Southend University Hospital NHS
NHS Foundation Trust

May 2011

*1 a) Please confirm or deny whether your Trust has admitted patients for acute myocardial infarction in 2008/09, 2009/10 or 2010/11*

Yes

*b) If confirmed please provide details on the number of patients admitted for myocardial infarction in each year since 2008/09*

| Financial Year | Diagnosis Order | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Primary** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **Grand Total** |
| 2008/09 | 399 | 40 | 18 | 10 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 1 | **476** |
| 2009/10 | 421 | 58 | 18 | 13 | 6 | 3 | 2 | 1 | 0 | 0 | 1 | 0 | **523** |
| 2010/11 | 429 | 68 | 43 | 19 | 9 | | 2 | 2 | 1 | 0 | 0 | 1 | **574** |
| **Grand Total** | **1249** | **166** | **79** | **42** | **17** | **5** | **5** | **4** | **1** | **1** | **2** | **2** | **1573** |

*2 a) Please confirm or deny whether anyone has died with a primary diagnosis of acute myocardial infarction in 2008/09, 2009/10 or 2010/11*

Yes.

*b) If confirmed please provide details on the number of patients who have died with a primary diagnosis of acute myocardial infarction since 2008/09.*

| Financial Year | Deaths |
|---|---|
| 2008/09 | 60 |
| 2009/10 | 33 |
| 2010/11 | 45 |
| **Grand Total** | **138** |

*3 a) Please confirm or deny whether your Trust offers cardiac rehabilitation services to patients following acute myocardial infarction.*

Yes

*b) If confirmed please provide details of the cardiac rehabilitation services your Trust offers to patients following acute myocardial infarction and when they are offered.*

**Phase 1**: patients are seen in hospital and given health education and advice pre discharge.

**Phase 2**: patients are ‘phoned at home post discharge and further information is given , those eligible for phase 3 are then invited to attend pre assessment and phase 3.

**Phase 3**: we offer a mix of classes and talks as well as home based support.

We have classes on Monday, Wednesday and Friday which include exercises and educational talks, or provision of an educational manual and relaxation CD

We also offer an option to patients who are unable to attend exercise classes. These patients receive an education manual and Relaxation CD and 3 phone calls, spaced 3 weeks apart offering support as well as information.

The subjects covered in the talks and the education manuals are as follows:

| | |
|---|---|
| Anatomy and Terminology | Risk Factors 1 |
| Angina and chest pain | Risk Factors 2 |
| MI | Dietician |
| Investigations | Benefits of exercise |
| Pharmacist | Stress and Relationships |
| Treatments | The way forward |

*4a) Please confirm or deny whether patients are referred to a different Trust for cardiac rehabilitation following acute myocardial infarction.*

Patients are not referred to a different Trust unless the patient is from out of area and we would then refer them to their local cardiac rehabilitation.

*b) If confirmed, please list all trusts patients are referred to for cardiac rehabilitation following acute myocardial infarction.*

Not applicable

*5a) Please confirm or deny whether data is collected by the Trust on the number of patients who have accepted and/or declined cardiac rehabilitation following acute myocardial infarction.*

Yes

*b) If confirmed, please provide data on the number of patients who have accepted or declined this service since 2008/09.*

The Trust does not hold the Information specifically for patients who have had an MI. The data below relates to **all** patients who were referred to cardiac rehabilitation.

| | **2008-9** | **2009-10** | **2010-11** |
|---|---|---|---|
| Phase 1 | 135 | 504 | 547 |
| Phase 2 | 335 | 832 | 926 |
| Phase 3 | 0 | 0 | 0 |
| Completed | 373 | 367 | 643 |
| Declined | 635 | 526 | 266 |
| Excluded | | 116 | 153 |

*6a) Please confirm or deny whether your Trust has local guidelines in place for the management of patients following an acute myocardial infarction.*

Yes

*b) If confirmed please supply details of the guidelines.*

Please find below the 2 flow charts for management of patients post MI and which relate to patients at Southend moving to Essex CTC

*7a) Please confirm or deny whether your Trust holds data on the number of readmissions there were to your Trust within 28 days of discharge for patients originally admitted for acute myocardial infarction.*

Yes

*b) If confirmed please provide data for 2008, 2009 and 2010.*

| Financial Year | Readmissions All | Readmitted again for MI |
|---|---|---|
| 2008/09 | 60 | 13 |
| 2009/10 | 73 | 18 |
| 2010/11 | 87 | 17 |
| **Grand Total** | **220** | **48** |

*8a) Please confirm or deny whether following discharge your Trust offers support and/or advice to patients who have had an acute myocardial infarction.*

Yes

*b) If confirmed, please provide details of the nature of the support and/or advice including on medicines management, exercise, diet, psychological support, and anything else.*

Please see response made for question 3.

*9a) Please confirm or deny whether your Trust has any shared care protocols with other Trusts for patients with acute myocardial infarction* Yes
*b) If confirmed, please provide details.* See response to question 6b.

*10a) Please confirm or deny whether your Trust participates in the national myocardial infarction audit.* Yes

*b) If confirmed, please supply a copy of the latest report submitted by your Trust to this audit.*

Please find below a copy of our MINAP Annual Report for April 2010 - March 2011

Southend University Hospital NHS
NHS Foundation Trust

Southend University Hospital NHS
NHS Foundation Trust

# Financial Year Report

***version 2.0 January 2006***

for: **SEH Southend Hospital**
prepared on: **01/06/2011**
by user: **J G**

**<u>IMPORTANT:</u> This report relates only to your local hospital's practice. Every hospital has variations in its practice, and to properly understand the content of this report, you should discuss it with your local cardiologists and their clinical teams.**

| | |
|---|---|
| **1. Coverage** - All admissions for the year: | **<u>April 2010- March 2011</u>** |
| **2. Admissions** - Total number of admissions records: | **490** |
| **3. Data Completeness** - Average data completeness *for selected key variables (see Appendix B for more detail* | **99.6%** |

## 4. Admission and Discharge Diagnosis

| | MI (ST+) | MI (ST-) | Threat. MI | ACS (TR+) | ACS (TR-) | ACS (TR?) | CPQC | MI (unc.) | Other | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Definite (STE) MI | 90 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 92 |
| Probable MI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Acute coronary syndrome | 7 | 0 | 0 | 295 | 0 | 0 | 0 | 1 | 9 | 312 |
| Chest pain ? cause | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 4 |
| Other initial diagnosis | 1 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 2 | 54 |
| **Total** | **98** | **0** | **0** | **351** | **0** | **0** | **0** | **1** | **12** | **462** |

**<u>Key:</u>**

| | | | | | |
|---|---|---|---|---|---|
| MI | Myocardial Infarction | ST+ | ST Elevation | ST- | non-ST Elevation |
| Threat | Threatened MI | ACS | Acute Coronary Syndrome | Tr+ | Troponin positive |
| TR- | Troponin negative | Tr? | Troponin unspecified | CPQC | Chest pain ? cause |
| unc | Unconfirmed MI | Other | Other or blank diagnosis | | |

## 5. Reperfusion

*Includes all patients who present to hospital with symptoms suggestive of AMI and cardiographic changes of ST elevation (or new LBBB) on the admission ECG. Any patients with ineligible admission ECGs which subsequently develop ST elevation for which they receive reperfusion treatment are not currently included.*

*There are new options for Delay to treatment, not all of which will exclude patients from analyses. Ambulance procedural delay excludes a patient from CTD, CTN, OTN analyses but not DTN analyses. Where the delay to treatment is cardiac arrest and this occurs pre-hospital, the patient is excluded from CTN but not DTN analyses. Delays to treatment which do not exclude patients from analyses include Obtaining consent for therapeutic trial, Ambulance 12 lead ECG not diagnostic of STEMI, Consideration for primary PCI, Ambulance administrative delay. Hospital administrative failure no longer excludes a patient from DTN and CTN. Initial ECG not diagnostic as a delay to treatment has been removed from the dataset as it is incompatible with an initial diagnosis of definite MI. For further details and analysis criteria please see the Explanatory notes.*

| | Local | (%) | National Data for |
|---|---|---|---|
| **Admissions with ST elevation MI** | 92 | | |
| **Reason Thrombolytic Treatment not given** (Note: these patients may still be eligible for PCI) | 12 | (13.0%) | |
| Ineligible ECG | 1 | | |
| Too Late | 6 | | |
| Risk of Haemorrhage | 0 | | |
| Uncontrolled Hypertension | 0 | | |
| Administrative Failure | 0 | | |
| Elective Decision | 2 | | |
| Refused Treatment | 1 | | |
| Other | 2 | | |
| Unknown | 0 | | |
| Primary PCI Performed | 0 | | |
| **Reperfusion Indicated** | 80 | | |
| **Reperfusion Performed** | 2 | (2.5%) | |
| Thrombolysis | 2 | | |
| pPCI | 0 | | |
| Method not Known | 0 | | |
| **Justified Delay to Treatment** | 0 | (0.0%) | |
| Sustained Hypertension | 0 | | |
| Clinical concern about recent cerebrovascular event | 0 | | |
| Delay obtaining consent | 0 | | |
| Cardiac Arrest | 0 | | |
| Ambulance procedural delay | 0 | | |
| Other | 0 | | |

| ***Other patients receiving reperfusion treatment*** | | |
|---|---|---|
| **Acute MI while already in Hospital** | 0 | |
| | | |
| **Reperfusion in patients without an admission diagnosis of definite AMI** | 2 | |

## 6. Time to Treatment

*Includes all patients who present to hospital with symptoms suggestive of AMI and cardiographic changes of ST elevation (or new LBBB) on the admission ECG, and who have no contraindication to treatment, nor any justified reason for treatment delay.*
*(NB: only shows cases where a valid delay time has been submitted or calculated.).* ***Call to Door*** *and* ***Door to Needle*** *do NOT include cases where thrombolysis was given before arrival at hospital, but* ***Call to Needle*** *and* ***Onset to Needle*** *do include these cases.*

| Eligible Admissions total | **2** |
|---|---|
| Eligible Admissions within 30 minutes | **0** |
| % <= **30** minutes | **0.0%** |
| Median time (min) | **31** |
| Inter-quartile range (min) | **31 - 50** |

| Eligible Admissions total | **2** |
|---|---|
| Eligible Admissions within 30 minutes | **2** |
| % <= **30** minutes | **100.0%** |
| Median time (min) | **18** |
| Inter-quartile range (min) | **18 - 18** |

| Eligible Admissions total | **2** |
|---|---|
| Eligible Admissions within 60 minutes | **1** |
| % <= **60** minutes | **50.0%** |
| Median time (min) | **49** |
| Inter-quartile range (min) | **49 - 68** |

| Eligible Admissions total | **2** |
|---|---|
| Eligible Admissions within 120 minutes | **1** |
| % <= **120** minutes | **50.0%** |
| Median time (min) | **50** |
| Inter-quartile range (min) | **50 - 2030** |

## 7. Where Thrombolysis was Given

*Any discrepancy between the total figure below and the totals shown in Table 5 are due to registration of invalid or blank codes for reperfusion location.*

| Before admission to hospital | 0 |
|---|---|
| In A&E | 2 |
| In CCU (direct admission) | 0 |
| In CCU (slowtrack) | 0 |
| Elsewhere in hospital | 0 |
| **Total** | **2** |

## 8. Secondary Prevention

*For all patients discharged alive with a discharge diagnosis of* ***MYOCARDIAL INFARCTION (ST and non-ST Elevation), Threatened MI and ACS Troponin Positive****. Patients transferred for investigation or intervention should be entered as 9. Unknown if the discharge medication is*

*unknown at the time of transfer.*

| | Troponin Positive ACS Discharged alive, and data available | Contra-indicated | Patient declined treatment | Not Indicated | Number treatable | Number treated | % treated | National % treated |
|---|---|---|---|---|---|---|---|---|
| Aspirin | **411** | **42** | **6** | **0** | **369** | **369** | **100.0%** | |
| b blocker | **411** | **72** | **6** | **0** | **339** | **339** | **100.0%** | |
| ACE inhibitor | **411** | **88** | **6** | **0** | **323** | **323** | **100.0%** | |
| Clopidogrel | **411** | **62** | **6** | **0** | **349** | **349** | **100.0%** | |
| Statin (all admissions) | **411** | **27** | **6** | **0** | **384** | **384** | **100.0%** | |
| Statin (cholesterol > 5 mmol/l) | | | | **0** | **70** | **70** | **100.0%** | |

## Appendix A: Financial Year Audit Report - Explanatory Notes

**General.** This audit report represents 12 months activity for your hospital. The audit report should be discussed with your management colleagues. Where management have direct access to these reports it is very important that the interpretation of these analyses is discussed with your cardiologists.

**Dataset**
Version 6.2 was implemented on 1 April 2005 and is available at
**http://www.rcplondon.ac.uk/college/ceeu/ceeu_ami_home.htm**

**Release of data outside your Trust.** Strategic Health Authorities, the Department of Health, and the public have a legitimate interest in these data in differing formats and detail. The following principles have been agreed following wide discussion. SHAs have online access to 'headline' NSF data on hospitals within their SHA. This will be very similar in format to the screen views already available to you, but will not have the local detail available in the printed Audit Report. SHAs will have access one month after the end of each quarterly reporting period. The DH will receive quarterly summary data for each Trust with the same built in delay. The public will have access to hospital data for intervals to treatment and use of secondary prevention measures. The public reports will be released annually, around June of each year. There are plans to release data to cardiac networks in 2006.

1. **Coverage.** You can produce either quarterly or annual audit reports. If you add records to a quarter after you have created an audit report you will have to create another report in order to see the updated analyses.

2. **Admissions.** The total number recorded may be greater than the number for which data entry was complete at the time of data transfer. It is possible that this may be reflected in small discrepancies between the number admitted and the number on which some analyses have been performed.

3. **Data completeness.** This is based on 11 mandatory fields that are listed in Appendix B.

4. **Initial and discharge diagnosis.** This is presented as a cross tabulation. In the Initial Diagnosis column MI (ST+) refers to patients for whom you recorded an admission ECG showing conventionally accepted evidence of ST elevation. The discharge diagnosis of myocardial infarction includes both ST elevation MI and non ST elevation MI as options. Acute coronary syndrome is separated into troponin +ve and troponin -ve acute coronary syndromes. A further group of ACS (troponin unspecified) exists for use where a troponin value is not recorded. It should be exceptional for a troponin value not to be available.

5. **Reperfusion.** This section concerns those patients who receive thrombolytic treatment and those who have primary PCI. The first section concerns those who are admitted to hospital with an ST elevation AMI demonstrated on the admission ECG. Those patients not having thrombolytic treatment because of a contraindication are listed. The difference, if any, between 'Reperfusion indicated' and 'Reperfusion performed' reflects patients apparently eligible for treatment who did not receive either thrombolytic treatment or PCI. **Delay to treatment.** There are new options for Delay to treatment, not all of which will exclude patients from analyses. Ambulance procedural delay excludes a patient from CTD, CTN, OTN analyses but not DTN analyses.

   Where the delay to treatment is cardiac arrest and this occurs pre-hospital, the patient is excluded from CTD, CTN and OTN. Where the delay to treatment is cardiac arrest and this occurs in hospital, the patient is excluded from OTN, CTN, and DTN. Delays to treatment which do not exclude patients from analyses include Obtaining consent for therapeutic trial, Ambulance 12 lead ECG not diagnostic of STEMI, Consideration for primary PCI, Ambulance administrative delay. Hospital administrative failure no longer

excludes a patient from DTN and CTN. Initial ECG not diagnostic as a delay to treatment has been removed from the dataset as it is incompatible with an initial diagnosis of definite MI. For further details and analysis criteria please see below. **Other patients receiving thrombolytic treatment.** Patients without an admission diagnosis of definite infarction may receive thrombolytic treatment if ST segment elevation subsequently develops and are included here.

6. **Time to treatment.** The national analyses are based on aggregate numbers and not on summary analyses for individual hospitals. Out of hospital delays are only analysed for patients having thrombolytic treatment. Call to treatment interval is now a national priority and reducing this interval should be considered a joint, integrated responsibility rather than two separate processes before and after admission.

7. **Where treatment was given.** This applies to both thrombolytic treatment and PCI

8. **Secondary prevention.** The use of secondary prevention treatment is now based on patients with a discharge diagnosis of myocardial infarction, (ST elevation and non ST elevation), threatened MI and acute coronary syndrome (troponin positive). Those who die, or who are transferred for treatment elsewhere (excluding day cases) are not counted.

Feedback on all aspects of the presentation of these analyses is welcomed. Please contact the MINAP helpdesk with comments on content, interpretation and validity of analyses. Before doing this please download and examine your data into Excel or other suitable format.

**Analysis criteria for secondary prevention January 2006**

| | |
|---|---|
| Discharge diagnosis **is** | 1. Myocardial infarction (ST elevation) |
| | 2. Myocardial infarction (non ST elevation) |
| | 3. Threatened MI |
| | 4. Acute coronary syndrome (troponin positive) |
| Death in hospital **is not** | 1. From MI |
| | 2. From complication of treatment |
| | 3. Other non cardiac related cause |
| | 4. Other cardiac cause |
| Discharged on aspirin **is** | 1. Yes |
| | 2. No |

Aspirin = % of patients discharged alive that received aspirin/number of patients discharged alive that were eligible for aspirin. Eligible is defined in the analysis criteria below.
% discharged alive on aspirin = nYes/nYes + nNo X100%.

Patients are excluded from the analysis if 4.08 Discharged on Aspirin was
2. Contraindicated
3. Patient declined treatment
8. Not indicated
9. Unknown

Southend University Hospital **NHS**

NHS Foundation Trust

**Analysis criteria for CTD/CTN/ DTN and OTN January 2006**

| | CTD | CTN | DTN | OTN |
|---|---|---|---|---|
| Initial diagnosis **is** | 1. Definite MI | 1. Definite MI | 1. Definite MI | 1. Definite MI |
| Method of admission **is not** | 5. Made own way to hospital<br>8. Patient already in hospital<br>9. Transferred for PCI<br>blank | 5. Made own way to hospital<br>8. Patient already in hospital<br>9. Transferred for PCI<br>blank | 8. Patient already in hospital<br>9. Transferred for PCI<br>blank | 8. Patient already in hospital<br>9. Transferred for PCI<br>blank |
| Delay to treatment **is not** | 1. Sustained hypertension<br>2. Clinical concern about cardiovascular event or surgery<br>3. Delay obtaining consent<br>5. Cardiac arrest (pre-hospital)<br>8. Ambulance procedural delay<br>9. Other | 1. Sustained hypertension<br>2. Clinical concern about cardiovascular event or surgery<br>3. Delay obtaining consent<br>5. Cardiac arrest<br>8. Ambulance procedural delay<br>9. Other | 1. Sustained hypertension<br>2. Clinical concern about cardiovascular event or surgery<br>3. Delay obtaining consent<br>5. Cardiac arrest (in- hospital)<br>Not applicable to DTN<br>9. Other | 1. Sustained hypertension<br>2. Clinical concern about cardiovascular event or surgery<br>3. Delay obtaining consent<br>5. Cardiac arrest<br>8. Ambulance procedural delay<br>9. Other |
| Was reperfusion attempted **is** | 1. Thrombolytic drug<br>3. Rescue PTCA (in house)<br>4. Referred for rescue PTCA elsewhere<br>6. Facilitated PCI<br>7. Additional dose of thrombolytic used | 1. Thrombolytic drug<br>3. Rescue PTCA (in house)<br>4. Referred for rescue PTCA elsewhere<br>6. Facilitated PCI<br>7. Additional dose of thrombolytic used | 1. Thrombolytic drug<br>3. Rescue PTCA (in house)<br>4. Referred for rescue PTCA elsewhere<br>6. Facilitated PCI<br>7. Additional dose of thrombolytic used | 1. Thrombolytic drug<br>3. Rescue PTCA (in house)<br>4. Referred for rescue PTCA elsewhere<br>6. Facilitated PCI<br>7. Additional dose of thrombolytic used |
| Valid times for | Call for help<br>Arrival at hospital<br>Reperfusion | Call for help<br>Reperfusion | Arrival at hospital<br>Reperfusion | Onset of symptoms<br>Reperfusion |
| Difference between | time of call for help and time of arrival is > 0 | time of call for help and time of reperfusion is >0 | time of arrival and time of reperfusion is not less than or equal to 0 | Time of onset of symptoms and time of reperfusion is > 0 |
| Difference between | time of arrival and time of reperfusion is not less than or equal to 0 | | | |

## Appendix B: Data Quality Analysis Detail

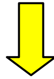
*All records MUST have an admission date, admission diagnosis, hospital name and hospital number to be accepted, therefore these fields will automatically by 100% complete. The key fields below reflect overall data quality additional to the "mandatory" fields.*

| Field | Your Data Completeness | National Average for |
|---|---|---|
| NHS Number | 99% | |
| Ethnic Group | 100% | |
| Postal code | 100% | |
| GP Practice Code | 100% | |
| Initial Diagnosis | 100% | |
| Admission Route | 100% | |
| Smoking Status | 100% | |
| Diabetes | 100% | |
| Admitting Consultant | 100% | |
| Admission Date | 100% | |
| Glucose | 93% | |
| Admission Ward | 100% | |
| Thienopyridene | 100% | |
| Discharge Date | 100% | |
| Final diagnosis | 100% | |
| Bleeding Complications | 100% | |
| Death in Hospital | 100% | |
| Discharged on Statin | 100% | |
| Coronary Angiography | 100% | |
| Reinfarction | 100% | |

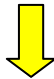
Southend University Hospital NHS
NHS Foundation Trust

# MANAGEMENT OF PATIENTS WITH ACUTE MYOCARDIAL INFARCTION IN A&E

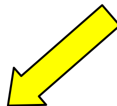
PATIENT PRESENTS WITH SYMPTOMS OF AMI
HAS ST ELEVATION IN 2 CONTIGOUS LEADS OR NEW LBBB

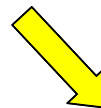


CARE FOR PATIENT IN RESUS



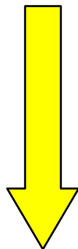
ASSESS FOR PRIMARY PCI USING
THE CARDIAC PATHWAY
Pgs 8 PPCI REFERRAL FORM A
Pgs 9HEART ATTACK FORM B



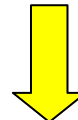


PATIENT ELIGIBLE FOR
TRANSFER CONTACT
**HOT LINE NUMBER**
**01268 394184**

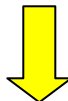
PATIENT DOES NOT MEET CRITERIA
CONTACT ECTC ON CALL
**CARDIOLOGY SPR ON 0845 1553111**
**BLEEP 9010**



IF ACCEPTED RING
**HOTLINE 01268 394184**



CALL FOR AMBULANCE ON **01245 442211**
***"STATE THAT YOU HAVE A PATIENT FOR PPCI TRANSFER TO THE PPCI CENTRE AT BASILDON"***



ENSURE THAT PATIENT HAS HAD :
ASPIRIN 300 MG
CLOPIDOGREL 600 MG
IV MORPHINE FOR PAIN RELIEF
ANTI-EMETIC IF REQUIRED

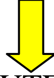
**PHOTOCOPY NOTES FOR TRANSFER**

**FAX FRONT SHEET, ECG+ FORM A**
**01268 394179**

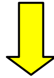
Southend University Hospital NHS
NHS Foundation Trust

# MANAGEMENT OF PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

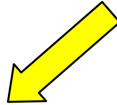
MEDICAL TEAM CONFIRMS AMI
ST ELEVATION 2 CONTIGOUS LEADS OR NEW LBBB

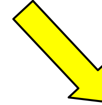


CONTACT ACUTE CARDIAC NURSE
BLEEP 2053
(if no ACN and have problems contact CCU)



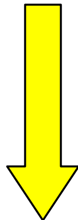
ASSESS FOR PRIMARY PCI USING
CARDIAC PATHWAY - FORM A
AND FORM B (pg 8 and 9)



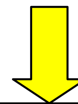


PATIENT ELIGIBLE FOR
TRANSFER CONTACT
**HOT LINE NUMBER**
**01268 394184**

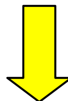
PATIENT DOES NOT MEET CRITERIA
CONTACT ECTC ON CALL
**CARDIOLOGY SPR ON 0845 1553111**
**BLEEP 9010**



IF ACCEPTED RING
**HOTLINE 01268 394184**



**CALL FOR AMBULANCE ON 01245 442211**
***"STATE THAT YOU HAVE A PATIENT FOR PPCI TRANSFER TO THE PPCI CENTRE AT BASILDON"***



ENSURE THAT PATIENT HAS HAD :
**ASPIRIN 300 MG**
**CLOPIDOGREL 600 MG**
**IV MORPHINE FOR PAIN RELIEF**
ANTI-EMETIC IF REQUIRED

**PHOTOCOPY NOTES FOR TRANSFER**

**FAX FRONT SHEET, ECG+FORM A**
**01268 394179**