ACRE PROJECT

Accelerated Chest pain Risk Evaluation

Translating evidence into clinical practice

Sarah Ashover
Senior Project Officer
What is ACRE?

- Clinical redesign project – commenced 2012
- Supports implementation of the best evidence for the evaluation of patients presenting to ED with chest pain

- Evidence-based
- Safe
- Patient Focused
- Efficient
Burden of “Chest pain”

Among the most common reasons for patients to present to Emergency Department (ED)

• Up to 10% of all ED presentations
• Up to 25% hospital admissions
• And… we want them to keep coming
  • Cardiovascular disease burden
Diagnostic Dilemma

- Majority (85%) without disease
- Consequence of missing 15%
Chest pain Assessment

Guidelines:
National Heart Foundation (NHF) / Cardiac Society of Australia and New Zealand (CSANZ), 2006

• Risk stratification – low, intermediate, high
• Serial ECG and blood biomarker
• Objective test (usually exercise stress test)

• All except ‘Low-risk’ – 6-8 hour serial testing, often including admission to await objective testing
• Typical LOS = >24 hours
• Low Risk – 2%
Accelerated Diagnostic Protocols (ADPs)

- ADAPT Trial (2012)
- Alternate risk stratification
- ~20% patients identified as low risk
  - Accelerated ECG and blood test (2 vs 6-8 hours)
  - Discharge for outpatient stress test
- No new tests or technology
Translating research into practice

• What is the typical time lag for health research to enter clinical practice?

17 Years!

The answer is 17 years, what is the question: understanding time lags in translational research

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Translating ADAPT into practice

- Funded for single-site pilot trial 2012-13, Nambour Hospital
- Focus on NEAT, reducing ED LOS
  - Implement ADAPT
  - Report outcomes (ED LOS, NEAT, patient outcomes)
- No adverse events (MACE)
- Average ED LOS 425 → 344 mins (ADP patients 163 mins)
- Release capacity – 121,743 mins over 6 months
  = 0.46 fully staffed and equipped treatment space
- Happy patients – 95% ≥ 7/10
Widespread clinical redesign

- Health Innovation Fund - 2014
- Return on investment 3:1
ADAPT Statewide rollout

Goal:
• Implement ADAPT in 90% of 23 target hospitals

Methods:
• Approaching local senior stakeholders
• Early executive engagement
• Education of clinical and admin. staff
• Funding of local project champion
• Ongoing feedback of data
EDIS data extraction

- Project Box linked to diagnosis input
Data Linkage (EDIS → HBCIS)
ADAPT Statewide rollout

- Statewide Rollout
  - 2014 - 2016
  - 19 Queensland Health Hospitals

Outcomes published MJA 2017:
- 21.3% patients → accelerated care
- Mean hospital LOS reduction 10.4 hours
- 13.4% reduction in admission rate
- Financial Release capacity: $13.5m
- MJA Editor’s Pick
  Top 10 articles for 2017

Implementing change: evaluating the Accelerated Chest pain Risk Evaluation (ACRE) project
The value of linked data?

$13.5m

Incorporated in the 2016 NHF/CSANZ Guidelines

Implementing change: evaluating the Accelerated Chest pain Risk Evaluation (ACRE) project

William A Parsonage, Tanya Milburn, Sarah Ashover, Wade Skoien, Jaimi H Greenslade, Louise McCormack, Louise Cullen.
ACRE II – ImpACT (2016-18)

- Accelerated care for up to 75% (vs ~ 20%)

Improved Assessment of Chest pain Trial (IMPACT): assessing patients with possible acute coronary syndromes

Louise Cullen, Jami H Greenslade, Tracey Hawkins, Chris Hammersley, Sharin O’Kane, Kimberley Ryan, Kate Parker, Jessica Schiutoni, Emily Dalton, Anthony FT Brown, Martin Tham, W Frank Peacock, Allan Jaffe, Peter K O’Rourke, William A Parsonage.
ImpACT

- Prospective intervention, single-site study (RBWH)
- Feb 2011 – March 2014
- 1366 patients
- MJA Editor’s Pick – Top 10 articles for 2017

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ImpACT Implementation

- Standard practice at RBWH since 2014
- 9 QH Hospitals Implemented:
  - Cairns, Ipswich, SCUH, Nambour, Bundaberg, QE II, Rockhampton*,
    Gladstone*, Mackay
  (*Utilising tele-EST Service)

- Tele-EST Service
  - CED Funded statewide initiative based at RBWH
  - Host end – Cardiology AT & Senior Cardiac Scientist
  - Recipient end – 2 BLS trained staff
  - Avg. reporting turnaround - 7 mins
In Summary

- Use of data – health service improvement
- ACRE – benefit to patients by introducing sound clinical research into practice in a timely manner
- Outcome data is essential
- Thank you!
- Accessibility
ACRE Project

- Healthcare Improvement Unit, Clinical Excellence Division, Queensland Health
- Metro North Hospital and Health Service

ACRE Project Team
- Prof Louise Cullen (ED Clinical Lead)
- Dr Louise McCormack / Prof Will Parsonage – Cardiology Clinical Lead
- Sarah Ashover – Snr Project Officer
- Tanya Milburn – Project Officer
- Laura Foran – Project Officer
- Sara Berndt – Project Officer

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