

Royal College of Physicians of London
Clinical Effectiveness and Evaluation Unit
Acute Myocardial Infarction (AMI) - A Baseline Survey of Facilities

Name of Respondent _____

Date of completion:
____ / ____ / ____

Name of Health Authority _____

Leave Blank

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Name of Trust _____

Name of Hospital _____

Address _____

Telephone:

Fax:

Post code _____

E-mail address _____

If acute medicine is dealt with on more than one site please give the name of the other hospital connected with yours

If you have any queries please contact the Clinical Effectiveness and Evaluation Unit
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Marking Instructions

Please mark boxes with a tick: e.g.

Please write numbers clearly in number boxes: e.g.

25

Please write clearly in any free text boxes provided:

e.g.

If you wish to add comments to your answers to any of these questions please do so in the space provided at the end of this survey.

1 Your hospital

Please describe your hospital by ticking one of the following boxes

*Please tick
one box*

- 1a** A hospital with 24 hour A&E department taking acute unselected emergencies.
[either with or without a cardiac investigational unit]
- 1b** Hospital with A&E department open less than 24 hours day, but taking acute unselected emergencies.
- 1c** Hospital without A&E dept but receiving patients with suspected AMI either 999 or from GPs. *[Usually hospital with split site]*
- 1d** Cardiothoracic unit (not part of an acute hospital with A&E department) accepting suspected AMI from 999 service or GPs
- 1e** Cardiothoracic unit only accepting emergency tertiary referrals
[if so; answer questions 6.5.b and 6.5.c and then return the form]
- 1f** Minor injury unit where thrombolytic treatment is given
[if so; please complete sections 2, 9 and 10 only]
- 1g** Other; please explain in box below only if you accept patients with suspected AMI

2 Your population

Note: Answering these four questions may need help from your Health Authority or Hospital Information Department

Please write number in box

2a Catchment population for acute admissions (not tertiary referrals) for the year 1998. *[quote total catchment population to nearest 10,000]*

2b Percentage of resident population of your H.A aged 75 years or more.

2c Number of patients with primary discharge diagnosis of AMI; excluding patients transferred to you from elsewhere
[available from medical coding office] [1998-9 data please]

2d The standardised mortality ratio (SMR) for coronary disease for your district

3 Staffing and medical acute on take duties

This section will give information of staffing numbers in relation to population, and some indication of the size of the general medical component of the workload of DGH cardiologists

Please write number in box

3a Number of consultant physicians involved in the on take rota

3b The rota for acute medical on take is 1 in (number of days)
[This should equal the number of medical teams making up the rota. Give equivalent where 12 hours takes are performed]

3c Number of physicians with a major interest in cardiology having regular medical on take duties. Give number and WTE
Number [max part time = 1.0, lecturers, honorary lecturer etc, posts as decimals]

WTE

3d Number of adult cardiologists making up the acute cardiology rota. (no on take duties for acute general medicine) Give number and WTE
Number [max part time = 1.0, lecturers, honorary lecturer etc, posts as decimals]

Number

WTE

3e Number of staff grade physicians in cardiology. Please give number and WTE

Number

WTE

3f Number of specialty registrars in cardiology having involvement in acute takes as part of dual accreditation training

3g Number of associate specialists in cardiology. Please give the number and WTE

Number

WTE

4 Management of myocardial infarction

4.1	<p>Are there separate on take arrangements whereby elderly patients with AMI are admitted under the department of medicine for the elderly rather than an on take physician?</p> <p>If so please state (official) age cut off point</p>	Yes	No
4.2	<p>In general who looks after inpatients (below official cut off point if appropriate) with AMI? [see below for specific questions about elderly patients]</p> <p>a) General physician who admitted the patient</p> <p>b) Transferred <i>routinely</i> to care of cardiologist after admission by on take team</p> <p>c) A cardiologist, (one of the team of cardiologists) who has initial care of the patient, handing over care of patient to a general physician on leaving CCU</p> <p>d) Other please explain:</p>		Please tick one box
4.3	<p>In general who follows up patients with AMI after discharge? (Assume <75 years of age, previously in good health)</p> <p>a) General physician who admitted patient</p> <p>b) Transferred routinely to care of cardiologist</p> <p>c) Transferred occasionally to cardiologist (if complicated etc)</p> <p>d) No fixed arrangement</p>		Please tick one box
4.4	<p>Are there written guidelines or protocols for the management of AMI in your hospital?</p>	Yes	No
4.5	<p>Is the use of these guidelines subject to regular audit ?</p>	Yes	No

5 The coronary care unit (CCU)

Please tick one box

5.1 What best describes the unit?

- a) Dedicated CCU
- b) Beds shared with Intensive Care Unit
- c) Beds shared with a high dependency unit
- d) Monitored area which is part of a general medical ward with dedicated nursing staff for patients with AMI, *[not part of the general nursing staff of the ward]*
- e) Monitored area part of a general medical ward where patients with AMI are looked after by non specialised nursing staff.
- d) Other; please explain below

Please write number in box

5.2

- a) **How many beds does the unit have?**
- b) **How many beds are routinely staffed?** *[regularly available for use]*
- c) **If your unit is part of a general medicine ward please give total number of beds on ward.**

Please write number in box

5.3 How many qualified nurses are there on normal day and night shift. If you have answered d) or e) to question 5.1, please give the number of nurses on shift for whole ward: *[Senior nursing staff will know]*

- a) normal day time shift?
- b) normal night time shift?

Please tick one box

5.4 Are there difficulties in staffing your CCU adequately without resort to bank/locum/agency nurses? Give an estimate for how many days there is need for such staffing in a typical month. *[Senior nursing staff will know]*

- Never
- Rarely (< 8 days/month)
- Commonly (8 – 21 days/ month)
- Most of time (more than 21 days/month)

5.5	Facilities on CCU	<i>Yes</i>	<i>No</i>
	<p>a) Is there immediate access to radiographic screening facilities on CCU (or designated facility immediately and conveniently adjacent)?</p> <p>b) Are there facilities for telemetry on CCU or in a step down facility?</p> <p>c) Are pressure monitoring facilities immediately available on CCU? (Swan Ganz or arterial pressure monitoring)</p> <p>d) What enzymes/markers are used to assess myocardial necrosis and which enzymes/markers are available for near patient testing (either</p>		
		<i>Tick if available for near pt testing</i>	
		<i>Yes</i>	<i>No</i>
	CK	<input type="checkbox"/>	<input type="checkbox"/>
	CK_MB	<input type="checkbox"/>	<input type="checkbox"/>
	CK_MB mass	<input type="checkbox"/>	<input type="checkbox"/>
	Troponin T or I	<input type="checkbox"/>	<input type="checkbox"/>
	Myoglobin	<input type="checkbox"/>	<input type="checkbox"/>
	SGOT / AST	<input type="checkbox"/>	<input type="checkbox"/>
	LDH / HBD	<input type="checkbox"/>	<input type="checkbox"/>
	Other:		
		<i>Yes</i>	<i>No</i>
5.6	Is there a step down unit for patients with infarction leaving CCU? <i>(A step down unit is defined as a number of beds on a ward used preferentially for patients from CCU which might have dedicated staff and additional monitoring facilities)</i>		
5.7	<p>a) Is there an official age related policy for admission to your CCU?</p> <p>b) If yes, please state age cut off</p>	<i>Yes</i>	<i>No</i>
5.8	Does a cardiologist, cardiology staff grade physician, associate specialist or cardiology specialist registrar do a regular (i.e. daily) ward round on the coronary care unit (CCU) to help with management? <i>[Where patients are under the care of general physicians]</i>	<i>Yes</i>	<i>No</i>

6	Admission arrangements		
		<i>Yes</i>	<i>No</i>

**6.1 Can patients with suspected infarction be admitted *directly* to your CCU?
(Either after GP referral or brought by ambulance following 999 call)
[This implies that the patient is NOT seen by hospital clinicians before arrival on CCU]**

6.2 a) Where are GP referrals with suspected infarction normally seen after arrival in hospital?

Please tick one box

- a) A&E
- b) Medical assessment unit
- c) General ward
- d) Direct admission to CCU

b) Where are 999 referrals with suspected infarction normally first seen?

Please tick one box

- a) A& E
- b) Medical assessment unit
- c) General ward
- d) Direct admission to CCU

6.3 a) If your hospital has separate on take arrangements for older patients, are older patients with AMI admitted to CCU?

[if not please go to question 6.4a]

Yes No

- a) Only if receiving thrombolytic treatment
- b) Not normally admitted to CCU

b) If an elderly patient is admitted to CCU with AMI who looks after them?

Please tick one box

- a) The admitting consultant geriatrician and team
- b) General physician on take and team
- c) A cardiology team

6.4 a) Do you ever have to close CCU because of pressure of beds or lack of nursing staff? If so, on how many days/month?

Please tick one box

Never

Rarely (< 8 days/month)

Commonly (8 – 21 days/month)

Most of time (more than 21 days/month)

b) Do you experience periods when admission to CCU is delayed significantly while a bed is made available? [significant meaning likely in clinicians judgement to have impact on effective clinical management of the patient]

Please tick one box

Never

Rarely (< 8 days/month)

Commonly (8 – 21 days/month)

Most of time (more than 21 days/month)

c) If patient can not be admitted to CCU as a result of the pressure of beds, where might they go?

Please tick one box

a) General medical ward

b) Step down unit

c) Dedicated cardiac ward

d) Admissions unit

e) Wait in A&E

6.5 a) If your hospital has an A&E department and you have an interventional unit, do patients (including those referred from elsewhere) awaiting or post angioplasty on CCU, contribute to difficulties in admitting other patients with AMI to your CCU? Estimate how often this might happen in one month. [If you are not an interventional unit please go to question 6.6]

Please tick one box

Never

Rarely (< 8 days/month)

Commonly (8 – 21 days/ month)

Most of time (more than 21 days/month)

b) If you are an interventional unit how many inpatients are there today on your urgent / emergency waiting list awaiting angiography either:

Please enter number

a) following admission to your own hospital

b) awaiting in beds in other hospital

c) total number where distinction between a) and b) not available

c) If you are an interventional unit how long (in days) would you expect the last patient presently waiting in another hospital on your angiography urgent/emergency waiting list to wait? [Now go to question 6.7]

Enter number of days

6.6 a) If you are in a DGH without interventional facilities how much does delay in transferring unstable patients to your interventional centre contribute directly or indirectly (by a knock on effect of patients waiting on wards for transfer) to difficulties in admitting patients with AMI to your CCU? Estimate how often this might happen in one month.

Please tick one box

Never

Rarely (< 8 days/month)

Commonly (8 – 21 days/ month)

Most of time (more than 21 days/month)

- b) If you are a hospital without on site interventional facilities how many patients are there in your hospital today awaiting transfer for urgent / emergency angiography**

*Please enter
number*

[this question assumes that the large majority of patient waiting will have acute coronary syndromes, but please include all patients waiting for transfer for angiography even though this may include inpatients with critical valvar disease]

- c) If you are a hospital without on site interventional facilities how often do you find it necessary, because your normal referral unit is unable to help, to arrange emergency angiography for a patient elsewhere?**

*Please Tick
one box*

Never

Rarely (once or twice a year)

Infrequently (less than once a month)

Frequently (more than once a month)

Routinely (almost every patient)

- 6.7 a) Is thrombolytic treatment given before admission to hospital in your district?**

Yes

No

- b) If yes, who administers it ?**

a) GP

b) Ambulance paramedics

c) Other; explain in the box below

6.8 Concerning the use of thrombolytic agents for FIRST infarctions:

- | | |
|--|----------------------|
| | <i>Yes</i> <i>No</i> |
| a) Is there a written hospital policy concerning the choice of thrombolytic agent used for first infarctions? | |
| b) In practice: | <i>Yes</i> <i>No</i> |
| a) Is Streptokinase used for the majority of eligible first infarctions? | |
| b) Is tPA (or other recombinant thrombolytic agent) used for the majority of eligible first infarctions? | |
| c) Do you use SK for the majority of eligible first infarctions with a policy of using tPA for younger eligible first infarctions? | |
| | <i>Yes</i> <i>No</i> |
| c) Is the choice of thrombolytic agent to any degree limited by cost in your hospital? | |

6.9 Arrangements for thrombolytic treatment:

*Enter as %
in each box*

a) Can you give an estimate, in percentage terms, how/where thrombolysis eligible patients are treated?

1. Fast track from Accident & Emergency to CCU where thrombolytic treatment given
2. Given in A & E
3. Direct admission to CCU (not seen by hospital clinician before reaching CCU)
4. Given in acute assessment unit or general ward

b) What percentage of patients receive SK for first infarctions.

[Leave blank if not known]

6.10 Use of Accident & Emergency Department for provision of thrombolytic treatment

Yes No

1. Thrombolytic treatment is given in A & E
[if A&E is not used for thrombolytic treatment move on to question 6.11]
2. A specially trained nurse practitioner may initiate treatment
3. If 2 above is Yes, for what percentage of the 24 hour period is the practitioner available?
4. Treatment may be initiated by junior A & E staff
[without review by on call medical or cardiology team]
5. Treatment may only be started after review by on call medical team

6.11 If A&E is not used for thrombolytic treatment can you explain why this is?

Yes No

1. No measurable benefit in terms of delay
2. Difficulty in persuading CCU nursing staff of the potential benefits
3. Difficulty in persuading A&E clinical staff of the potential benefits
4. Other ; please explain in box below

6.12 a) If patients have had thrombolytic treatment in A&E are they then normally admitted to CCU?

Yes No

b) If not where might they go to?

Yes No

- a) General medical ward
- b) Step down unit
- c) Dedicated cardiac ward
- d) Admissions unit

7 Rehabilitation

7.1	How many WTE of dedicated coronary rehabilitation staff are there?	<i>Enter WTE</i>
7.2	How many, if any, are funded on soft money (state WTE)	<i>Enter WTE</i>
7.3	<p>Does the rehabilitation process have routine access to the staff listed below in addition to the rehabilitation staff you have quoted in question 7.1? (state WTE for each)</p> <p style="text-align: right;"><i>Enter WTE</i></p> <p style="text-align: center;">Physiotherapists</p> <p style="text-align: center;">A dietician</p> <p style="text-align: center;">A clinical psychologist</p> <p style="text-align: center;">An exercise physiologist</p> <p style="text-align: center;">A cardiac liaison nurse*</p> <p style="text-align: center;">An occupational therapist</p> <p><i>*Cardiac liaison nurse defined loosely as a post having the duties in the community, as well as in the hospital, and perhaps covering secondary prevention and training</i></p>	
7.4	If you have a cardiac liaison nurse(s) please would you describe the duties of the post(s) in a few words in the box below:	

7.5	Which of the following are provided by the rehabilitation service?	<i>Yes No</i>
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	<ul style="list-style-type: none"> a) gym based physical rehabilitation b) home visiting post discharge c) hospital based drop in service d) phone based advice service e) counselling for partners f) support for patients post CABG g) support for other (non AMI) patients with coronary artery disease 		
7.6	a) Does the rehabilitation team see patients with AMI before discharge from hospital?	<i>Yes</i>	<i>No</i>
	b) Has your hospital developed links with community leisure facilities to support coronary rehabilitation?	<i>Yes</i>	<i>No</i>

8 Management after the acute event			
8.1	Is there a policy of <i>routine</i> exercise stress testing <u>before</u> discharge for patients after confirmed AMI, (for those patients in whom it is not inappropriate because of age or major co-morbidity) ?	<i>Yes</i>	<i>No</i>
8.2	Is there a policy of routine exercise testing of patients following infarction <u>after</u> discharge, (for those patients in whom it is not inappropriate because of age or major co-morbidity) ?	<i>Yes</i>	<i>No</i>
8.3	Is there a policy for routine inpatient assessment of LV function using echocardiography following AMI?	<i>Yes</i>	<i>No</i>
8.4	a) Are there on site facilities for radionuclide cardiac imaging?	<i>Yes</i>	<i>No</i>
	b) If yes, do you <i>routinely</i> evaluate LV function by imaging after AMI ?	<i>Yes</i>	<i>No</i>
	Normally before discharge		

Normally after discharge			
8.5	a) Are there on site facilities for angiography? (with or without facilities for interventional work)	<i>Yes</i>	<i>No</i>
		<i>Tick one box</i>	
	b) If Yes is this:		
		Mobile	
		Fixed	
8.6	In general is angiography performed after AMI as a clinical policy? (as opposed to symptomatic indications) [If no please go to section 10]	<i>Yes</i>	<i>No</i>
		<i>Tick one box</i>	
	b) If Yes is this done usually before discharge, or after discharge after the AMI		
		Before	
		After	
8.7	a) Is interventional work performed on site? [If no please go to section 10]	<i>Yes</i>	<i>No</i>
		<i>Tick one box</i>	
	b) If yes, do you perform		
		1) rescue angioplasty?	
		2) primary angioplasty?	
	c) If yes to either, is this		
		1) only for your own patients?	
		2) for tertiary referrals?	
	d) Is your laboratory available		
		1) 24 hours / day	
		2) less than 24 hours / day	

9	Smaller hospitals and minor injuries units only
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**For general practitioners who treat infarctions in minor injuries units or smaller hospitals
Thank you for your help with this survey; we hope you do not mind that it is structured
mainly with larger hospitals in mind, but your answers are equally important!**

9.1 What is the number of GPs in rota diagnosing AMI and treating with thrombolytic agents *Enter number*

9.2 How many doses of thrombolytic agent did you use in 1999? *Enter number*

9.3 How far (miles) is the main DGH to which your patient with infarction has to travel? *Enter number*

9.4 In diagnosing acute infarction do you use facsimile, or other electronic methods in order to discuss the index ECG with a colleague in another hospital, before proceeding to treat with thrombolytic agents? *Yes No*

10 Audit of myocardial infarction

10.1 Do you at present routinely record: *Yes No*
[if no for a) – c) then please go to 10.16]

- a) Door to needle time?
- b) Pre-hospital delays?
- c) Use of secondary prevention?

10.2 How is audit performed? *Please tick one box*

- a) continuous audit
- b) intermittent/regular
- c) occasional/sporadic

10.3 a) Are data stored in a computer database? *Yes No*

b) If yes:

1) where is the computer sited?

- a) CCU
- b) A&E
- c) Elsewhere in department

2) is the computer on a hospital network?

3) is the computer linked to:

- a) NHS net
- b) Internet

10.4 What best describes your computing arrangements for audit

*Please tick
one box*

- a) The database is a locally written programme
- b) The programme is professionally written, i.e. commercially available
- c) We are part of the NAOMI network
- d) Not computer based at present

10.5 a) Who collects/enters data for audit

*Please tick
one box*

- a) Nurses
- b) Doctors (with no nursing input)
- c) Audit staff
- d) Other, please explain below

**b) If nurses collect and enter audit data are they funded to do this?
[i.e. is the cost of this activity included in the nursing budget for CCU?
If no, would you please explain how they are funded in the box provided
below.**

Yes No

10.6	When is audit data collection/input performed?	<i>Please tick one box only</i>
	<ul style="list-style-type: none"> a) In CCU before patient leaves for another ward b) On A&E at time of admission c) Retrospectively 	
10.7	Who most commonly analyses the audit data	<i>Please tick one box only</i>
	<ul style="list-style-type: none"> a) Cardiac services lead b) Consultant c) Junior staff d) Audit staff e) NAOMI or other external arrangement f) Other (please state): 	
10.8	Normally how often are the audit data analysed?	<i>Enter Number</i>
	Once in	months
10.9	When did audit start at your hospital (year)	<i>Enter year</i>
10.10	Whose idea was it to start audit?	<i>Please tick one box</i>
	<ul style="list-style-type: none"> 1. You, or your department 2. At the request of your Trust 3. At the request of your Health Authority 4. Invitation to join national audit 5. Other (please explain in the box below) 	

		<i>Yes</i>	<i>No</i>
10.11	Is this part of a regional/sub-regional audit? <i>[i.e. are data shared with colleagues in other hospitals?]</i>		
10.12	Who sees the audit results ?	<i>Yes</i>	<i>No</i>
	Medical colleagues		
	Nursing staff		
	Medical Director		
	Trust Managers		
	Health Authority		
10.13	a) Do you discuss the results of your audit with managers in your Trust or with your Health Authority?	<i>Yes</i>	<i>No</i>
	b) If yes, do they have difficulty in understanding/interpreting the results?		
	c) Have you ever encountered significant difficulty as a result of misunderstanding or misinterpretation by managers or public health physicians?		
10.14	Normally one would expect aggregated data for delays before treatment, (means or median delays) to be important to management. Have management in your Trust/Authority ever wished to discuss data from single cases with you?	<i>Yes</i>	<i>No</i>
10.15	How is your audit funded?	<i>Please tick box</i>	
	a) Trust audit funds		
	b) Department soft money		
	c) Other; please explain in box below:		

10.16	Please tick or list any other <i>regular</i> (i.e. either continuous or at fixed intervals) audit performed within your cardiology department	<i>Yes</i> <i>No</i>
	CCU outcome/mortality data	
	Audit of secondary prevention measures	
	Confidential catheter data audit	
	Pacemaker audit	
	Other; please list below	

We would like to know whether you would like to be considered as a pilot site for the first wave of implementation of the national MI Audit. Priority will be given to those on the NHS net. The implications of saying “yes” is that you would be likely to become part of the national audit during year 2000.

Please tick one box

a) Would like to be considered as a pilot site

b) Would **not** like to be considered as a pilot site

Thank you for taking the trouble to complete this survey. We believe that the analysed results will be valuable in demonstrating the level of provision of service for patients with infarction. You may feel that we have not been comprehensive, or there may be special points that you wish to raise either in relation to your own service or more generally. Please do so below, in confidence.

Question Number	Comments

Question Number	Comments