Much work has focused on the rapid distinction of the 1 in 5 patients without ST elevation on ECG, who are suffering from a non ST elevation myocardial infarction (NSTEMI). Pre-hospital translation of such work may allow improved access to specialist treatment for patients with NSTEMI and also identify a low risk population suitable for management without immediate ambulance transfer to hospital.

The objective was to determine the accuracy of a wholly paramedic calculated pre-hospital HEART score to predict a 30-day Major Adverse Cardiac Event (MACE). The potential implications of pre-specified low-risk and high-risk cut-offs were also to be determined.

Method and results Prospective diagnostic accuracy study in Northeast Scotland (UK) on adult (>18 yr) patients with cardiac sounding chest pain, attended by a paramedic ambulance and who had no ST elevation on initial ECG.

A real time paramedic HEAR score was calculated and blood drawn for analysis with a POC cTn assay and later with both laboratory based contemporary and high-sensitivity cTn assays. Normal care then ensued and patients were followed up to 30 days for development of MACE.

Conclusions Between Nov 2014 and April 2018, 1275 patients agreed to participate in the ambulance and 1056 later gave informed consent with 1054 completing 30 day follow up.

358 patients had complete Paramedic HEART scores with all 3 assays and 969 patients with the 2 lab based assays (figure 1)

Sensitivities and specificities (95% CI) for the HEART scores vs MACE will be calculated and ROC curves generated. Diagnostic properties at different score cut-offs will be presented and analysis of the impact of the different cTnI assays presented.

Apologies: Independent AMI adjudication due to complete next week, so no full results yet.

014 SHARED DECISION MAKING: T-MACS CHOICE FOR CHEST PAIN PATIENTS IN THE ED

The concept of shared decision making (SDM) has gained increasing attention across healthcare fields including emergency care, with a focus shift towards patient-centred medicine.

With cardiac chest pain accounting for approximately 6% of all emergency department (ED) attendances we aimed to co-design a personalised decision aid based on the established Troponin-only Manchester Acute Coronary Syndromes (T-MACS) prediction model to increase patient involvement in the decision making on serial troponin testing and follow up.

The T-MACS Choice decision aid was co-designed with patient and physician involvement in 7 stages using a mixed-methods approach (figure 1) at the Manchester Royal Infirmary (MRI) from March to May 2017. The initial prototype was developed based on a) a literature review of SDM, b) the AHRQ health literacy toolkit and c) the International Patient Decision Aid Standards instrument.

In subsequent stages the prototype was improved based on feedback provided by the PRIMER patient and public involvement group, three SDM expert clinicians, focus groups interviews involving 26 members from patient groups with a history of cardiac problems, questionnaires from 29 emergency physicians and 14 patients presenting to MRI ED with chest pain and admitted for serial troponin testing.

The final T-MACS Choice decision aid is personalised for the individual patient, reflecting their distinct risk group with the relevant choice options (figure 2).

In the initial development stages the most common themes identified were the importance of a personalised design and the use of clear, understandable language avoiding medical jargon. Both patients and physicians highlighted the importance of including information on heart health and prevention. In the final stages both sides agreed that T-MACS Choice had the right amount of information, was clear and engaging patients in the decision making.

Further research on clinical implementation of T-MACS Choice is needed to determine its impact on patient choice and safety.

Abstract 014 Figure 1 T-MACS choice development flowchart
Abstracts

CHEST PAIN
HELPING YOU TO CHOOSE THE RIGHT CARE

Name:

YOUR CHEST PAIN

Chest pain is very common and has a number of different causes, many of which are not serious. However there is a chance that you have a heart problem. We have done some tests to see whether we think your chest pain is caused by a heart attack or if it may be caused by something else. Now we have the results we would like to discuss the next steps in your management.

Other causes of your chest pain include:

Your doctor can give you more information about this.

WHAT WE HAVE DONE

We have done some tests to try and find the cause of your chest pain, these include:

• A Blood test to check the levels of an protein in the blood. This blood test can be repeated after a few hours in case the levels rise or fall. Normally the level of this protein is below 14.
• A Heart trace (ECG) to check the activity of the heart and to check that the heart is getting enough oxygen.

We may have done other investigations as well, but we used some of the information about your chest pain and these test to calculate your personal risk of having a heart attack.

WHAT HEART PROBLEMS MAY I HAVE HAD?

A heart attack also called and MI is when the blood flow to the heart is reduced, often by a blood clot, which can damage the heart muscle. This can be treated with medication or a procedure to restore the blood flow. These treatments can be very effective at helping patients recover and stay healthy in future. Angina is similar to this but the blood flow reduced temporarily.

Is there anything you are worried about?

What is most important for you with your treatment?

YOUR OPTIONS

Given that your risk of a heart attack is very low there are a few options for how to manage your chest pain.

A. Stay in hospital and have another blood test
We can repeat the blood test for the protein that is raised in a heart attack after 5 hours. Doing this test allows us to be more confident that you have not had a heart attack. You will have to wait for the results so this can take up to 4 or 5 hours in total.

B. Be discharged and return home
Because your risk is so low we believe it is safe for you to go home, without having any serious heart complication, if you would like. You can follow this up with your GP if you would like.

C. Go home and come back for another blood test
This means that you leave the hospital straight away and would have to return in between 3 and 24 hours. Doing this test allows us to be more confident that you have not had a heart attack.

Abstract 014 Figure 2 T-MACS choice

YOUR PERSONAL RISK

We would classify your risk of having had a heart attack or getting a heart complication in the next 30 days as very low at 1%.

For every 100 people that come into the emergency department like you with chest pain

99 people will not have a heart attack or any heart complications in the next 30 days
1 person will have a heart attack or any heart complications in the next 30 days

We can not fully exclude the possibility that you have a heart attack, we can only calculate your risk.

If you have any questions or you don’t understand something, please ask your A&E doctor to explain this!

Based on our discussion we would recommend option A for you.

WHAT IS NEXT?

You should try and discuss the options with family or your partner if you can. You and your doctor can then discuss the options for your management, what you would prefer and which is best for you.

If you would not like to make the decision and would like your doctor to make the decision that is also possible. They will likely follow the hospital guidelines. Whatever you decide to do will not affect your care in the future. Every patient is different with different values and preferences. We want to make sure that we give you the care that is right for you.

SHARED DECISION - YOUR NEXT STEP

Considering everything you decided on option A

Your option is:

Although we think that your chest pain is not likely to be caused by a heart attack, this can be a warning sign that you may have a heart attack in the future. If you have chest pain that worries you or any other symptoms that you think are related to your chest pain or if any symptoms return or change, then call 999 or come back to the emergency department.

Following your visit it is important to stay healthy to help your recovery, this includes stopping smoking if you smoke, reducing the amount of alcohol you drink, exercising more and eating healthily. This will help to keep your heart healthy. Your GP can help you with this, it’s a good idea to visit them soon.