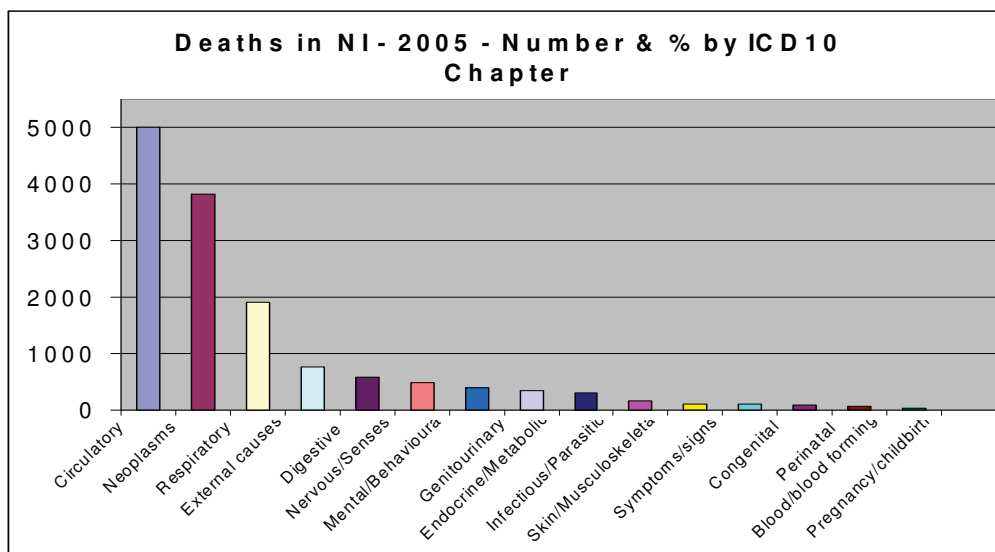


SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

6.4 HEART DISEASE

Coronary heart disease (CHD) is a preventable disease that remains the biggest killer in Northern Ireland today. Changes in risk factors and advances in medical care have contributed to a decline in the total deaths from heart disease over the past 30 years. But in spite of this it remains the main cause of death among both sexes, accounting for over 35% of deaths.



These standards cover a variety of aspects of cardiology from presentation of acute chest pain to long term rehabilitation and support. They also address the wider topics such as congenital heart disease and arrhythmias and sudden cardiac deaths.

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 16:

All pregnant women should have appropriate antenatal screening for congenital heart disease (CoHD), with specialist services available to those in whom a diagnosis of CoHD is made.

Rationale:

Detailed scanning of the fetal heart should be an integral part of the routine anomaly scan performed on all pregnant women in Northern Ireland. Current antenatal detection rates for congenital heart disease in Northern Ireland are only 25%. Antenatal diagnosis of congenital heart disease leading to planned delivery and care in a specialised centre has been shown to reduce morbidity and mortality.

Evidence:

The Paediatric and Congenital Cardiac Services Review (DOH) 2002 highlighted the need for standards of care for antenatal screening for Congenital Heart Disease <http://www.heartstats.org/datapage.asp?id=3507>

National Institute for Health and Clinical Excellence (NICE) guidelines for antenatal screening (2008) <http://www.nice.org.uk/Guidance/CG62>

Outcome data for patients diagnosed early with complex congenital heart disease – Heartsuite

Responsibility for delivery / implementation

Health and Social Care Board
Public Health Agency
HSC Trusts
Primary Care

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Quality Dimension

Safe

Detection of a defect before birth allows mothers and doctors to plan for a safer birth at the best time and in the best place ensuring early detection and intervention for serious defects.

Timely

Some babies have a type of heart disease that is life threatening in the first few days of life, if not diagnosed. Therefore timely detection and intervention ensures a better outcome.

Efficient

Failure to detect heart disease before birth can lead to costly and dangerous emergency situations and can be life threatening.

Equitable

All pregnant mothers should have appropriate antenatal screening and onward referral for specialist advice, if required.

Patient Centred

Early detection allows time for parents to understand and come to terms with their baby's condition and can be involved in decision making early in pregnancy.

Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of patients with major congenital heart disease diagnosed antenatally.	Heartsuite Database	40%	March 2010
		50%	March 2011
		55%	March 2012

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 17:

All children with suspected major congenital and acquired heart disease should have access to prompt diagnosis and appropriate management in line with Ministerial targets.

Rationale:

Morbidity and mortality of heart disease in children can be reduced as a result of early detection, diagnosis and treatment with appropriate access to specialist professionals.

Evidence:

A centralised model of care provision is endorsed by the Report of the Paediatric and Congenital Cardiac Services Review Group (December 2003) <http://www.advisorybodies.doh.gov.uk/childcardiac/index.htm>

Responsibility for delivery / implementation

Health and Social Care Board
Public Health Agency
HSC Trusts
Primary Care

Quality Dimension

Timely

Children with congenital heart disease should receive early and accurate diagnosis and appropriate treatment plans delivered by specialists in a specialist centre.

Effective

The appropriate management of these patients should improve their expected outcomes leading to reduced mortality and improved quality of life.

Equitable

All patients will have access to a specialist service.

Patient Centred

Patients, families and carers should be provided with specialist care and support which promotes self management and independence.

**SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL
BEING**

Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of new born babies with suspected major congenital heart disease seen by a consultant paediatric cardiologist within 5 working days. (All other children should be seen within current Ministerial targets)	Central Cardiac Audit Database (CCAD)	80%	March 2010
		90%	March 2011
		95%	March 2012

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 18:

All patients with suspected inherited cardiac disease should have access to a consultant led service specifically designed to meet their needs.

Rationale:

There are many genetic disorders which have major effects on the cardiovascular system. Recent advances in genetics have enabled identification of individuals who have these disorders (including those who are pre-symptomatic). Once identified, these individuals can be offered appropriate screening / monitoring, which may reduce complications associated with the condition, including the risk of sudden death.

The majority of sudden cardiac deaths in people under the age of 40 are caused by inherited cardiomyopathies and channelopathies (arrhythmias).

Evidence:

National Service Framework for Coronary Heart Disease, Chapter Eight: Arrhythmias and Sudden Death (DOH, March 2005)

http://www.dh.gov.uk/en/Healthcare/NationalServiceFrameworks/Coronaryheartdisease/DH_4117048

Responsibility for delivery / implementation

Belfast HSC Trust

Quality Dimension

Timely

Enhance the awareness of patients / families with inherited cardiac disease by early diagnosis and, where appropriate and feasible, prophylactic treatment.

Effective

Ensure long term surveillance of agreed cardiac markers to reduce any complications.

Equitable

All patients will have access to a specialist service.

Patient Centred

Patients, families and carers should be provided with specialist care and support, which links to national and, where possible, international services to ensure family members who are "at risk" of genetic conditions are identified.

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of first degree relatives of patients with suspected inherited cardiac disease who are offered access to genetic testing and subsequent specialist follow up, as appropriate.	Audit	Establish baseline Performance level to be determined once baseline established	March 2011

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 19:

All adults with major congenital heart disease should have access to a specialist consultant led service specifically designed to meet their needs.

Rationale:

Improved survival rates of those treated for congenital heart disease in childhood results in approximately 130-150 new patients being added to the adult congenital heart disease population every year. This means that by 2010 there will be a further 20% increase in adults with complex congenital heart disease requiring specialist congenital heart disease services.

Evidence:

A Commissioning Guide for Services for Young People and Grown Ups with Congenital Heart Disease (DOH May 2006)

http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4134696.pdf

Responsibility for delivery / implementation

Health and Social Care Board
Public Health Agency
HSC Trusts
Primary Care

Quality Dimension

Timely

Structured transition from paediatric services to adult services should commence 12 months prior to the patient's 16th birthday.

Effective

The appropriate management of these patients should improve their expected outcomes leading to reduced mortality and improved quality of life.

Equitable

All patients will have access to a specialist service.

Patient Centred

Patients, families and carers should be provided with specialist care and support which promotes self management and independence

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of patients with congenital heart disease who have accessed a specialist consultant led service.	Heartsuite Database	90%	March 2011
	Patient and family focus groups	95%	March 2012

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 20:

All patients with a diagnosis of a non atrial fibrillation arrhythmia should receive timely assessment, treatment and support based on individual need.

Rationale:

Early detection of arrhythmias and clinically effective treatments reduce the chance of life threatening arrhythmias, and allow patients to be managed appropriately and discharged efficiently leading to a reduction in admission/readmission.

Evidence:

Cardiac resynchronisation therapy for the treatment of heart failure. NICE technology appraisal guidance 120 (May 2007)

<http://www.nice.org.uk/Guidance/TA120>

National Institute for Health and Clinical Excellence (NICE) Implantable cardioverter defibrillators (ICDs) for the treatment of arrhythmias (Jan 06)

<http://www.nice.org.uk/Guidance/TA95>

Scottish Intercollegiate Guidelines Network (SIGN), Cardiac Arrhythmias in coronary heart disease <http://www.sign.ac.uk/guidelines/fulltext/94/index.html>

National Service Framework for Coronary Heart Disease, Chapter Eight: Arrhythmias and Sudden Death (DOH, March 2005)

http://www.dh.gov.uk/en/Healthcare/NationalServiceFrameworks/Coronaryheartdisease/DH_4117048

Responsibility for delivery / implementation

Health and Social Care Board

Public Health Agency

HSC Trusts

Primary Care

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Quality Dimension			
Effective All treatment will be provided in line with evidence based practices.			
Equitable All patients will have access to specialist services.			
Patient Centred The diagnosis, treatment and ongoing care of patients will take into account their individual needs and preferences			
Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of patients with a potentially life threatening non atrial fibrillation arrhythmia who have a preliminary diagnosis made and definitive treatment plan commenced within a maximum of 9 weeks following initial presentation.	Retrospective audits of performance	80%	March 2010
		85%	March 2011
	Patient focus groups	95%	March 2012

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 21:

All patients with a diagnosis of atrial fibrillation should receive timely assessment, treatment and support based on individual need.

Rationale:

Atrial fibrillation (AF) is the most common sustained arrhythmia encountered in clinical practice. Its incidence increases with age and the presence of structural heart disease. It is a major cause of stroke, especially in the elderly. Several drugs and treatments effectively restore and maintain sinus rhythm in patients with AF and improve quality of life.

Evidence:

National Institute for Health and Clinical Excellence (NICE), Atrial Fibrillation: the management of atrial fibrillation (2006)

<http://www.nice.org.uk/Guidance/CG36>

Responsibility for delivery / implementation

Health and Social Care Board

Public Health Agency

HSC Trusts

Primary Care

Quality Dimension

Safe

Early diagnosis and appropriate treatment will reduce the risk of stroke / thromboembolism.

Timely

Improved access for those that require the services by offering timely access to evidence based treatment.

Efficient

Improved quality of life due to early diagnosis, treatment and ongoing care.

Equitable

All patients will have access to specialist services.

Patient Centred

The diagnosis, treatment and ongoing care of patients will take into account their individual needs and preferences

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of patients with AF who are currently treated with anti-coagulation drug therapy or an anti-platelet therapy	QOF	90%	March 2010
		95%	March 2011
		98%	March 2012

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 22:

All patients with a clinical suspicion of heart failure should have access to ECG and BNP for first level rule out in a primary care setting.

Rationale:

The quality of life for patients with suspected heart failure improves if they receive timely access to diagnosis, treatment and ongoing care.

Evidence:

The European Society of Cardiology Guidelines for the diagnosis and treatment of acute and chronic Heart Failure, 2008

<http://www.escardio.org/guidelines-surveys/esc-guidelines/GuidelinesDocuments/guidelines-HF-FT.pdf>

National Institute for Health and Clinical Excellence (NICE) Management of chronic heart failure in adults in primary and secondary care (July 2003)

<http://www.nice.org.uk/Guidance/CG5>

CREST Guidelines on the management of chronic heart failure in NI (Feb 2005) <http://www.crestni.org.uk/publications-show?txtid=4080>

National Service Framework for Coronary Heart Disease, Chapter 6, Heart failure (March 2000)

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4094275

SIGN Management of chronic heart failure. (Feb 2007)

<http://www.sign.ac.uk/guidelines/fulltext/95/index.html>

Responsibility for delivery / implementation

Health and Social Care Board

Public Health Agency

HSC Trusts

Primary Care

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Quality Dimension			
<p>Timely Improve access and reduce waiting times for those who require access to the service.</p> <p>Effective Improve the quality of life of the individual due to early diagnosis and treatment.</p> <p>Efficient Reduce delays in diagnosis and inappropriate echo referrals and ensure a better use of resources.</p>			
Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of patients referred to a specialist heart failure service who have an ECG and BNP requested, carried out and interpreted prior to referral	Audit of patients referred to specialist heart failure service with a presentation diagnosis of suspected systolic heart failure.	Establish baseline Performance level to be determined once baseline established	March 2011

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 23:

All patients with diagnosis of heart failure should be prescribed evidence based medication as appropriate, under the guidance of the multidisciplinary specialist team.

Rationale:

Evidence based medications and access to a multi disciplinary team have been shown to decrease mortality, reduce the number of bed days and improve the quality of life, improve patient satisfaction, increase reassurance and facilitate access of this population of patients to appropriate interventions.

Evidence:

National Institute for Health and Clinical Excellence (NICE) Management of chronic heart failure in adults in primary and secondary care (July 2003)

<http://www.nice.org.uk/Guidance/CG5>

CREST Guidelines on the management of chronic heart failure in NI (Feb 2005) <http://www.crestni.org.uk/publications-show?txtid=4080>

National Service Framework for Coronary Heart Disease, Chapter 6, Heart failure (March 2000)

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4094275

SIGN Management of chronic heart failure. (Feb 2007)

<http://www.sign.ac.uk/guidelines/fulltext/95/index.html>

Responsibility for delivery / implementation

Health and Social Care Board

Public Health Agency

HSC Trusts

Primary Care

**SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL
BEING**

Quality Dimension			
<p>Effective Improved quality of life due to early diagnosis, treatment and continuity of care and appropriate secondary prevention medications.</p> <p>Equitable All patients should have access to the specialist service.</p> <p>Patient Centred Patients, families and carers should be provided with specialist care and support which promotes self management and independence.</p>			
Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of clinically appropriate patients on optimal evidence based medication for systolic heart failure. (Excluding co-morbidities and / or those currently undergoing uptitration)	QOF	70% 80% 90%	March 2010 March 2011 March 2012

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 24:

All eligible patients* suffering an acute myocardial infarction with ST-segment elevation heart attack should receive thrombolysis within one hour of calling for professional help.

(*Excluding those with contraindications to thrombolysis or those undergoing primary PCI)

Rationale:

Acute myocardial infarction (AMI) is caused by blockage of a coronary artery by a thrombus or clot. This is usually the result of rupture of an atherosclerotic plaque within the artery. The heart muscle supplied by that artery is damaged or dies because of lack of oxygen (ischaemia). Patients with AMI may develop heart failure or potentially fatal cardiac arrhythmias as a result of damage to the heart muscle. These and other complications may occur early, within the first few hours of the event, or may develop over the subsequent months or years. Thrombolytic drugs break down the thrombus so that the blood flow to the heart muscle can be restored to prevent further damage and assist healing. The sooner the blood flow can be restored, the better the chances of avoiding the death of the heart muscle.

Evidence:

National Service Framework for Coronary Heart Disease, Chapter three: Heart attacks and other acute coronary syndromes (DOH, March 2005)

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4094275

ESC 2003 Management of Acute Myocardial Infarction in patients presenting with ST-segment elevation European Heart Journal 24 28-66

<http://eurheartj.oxfordjournals.org/cgi/content/full/24/1/28>

National Institute for Health and Clinical Excellence (NICE) Guidance on the use of drugs for early thrombolysis in the treatment of acute myocardial infarction (2002) <http://www.nice.org.uk/Guidance/TA52>

ESC 2008 Management of acute myocardial infarction in patients presenting with persistent ST-segment elevation. European Heart Journal 29 2909- 2945

<http://eurheartj.oxfordjournals.org/cgi/content/full/29/23/2909>

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Responsibility for delivery / implementation			
Health and Social Care Board Public Health Agency HSC Trusts Northern Ireland Ambulance Service HSC Trus Primary Care			
Quality Dimension			
Timely Early intervention reduces the risk of death and disability, but the effectiveness of treatment is greater the sooner treatment is begun			
Efficient All treatment will be provided in line with evidence based practices.			
Equitable All patients will have access to appropriate clinical intervention.			
Patient Centred The diagnosis and treatment of patients will take into account their individual needs and logistical issues.			
Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of eligible patients with AMI (STEMI or new LBBB) that receive thrombolysis within 60 minutes of calling for professional help	MINAP	60%	March 2010
		65%	March 2011
		70%	March 2012

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 25:

All patients identified as requiring cardiac rehabilitation, in line with the regional guidelines, should be offered this service.

Rationale:

Cardiac Rehabilitation (CR) is an evidence-based intervention that reduces mortality and morbidity by at least 26% from cardiac disease.

Evidence:

British Association for Cardiac Rehabilitation – Standards and Core Components for Cardiac Rehabilitation (BACR2007)

<http://www.bcs.com/documents/affiliates/bacr/BACR%20Standards%202007.pdf>

CREST Guidelines for cardiac rehabilitation in NI (May 2006)

<http://www.crestni.org.uk/publications-show?txtid=4003>

National Service Framework for Coronary Heart Disease, Chapter 7, Cardiac Rehabilitation (March 2000)

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4094275

Responsibility for delivery / implementation

Health and Social Care Board

Public Health Agency

HSC Trusts

Primary Care

Quality Dimension

Equitable

All patients should have access to components of a cardiac rehabilitation service.

Patient Centred

Cardiac rehabilitation should be menu based and focus on the individual needs of the patients

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of patients eligible for cardiac rehabilitation who receive the Phase 1, Phase 2 and Phase 3 components of the service based on an assessment of their need.	National Audit for Cardiac Rehabilitation (NACR)	Establish baseline Performance level to be determined once baseline established	March 2012

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 26:

All patients who develop new onset chest pain, suggestive of angina should be reviewed at a rapid access chest pain clinic (RACPC) within 2 calendar weeks of referral by the GP/appropriate clinician.

Rationale:

A Rapid Access Chest Pain Clinic (RACPC) is a service provided to the General Practitioners for rapid cardiological assessment of patients that are suspected of having developed new onset angina and for patients with known ischaemic heart disease with worsening symptoms. The clinic is not designed for the assessment of patients with acute cardiac chest pain, for those that require routine assessment/management of stable angina or for review of follow-up patients.

RACPCs supported by clear referral criteria and protocols for investigation lead to more complete, more accurate and more rapid diagnosis and assessment of people with suspected angina.

Evidence:

Chapter 4, Coronary Heart Disease National Service Framework, England and Wales. Mar 2000 -

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4094275

Responsibility for delivery / implementation

Health and Social Care Board
Public Health Agency
HSC Trusts
Primary Care

Quality Dimension

Safe

Reduction of patients who experience an acute cardiac event whilst waiting for an elective outpatient appointment

Efficient

Patients should be assessed by an appropriate clinical team

Equitable

All patients should have access to a RACPC service

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of patients who are seen at RACPC within the target time period from referral made to patient seen (excluding refusal of first offer).	NI RACPC minimum dataset	90% within 2 calendar weeks	March 2010
		95% within 2 calendar weeks	March 2011

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 27:

All high risk patients presenting with non ST elevation acute coronary syndromes should undergo angiography / revascularisation within 72 hours of diagnosis in accordance with clinical need.

Rationale:

Angiography is advised to prevent early complications and / or to improve long term outcomes for patients. In high risk groups the clear benefit is reported from early angiography and as an appropriate intervention (PCI / Surgery)

Evidence:

Guidelines for the management of patients with acute myocardial infarction presenting with ST segment elevation (European Society of Cardiology 2003)
<http://eurheartj.oxfordjournals.org/cgi/content/full/24/1/28>

Responsibility for delivery / implementation

Health and Social Care Board
Public Health Agency
HSC Trusts
Primary Care

Quality Dimension

Safe

Reduction of complications and increase in long term patient outcomes

Timely

High risk patient groups should have access to angiography and +/- PCI in <72 hours and cardiac surgery within 7 days

Effective

Services will be evidence based care in line with local and national standards

Efficient

Ensures that appropriate patients are selected for investigation / intervention

Equitable

All high risk patients will have access to angiography and +/- PCI/surgery

**SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL
BEING**

Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of patients with acute coronary syndrome who undergo angiography (+/- PCI) within 72 hours of diagnosis	In hospital transfer referral database	75%	March 2010
		85%	March 2011
		95%	March 2012
Percentage of patients requiring urgent surgical revascularisation who receive this intervention within 7 days of being clinically suitable.		50%	March 2010
		60%	March 2011
		80%	March 2012

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Overarching standard 28:

All patients with suspected pulmonary arterial hypertension should be managed in a timely fashion by a specialist multidisciplinary team in line with NSCAG centres.

Rationale:

There is a high level of mortality and morbidity associated with this group of patients.

The disease aetiology is diverse and requires specialised investigation to confirm diagnosis and guide decisions in management.

Treatments are expensive and require long-term monitoring by a multidisciplinary team

Evidence:

Service Specifications for National Pulmonary Hypertension Service Jan 03
ESC and ACCP guidelines

http://www.hcsu.org.uk/index.php?option=com_docman&task=doc_download&gid=555

Responsibility for delivery / implementation

Health and Social Care Board

Public Health Agency

HSC Trusts

Primary Care

SERVICE FRAMEWORK FOR CARDIOVASCULAR HEALTH AND WELL BEING

Quality Dimension			
<p>Timely Patients will receive early and appropriate treatment following diagnosis</p> <p>Effective All treatment will be provided in line with evidence based practices. Using evidence based methods, patients will be referred for investigation to establish or exclude a diagnosis of pulmonary hypertension</p> <p>Efficient All patients will receive accurate diagnosis by a team with specialist expertise in diagnosis and management of PHT</p> <p>Equitable All patients should have access to specialist services</p> <p>Patient Centred A follow-up process should run for the lifetime of the patient promoting independence and self management</p>			
Performance Indicator:	Data source	Anticipated Performance Level	Date to be achieved by
Percentage of people assessed and appropriately managed in line with agreed care pathway	Audit	95%	March 2011