

## Topic Overview: Cardiac Module

### Sub-Module: C1 – Triage for Chest Pain

[Last Updated Nov 2013]

This handout is designed to partner the topic overview simulation session C1 – Triage for Chest Pain. This session involves a presentation, followed by 3 simulated triage scenarios. Use this document to jog your memory or to aid in your reflection of the session, and the simulation.

### Session Objectives

1. Understand the process of triage
2. Be aware of the levels of seriousness of chest pain and their implications for treatment and outcome
3. Apply triage to chest pain
  - a. Triage categories
  - b. Discriminating cardiac versus non-cardiac pain
  - c. Discharge and transfer pathways
4. Practice the ISBAR handover

### Introduction

Chest pain is a common presenting complaint in Australian Emergency Departments – comprising up to 5% of all presentations. Of course there are many possible causes of chest pain – some are very serious and need to be identified and acted on urgently. Some other causes – say a minor area of cellulitis on the chest – may well need ED care but are not so serious or urgent.

Identifying the serious from the not so serious can be a major challenge. There are many possible causes:

- From the serious
  - Ischaemic Heart Disease: biggest killer - 15% of all deaths
  - PE
  - Pneumothorax
  - Pneumonia
  - aortic dissection
- To the “trivial”
  - Costochondritis
  - Shingles
  - indigestion...

## Triage

The word “triage” comes from the French trier “to sort” and the concept was first used on the battlefields of Napoleonic France. The aim of triage is to try to figure out which of the many patients presenting need to be seen & treated most urgently.

The process of accurately triaging patients is complex and takes years to learn. Put simply, triage decisions are based on the patient’s presenting problem (chest pain or seizure or sore lip or whatever), their general appearance (well & happy – sick & dying) and the vital signs.

Most of the time the definitive diagnosis will not (and cannot) be known until much later in the patient’s “journey”

## Chest pain is an emergency!

Chest pain is generally considered to be something that should be seen urgently – there are advertisements on TV with people clutching their chest with the message “quick – call 000”. If the pain is cardiac in origin – it does need to be seen urgently (talk about why in a minute)...but how can you know?

## Distinguishing Cardiac from Non-cardiac chest pain

Acute Coronary Syndrome not infrequently presents in an “atypical” manner – for example with some of the features listed as “reassuring”. Non-classic presentations are more common in older people & in diabetics – indeed, it might be said that atypical is typical.

## Cardiac versus Non-Cardiac

### **Suggestive**

- Dull, tight, ache, pressure
- Radiation to arm/shoulder/neck
- Associated nausea, sweatiness, SOB
- Worse with exertion
- Assessment of chest pain is covered in next sub-module
- Presence of cardiac risk factors

### **Reassuring**

- Sharp, stabbing, “shock- like”
- Very brief – or constant over many hours/days
- Worse with inspiration
- Point tenderness of chest wall
- No associated symptoms
- No risk factors

None of these are fool proof!  
Assessment of chest pain will be covered in more detail in another lecture

### Serious versus Non-serious chest pain

In the diagnosis of lots of diseases there seems to be three grades:

- The cases where it is clear that the patient has the condition
- The cases where it is obvious they do not
- Every other case in between

This third group is the most common & the most problematic!

Part of the job in Emergency Medicine – and certainly at Triage – is to worry about the worst-case scenario. Complete risk stratification should occur as part of the full assessment, but is useful to know many of the features to aid in triage.

- If it is (or is possibly) cardiac origin chest pain
- **Triage as an emergency – ATS 2**
- **Must be seen within 10 minutes**

There are two main reasons for this urgency

- All patients with chest pain need to have a 12-lead ECG performed and urgently interpreted by someone who skilled at reading ECGs – typically an Emergency Physician or Registrar. The ECG will diagnosis an ST elevation myocardial infarction which may require urgent revascularisation and involvement of a cardiologist.
- The other main reason for urgent evaluation is that even if there is no STEMI, a patient with any degree of ACS is at risk of complications like an arrhythmia or cardiogenic shock – they need to be assessed for these and early treatment (including aspirin) started to reduce morbidity and mortality.

### Disposition

Disposition of chest pain patients depends on risk stratification. This is based on:

- History
- Examination
- ECG
- Blood tests

This is the level of risk that the patient has ACS causing further problems, such as myocardial infarction or fatal arrhythmia. There will be more detail about risk stratification in a subsequent session – for now that high-risk patients need admission to a monitored area, low risk patients can often go home (with appropriate further follow-up) and patients in-between are...in-between!

## Handover\*

Handover to another clinician – whether it’s to a colleague in the ED or to an inpatient service – is an extremely important time. This is when things can be missed or forgotten, when communication errors can contribute to poor outcomes.

New South Wales, along with other parts of Australia and the World, have adopted a standardised structure to facilitate clear and concise handover within the medical professions. Some of you may have already seen this on DETECT courses or use the **ISBAR** handover tool.

### I Introduction

Introduce yourself and clarify whom you are handing over.

Introduce the patient and their demographics.

### S Situation

Explain the Presenting complaint and severity of illness.

Explain why you are talking to the person you are communicating with.

### B Background

Elaborate on the patient’s presenting complaint and their relevant previous medical history/social history/family history/medications/ allergies/fasting status – as relevant.

### A Assessment

Explain what you found in your assessment.

Use numbers for observations rather than describing them as high/low/normal.

### R Recommendations

This can include what you would like them to do “I need you to assess this patient within 10 minutes” and what you would like to do “I would like to give this patient 300mg of aspirin before moving him to resus bay 4 for further assessment and treatment”

\*Note that this is not specific to cardiac patients – it applies to all handover

<b>ATS 1</b>	<b>Immediate Threat to Life Requiring Immediate Resuscitation</b> Cardiac Arrest Shock Systolic BP <80 (in adults) Immediate Risk to Airway Severe Respiratory Distress
<b>ATS 2</b>	<b>Emergency. Assessment and Treatment Within 10 Minutes</b> Chest Pain of Probably Cardiac Origin Acute Hemiparesis Suspected Meningococcaemia – Fever with Lethargy Presentation Suggestive of AAA, PE or Ectopic Pregnancy
<b>ATS 3</b>	<b>Urgent. The Patient may Deteriorate to a Life or Limb Threatening Stage if Assessment and Treatment Have not Begun within 30 Minutes</b> Moderate Pain Severe Systemic Hypertension Chest Pain of Probable Non-Cardiac Origin
<b>ATS 4</b>	<b>Semi-Urgent. Patient May Deteriorate if Assessment and Treatment are not Started within 60 Minutes</b> Chest Injury Without Respiratory Compromise Head Injury Without LOC Non Specific Abdominal Pain
<b>ATS 5</b>	<b>Non-Urgent. A Wait of 2 Hours is Unlikely to Affect Patient’s Outcome</b> Minor Wounds Not Requiring Repair Minor Symptoms of Low Risk Conditions Immunisations

### References and Further Reading

- Thrombolysis in Myocardial Infarction Study Group (homepage on the internet). TIMI Study Group; (cited 2012 June 06). Available from: <http://www.timi.org/>
- Australian Resuscitation Council. Guideline 14.2, Acute Coronary Syndromes: Initial medical Therapy. Australian Resuscitation Council. Available from: [http://www.resus.org.au/policy/guidelines/section\\_14/14\\_2.htm](http://www.resus.org.au/policy/guidelines/section_14/14_2.htm)
- Health Services Performance Improvement Branch. Chest Pain Evaluation (NSW Chest Pain Pathway). Department of Health NSW; (09-Jun-2011). Available from: [http://www.health.nsw.gov.au/policies/pd/2011/pdf/PD2011\\_037.pdf](http://www.health.nsw.gov.au/policies/pd/2011/pdf/PD2011_037.pdf)

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