The truth,
the whole truth
and nothing but the truth

Data Linkage Symposium
25 November, 2014
Overview

• Cardiac Clinical Informatics Unit
  – Who, what, why and where

• Examples of data linkage
  – Current linkages
  – Opportunities for linkages
    • Improve clinical data quality
    • Operational reporting
Statewide Cardiac Clinical Informatics Unit

Who, What, Why, Where and How
Who?

- The Cardiac Information Solutions Program (CISP) is an initiative of the Statewide Cardiac Clinical Network

- Multiyear program of work initiated to resolve information barriers to the provision of safe, effective and efficient cardiac clinical care within HHSs across Queensland
## CISP Stage 3 Tranches

<table>
<thead>
<tr>
<th>Tranche 1</th>
<th>Tranche 2</th>
<th>Tranche 3</th>
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<tbody>
<tr>
<td><strong>CISP</strong></td>
<td><strong>Stage 3</strong></td>
<td><strong>Tranches</strong></td>
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<tr>
<td>Building and extending on baseline capability, focus on tangible and early benefits, higher level of planning certainty</td>
<td>Building on enhanced capability from Tranche 1, continued focus on benefits realisation, planning certainty based on outcomes of Tranche 1</td>
<td>Capability building more targeted, planning certainty increased based on enhanced capability from earlier projects</td>
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### Project 1: Interventional Cardiology (CCL)
- **AIM:** Continue existing work, stabilise CCL solution and free up CISP resources to focus on other CISP initiatives
- Hand over to COSU and CCIU

### Project 2: Statewide and National Safety and Quality Reporting (SNSQR)
- **AIM:** Initiate early and interim statewide and national safety and quality reporting, realise benefits early, inform later options
- Hand over to COSU and CCIU

### Project 3: Electrophysiology (EP)
- **AIM:** Develop requirements to support EP procedural reporting, options analysis focusing on leveraging off existing cardiac systems
- Hand over to COSU and CCIU

### Project 4: Electrocardiograph (ECG)
- **AIM:** Continue existing work as a priority, confirm requirements, review options to leverage off existing capability within QH to support ECG Pilot
- Seek approval for Tranche 2

### Project 5: Cardiac Clinical Data Registry (CCDR)
- **AIM:** Continue existing work, complete market scan and options analysis, confirm CCDR options, procure solution if required and approved
- Seek approval for Tranche 2

### Project 6: Echocardiography (Echo)
- **AIM:** Develop requirements to support Echo in the northern areas, options analysis focusing on leveraging off existing cardiac systems, review options to integrate with existing southern systems
- Seek approval for Tranche 2

### Project 7: Acute Patient Triage and Transfer (Acute PTT)
- **AIM:** Develop options analysis for a cardiac PTT solution, review dependencies and options to leverage existing capability
- Seek approval for Tranche 2

### Project 8: Common Application Platform (CAP)
- **AIM:** Confirm need and requirements for a CAP based on results of other projects, progress procurement of CAP if required
- Seek approval for Tranche 3

### Work Package: Cardiac Operational Support Unit (COSU)
- **AIM:** Develop support model for ongoing and long-term transition of the program outcomes
- Start

### Work Package: Cardiac Clinical Informatics Unit (CCIU)
- **AIM:** Set up long term clinical informatics capability to focus on strategic planning and initiatives to maximise cardiac information and ICT resources
- Start
Statewide Cardiac Clinical Network

Cardiac Data Steering Committee

Centralised model for collecting and distributing fragmented cardiac data
Why?

• Cardiac Catheter Laboratories x 7
• Cardiac Surgery x 3
• Heart Failure – Statewide
• Cardiac Rehabilitation – pilot Metro South
Where?

Block 7, Level 6
How?

Philosophy
1. Collect once, use many
2. Data is for learning, not judgement
   – improving patient outcomes
     • Statewide clinical indicator program
     • Participate in National Clinical Quality Registries
     • Health services and care outcome planning
     • Compliance with legislative performance management accountabilities at a National, State and Local level
Approach

• Clinician-led/focused informatics service
  – Cardiac Data Steering Committee

• Phased approach - initial priority to build trust in the quality and use of data
  – Phase one: developing clinically relevant reporting
    • Cardiac Clinical Indicator Program
The right data

- Clinical systems lack administrative data
- Administrative systems lack clinical data
- *Data linkage* provides a comprehensive view using both administrative and clinical data
- Leads us to the truth, the whole truth and nothing but the truth
Examples of data linkages

1. Current linkages
2. Opportunities for linkages
   – Improve clinical data quality
   – Operational reporting
Examples of data linkages

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Example 1. Current linkages
Cardiac Clinical Indicator Program

- Cardiac Data Steering Committee developed the first draft of the cardiac clinical indicator program in Sept, 2013

- Endorsed at the inaugural Statewide Cardiac Data Forum in November 2013

- 5 indicators, 2 of which require data linkage
Qld Cardiac Performance Metrics

CI.1  All cause, unadjusted 30-day mortality post PCI

CI 2.  Proportion of STEMI patients presenting within 6 hours of symptom onset, who received an intervention within 90 minutes of first medical contact and/or first diagnostic ECG

CI 3.  Proportion of NSTEMI patients who received angiography within 72 hours of hospital admission

CI 4.  Proportion of major IN LAB events post PCI (perforation requiring intervention, death, tamponade, emergency CABG or CVA-stroke)

CI 5.  Proportion of PCI cases where total entrance dose exceeded the high dose threshold (HDT)
CI1 Tableau (fictitious data)
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Qld Cardiac Performance Metrics

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### CI2 Tableau (fictitious data)

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• Queensland Ambulance Service
• Health Statistics Unit
• Cardiac Clinical Informatics Unit
National reporting

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Consultation Draft:
Clinical Care Standard for Acute Coronary Syndrome

December 2013
Clinical Care Standards for ACS

Clinical Care Standard for Acute Coronary Syndrome

1. A patient with acute chest pain or other symptoms suggestive of an acute coronary syndrome receives a 12-lead electrocardiogram (ECG) and the results are interpreted by an ECG-qualified clinician within 10 minutes of first emergency clinical contact.

2. A patient with an acute ST segment elevation myocardial infarction (STEMI), for whom emergency reperfusion is clinically appropriate, receives primary percutaneous coronary intervention (PCI) or thrombolysis within time frames recommended by the current National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand Guidelines for the Management of Acute Coronary Syndrome.

3. A patient presenting with acute chest pain or other symptoms suggestive of an acute coronary syndrome receives care guided by an evidence-based clinical pathway.

4. A patient admitted to hospital with a non-ST segment elevation acute coronary syndrome (NSTEMI) is managed based on a documented, evidence-based assessment of their risk of major adverse cardiac events.

5. The role of coronary angiography with a view to appropriate coronary revascularisation is considered and discussed with a patient with a non-ST segment elevation acute coronary syndrome (NSTEMI) who is assessed to be at intermediate or high risk of an adverse cardiac event.

6. Before a patient with an acute coronary syndrome leaves the hospital, they are involved in developing an individualised care plan that identifies the lifestyle modifications and medicines they should take to manage their risk factors, addresses their psychosocial needs and includes a referral to a cardiac rehabilitation program that is appropriate for them. This plan is also provided to the patient’s general practitioner.
Examples of data linkages

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Example 3. Health Roundtable

F10 Interventional Coronary Procedure + AMI + CCC

ALOS at 3.6 days is 5.2 days, 45% more than the 4 exemplars' weighted average at 3.6 days.
The whole truth relies on

1. Quality data
2. The right data
Thank you

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