



ECaP – Improvement Group

Collaborative working to improve acute Chest Pain service in Tayside

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Introduction and Aims

The Effective care pathways group (ECAP) first met in March 2017 to bring together specialties assessing patients presenting with chest pain. We sought to:

1. Address unwarranted variation and waste
2. Reduce the overnight admissions
3. Reduce cost whilst maintaining safe effective assessment
4. Improve patient experience of those presenting with chest pain

Interventions

Investigations

ECAP panel created

1. Bicarbonate, glucose, cholesterol and CRP removed from ACS bloods panel reducing the cost of this set of tests by £3.58.
2. Updated guidance on Exercise test requests created a reduction of tests of 6/month, saving £101/test.

Pathways

Combined knowledge and experience allowed for robust and patient centered pathways to be designed. Group discussion guided pathway creation to reduce unwarranted variation with appropriate initial patient destination as the primary aim.

Chest Pain Assessment in Emergency Medicine - Ninewells Hospital

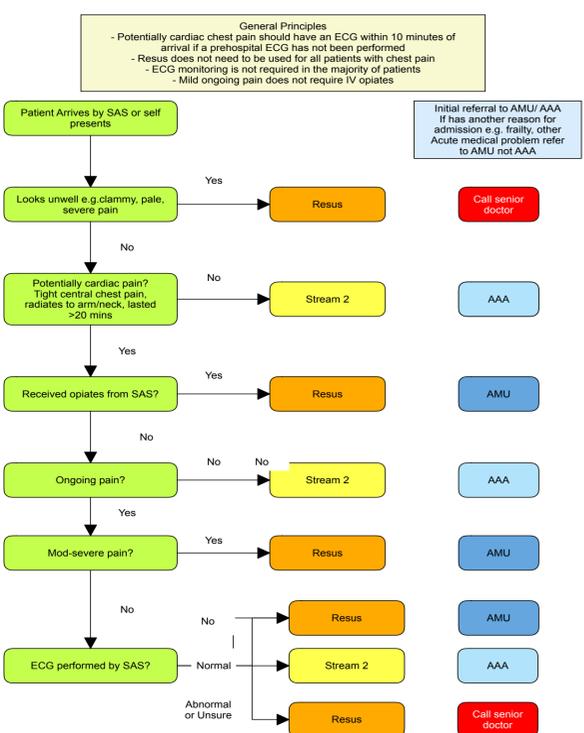


Fig 1 - Initial referral decision tool

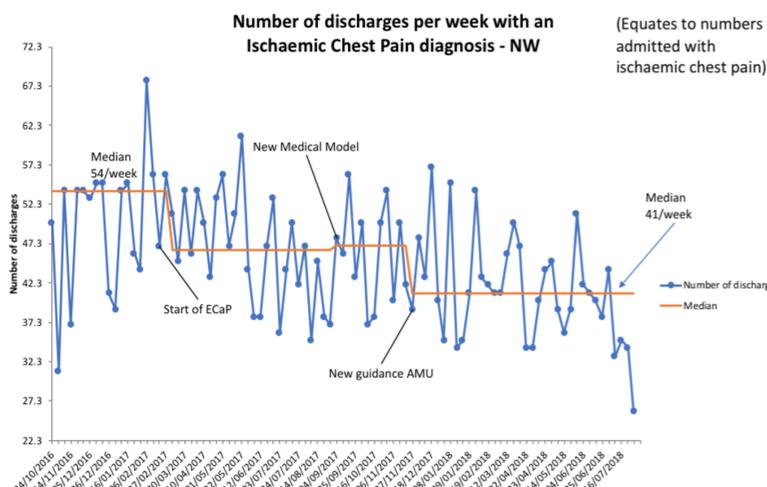


Fig 2 – Weekly admission for potential ischaemic chest pain

The Future Pathways

Emergency Medicine

- Only 8% with an admission troponin are discharged with a diagnosis of ischaemic heart disease.
- High sensitivity (HS-Trop) would potentially allow up to 40% of patients to be discharged from the ED

Ability rule-out ACS with single troponin in ED (High-STEACS model¹) could potentially result in a saving of £4900/week £254,800/year.

Acute Medicine

Retrospective modelling with a **High-STEACS¹** like pathway - Potential impact per month:

1. 28.8 fewer admissions from ED group
2. 46.8 fewer overnight stays in AMU including GP referrals
3. 126 fewer troponin samples

Patient Experience

- Patient questionnaires provided the information patients wanted in a chest pain leaflet. We have created two leaflets: Admission and Discharge
- We plan to collect Patient experience data with respect to be
 1. Our new pathways
 2. Information leaflets
 3. Overall experience of those presenting with chest pain

Conclusions

We applied locally developed, robust methodology to guide the ECaP process. This has been carried forward into other pathway work, ECAP Syncope Group.

The introduction of a number of simple measures has reduced the overall costs associated with this large patient group. Collaborative efforts between specialties has improved the efficiency of clinical assessment.

Moving forward we have set goals for the introduction of HS-trop and modeled ongoing benefits for patients and acute services in NHS Tayside. Moreover, we aim to assess the impact of patient experience through a number of measures.

Progress

- Median weekly inpatient admissions reduced from 54 to 40.5
- Increased overall use of ambulatory care area
- Gradual upward trend in numbers of patients managed on the day of arrival
- Fewer ETT requests since improved AMU requesting guidance - reduction of 6/month

Total Savings

Up to £155,000 total annual savings based on 50 chest pains patients weekly with current simple interventions

- Potential saving of around £180/week if ECAP panel used consistently.
- 14 fewer AMU admission saving £2660/week
- ETT request reduction saving £606/month

References

1. Comparison of the Efficacy and Safety of Early Rule-Out Pathways for Acute Myocardial Infarction. Circulation 2017 135(17): 1586-1596. Chapman AR et al.