

# Using analytics and data visualisation to enhance collaboration and drive improvement

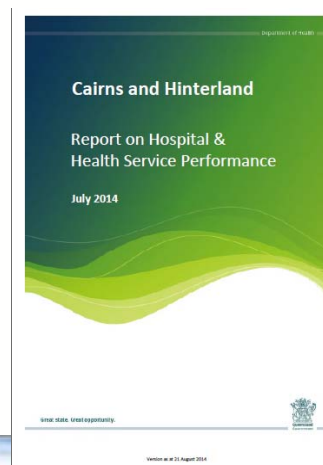
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# Prior to CaPRS

The previous form of reporting was a very manual Excel and paper based process:

- Production was time consuming
- No ability to collaborate or integrate with other team models and reports
- Produced a static view of performance data
- Inefficient process prone to errors
- Not a great use of resources
- Reports were distributed by email
- Data extractions into Excel data files.



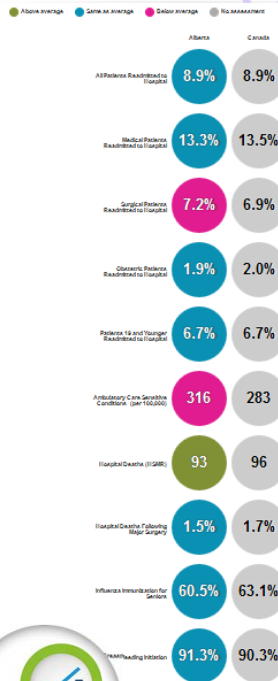
| CAIRNS AND HINTERLAND   |       |         |       | Sep 2013 | Oct 2013 | Nov 2013 | Dec 2013 | Jan 2014 | Feb 2014 | Mar 2014 | Apr 2014 | May 2014 | Jun 2014 | Jul 2014 | Aug 2014 |       |
|---|-------|---------|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|
| <b>Effectiveness - Safety and Quality</b>                               |       |         |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| <b>1 In hospital Mortality VLAD Indicators</b>                          |       |         |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Acute myocardial infarction   | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Stroke  | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Fractured neck of femur   | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Trauma/trauma   | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| <b>2 Unplanned hospital readmission indicators (VLAD)</b>               |       |         |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Acute myocardial infarction   | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Heart failure   | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Knee replacements   | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Hip replacements  | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Diagnosis   | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Schizophrenia   | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Paediatric bronchiolitis and otitis media                               | green | June    |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| <b>Healthcare associated Staphylococcus (Including MRSA) Bacteremia</b> |       |         |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| per 10,000 bed days   |       | 2013-14 | 0.65  | 0.18     | 1.22     | 0.14     | 0.98     |          |          |          |          |          |          |          |          |       |
| <b>Security and Effectiveness - Access</b>                              |       |         |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| <b>4 Shorter stays to emergency departments*</b>                        |       |         |       |          | 83.0%    | 83.0%    | 83.0%    | 83.0%    | 83.0%    | 83.0%    | 83.0%    | 83.0%    | 83.0%    | 83.0%    | 83.0%    | 83.0% |
| <b>5 Fewer long waiting whist time surgery patients</b>                 |       |         |       |          |          |          |          |          |          |          |          |          |          |          |          |       |
| Category 1 - within 90 days   | 0-12% | August  | 0.01% | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     |       |
| Category 2 - within 90 days   | 0-12% | August  | 0.00% | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     |       |
| Category 3 - within 90 days   | 0-12% | August  | 0.00% | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     |       |
| Category 4 - within 90 days   | 0-12% | August  | 0.00% | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     |       |
| <b>Total (FTE wait)</b>   |       | August  | 0.00% | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     |       |
|   |       | August  | 0.00% | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     | 0.0%     |       |



# Trends in data visualisation

## Appropriateness and Effectiveness

Providing care to only those who need it, the volume, duration, intensity, and consequences of health problems



## Joint Replacement Wait Times



Patients receiving a hip or knee replacement within 6 months

**81.0%** CANADA  
**83.0%** Alberta **Improvement**



Percentage of patients who had to wait **more than 2 months** to see a specialist



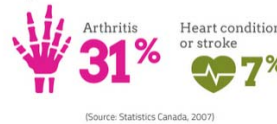
Percentage of Canadians waiting **3 months or longer** to see a specialist for a new illness



Number of specialists per 100,000 Canadians



Percentage of patients waiting **over 3 months** to see a specialist, by condition



## Access

Can you get the health services **you need** when you need them? >

## Quality of Care

How good is the care **you are receiving**, and **is it safe**? >

## Spending

How much do the health services you use cost the system? >

## Health Promotion and Disease Prevention

How well is the system working **to help you stay healthy** and avoid getting sick? >

## Health Outcomes

Are Canadians actually getting **healthier**? >



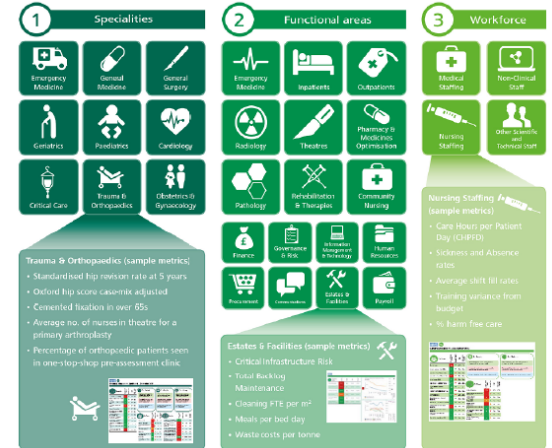
The model hospital collates a clear, consistent, dataset from trusts across the country to enable a top-level monthly view of performance.

## NHS Trust boards

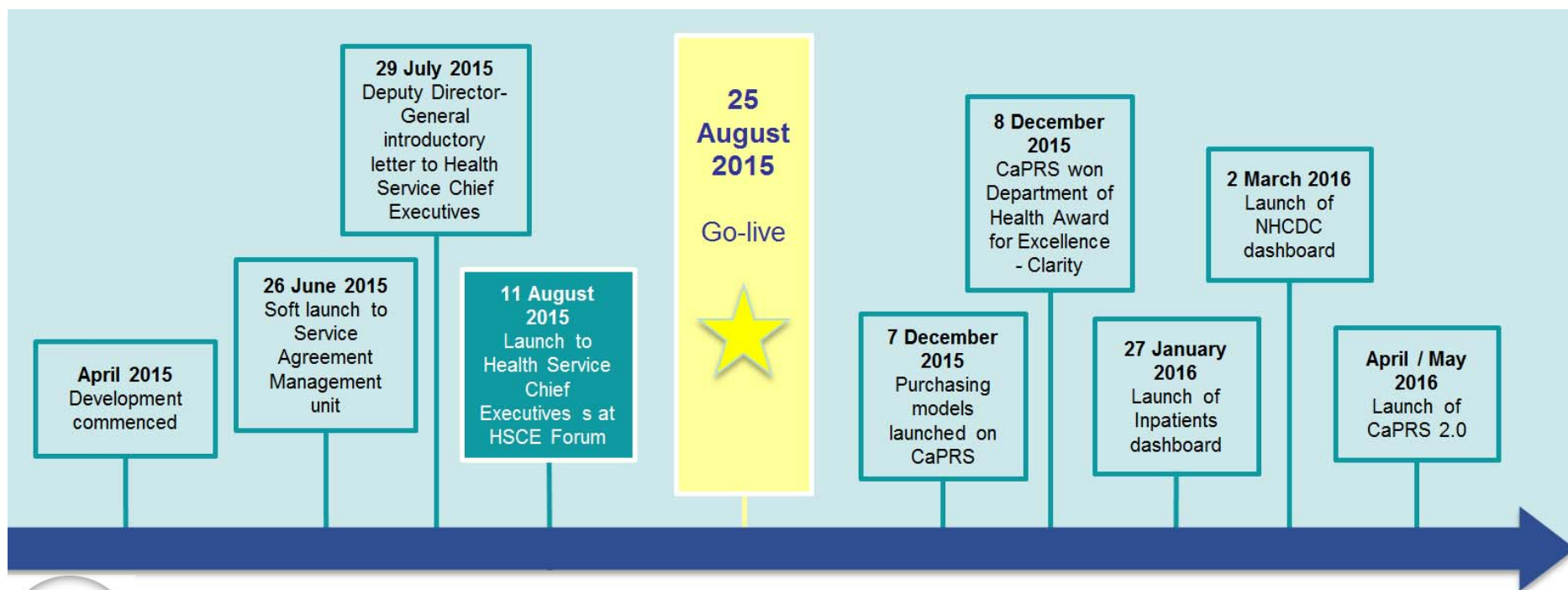
The model hospital is a source of the actual and comparative performance and efficiency data NHS boards need to monitor and improve their organisations' service delivery and efficiency.



For executives and senior managers, the model hospital drills down to greater areas of detail. Three main 'lenses' will group larger sets of indicators to support further analysis of the factors impacting on performance.



# CaPRS development journey



# CaPRS

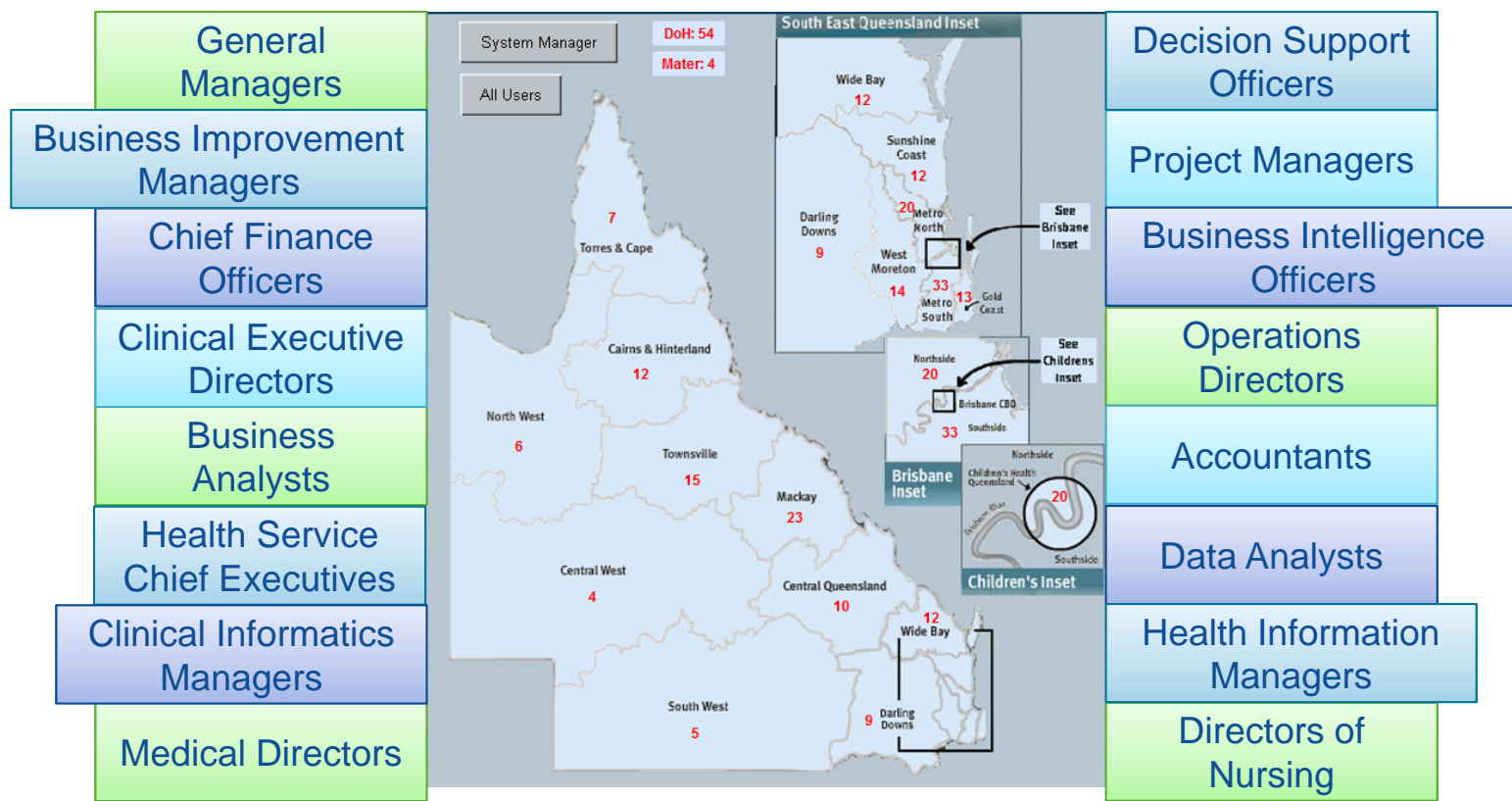
Online interactive dashboards with benchmarking and drill down functionality <http://caprs.health.qld.gov.au>

The screenshot displays the CaPRS dashboard interface. At the top left, there is a navigation menu with 'ED Analytics' selected. Below the menu are tabs for 'Notes', 'Main', 'Benchmarking', 'Discharge dashboard', 'Flu-like', and 'Alcohol-related'. The main content area is divided into several sections:

- Filters:** A list of filters on the left side, including HHS, Facility, Month, Calendar Year, Mode of arrival, ATB, Departure type, Age Range, IHPA peer group, NEAT 2014, Primary Dis..., and Age.
- GEAT performance by facility:** A map of Australia showing performance data points for various facilities.
- % Change from Jan 2016 to Mar 2016:** A scatter plot showing the percentage change in GEAT performance for different facilities, with a target line at 90% and a state average line at 80%.
- % of patients who depart the ED within 4 hours by HHS and hospital:** A bar chart showing the percentage of patients who depart the ED within 4 hours by HHS and hospital. The data points are: 81.8, 79.2, 87.7, 97.3, 88.9, 77.5, 78.9, 72.2, 72.5, 89.9, 97.0, 76.9, 91.8.
- Reporting:** A box containing icons for 'System performance reports' and 'DoH executive reports'.
- Models:** A box containing icons for 'Waitlist model' and 'Purchasing model'.
- Analytics:** A box containing an icon for 'Descriptive analytics'.
- Sign In:** A sign-in form with fields for 'User Name' (containing 'GH'), 'Password', and a 'Submit' button.

At the bottom right, there is a page number '5'.

# The reach of CaPRS



# Questions?



Contact the CaPRS team for more information:

[CaPRS@health.qld.gov.au](mailto:CaPRS@health.qld.gov.au)