

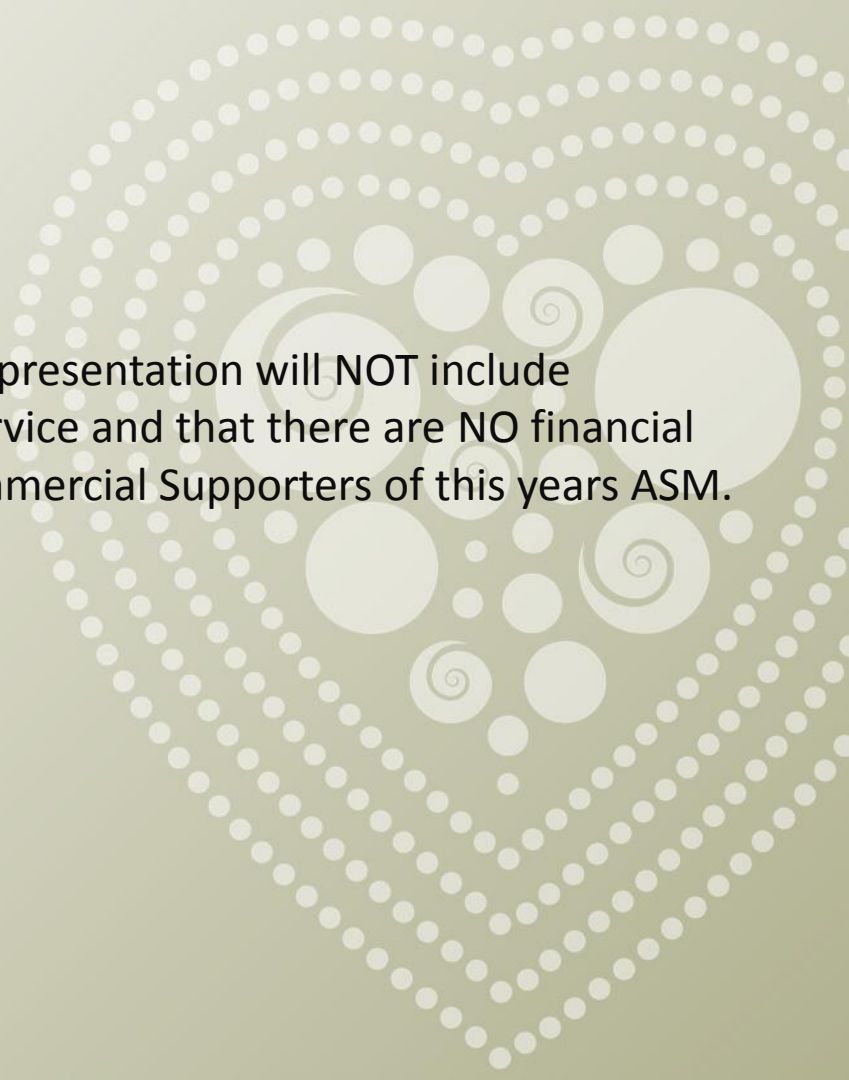
A large scale implementation of the ADAPT Accelerated Diagnostic Protocol in Queensland:

Impact on hospital length of stay and admission rates for possible cardiac chest pain

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Faculty Disclosure

- The presenter has advised that the following presentation will NOT include discussion on any commercial products or service and that there are NO financial interests or relationships with any of the Commercial Supporters of this years ASM.



Background

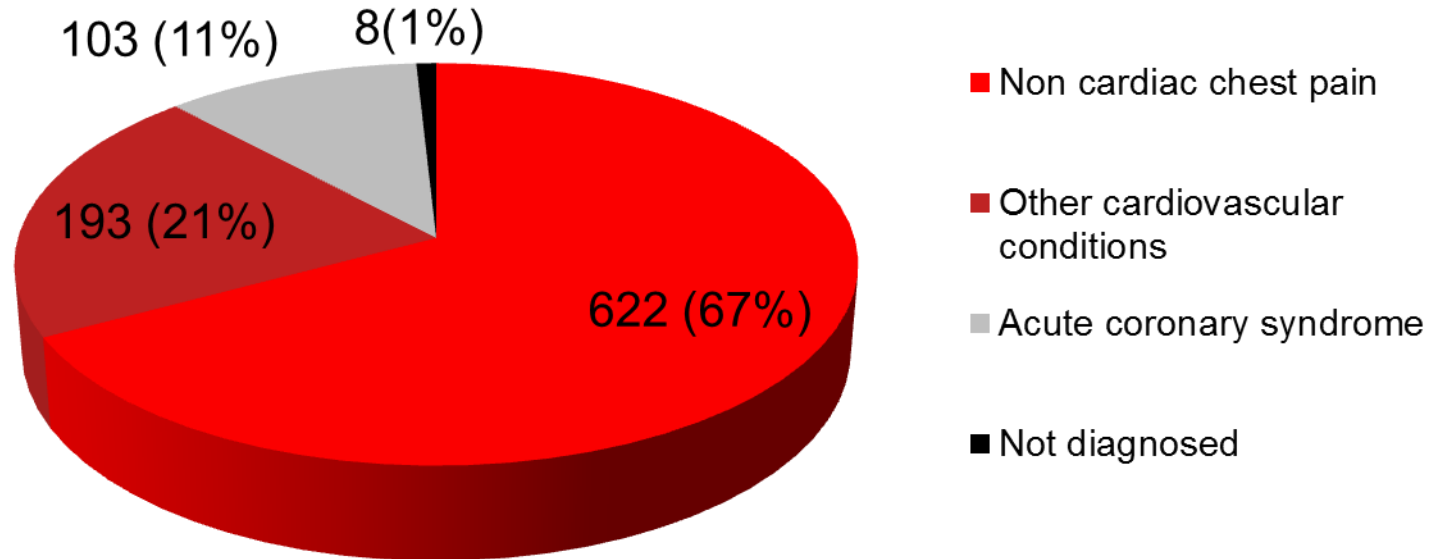
- **Chest pain is one of the most common primary presentations to Australian Emergency Department's (ED's)**
- **AIHW Emergency Department Care, 2014 – 15, Australian Hospital Statistics¹ show 251 537 patients presented to ED's with 'pain in throat and chest'**
- **Potential for serious pathology – most notably Acute Coronary Syndromes (ACS)**
- **2006 NHF / CSANZ guidelines² describe the risk stratification of patients to low, intermediate and high risk.**

¹ Australian Institute of Health and Welfare 2015. Emergency department care 2014-15: Australian hospital statistics. Health services series no. 65 Cat. No. HSE 168. Canberra: AIHW

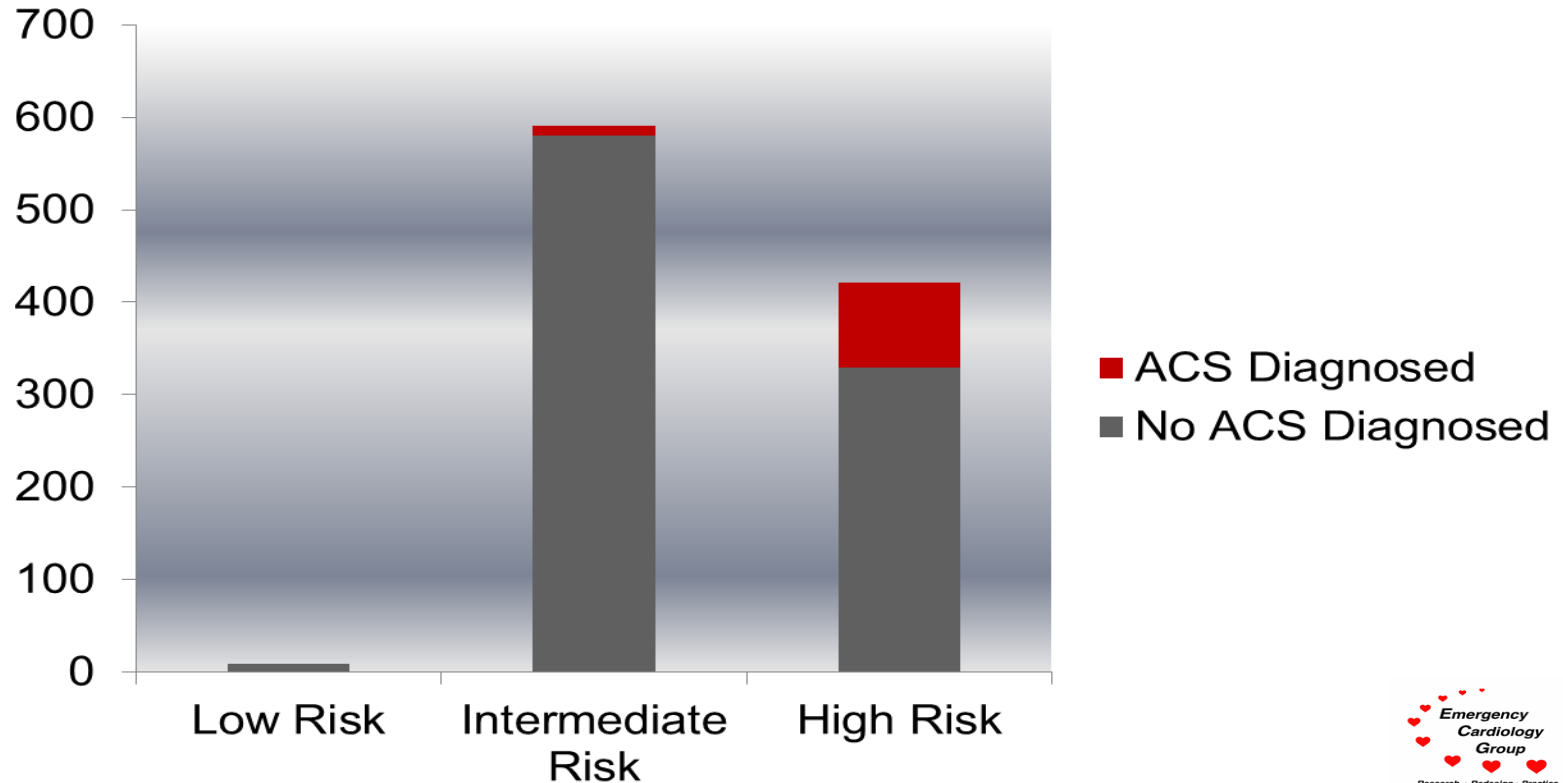
² Acute Coronary Syndrome Guidelines. Working Group. National Heart Foundation of Australia, Cardiac Society of Australia and New Zealand

guidelines for the management of acute coronary syndromes 2006. *Med J Aust* 2006; 184 (8 Suppl): S1-S32

ED Presentations suggestive of ACS



NHF / CSANZ risk stratification



ADAPT Accelerated Diagnostic Protocol (ADP)

- **Thrombolysis In Myocardial Infarction (TIMI) score = 0 at presentation**
- **No new ischemic changes on electrocardiograph at 0 and +2 hours**
- **cTnI level at 0 hour and +2 hours below institutional cutoff for an elevated troponin concentration**

Than M, et al S. 2-Hour accelerated diagnostic protocol to assess patients with chest pain symptoms using contemporary troponins as the only biomarker: the ADAPT trial. *J Am Coll Cardiol* 2012; 59: 2091-2098

Drivers for change.....

- **Increasing pressure on ED's.**
2012: National Health Reform Agreement
 - Funding targets linked to the 4 hour National Emergency Access Target (NEAT)
- **Innovation funding**
2013: The Queensland Department of Health - Health Innovation Fund (HIF)
 - Innovative solutions with the potential for statewide application
 - Four priority funding areas including reducing waiting times for EDs.

Accelerated Chest pain Risk Evaluation (ACRE) Project



- **Purpose:**

- To measure the effect of the ADAPT ADP on
 1. ED Length of stay (LOS)
 2. Total hospital (LOS)
 3. Admission rates

Accelerated Chest pain Risk Evaluation (ACRE) Project



- **Method:**
 - Centrally-based ACRE project team
 - QH Hospitals selected based on access to laboratory pathology
 - Engagement of key stakeholders and hospital executives
 - Face to face meetings
 - Close collaboration of ACRE project team and hospitals
 - Analysis and feedback

Accelerated Chest pain Risk Evaluation (ACRE) Project



- **Data:**
 - 12 months pre-implementation data collected from the Emergency Department Information System (EDIS)
 - Post-implementation data identified ADP-suitable patients with EDIS project box
 - Linked to inpatient records where relevant
 - **16 eligible QH hospitals between October 2013 and August 2015**

Results

TOTAL PATIENTS

Pre implementation:	32 066
Post implementation:	33 017
Possible Cardiac Chest Pain:	25 023
Managed on ADP:	5 815

23.2% managed on ADP

(95% CI: 22.7 – 23.8%)

Results

Median Total Hospital LOS

Pre implementation:	1210 (IQR: 511 – 3494)
Post implementation:	806 (IQR: 368 – 2300)

Decrease of 404 min

(95% CI: 370 – 437)

Results

ED LOS

Pre implementation: 230 mins (IQR: 163 – 352)

Post implementation: 213 mins (IQR: 150 – 307)

Decrease of 17 mins

Results

Hospital Admissions

Pre implementation: 70.4%

Post implementation: 57.3%

Absolute decrease = 13.1%

(95% CI: 12.3 – 13.9%)

Conclusion

Small local gains

=

Significant rewards collectively

Conclusion

Success factors for large scale clinical redesign:

1. Key stakeholder engagement
2. Strong evidence base from locally derived research
3. Clinician-led change
4. Adaptability of pathway to fit local processes
5. Continual feedback and communication