65 QUALITY IMPROVEMENT AND COST SAVINGS ASSOCIATED WITH AN UPDATE TO THE ACUTE CHEST PAIN PATHWAY AND INTRODUCTION OF 3 HOUR RULE-OUT TROPONIN ASSAY IN A BUSY DISTRICT GENERAL HOSPITAL SETTING

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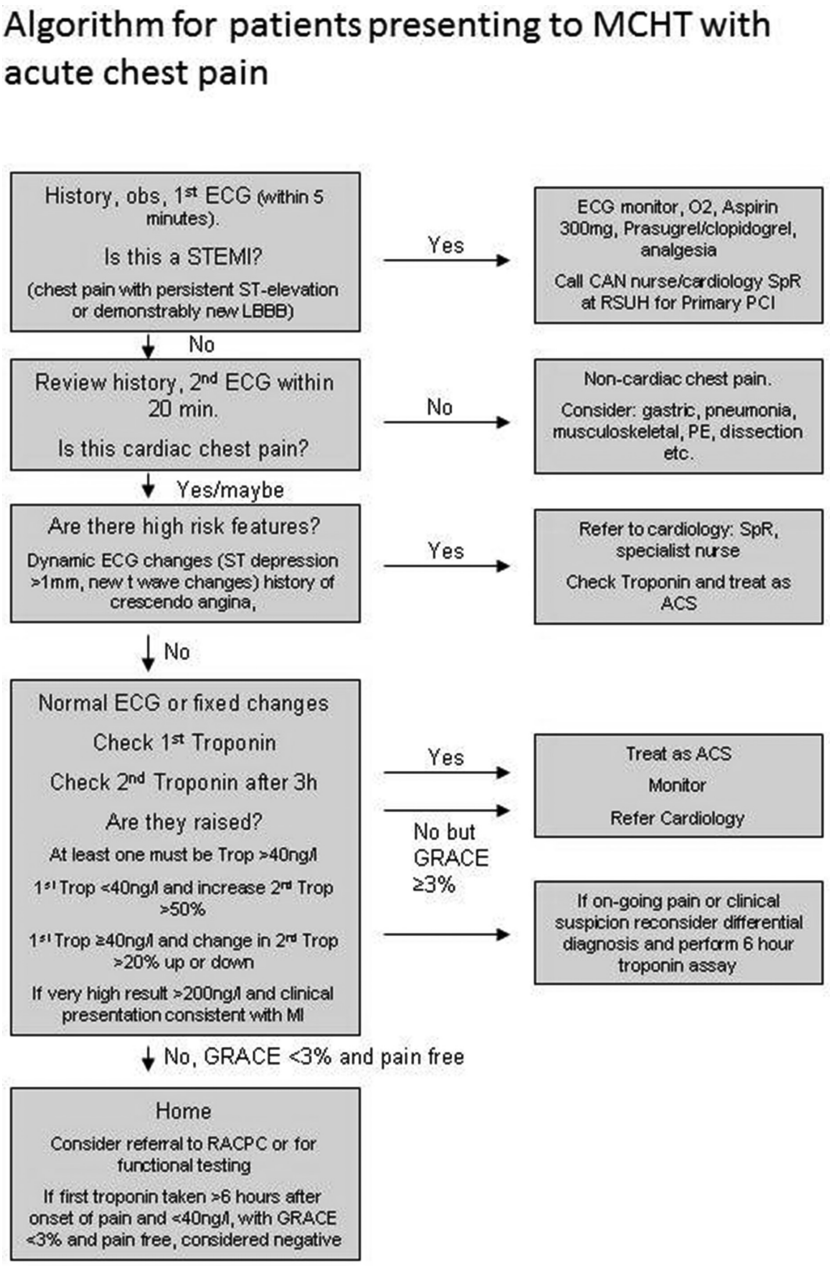
Introduction Management of acute chest pain involves the urgent and careful clinical assessement of a patient, to ensure timely treatment of a potentially life-threatening heart attack and the identification of other, non-cardiac causes of chest pain. Troponin measurement is a useful resource in the management and risk stratification of new onset chest pain. At Mid Cheshire NHS Hospitals Trust (MCHT) we use the AccuTnI+3 high-sensitivity Troponin assay by Beckman Coulter. In line with current European Cardiology Society (ESC) recommendations, we changed from a 0 and 12 hour Troponin protocol to a 0 and 3 hour protocol (see figure 1). We audited this process to determine the effects of safety, quality and cost to the trust.

Methods We identified all patients coded to have presented to A and E with chest pain in March 2016 (assessed using the 12 hour protocol) and September 2016 following introduction of the new 3 hour protocol in April 2016. Clinical records were then retrospectively analysed and potential cost and bed savings to the trust calculated.

Results In March (see table 1), 135 patients were assessed for chest pain in A and E. 5 patients had positive Troponin on admission, of which 2 were diagnosed with NSTEMI. 42 patients were admitted overnight in order to assess 12 hour troponin. All of which were subsequently discharged home on



Abstract 65 Figure 1

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	March 2016	September 2016
No. of patients admitted with chest pain	135	120
Troponin assessed	120	104
At least one positive Troponin (>40 ng/L)	5	5
Admitted overnight to:	42	0
- assess 12 hour troponin	42	12
- for further assessment		
Subsequent discharge after post-take ward round	42	12
Inpatient angiography	4	1
Outpatient Rapid Access Chest Pain Clinic referral	9	5
Readmission within 30 days with chest pain	6	13
Readmission within 30 days with NSTEMI	1	0
Mean length of stay (hours)	20	7

the post-take ward round. The 12 hour troponin was never raised if the admitting troponin was negative. In September, 120 patients were assessed for chest pain; 5 had positive troponin, of which 1 was an NSTEMI. No patients were admitted overnight to wait for a 12 hour troponin result. Twelve patients were admitted overnight, despite a negative 3 hour troponin, for further assessment. All were discharged home at the post-take ward round. 6 patients were re-admitted within 30 days of discharge from the March cohort, with one fatality secondary to congestive cardiac failure. In September, there were 13 re-admissions with chest pain, none had a positive Troponin result or missed myocardial infarction. There was no change in rates of referral to the Rapid Access Chest Pain Clinic on discharge (9 in March, 5 in September). Based on a cost of £300 per bed day, changing to the updated pathway generated a cost saving of between £100 000 to £150 000 per year to the trust. Average length of stay for those admitted for the assessment of chest pain, excluding those diagnosed with other medical conditions was 20 hours in March and 7 hours following introduction of the new protocol.

Conclusion Implementation of a 3 hour rule-out troponin protocol improved the quality of care delivered to patients at MCHT. Patients were given a diagnosis more quickly and the practise of admitting patients overnight for a 12 hour troponin has stopped. This has had significant cost and bed savings for a busy district general hospital.

66 COGNITIVE IMPAIRMENT IS NOT ASSOCIATED WITH 30 DAY MAJOR ADVERSE CARDIOVASCULAR EVENTS IN OLDER (75 YEARS) PATIENTS PRESENTING WITH NON-ST ELEVATION ACUTE CORONARY SYNDROME: AN EVALUATION FROM THE ICON1 STUDY

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Introduction Dementia is leading cause of death in the UK and shares many common risk factors with coronary artery disease. The relationship between cognition and major adverse cardiovascular events (MACE) in older patients presenting with non ST elevation Acute Coronary syndrome (NSTEACS) is not known.

Aim To investigate the association of cognitive impairment with 30 day MACE (mortality, hospital readmission with ACS, unplanned revascularisation, stroke and major bleeding events) in older patients presenting with NSTEACS in the ICON1 study.

Method Over a period of 34 months 277 patients 75 years of age, admitted for invasive management of NSTEACS, were enrolled into a multicentre prospective observational study. Cognitive assessment was performed by Montreal Cognitive Assessment (MoCA) test, where a cut-off of 26 is used to determine cognitive impairment. Frailty was assessed using the Fried criteria, where a score of 0 is robust, 1 or 2 is pre-frail and 3 is frail.

Results 251 patients had a MoCA score calculated at presentation (mean±Standard deviation [SD]=25.1±3.3), nearly half of the patients (n=122, 48.6%) had cognitive impairment. The mean age was 81.2±4.0 years (mean± Standard Deviation [SD]). Patients with cognitive impairment were older compared to normal cognition group (82.2±3.9 vs. 80.2±3.9 years, $p<0.001$), and were frail (36.1% vs. 18.6%, $p=0.002$). Overall 19 (7.6%) patients reached MACE outcome, the rate of composite adverse outcomes were 6.6% vs. 8.5% ($p=0.555$) respectively. No patient died at 30 day in the selected cohort and no one had ST elevation myocardial infarction. There was no difference in the occurrence of non ST elevation myocardial infarction (0.8% vs. 0.8%), unstable angina (0.8% vs. 2.3%, $p=0.808$), unplanned revascularisation (1.6% vs. 1.6%, $p=1.0$), stroke/Transient Ischaemic Attack (0% vs. 0.8%, $p=1.0$), and major bleeding (4.1% vs. 3.9%, $p=1.0$), and readmission with ACS rate (1.6% vs. 3.1%, $p=0.684$) between the impaired and normal cognition groups respectively.

Conclusion Cognitive impairment is common in patients over 75 years of age with NSTEACS managed invasively. Those with significant impairment are older and frail. Short-term 30 day MACE outcomes are not different between cognition groups in this selected cohort of patients.

67 REDUCING CHEST PAIN ADMISSIONS USING A 1 HOUR HIGH-SENSITIVITY TROPONIN-T PATHWAY

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Introduction Chest pain is the most common presenting complaint to emergency departments in the United Kingdom. Existing management pathways for suspected Acute Coronary Syndrome utilise serial cardiac troponin measurement, typically at admission and again at 6 or 12 hours, often necessitating inpatient admission. Recent work has validated the use of a high sensitivity Troponin assay to enable risk stratification using presentation and 1 hour Troponin concentrations, with a view to reducing admissions and facilitating safe, early discharge.

Methods A 1 hour troponin pathway was implemented in a District General Hospital (DGH) at Gloucestershire Royal Hospital, using a High Sensitivity Troponin-T assay (hs-cTnT, Elecsys assay, *Roche Diagnostics*®). This was trialled in the Emergency Department for 56 consecutive hours. Patients with suspected ACS had a plasma hs-cTnT concentration