

3593147
Doctor/s was comforting and honest in treatment information provided about follow-up plan. No further info about pain management at home.

8579784
No.

3667421
When I need health care. The Mater is the place I would recommend anyone. Recognising the staff that you can't please everyone.

3622742
In the hospital people were very fast. The food was all right. One medical staff with thousand on the other had difficulty sleeping. And watched TV all night. I slept lightly so I found it hard to sleep with the TV on. Earplugs were somewhat useful, but annoying and difficult to use.

3526947
I have a friend that I find useful. It could make me feel like I was back in the comfort of your care. I think the hospital treatment was done so well.

3526947
I had a friend in the hospital who advised me on how to do it. The hospital was doing what it could do with the help of the Mater staff at the Mater staff.

3526947
They had difficulties giving me pain relief. I was told to wait until it was time.

3512183
I was really glad of the staff and the care I received at the Mater. The staff were just getting the job done.

3647483
My room was very comfortable. Very professional and kind care of my needs. My nurse before Kevin did not seem to know how all the equipment worked and presented equipment. My surgeon seemed to have the staff operating as well as the staff in the wards after the surgery. My discharge plan was done very well. I was advised to show my doctor and have a more thorough examination. My discharge plan was not written on a very steep plan. They came off and got off the water during my week's stay. I have had some complications with this medication which was provided. I had to reduce it to some point reliever of the pain. But I would get a recipe for the doctor in case I needed it. I was advised that they were in my bag of moulded milk. The doctor was unsatisfied that they would turn me with what it required.

3562573
The care I received was amazing. Nothing was too much trouble, very much appreciated.

01142804
My nurse was wonderful. They worked hard and were always friendly and helpful.

08318081
The care was good. I would have liked more information on the drugs and was having early signs of drug addiction problems in hospital and did not realise and came out of hospital with problems to continue. I had no way of getting off the medication and the staff were not helpful.

3638822
Only to thank the nurses and the care I received in the Mater, they made sure the experience was as easy as possible.

3986858
Hi, may I speak to Kim Ovenden. I had knee replacement. The last 2 questions of the survey you should let people answer more. The only one I am happy with was the care from the staff at the Mater. The only thing I would suggest is to check the wounds before leaving the hospital as I had the ring of an infection. I was transferred to the Bomah Hospital for this treatment and they have taken very good care of me. I had not got any antibiotics as she claimed it was a tablet. Kind regards Kim Ovenden.

3568835
The first small snack ordered was not delivered. Food was not good. I was told I would be discharged around 8.30 so did not have breakfast. This turned into maybe being late as it was the weekend. Ordered small lunch. I continually questioned the nurse on the delay as my daughter...
“Leadership’s not a title. It’s a behavior. Live it.”

- Robin Sharma
LOS distribution curves for 3 different physicians, each with average LOS 4.85 days

Who do you want and why?
“To be sure, we need innovation to expand our knowledge and therapies … but we have not effectively used the abilities science has already given us.”

“Indeed, the scientific effort to improve performance in medicine – an effort that at present gets only a miniscule portion of scientific budgets – can arguably save more lives in the next decade than bench science, more lives than research on the genome, stem cell therapy, cancer vaccines, and all the other laboratory work we hear about in the news.”

‘Better: A Surgeon’s Notes on Performance’ Atul. Gawande