

How Hospitals Manage Heart Attacks

Second Public Report of the
Myocardial Infarction National Audit Project

**Myocardial
Infarction
National
Audit
Project**

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Clinical Effectiveness and Evaluation Unit

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Written on behalf of the MINAP Steering Group

HOW HOSPITALS MANAGE HEART ATTACKS

April 2002-March 2003

This report covers the performance of hospitals in England caring for people having heart attacks from April 2002- March 2003.

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1 Introduction

The National Service Framework (NSF) for coronary heart disease is a 10-year programme published by the Department of Health in March 2000, which set standards of care for patients with coronary heart disease in England (<http://www.doh.gov.uk/nsf/coronary.htm>). The NSF helps the NHS to plan and deliver the service changes needed to raise standards of care, to improve clinical outcomes and to monitor progress. In addition it promotes equal care for all people with coronary heart disease. In order to make this happen, the NSF has set 12 standards covering areas from prevention to rehabilitation. For more information on what these targets mean for you, see the British Heart Foundation publication: 'Good Service? The National Service Framework for coronary heart disease. A guide for members of heart support groups, consumer groups and individuals interested in how services for coronary heart disease in England are developed.'

A report on progress towards achievement of the NSF targets, 'Delivering better heart services', was published by the Department of Health in March 2003 (<http://www.doh.gov.uk/heart/progress2003>). A recent report by the Department of Health, 'Review of Early Thrombolysis', identifies best practice and makes recommendations for the delivery of faster thrombolysis. (<http://www.doh.gov.uk/heart/thrombolysis/review>).

The Myocardial Infarction National Audit Project (MINAP) was developed to show how hospitals in England are performing against the NSF targets for patients with heart attacks (myocardial infarction). This report from MINAP concentrates on the time taken to give clot busting drugs (thrombolytic therapy) to suitable patients and

the use of drugs to prevent another heart attack (secondary prevention). There is good evidence that both these treatments are highly effective in saving lives.

2 What happens when you have a heart attack

What is a heart attack?

A heart attack occurs when a clot (thrombus) suddenly develops within a heart artery. The heart muscle supplied by the blocked artery suffers permanent damage if the blood supply is not restored quickly.

Thrombolytic treatment

Thrombolytic treatment is the term that describes the use of clot dissolving drugs. Thrombolytic treatment is effective up to about 12 hours after the onset of symptoms but is most effective when given very early after the symptoms. Hospitals and ambulance services are increasingly well organised to recognise heart attacks and provide treatment rapidly.

This report covers patients who were eligible for thrombolytic treatment because they had

- definite signs of a heart attack when they arrived at hospital
- no reason why a thrombolytic drug might be harmful to them and
- no good reason to delay giving the treatment

Thrombolytic drugs are not given until a heart attack is confirmed by an electrocardiogram (ECG). As these drugs are designed to dissolve clots, they may be unsuitable for some patients who are at risk of internal bleeding. Patients at significant risk of bleeding may not be given this treatment where the risk of bleeding is greater than any potential benefit.

3 Drugs to prevent another heart attack

Several drugs are available which have been shown in large clinical trials to reduce the risk of another heart attack. These are called secondary prevention drugs and include

- **aspirin**, which helps to prevent the blood from clotting
- **beta blockers**, which slow the heart rate and lower blood pressure
- **statins**, which reduce cholesterol levels in the blood

Someone who has had a heart attack is normally given these drugs unless they are unable to take them because of side effects.

4 National Service Framework standards and targets

NSF Standard six states that thrombolysis should be given within 60 minutes of calling for professional help (Call to Needle time). In December 2002, 38% of patients

achieved this standard and the Department of Health will use this figure as the baseline from which they wish to see a ten percentage point improvement each year.

The NSF target for thrombolysis:

- By April 2002 75% of eligible patients should receive thrombolytic drugs within 30 minutes of arriving at hospital (Door to Needle time). This target was reduced to 20 minutes in April 2003.

The NSF target for secondary prevention:

- By April 2002 80-90% of patients discharged from hospital following a heart attack should be given these drugs.

5 Achievement against targets for heart attack patients by hospitals in England, with explanatory notes



The table in the link below shows how your hospital is performing against the NSF targets. The table has seven columns.



Hospital	Hospitals in England that admit patients with heart attacks are listed in alphabetical order. A table in section 12 shows hospital location.
Door to Needle time (DTN 30)	This is the time from arrival at hospital when the ambulance stops outside the hospital (door) to the start of the thrombolytic treatment (needle). The target time was 30 minutes by April 2002.
Door to Needle time (DTN 20)	This is the time from arrival at hospital when the ambulance stops outside the hospital (door) to the start of the thrombolytic treatment (needle). The target time was 20 minutes by April 2003.
Call to Needle time (CTN)	This is the time from the initial call by the patient or their relative for professional help to the GP, NHS Direct or the ambulance service (call) to the start of thrombolytic treatment (needle). This is an NSF standard and the target time is 60 minutes.
Aspirin Beta Blocker Statins	The last three columns show performance against targets for the use of three drugs which reduce the chance of another heart attack. The symbol shown represents achievement against these targets.

National average

The national average is the overall achievement against the six NSF targets for all hospitals in England that treat heart attack patients.

Achievement against the NSF targets is shown using three symbols

-  reached the target
-  within 25% of the target
-  more than 25% from the target

Please note that the NSF target for thrombolysis (clot busting drugs) is different from the target for drugs to prevent another heart attack. The target for Call to Needle is 38% this year and will increase to 48% in 2004. Hospitals achieving this are shown by a  and those not achieving it are shown by a .

Hospitals with 'No Data'

If hospitals have not returned any data, then 'No Data' will appear in the table. Where analyses are absent enquiries should be made locally to confirm individual hospital status.

Hospitals with fewer than 20 cases (!)

If a hospital has fewer than 20 cases that meet the analysis criteria, then ! will appear in the table. This may be because the hospital is small with few patients admitted with heart attack and the analysis may not be representative. In the case of larger hospitals this may be because primary angioplasty is being used extensively for the treatment of heart attack. In others failure to report performance may be the cause.

Hospitals with incomplete data

If a hospital has returned data for less than four quarters of the year, then an * will appear in the table and the analysis is performed on incomplete data.

Coverage

This report is based on data from the 12 months from 1 April 2002 - 31 March 2003. This report will be updated in April 2004 for the period April 2003 - March 2004 and will subsequently be released annually.

6 Comment

- This report is based on the average performance of hospitals over 12 months. The number of hospitals achieving the DTN30 target has increased from 52 to 95 since the last report in November 2002. Achievement against this target has increased steadily throughout 2003 and therefore performance for the year from April 2002 – March 2003 will underestimate performance over the last two quarters. In the first three months of this year this target was achieved in 76% of patients.
- The Call to Needle time measures the time taken from the call for professional help until treatment and reflects the performance of the whole service. This is the most relevant indicator of patient care. It will become increasingly important for NHS monitoring purposes.

- While we report here on the achievement of the 60 minute Call to Needle time standard by acute hospitals, we recognise that delivery of heart attack care within this timeframe is a responsibility that hospitals share with NHS ambulance services. Ambulance response times and Call to Door times will therefore be critical in improving overall NHS performance against the 60 minute thrombolysis standard, thus providing more effective patient care and better clinical outcomes.
- The use of medication to reduce the risk of further heart attack has continued to increase. The number of hospitals achieving the NSF target for aspirin has increased from 193 - 202, for beta blockers from 152 - 174 and for statins from 151- 175.

7 Key messages

- The NSF was published in 2000 in order to improve the care of patients with heart attack and to reduce the number of deaths from heart attack.
- The NSF is a ten year programme. This is the second report to be published on the treatment of heart attack.
- Hospital treatment of patients with acute heart attacks are now compared nationally using the same definitions. It enables hospitals to compare themselves against all other hospitals, to establish a baseline for future progress, and monitor improvement in care for people who have suffered a heart attack.
- Measuring performance against these targets can help hospitals identify areas where care for people with heart attacks can be improved.
- Everyone should familiarise themselves with symptoms of a heart attack (for a description of symptoms see page 9 of the British Heart Foundation publication: “‘Good Service?’ The National Service Framework for coronary heart disease. A guide for members of heart support groups, consumer groups and individuals interested in how services for coronary heart disease in England are developed”).
- Patients should ring 999 for help immediately if the symptoms of a heart attack last more than 15 minutes and are not relieved by resting or using nitrate tablets or spray, if prescribed.
- The largest delay is not usually the arrival of the ambulance or giving thrombolysis, but the delay in calling for professional help.
- Most hospitals will have a Patient Advice and Liaison Service (PALS) which should be able to give advice on your hospital’s performance.

8 Glossary

Anti-platelet drugs – Drugs including aspirin that prevent the clotting of blood. Anti-platelet drugs act by reducing the ‘stickiness’ of platelets - the small blood cells that can clump together to form a clot.

Aspirin – An anti-platelet drug used to help prevent blood clots forming.

Beta Blockers – Beta-blockers are drugs that block the actions of the hormone adrenaline that makes the heart beat faster and more vigorously. They are used to help prevent attacks of angina, to lower blood pressure, to help control abnormal heart rhythms and to reduce the risk of further heart attack in people who have already had one. They may also be used in small doses in heart failure.

Cholesterol – A fatty substance mainly made by the liver. It plays a vital role in the functioning of every cell wall throughout the body. The body also uses cholesterol to make other vital chemicals. However, too much cholesterol in the blood increases the risk of coronary heart disease and heart attacks.

Clot-busters – Drugs used to dissolve blood clots after a heart attack.

Electrocardiogram – Also known as ‘ECG’. A test to record the rhythm and electrical activity of the heart. The ECG will show if a person has had a heart attack, either recently or some time ago.

Heart Attack – A heart attack occurs when a clot (thrombus) suddenly develops within a heart artery. The heart muscle supplied by the blocked artery suffers permanent damage if the blood supply is not restored quickly. The damage to heart muscle carries a risk of sudden death, and heart failure in people who survive.

Heart failure – Heart failure occurs when a damaged heart becomes less efficient at pumping blood round the body. This may result from damage to the heart muscle caused by a heart attack.

Myocardial Infarction – A heart attack.

Primary angioplasty - An emergency treatment to reopen a blocked artery using a fine catheter with a small inflatable balloon at its tip. This is a relatively new treatment for heart attack which is not yet widely available.

Secondary Prevention – Drugs that prevent another heart attack.

Statins – Drugs used to reduce cholesterol levels in the blood.

Thrombolytic Treatment / Thrombolysis – Treatment which dissolves a clot blocking an artery and restore blood flow to the heart muscle.

Thrombus – A blood clot.

9 Contacts for more information on this report

Myocardial Infarction National Audit Project

Clinical Effectiveness and Evaluation Unit

Royal College of Physicians

London NW1 4LE

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Email minap@rcplondon.ac.uk

www.rcplondon.ac.uk/college/ceeu/ceeu_ami_home.htm

Royal College of Physicians

PR Manager Linda Cuthbertson on 020 7935 1174 ext.254

Email: Linda.Cuthbertson@rcplondon.ac.uk

Department of Health

Enquiries to the Department should be directed to the Public Enquiry Office

Tel: 0207 210 4850 (line open from 9.00am to 5.00pm Monday to Friday).

Minicom: 0207 210 5025.

Email at dhmail@doh.gsi.gov.uk

In writing to the Minister for Public Health at

The Department of Health

Richmond House

79 Whitehall

London SW1A 2NS

If you require further information on your local hospital's performance please contact the hospital's Patient Advice and Liaison Service.

10 Contacts for information on heart conditions

British Heart Foundation

<http://www.bhf.org.uk/>

NB: The British Heart Foundation runs a medical information line that provides information about heart conditions and their management. It cannot respond to questions about service provision in individual hospitals. Tel: 08450 70 80 70
The document 'Good Service' can be obtained by telephoning 01604 640016 and asking for leaflet code M69.

British Cardiac Patients Association

<http://www.bcpa.co.uk/>

HEART UK

<http://www.familyheart.org/>

American Heart Association

<http://www.americanheart.org/>

NHS Direct

<http://www.nhsdirect.nhs.uk/>

Tel: 0845 4647

Blood Pressure Association

<http://www.bpassoc.org.uk/>

DOH website and NSF link

<http://www.doh.gov.uk/nsf/coronary.htm>

Diabetes UK

<http://www.diabetes.org.uk/>

British Cardiac Society

<http://www.bcs.com/>

11 Acknowledgement

This report was completed in close collaboration with the Central Cardiac Audit Database (CCAD) <http://www.ccad.org.uk/> who performed data management and analysis.

The Myocardial Infarction National Audit Project acknowledges the contribution of its Patient/Carer Group and British Heart Foundation Patient Focus Groups in the development of this report.

The Commission for Health Improvement (CHI) is the independent inspection body for the NHS. CHI publishes reports on NHS organisations in England and Wales and highlights where the NHS is working well and the areas that need improvement. CHI is now also responsible for directing the clinical audit programme for England and Wales and funds MINAP. By publicly identifying where improvement is required and sharing good practice within the service, CHI helps the NHS to raise standards of patient care.

12 Hospital location

Hospital	Town
Addenbrooke's Hospital	Cambridge
Airedale General Hospital	Keighley
Arrowe Park Hospital	Wirral
Ashford Hospital	Ashford
Barnet General Hospital	Barnet
Barnsley District Hospital	Barnsley
Basildon Hospital	Basildon
Bassetlaw District General Hospital	Nottingham
Battle Hospital	Reading
Bedford Hospital	Bedford
Birmingham Heartlands Hospital	Birmingham
Bishop Auckland General Hospital	Bishop Auckland
Blackburn Royal Infirmary	Blackburn
Bradford Royal Infirmary	Bradford
Bridlington and District Hospital	Bridlington
Bristol Royal Infirmary	Bristol
Broomfield Hospital	Chelmsford
Burnley General Hospital	Burnley
Bury General Hospital	Bury
Calderdale Royal Hospital	Halifax
Central Middlesex Hospital	London
Charing Cross Hospital	London
Chase Farm Hospital	Enfield
Chelsea and Westminster Hospital	London
Cheltenham General Hospital	Cheltenham
Chesterfield Royal	Chesterfield
Chorley Hospital	Chorley
City Hospital	Birmingham
Colchester General Hospital	Colchester
Conquest Hospital	St Leonards on Sea
Countess of Chester Hospital	Chester
County Hospital Hereford	Hereford
County Hospital Louth	Louth
Crawley Hospital	Crawley
Cumberland Infirmary	Carlisle
Darent Valley Hospital	Dartford
Darlington Memorial Hospital	Darlington
Derby Royal Infirmary	Derby
Derriford Hospital	Plymouth
Dewsbury District Hospital	Dewsbury
Diana, Princess of Wales Hospital	Grimsby
Doncaster Royal Infirmary	Doncaster

Dorset County Hospital	Dorchester
Ealing Hospital	Southall
East Surrey Hospital	Redhill
Eastbourne District General Hospital	Eastbourne
Epsom Hospital	Epsom
Frenchay Hospital	Bristol
Friarage Hospital	Northallerton
Frimley Park Hospital	Frimley
Furness General	Barrow in Furness
George Eliot	Nuneaton
Glenfield Hospital	Leicester
Gloucestershire Royal Hospital	Gloucester
Good Hope General Hospital	Sutton Coldfield
Grantham and District	Grantham
Halton General Hospital	Runcorn
Hammersmith Hospital	London
Harrogate District Hospital	Harrogate
Hartlepool General	Hartlepool
Hemel Hempstead General	Hemel Hempstead
Hexham General Hospital	Hexham
Hillingdon Hospital	Uxbridge
Hinchingbrooke Hospital	Huntingdon
Homerton Hospital	London
Hope Hospital	Manchester
Horton General Hospital	Banbury
Hospital of St Cross	Rugby
Huddersfield Royal Infirmary	Huddersfield
Hull Royal Infirmary	Hull
James Cook University Hospital	Middlesborough
James Paget Hospital	Great Yarmouth
John Radcliffe Hospital	Oxford
Kent and Canterbury Hospital	Canterbury
Kent and Sussex Hospital	Tunbridge Wells
Kettering General Hospital	Kettering
King's College Hospital	London
King George Hospital	Goodmayes
Kings Mill Hospital	Sutton in Ashfield
Kingston Hospital	Kingston Upon Thames
Leeds General Infirmary	Leeds
Leicester General Hospital	Leicester
Leicester Royal Infirmary	Leicester
Leighton Hospital	Crewe
Lincoln County Hospital	Lincoln
Lister Hospital	Stevenage
Luton and Dunstable Hospital	Luton
Macclesfield District General	Macclesfield

Maidstone General Hospital	Maidstone
Manchester Royal Infirmary	Manchester
Manor Hospital	Walsall
Mayday University Hospital	Croydon
Medway Maritime Hospital	Gillingham
Milton Keynes General Hospital	Milton Keynes
Montagu Hospital	Mexborough
New Cross Hospital	Wolverhampton
Newark Hospital	Nottingham
Newham General Hospital	London
Norfolk and Norwich Hospital	Norwich
North Devon District Hospital	Barnstable
North Hampshire Hospital	Basingstoke
North Manchester General Hospital	Manchester
North Middlesex Hospital	London
North Staffordshire Hospital	Stoke on Trent
North Tees General	Cleveland
North Tyneside General Hospital	North Shields
Northampton General Hospital	Northampton
Northern General Hospital	Sheffield
Northwick Park Hospital	Harrow
Nottingham City Hospital	Nottingham
Oldchurch Hospital	Romford
Ormskirk and District General	Ormskirk
Peterborough District Hospital	Peterborough
Pilgrim Hospital	Boston
Pinderfields General Hospital	Wakefield
Pontefract General Hospital	Pontefract
Poole Hospital	Poole
Princess Alexandra Hospital	Harlow
Princess Royal Hospital	Haywards Heath
Princess Royal Hospital	Telford
Princess Royal University Hospital	Bromley
Queen's Hospital	Burton upon Trent
Queen Alexandra Hospital	Portsmouth
Queen Elizabeth Hospital	Kings Lynn
Queen Elizabeth Hospital	Gateshead
Queen Elizabeth Hospital	Greenwich
Queen Elizabeth II Hospital	Welwyn Garden City
Queen Elizabeth the Queen Mother	Margate
Queen Mary's Hospital	Sidcup
Rochdale Infirmary	Rochdale
Rotherham General Hospital	Rotherham
Royal Albert Edward Infirmary	Wigan
Royal Bolton Hospital	Bolton
Royal Bournemouth General	Bournemouth

Royal Cornwall Hospital	Truro
Royal Devon and Exeter	Exeter
Royal Free Hospital	London
Royal Hallamshire Hospital	Sheffield
Royal Hampshire County Hospital	Winchester
Royal Lancaster Infirmary	Lancaster
Royal Liverpool University Hospital	Liverpool
Royal London Hospital	London
Royal Oldham Hospital	Oldham
Royal Preston Hospital	Preston
Royal Shrewsbury Hospital	Shrewsbury
Royal Surrey County Hospital	Guildford
Royal Sussex County Hospital	Brighton
Royal United Hospital Bath	Bath
Royal Victoria Infirmary	Newcastle
Russells Hall Hospital	Dudley
Salisbury District Hospital	Salisbury
Sandwell Distict Hospital	West Bromwich
Scarborough General Hospital	Scarborough
Scunthorpe General Hospital	Scunthorpe
Selly Oak Hospital	Birmingham
Skegness District Hospital	Skegness
Solihull General Hospital	Birmingham
South Tyneside District Hospital	South Shields
Southampton General Hospital	Southampton
Southend Hospital	Westcliff on Sea
Southmead Hospital	Bristol
Southport and Formby District Hospital	Southport
St George's Hospital	London
St Helier Hospital	Carshalton
St James' University Hospital	Leeds
St Mary's Hospital	Newport, IoW
St Mary's Hospital	Paddington
St Peter's Hospital	Chertsey
St Richard's Hospital	Chichester
St Thomas Hospital	London
Staffordshire General Hospital	Stafford
Stepping Hill Hospital	Stockport
Stoke Mandeville Hospital	Aylesbury
Sunderland Royal Hospital	Sunderland
Tameside General Hospital	Ashton under Lyme
Taunton and Somerset Hospital	Taunton
The Alexandra Hospital	Redditch
The Great Western Hospital	Swindon
The Ipswich Hospital	Ipswich

Torbay Hospital	Torquay
Trafford General Hospital	Manchester
University College Hospital	London
University Hospital Aintree	Liverpool
University Hospital Lewisham	London
University Hospital of North Durham	Durham
University Hospital Queens Medical Centre	Nottingham
Victoria Hospital	Blackpool
Walsgrave Hospital	Coventry
Wansbeck General Hospital	Ashington
Warrington District General Hospital	Warrington
Warwick Hospital	Warwick
Watford General Hospital	Watford
West Cornwall Hospital	Penzance
West Cumberland Hospital	Whitehaven
West Middlesex University Hospital	Isleworth
West Suffolk Hospital	Bury St Edmonds
Westmoreland General Hospital	Kendall
Weston General Hospital	Weston Super Mare
Wexham Park Hospital	Slough
Whipps Cross Hospital	London
Whiston Hospital	Prescott
Whitby Hospital	Whitby
Whittington Hospital	London
William Harvey Hospital	Ashford
Worcester Royal Infirmary	Worcester
Wordsley Hospital	Stourbridge
Worthing Hospital	Worthing
Wycombe General Hospital	High Wycombe
Wythenshawe Hospital	Manchester
Yeovil District Hospital	Yeovil
York District Hospital	York

THIS TABLE MUST BE READ IN CONJUNCTION WITH THE EXPLANATORY NOTES

Hospital	DTN 30	DTN 20	CTN	Aspirin	Beta Block	Statins
National Average	◆	✗	✓	✓	✓	✓
Addenbrooke's Hospital	◆	✗	✗	✓	✓	✓
Airedale General Hospital	✗	✗	✗	✓	✓	✓
Arrove Park Hospital	✓	◆	✓	✓	◆	✓
Ashford Hospital - Middlesex	◆	✗	✓	✓	✓	✓
Barnet General Hospital *	!	!	!	!	!	!
Barnsley District General Hospital	✗	✗	✗	✓	◆	✓
Basildon Hospital *	◆	◆	!	✓	✓	✓
Bassetlaw District General Hospital	✓	✓	✓	✓	✓	✓
Battle Hospital	✓	✗	✓	✓	✓	✓
Bedford Hospital	✓	✗	✓	✓	✓	✓
Birmingham Heartlands Hospital	✓	✗	✓	!	!	!
Bishop Auckland General Hospital	✓	✗	✗	✓	◆	◆
Blackburn Royal Infirmary	✗	✗	✗	✓	✓	✓
Bradford Royal Infirmary	◆	✗	✗	✓	✓	✓
Bridlington And District Hospital	✓	✗	✗	✓	✓	✓
Bristol Royal Infirmary	◆	✗	✓	✓	◆	◆
Broomfield Hospital	◆	✗	✗	✓	✓	✓
Burnley General Hospital	◆	✗	✗	✓	✓	✓
Bury General Hospital	✓	✗	✓	✓	✓	✓
Calderdale Royal Hospital	✓	✗	✗	✓	◆	◆
Central Middlesex Hospital	◆	✗	!	✓	✓	✓
Charing Cross Hospital	✓	◆	!	✓	✓	✓
Chase Farm Hospital	No Data	No Data	No Data	No Data	No Data	No Data
Chelsea & Westminster Hospital	✓	◆	!	✓	✓	✓
Cheltenham General Hospital	✓	✗	✗	✓	✓	✓
Chesterfield Royal	◆	✗	✗	✓	✓	◆
Chorley Hospital	◆	✗	✗	✓	✓	✓
City Hospital	✓	✗	✓	✓	✓	✓
Colchester General Hospital	✓	✗	✗	✓	✓	◆
Conquest Hospital	✓	✗	✗	✓	✓	✓
Countess of Chester Hospital *	✗	✗	✗	✓	✓	✓
County Hospital Hereford	◆	✗	✗	✓	✓	✓
County Hospital Louth	✗	✗	✗	✓	◆	✓
Crawley Hospital	✓	✗	✓	✓	✓	✓
Cumberland Infirmary	◆	✗	✗	✓	◆	◆
Darent Valley Hospital	◆	◆	✓	✓	✓	✓
Darlington Memorial Hospital	◆	◆	✓	✓	✓	✓
Derby Royal Infirmary	✓	◆	✗	✓	✓	✓
Derriford Hospital	◆	✗	✗	✓	◆	✓
Dewsbury District Hospital	✗	✗	✗	✓	✓	✓
Diana, Princess of Wales Hospital	◆	✗	✓	✓	✓	✓
Doncaster Royal Infirmary	✓	◆	✓	✓	✓	✓
Dorset County Hospital	◆	✗	✗	✓	✓	✓
Ealing Hospital	✓	◆	!	✓	✓	✓
East Surrey Hospital	✗	✗	✗	✓	✓	✓
Eastbourne DGH	◆	✗	✗	✓	✓	✓
Epsom Hospital	✓	✓	✓	✓	✓	✓
Frenchay Hospital	✓	✗	✓	✓	✓	✓
Friarage Hospital	✓	✗	!	✓	✓	✓
Frimley Park Hospital	✓	◆	✓	✓	✓	✓
Furness General	✗	✗	!	✓	✓	✓
George Elliot Hospital	✓	◆	✓	✓	✓	✓
Glenfield Hospital	!	!	!	!	!	!
Gloucestershire Royal Hospital	◆	✗	✗	✓	✓	✓
Good Hope General Hospital	✓	✗	✓	✓	✓	✓
Grantham And District General	✓	✗	✗	✓	✓	✓

THIS TABLE MUST BE READ IN CONJUNCTION WITH THE EXPLANATORY NOTES

Hospital	DTN 30	DTN 20	CTN	Aspirin	Beta Block	Statins
Halton General Hospital	✓	✗	✓	✓	✓	✓
Hammersmith Hospital	!	!	!	✓	✓	✓
Harrogate District Hospital	✓	✗	✗	✓	✓	◆
Hartlepool General	✓	✗	✓	✓	✓	◆
Hemel Hempstead General	◆	✗	✗	✓	✓	✓
Hexham General Hospital	✓	✓	!	✓	✓	✓
Hillingdon Hospital	✓	◆	✓	✓	✓	◆
Hinchingbrooke Hospital	✗	✗	✗	✓	◆	✓
Homerton Hospital	✓	◆	✓	✓	◆	✓
Hope Hospital	✓	✗	✓	✓	✓	✓
Horton General Hospital *	✓	◆	!	✓	✓	✓
Hospital of St Cross	✓	✗	✗	✓	✓	✓
Huddersfield Royal Infirmary	✗	✗	✗	✓	✓	✓
Hull Royal Infirmary	◆	✗	✗	✓	✓	✓
James Cook University Hospital	✓	◆	✗	✓	✓	✓
James Paget Hospital	✗	✗	✗	✓	◆	✓
John Radcliffe Hospital	✓	◆	✗	✓	✓	✓
Kent and Canterbury Hospital	✗	✗	✗	✓	✓	◆
Kent & Sussex Hospital	◆	✗	✗	✓	✓	✓
Kettering General Hospital *	✓	◆	!	✓	✓	✓
King's College Hospital	◆	✗	!	✓	✓	✓
King George Hospital	✓	◆	✓	✓	✓	✓
Kings Mill Hospital	◆	✗	✗	✓	✓	✓
Kingston Hospital	✓	✓	✓	✓	✓	✓
Leeds General Infirmary	✓	✗	✗	✓	✓	✓
Leicester General Hospital	✓	◆	✗	✓	✓	✓
Leicester Royal Infirmary	✓	✗	✗	✓	✓	✓
Leighton Hospital	✓	✗	✓	✓	✓	✓
Lincoln County Hospital	✓	◆	✗	✓	✓	✓
Lister Hospital	✓	◆	✓	✓	✓	✓
Luton & Dunstable Hospital	✗	✗	✗	✓	✓	✓
Macclesfield District General	◆	✗	✗	✓	✓	✓
Maidstone General Hospital	◆	✗	✗	✓	◆	✓
Manchester Royal Infirmary	◆	✗	✓	✓	✓	✓
Manor Hospital	✓	✓	✓	✓	✓	✓
Mayday University Hospital	✓	◆	✗	✓	✓	✓
Medway Maritime Hospital	◆	◆	✓	✓	✓	✓
Milton Keynes General Hospital	◆	✗	✓	✓	✓	✓
Montagu Hospital	!	!	!	✓	✓	✓
New Cross Hospital	✓	◆	✓	✓	✓	◆
Newark Hospital	!	!	!	✓	◆	◆
Newham General Hospital	◆	◆	!	✓	◆	◆
Norfolk and Norwich Hospital *	✓	✗	✗	!	!	!
North Devon District Hospital	◆	✗	✗	✓	✓	✓
North Hampshire Hospital	✗	✗	✗	✓	◆	✓
North Manchester General Hospital	◆	✗	✓	✓	✓	✓
North Middlesex Hospital	✗	✗	✗	✓	✓	✓
North Staffordshire Hospital	◆	✗	✓	✓	◆	◆
North Tees General	✓	✗	✓	✓	✓	◆
North Tyneside General Hospital	✓	✓	✓	✓	✓	✓
Northampton General Hospital	◆	✗	✗	✓	✓	✓
Northern General Hospital	✓	✗	✓	✓	✓	✓
Northwick Park Hospital	✓	✓	✓	!	!	!
Nottingham City Hospital	✓	✗	✓	✓	✓	✓
Oldchurch Hospital	✓	◆	✓	✓	✓	✓
Ormskirk And District General	✓	✗	✓	✓	✓	✓
Peterborough District Hospital	◆	✗	✗	✓	✓	✓

THIS TABLE MUST BE READ IN CONJUNCTION WITH THE EXPLANATORY NOTES

Hospital	DTN 30	DTN 20	CTN	Aspirin	Beta Block	Statins
Pilgrim Hospital	✓	✗	✗	✓	✓	✓
Pinderfields General Hospital	◆	✗	✗	✓	✓	✓
Pontefract General Infirmary	✗	✗	✗	✓	✓	✓
Poole Hospital	◆	✗	✓	✓	✓	◆
Princess Alexandra Hospital	✗	✗	!	✓	◆	◆
Princess Royal Hospital	✓	◆	✓	✓	✓	✓
Princess Royal Hospital (Haywards Heath)	◆	✗	✓	✓	✓	✓
Princess Royal Hospital, Telford	◆	✗	✗	✓	✓	◆
Queen's Hospital	✗	✗	✗	✓	✓	✓
Queen Alexandra Hospital	◆	✗	✓	✓	✓	✓
Queen Elizabeth Hospital (King's Lynn)	◆	✗	✗	✓	✓	◆
Queen Elizabeth Hospital, Gateshead	✓	◆	✓	✓	✓	✓
Queen Elizabeth Hospital, Greenwich	No Data	No Data	No Data	No Data	No Data	No Data
Queen Elizabeth II Hospital	◆	✗	✗	✓	✓	✓
Queen Elizabeth the Queen Mother	◆	✗	✓	✓	✓	✓
Queen Marys Hospital	◆	✗	✗	✓	✓	✓
Rochdale Infirmary	✓	◆	✓	✓	✓	✓
Rotherham General Hospital	✓	✗	✓	✓	◆	◆
Royal Albert Edward Infirmary	✓	◆	✓	✓	◆	✓
Royal Bolton Hospital	✓	◆	✓	✓	✓	✓
Royal Bournemouth General Hospital	◆	✗	✗	◆	◆	◆
Royal Cornwall Hospital	◆	✗	✗	✓	◆	◆
Royal Devon & Exeter Hospital	◆	✗	✗	✓	◆	✓
Royal Free Hospital	✓	◆	!	✓	✓	✓
Royal Hallamshire Hospital	✓	✗	✓	✓	✓	✓
Royal Hampshire County Hospital	✗	✗	✗	✓	✓	✓
Royal Lancaster Infirmary	✗	✗	✗	✓	✓	✓
Royal Liverpool University Hospital *	✓	✗	✓	✓	!	!
Royal London Hospital	✓	◆	✓	✓	✓	✓
Royal Oldham Hospital	◆	✗	✓	✓	✓	✓
Royal Preston Hospital	◆	✗	✗	✓	✓	✓
Royal Shrewsbury Hospital	✓	✗	✗	✓	✓	✓
Royal Shrewsbury Hospital	✓	✗	✗	✓	✓	✓
Royal Surrey County Hospital	◆	✗	✗	✓	✓	✓
Royal Sussex County Hospital	◆	✗	✓	✓	✓	✓
Royal United Hospital Bath	◆	✗	✗	✓	✓	✓
Royal Victoria Infirmary	◆	✗	✗	✓	✓	✓
Russells Hall Hospital	✓	✗	✓	✓	✓	✓
Salisbury District Hospital	◆	✗	✗	✓	✓	✓
Sandwell District Hospital	✓	◆	✓	✓	✓	✓
Scarborough General Hospital	✓	◆	✓	✓	✓	✓
Scunthorpe General Hospital	✗	✗	✗	✓	✓	◆
Selly Oak Hospital	✓	◆	✓	✓	◆	✓
Skegness District Hospital	!	!	!	✓	✓	✓
Solihull General Hospital	◆	✗	✓	!	!	!
South Tyneside District Hospital	✓	✗	✓	✓	✓	✓
Southampton General Hospital	◆	✗	✓	✓	✓	✓
Southend Hospital	✗	✗	✗	✓	◆	✓
Southmead Hospital	✓	◆	✓	✓	✓	✓
Southport and Formby District General	◆	✗	✓	✓	✓	✓
St George's Hospital	◆	✗	✓	✓	✓	✓
St Helier Hospital	✓	✓	✓	✓	✓	✓
St James' University Hospital (Leeds)	✓	✗	✓	✓	✓	✓
St Mary's Hospital, Newport	◆	✗	✗	✓	◆	◆
St Mary's Hospital, Paddington	◆	✗	!	✓	✓	✓
St Peter's Hospital	✓	◆	✓	✓	✓	✓
St Richards Hospital	✓	◆	✓	✓	✓	✓

THIS TABLE MUST BE READ IN CONJUNCTION WITH THE EXPLANATORY NOTES

Hospital	DTN 30	DTN 20	CTN	Aspirin	Beta Block	Statins
St Thomas Hospital	◆	◆	✓	✓	✓	✓
Staffordshire General Hospital	◆	✗	✗	✓	✓	✓
Stepping Hill Hospital	◆	✗	✓	✓	✓	✓
Stoke Mandeville Hospital	✗	✗	!	✓	✓	✓
Sunderland Royal Hospital	✓	✗	✓	✓	✓	✓
Tameside General Hospital	◆	✗	✓	✓	✓	✓
Taunton & Somerset Hospital	✓	◆	✓	✓	✓	✓
The Alexandra Hospital	✓	◆	✓	✓	✓	✓
The Great Western Hospital	◆	✗	✗	✓	✓	✓
The Ipswich Hospital	◆	✗	✗	✓	✓	✓
Torbay Hospital	◆	✗	✗	✓	✓	✓
Trafford General Hospital	◆	✗	✓	✓	✓	✓
University College Hospital	◆	✗	✗	✓	◆	✓
University Hospital Aintree	✓	✗	✓	✓	✓	✓
University Hospital Lewisham	◆	✗	!	✓	✓	✓
University Hospital Of North Durham	✓	✗	✓	✓	✓	◆
University Hospital Queens Medical	✓	✗	✗	✓	✓	✓
Victoria Hospital	✓	◆	✓	✓	✓	✓
Walsgrave Hospital	◆	◆	✓	✓	✓	✓
Wansbeck General Hospital	◆	✗	✓	✓	✓	✓
Warrington District General Hospital	✓	✗	✓	✓	✓	✓
Warwick Hospital	✓	◆	✓	✓	✓	✓
Watford General Hospital	◆	✗	✗	✓	◆	✓
West Cornwall Hospital	!	!	!	✓	◆	◆
West Cumberland Hospital	◆	✗	✗	✓	✓	✓
West Middlesex University Hospital	✓	◆	✓	✓	✓	✓
West Suffolk Hospital	✗	✗	✗	✓	✓	✓
Westmoreland General Hospital	✓	✗	✗	✓	✓	✓
Weston General Hospital	✗	✗	!	✓	✓	✓
Wexham Park Hospital	◆	✗	✗	✓	✓	✓
Whipps Cross Hospital	✓	◆	✓	✓	✓	✓
Whiston Hospital	◆	✗	✓	✓	✓	✓
Whitby Hospital *	!	!	!	✓	✓	✓
Whittington Hospital	✗	✗	!	✓	✓	✓
William Harvey Hospital	◆	✗	✗	✓	✓	✓
Worcester Royal Infirmary	✓	✗	✓	✓	✓	✓
Wordsley Hospital	◆	✗	✓	✓	✓	✓
Worthing Hospital	✗	✗	✗	✓	✓	✓
Wycombe General Hospital	✓	✗	!	✓	✓	✓
Wythenshawe Hospital	✓	✓	✓	✓	✓	✓
Yeovil District Hospital *	✓	◆	✗	✓	✓	✓
York District Hospital	✗	✗	✗	✓	✓	✓