Heart Health Action Plan

Cardiovascular Strategy Steering Group Report

EASTERN REGIONAL HEALTH AUTHORITY
Údarás Réigiúnda Sláinte An Oirthir

Published in 2003

Contents

Foreword 4

Acknowledgements 5

Membership of the Steering Committee 6

Section 1 Executive Summary 7

Section 2 Context 15

2.1 *Building Healthier Hearts* and the Health Strategy 16

2.2 National Implementation Structures 17

Section 3 Setting the Scene in the Eastern Region 19

3.1 Heart Health in the Eastern Region 20

3.2 Service Provision in the Eastern Region 27

3.3 Implementation of the Cardiovascular Strategy in the Eastern Region - CVHS Steering Committee and Working Groups 28

3.4 Development 2000 - 2002 30

Section 4 Important Background Discussions 31

4.1 Common Themes from Consultation Process 32

4.2 Principles for Prioritisation 34

Section 5 Action Plan 35

5.1 Health Promotion 36

5.2 Primary Care 45

5.3 Pre-Hospital Services 54

5.4 Hospital Services 63

5.5 Cardiac Rehabilitation 79

5.6 Information Systems, Audit and Research 87

Appendix 93

Glossary 96

References 98

Foreword by Michael Lyons, Regional Chief Executive, ERHA

It gives me great pleasure to welcome the Heart Health Action Plan, which through its objectives sets out to address the burden of heart disease experienced by people throughout the Eastern Region. Heart Disease remains the single biggest killer in the Region and living with heart disease remains a reality for thousands of people and families.

The Eastern Regional Health Authority (ERHA) is responsible for planning, arranging, overseeing and co-ordinating health and social services for the 1.4 million people who live in Dublin, Wicklow and Kildare. The Authority is committed to implementation of this Action Plan and will do everything within its resources to ensure that the momentum is maintained to address the challenges ahead and achieve comprehensive implementation of the Action Plan.

I would like to thank the Cardiovascular Steering & Working Groups under the chairmanship of Dr. Siobhan Jennings for giving overall impetus and direction to the development of this important Action Plan.

Michael Lyons
Regional Chief Executive

Acknowledgements

The Heart Health Action Plan is the result of many months of hard work by the Cardiovascular Steering Group which in turn is a multisectoral group reflecting all players (service user, service provider, service purchaser).

It would not have been possible to bring the work to completion without the excellent input of the individuals, groups and organisations that participated so positively in all aspects of the task. The commitment and support of the Steering Group was greatly appreciated. A number of Steering Group members took on the extra task of chairing working groups, which gave detailed consideration to relevant issues.

Working Groups	**Chair**
Health Promotion	Martina Queally
Pre Hospital	Niamh O'Rourke
Primary Care	Louise McMahon
Hospital Sector	Dr. Brian Maurer
Cardiac Rehabilitation	Helen Newton
Information Systems, Audit & Research	Dr. Siobhan Jennings

The energy and enthusiasm of the chairpersons of these working groups and the commitment of all who took part, added greatly to the deliberations on the direction of the Action Plan and specifically to the production of the Interim Report in December 2001. We are much in their debt.

The contribution made by the three project managers from the Area Health Boards (Niamh O'Rourke ECAHB, Siobhan Fitzpatrick SWAHB, Dr. Jane Renehan NAHB) and the secretarial support in the ERHA (Michelle Burns, Olivia Magee, Bernie Clarke) was significant and greatly appreciated.

Finally, sincere thanks are offered to Ms Bernadette Kiberd, Cardiovascular Health Strategy Project Manager who brought enthusiasm, commitment and positive energy to this large and complex task.

Dr. Siobhan Jennings
Chair
Cardiovascular Steering Group

Membership of the Steering Committee

From the Eastern Regional Health Authority

Dr. Siobhan Jennings,
Specialist in Public Health Medicine (Chair)

Ms. Bernadette Kiberd,
Project Manager, Cardiovascular Health Strategy

Mr. Jim Breslin,
Director of Planning, Commissioning & Change

Ms. Louise McMahon,
Senior Commissioner, East Coast Area

Ms. Mo Flynn,
Senior Commissioner, South Western Area

Mr. Tom Finn,
Senior Commissioner, Northern Area

From the Area Health Boards

Dr. Jane Renehan,
CVHS Project Manager, Northern Area Health Board

Mr. Gerry Hanley,
Operations Manager, Northern Area Health Board

Ms. Niamh O'Rourke,
CVHS Project Manager, East Coast Area Health Board

Ms. Mary O'Connell,
Director of Acute and Primary Care Services,
East Coast Area Health Board

Dr. Richard Aboud,
General Practitioner, East Coast Area Health Board

Ms. Siobhan Fitzpatrick,
CVHS Project Manager, South Western Area Health Board

Ms. Martina Queally,
Director of Health Promotion, South Western Area Health Board

Ms. Pauline Bryan,
Director of Primary Care and Acute Services,
South Western Area Health Board

From the Dublin Academic Teaching Hospitals

Ms. Helen Newton,
Senior Cardiac Rehab Co-ordinator, Beaumont Hospital

Dr. Peter Crean,
Consultant Cardiologist, St. James's Hospital

Dr. Brian Maurer,
Director of Cardiology,
St. Vincent's University Hospital,
Incorporating St. Michael's Hospital

Ms. Joan Love,
Cardiology Sister, Adelaide & Meath Hospital inc. National Children's Hospital

Multisector Representation

Dr. Geoff King,
Director, Pre Hospital Emergency Care Council

Dr. John O'Brien,
General Practitioner,
Irish College of General Practitioners

Ms. Siobhan McGrory,
Youth Health Co-coordinator, National Youth Council of Ireland

Mr. Michael O'Shea,
Director, Irish Heart Foundation

Ms. Doreen Bracken,
Manager Physiotherapy Services, Irish Congress of Trade Unions (Community and Voluntary Pillar)

Dr. Margaret Fitzgerald,
Chief Specialist, Food Safety Authority of Ireland

Mr. Karl Mitchell,
Assistant Community Development Officer, Dublin City Council

Ms. Mary Hanlon,
Community Development Officer, Dublin City Council

Ms. Deirdre Whitfield,
Community Development Enterprise Officer,
Wicklow County Council

Mr. Willy Carroll,
Director of Community & Enterprise, Kildare County Council (who sadly passed away in 2002)

Executive Summary

1

Executive Summary

Introduction

The Cardiovascular Health Strategy, *Building Healthier Hearts*, launched in November 1999, sets out a strategic plan, through 211 recommendations, to reduce the heart disease mortality and morbidity experienced by Irish people.

In 2001, the Health Strategy, Quality and Fairness, was launched outlining a programme of investment and reform, involving all elements of the system, which will organise the future health system through four national goals: a) better health for everyone, (this involves intersectoral action on lifestyle and environmental factors as key determinates of good health); b) fair access, (a need to take more deliberate action in addressing health inequalities); c) responsive and appropriate care delivery (an increased understanding and awareness of the impact certain illnesses have on quality of life); d) high performance. Building on previous strategies, Quality and Fairness reiterates the key elements of health and social gain central to Building Healthier Hearts and specifically targets cardiovascular disease through a number of objectives, namely *'Promotion of health and well-being is intensified'* (Actions 5, 13) and '*The system has the capacity to deliver timely and appropriate services' (Action 56).*

The Eastern Regional Health Authority (ERHA) established in March 2000 is responsible for planning, arranging overseeing and co-coordinating health and personal social services for the 1.4million people who live in Dublin, Kildare and Wicklow. This it does through 39 providers, i.e. the three Area Health Boards(East Coast, Northern and South Western Area Health Boards) and 36 other main statutory and voluntary organisations. To progress the Cardiovascular Strategy for the years 2002-2007, the Authority initiated a multidisciplinary and multisectoral Hearth Health Steering Group. The Action Plan, presented here, is the result of the work of this group.

Background

Heart Health Status in the Eastern Region

Ireland has the highest premature mortality rate (under 65 years) from heart disease in the EU. While the eastern region has significantly lower mortality rates compared with Ireland as a whole, the region lags considerably behind the EU average.

Deaths from heart disease are declining in the eastern region by reference to national and international figures yet one quarter of all deaths in the region are caused by heart disease.

Inequity in mortality from heart disease exists in the eastern region: a) males are twice more likely to die from heart disease than females, b) geographical differences exist (significantly higher death rates noted in two Area Health Boards - NAHB and SWAHB) and c) the lowest social class has significantly higher rates than the highest (for males) in the All Ireland study – a fact that is highly likely to be true also in the eastern region.

Death rates from stroke are also on the decline but in contrast to heart disease rates in Ireland are close to the EU average. In the eastern region, death rates from stroke are similar to the national picture for males whereas rates for females are significantly lower. Within the region, only the South Western Area Health Board had levels of mortality significantly above the regional average.

While death rates from heart disease are on the decline, hospital discharges are slightly increasing. This is, undoubtedly, due to increased survival, the changing nature of the disease to that of a chronic one and to the effect of an ageing population. Eastern residents are more likely to receive certain interventions (PTCA) but have a similar chance of receiving surgery (CABG) compared with Irish residents overall. The basis for this statement is the HIPE (Hospital Inpatient Inquiry System) system of data collection on public hospital activity which does not include private hospital activity. This is a limitation.

Risk factors for heart disease are high in Ireland. A number of these risk factors have a strong social class relationship rather than showing geographical differences. The 2002 SLAN survey indicates:

- 27% of the population were noted to be current smokers
- One-third of people were overweight and a further 13% were obese
- Just over half (51%) of the respondents took some form of regular physical activity.

Targeting effective interventions at areas of lower social class is an important factor in reducing inequality from the burden of heart disease. A multisectoral approach is essential.

Implementation of the Cardiovascular Health Strategy in the Eastern Region

As a measure of the Government's commitment to the Cardiovascular Strategy, €3.8 million each year was allocated to the Authority in 2000 and 2001 and a further €3.3 million in 2002. Side by side with the work of the Regional Steering Committee in formulating an Action Plan, the Authority has commissioned a range of service developments in the region. These include:

Health Promotion

- Strengthening of infrastructure at Area Health Board and Hospital Sector to implement Health Promotion in a range of settings while targeting specific risk factors and groups.

Pre-Hospital

- Training of emergency personnel in the administration of aspirin to patients with chest pain
- Equipping of all ambulances with Automated External Defibrillators and those in remote areas with 12 lead telemetry with messaging facilities to A& E departments.

Primary Care

- Implementation of the National Programme for Secondary Care of patients with established disease in Primary Care
- Initiation of GP direct diagnostic access pilot project and support for diabetes shared care programmes.

Hospital

- Acute cardiac care was enhanced by the development of Acute Chest Pain Assessment Services in hospitals in the region.

- Assessment of the Cardiology Consultant Manpower needs of the region and submission to the National Cardiology Working Group.
- Additional Consultant Cardiologists
- Catheter Laboratory Review
- Other developments, i.e. heart failure care, supporting audit, enhancing nursing, medical and technical manpower and strengthening resuscitation training.

Cardiac Rehabilitation

- Expansion of cardiac rehabilitation services for heart patients in all nine hospitals in the region.

Information Systems, Audit and Research

- Collaborative quality initiatives, i.e. 'door to needle' time in the nine centres providing acute services and audit of uptake of cardiac rehabilitation.

Methods

Cardiovascular Health Strategy Steering Committee and Working Groups

In June 2001, the Cardiovascular Health Strategy Steering Group was set up to implement *Building Healthier Hearts* thereby improving Heart Health Status of the Region. The steering group worked through an inter-disciplinary and inter-sectoral approach reflecting a broad spectrum of expertise and representation of sectors within and external to the Health Sector. The Steering group defined its work in two phases:

Phase One (2001) – to ascertain the need, current activity and planned developments so that gaps in the service to meet need and opportunities/ challenges relating to developments are identified.

Phase Two (2002) – based on this analysis and wide consultation with stakeholders, formation of an Action Plan with specific objectives, defined time frame, identified resources/responsibilities and key indicators to ensure the balanced delivery of care.

Principles for prioritiisation

In rolling out this Action Plan, the Steering Committee recommends the following guiding principles to the Eastern Regional Health Authority:

- Implementation of the Action Plan must be carried out in a realistic phased process, taking cognisance of impinging factors such as funding, human resources, infrastructure, and integration with other developments and initiatives
- Initiatives should build on existing services and programmes and be sustainable.
- Opportunities to link with other initiatives, i.e. Quality and Fairness, Primary Care, ICT strategies, should be taken.
- Addressing need should be key. This includes reducing mortality, targeting inequity, people-centredness, quality and accountability
- In achieving change to be mindful of the balance between the quick wins and longer-term developments.
- Developments should demonstrate value for money.
- Particular attention is drawn to the areas prioritised by the National Cardiovascular Advisory Forum (Irish Heart Foundation 2001/2002 report).

Summary of Action Plan 2002 - 2007

Common Themes which emerged from the consultation process

During the wide consultation process, common issues across the six sectors that significantly impinge on the implementation of *Building Healthier Hearts* in the region were identified:

- Manpower/Human Resources – critical factors include supply and recruitment, retention, capital needs, human resource models and multi-annual planning
- Equity – critical factors include targeting services towards areas and populations with high level of deprivation, barriers in accessing services,

disparities in health between care groups and complexity of waiting lists and public and private issues.

- Standards and Quality – critical factors include protocol-driven care, incorporating the audit cycle (clinical, organisation and patient satisfaction) in the provider planning and service delivery, enhancement of performance indicators and quality assurance plans.
- Communications and Co-ordination – critical factors include integration among service providers, patient information sharing to achieve seamless delivery of care.
- Health and Social Gain – critical factors include, re-orientating services and individual perception so that individuals/communities are empowered in the fight against heart disease, evaluation of appropriateness, acceptability, and accessibility in monitoring and evaluating services.

Summary of the six areas

Under six sector headings (Health Promotion, Primary Care, Pre Hospital, Hospital, Cardiac Rehabilitation, Information Systems, Audit & Research) the Action Plan sets out specific objectives, related actions, time scales, identifies responsible stakeholders and estimates resources required.

Budgets are based on estimated costs, linked to and dependent on funding of national and regional strategies and initiatives. It is estimated that global costs require €40 million recurring and €7.5 million capital to implement this plan on a phased basis. It should be noted that over and above these estimated costs, models of care for emerging services i.e. emergency angioplasty, enhanced care for heart failure, stroke and diabetic patients and specific developments in regard to other strategies (e.g Primary Care, ICT) require separate funding.

Implementation will be in line and integrated with relevant national strategies: *Quality and Fairness, Primary Care Strategy, Strategic Review of Ambulance Service, Eastern Regional ICT Strategy.*

Health Promotion

The Action Plan for this sector is based on the 58 recommendations made by *Building Healthier Hearts.* The plan outlines ***eight key objectives*** for risk reduction and health promotion. For the purpose of this report, the needs of patients and the population within the region are grouped under the objectives of: a) public policy, b) media, c) settings (e.g.schools, workplace, health sector, community) and d) risk factors. This is estimated to cost €1 million recurring with initial capital investment of over €100,000.

Primary Care

The Action Plan for this sector is based on the 55 recommendations made by *Building Healthier Hearts***.** The plan outlines ***nine objectives*** under the headings: a) secondary prevention, b) high risk prevention, c) health promotion, d) ambulatory care, e) heart failure, f) quality assurance and g) co-ordination. This is estimated to cost €4.8 million recurring. Over and above this cost, the national Primary Care and regional ICT strategies along with cardiovascular high-risk prevention will require separate funding.

Pre Hospital

The plan outlines ***seven objectives*** to implement the 18 recommendations made by *Building Healthier Hearts.* For the purpose of this report, the needs of patients and the population within the region are grouped under the objectives of: a) central co-ordination, b) protocols, c) response times, d) first responder schemes, e) public awareness, f) cardio pulmonary resuscitation, e) information, surveillance and monitoring. It is estimated to cost €1.6 million recurring with capital investment of over €1 million.

Hospital

The plan outlines ***thirteen objectives*** to implement the 46 recommendations made by *Building Healthier Hearts.* For the purpose of this report, the needs of patients and the population within the region are grouped under the objectives of: a) services for the acute event, b) human resources, c) non acute and chronic services, d) non-invasive diagnostic services, e) invasive investigations and interventional services, f) co-ordination of care, g) quality assurance,

h) information, surveillance monitoring. This is estimated to cost €25 million recurring with capital investment of over €6 million. Over and above these estimated costs, models of care for emerging services i.e. emergency angioplasty, enhanced care for heart failure and diabetes patients require separate funding.

Cardiac Rehabilitation

The plan outlines ***four objectives*** to implement the 10 recommendations made by *Building Healthier Hearts.* For the purpose of this report, the needs of patients and the population within the region are grouped under the objectives of: service development of a) Phases 1 – 4, b) education and training, c) development of cardiac rehabilitation, d) co-ordination within hospitals and with primary care, e) information, surveillance monitoring. This is estimated to cost €7.6 million recurring with capital investment of over €500,000. These costs are felt to be conservative and do not take account of the poor building infrastructure supporting the current service.

Information Systems, Audit and Research

The plan outlines ***four objectives*** to implement the 21 recommendations made by *Building Healthier Hearts.* For the purpose of this report, the needs of patients and the population within the region are grouped under the objectives of: a) death certification, b) Health service information and surveillance systems, c) Surveillance of health behaviour, d) promoting evidence based care. This is estimated to cost €600,000 recurring with minor capital investment. Over and above these estimated costs, specific developments i.e. National Health Information Strategy (pending), National Cardiovascular Information System (NCIS), Health Information and Quality Authority and regional ICT strategy will require separate funding.

Next Steps

1) The Authority is committed to implementation of this action plan and will progress it through annual service and provider plans, driven by dedicated staff at ERHA, Area Health Boards and provider level. While recognising that funding and other resource elements are critical in achieving implementation within the time frame, objectives not significantly funding-dependent can nonetheless be progressed enthusiastically.

2) The current monitoring arrangements, i.e. quarterly tracking system of developments/service delivery will be elaborated in line with each sectors recommendations and globally the information systems, audit and research objectives (incorporating performance indicators, audits, research) will be addressed. These will feed into the Department of Health and Children's on-going review process.

3) The Steering Group will oversee the implementation of the Action Plan and produce an Annual Report.

Action Plan Budget

Summary	**Recurring Costs**	**Once-Off Costs**
A) Sector Costs	**€m**	**€m**
Health Promotion (8 Objectives)	€1.079m	€0.132m
Primary Care (9 Objectives)	€4.762m plus linked to other national & regional strategies and programmes	€0.047m plus linked to other national & regional strategies and programmes
Pre-Hospital (7 Objectives)	€1.561m Plus funding implications for Ambulance Service	€1.145m Plus funding implications for Ambulance Service
Hospital Sector (13 Objectives)	€18.318 – 24.918m 3% – 5% of Budgets for training Plus linked with Quality & Fairness Actions ICT Strategy Manpower Review Regional Diabetic Review and Initiative Acute Planning and developments	€4.929 – 5.919m Plus linked with Quality & Fairness Actions ICT Strategy Manpower Review Regional Diabetic Review & Initiative Acute Planning and developments
Cardiac Rehabilitation (4 Objectives)	€7.628m 3 – 5% of pay budgets Plus Linked with ICT funding & National NCIS programmes and other DoHC led initiatives	€0.557m Plus Linked with ICT funding & National NCIS programmes and other DoHC led initiatives
Information Systems Audit & Research (4 Objectives)	€0.623m +0.5% of Pay Budgets Linked with ICT & Primary Care Strategies	€0.063m Linked with ICT & Primary Care Strategies
Grand Total	€33.973 – 40.573m	€6.873 – 7.863m
B) Year Costs		
Year One Year Two Year Three Year Four	€19.167 – 39.406m €7.335m €1.310m €6.180m	€5.622 – 6.622m €1.005m €0.246m Within existing resources
Grand Total	**€33.973 – 40.573**	**€6.873–7.863**

Note: Implementing this Action Plan will be linked to National & Regional Strategies and Initiatives.

Budgets are based on estimate costs, linked to and dependent on funding of National & Regional Strategies and Initiatives.

Context 2

Context

2.1 Building Healthier Hearts and the Health Strategy

Building Healthier Hearts

In March 1998 the Minister for Health and Children established the Cardiovascular Health Strategy Group to develop a strategic approach to reduce avoidable death and illness caused by cardiovascular disease. *Building Healthier Hearts*, the national cardiovascular strategy, was launched in November 1999 and outlined four key areas for attention:

- Standardised care in the pre-hospital and hospital settings across health board regions
- Establish a protocol of appropriate primary care
- Ensure an effective surveillance system
- Expand or put in place settings based health promotion programmes.

The strategy contains 211 recommendations under the areas of: health promotion, pre-hospital, primary care, hospital care, cardiac rehabilitation and information systems, audit and research.

Previous strategies set out targets to be achieved:

> *To reduce the death rate from cardiovascular disease in the under-65 age group by 30% in the ten years 1995 - 2005;*
>
> *To reduce the death rate from ischaemic heart disease and stroke in people aged 65 to 74 by at least 15% to no more than 971 per 100,000 in the year 2005 from a baseline of 1,142 per 100,000 in 1995.*
>
> *To bring our levels of premature death from cardiovascular disease in line with the European average and in time to reduce our rates to the best performers in the EU.*

Quality & Fairness, A Health System for You

Building on previous strategies, the *Health Strategy: Quality and Fairness (2001)* reiterates the key elements of health and social gain central to *Building Healthier Hearts* and specifies important underlining principles of equity and fairness, people-centredness, quality and accountability. It outlines a programme of investment and reform, involving all elements of the system, which will organise the future health system through four national goals:

- Better health for everyone, which involves intersectoral action on lifestyle and environmental factors as key, determinates of good health.
- Fair access, a need to take more deliberate action in addressing health inequalities.
- Responsive and appropriate care delivery, an increased understanding and awareness of the impact certain illnesses have on quality of life
- High performance

Quality & Fairness specifically targets cardiovascular disease through Objectives 2 and 3.

Objective 2: The promotion of health and well-being is intensified

Action 5 Actions on major lifestyle factors targeted in *Building Healthier Hearts* will be enhanced

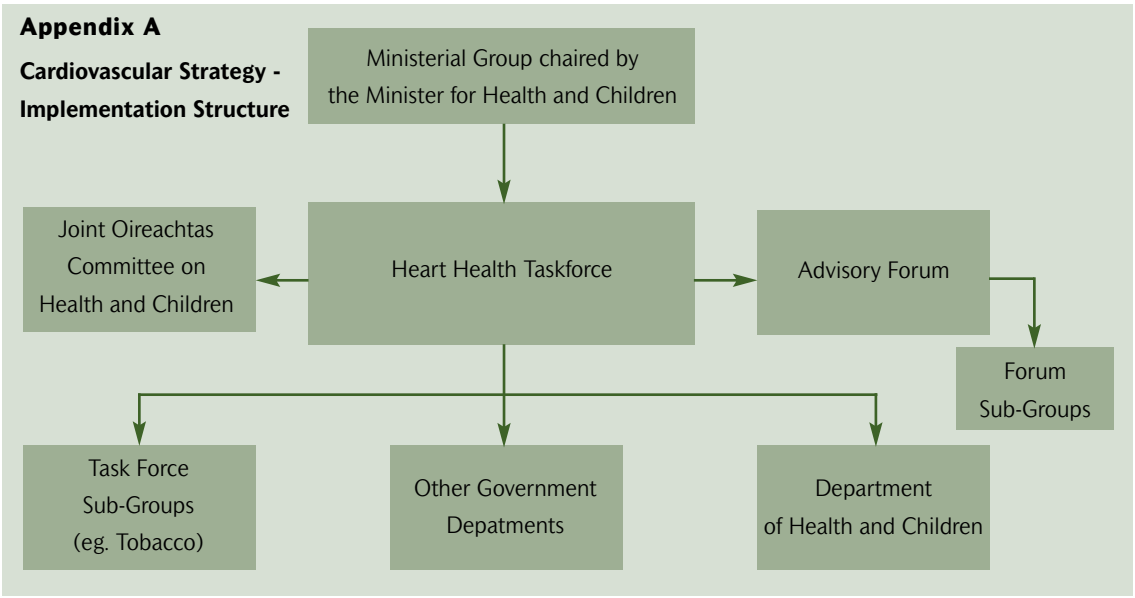
Action 13 The Heart Health Task Force will monitor and evaluate the implementation of the prioritised cardiovascular health action plan

Objective 3: The system has the capacity to deliver timely and appropriate services

Action 56 The Advisory Forum on Cardiovascular Health will work with the National Hospitals Agency and the Health Information and Quality Authority to ensure service quality, accessibility and responsiveness.

This Action Plan has been developed in the context of *Quality and Fairness*. Through the Working Groups of its Steering Committee there has been wide consultation with stakeholders across the region to address the recommendations in *Building Healthier Hearts.*

Figure 2.1 Cardiovascular Strategy – National Implementation Structures



2.2 National Implementation Structures

National Framework

To drive the national implementation of the Strategy, the Department of Health and Children put in place national structures and has sought commitment from Health Boards to do likewise at regional and local level.

Resources (funding)

As a measure of the Government's commitment to the Cardiovascular Strategy funding resources were immediately made available (from 2000 onwards). During the first three years, €45 million has been allocated, €39 million to the ERHA/Health Boards and €6 million for national programmes (health promotion, primary care, CHAIR, research, staff and meetings).

The breakdown of national funding by sector area for the two-year period 2000 & 2001 and the allocation of funding by Authority/Health Boards are detailed below for 2000, 2001 and 2002.

Figure 2.2 Breakbown of national funding for CVHS, 2000, 2001 & 2002 by Sector Area

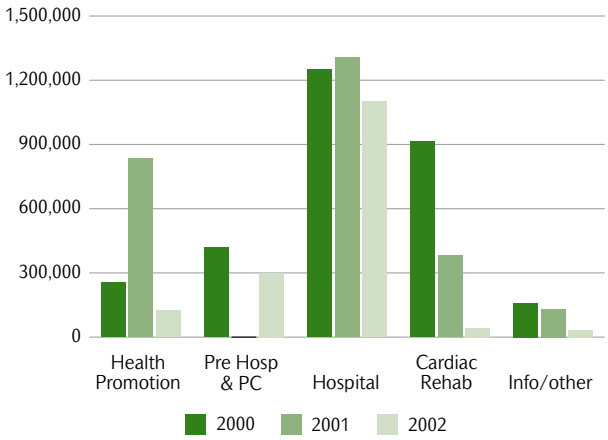
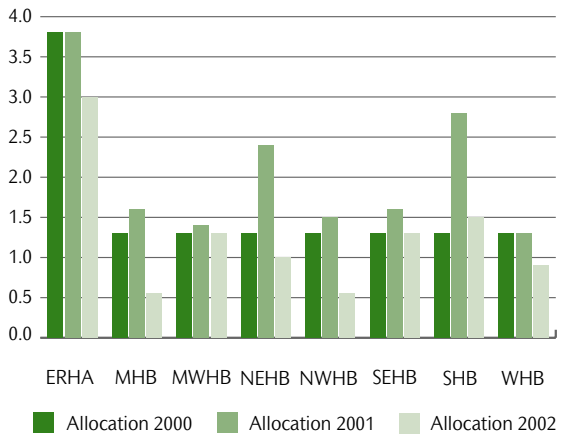


Figure 2.3 Breakdown of CVHS funding 2000, 2001 & 2002 ERHA/Area Health Board



Setting the Scene in the Eastern Region 3

Setting the Scene in the Eastern Region

3.1 Heart Health in the Eastern Region

3.1.1 Introduction

Heart disease is major killer and disables many people in Ireland and internationally. Moreover, Ireland has the highest premature death rates from ischaemic heart disease (IHD) in the EU. Consequently, a significant advance, in recent years, has been the publication of a national strategy to combat cardiovascular disease including heart disease - *Building Healthier Hearts*.

> "An average of over 3,800 deaths per year in the region are caused by cardiovascular disease"

This chapter is structured to demonstrate the burden of heart disease in the region by drawing on mortality data, hospital discharge information, data on cardiac interventions and the distribution of risk factors within the population.

As well as *Building Healthier Hearts* (1999), important recent reports of note in studying the burden of heart disease are

a) *50 years of Heart Disease in Ireland, Mortality, Morbidity and Health Services Implications* (2001) by Dr M Codd on behalf of the Irish Heart Foundation, Council for Heart Disease in Women,

b) *Inequalities in Mortality 1989-1998 – A report on All-Ireland mortality data* (2001) by Kevin Balanda and Jane Wilde for the Institute of Public Health in Ireland,

c) *Death rates in the Eastern region, 1994-98, analysis by Area Health Board* which is currently being published,

d) the *National Health and Lifestyle Surveys* conducted in 1998 and 2002 reflect risk factors for heart diseases

e) the Public Health Information System (PHIS) version 4, the national database of analysed mortality and hospital discharges data is also used here.

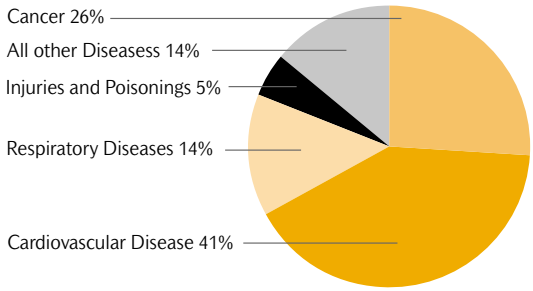
3.1.2 The burden of heart disease

a. Mortality

IHD Mortality – an overview

Traditionally, mortality is the primary indicator of health status. The principal causes of death in the eastern region are similar to the national picture and are set out in Fig. 3.1 Forty one percent of all deaths, an average of over 3,800 deaths per year in the region, are caused by cardiovascular disease (CVD).

Figure 3.1 Principal Causes of Death, 1995-1995 ERHA, All Ages



Source: PHIS version 4

Within the CVD group of diseases, ischaemic heart disease (IHD) is the major killer, accounting for 23% of all deaths and stroke for 9% of all deaths. Furthermore, CVD accounts for 26% of deaths in those under 65 years of age.

IHD Mortality – time trends in Ischaemic Heart Disease in Ireland

A study of Irish mortality data by Codd reveals that IHD increased between 1950 and 1974, levelled off until 1985 and then steadily declined from 1985 to 1999. Consequently, by 1999 mortality from IHD had declined by 37% in men and by 30% in women from the peak year of 1985. Similarly, acute myocardial infarction (AMI) mortality rates have declined overall from 1968 when data was first collected on this category of disease. Consequently, by 1999 mortality from AMI declined by 50% in men and by 39% in women from the peak year of 1985. A second feature of note in this report and in *Building Healthier Hearts* is the continuing higher mortality rates in men compared to women.

Up to the mid 1980s the decline in rates was reflected by a similar decline in numbers of deaths from IHD indicating similar population structures in the years prior to 1985. In recent years, however, numbers have not declined as rapidly as rates. This is a reflection of the demographic change whereby the proportion of those aged 65 years and over is rising rapidly. This in turn points to a growing burden on the health services to cater for elderly patients, a significant proportion of whom will have cardiovascular disease.

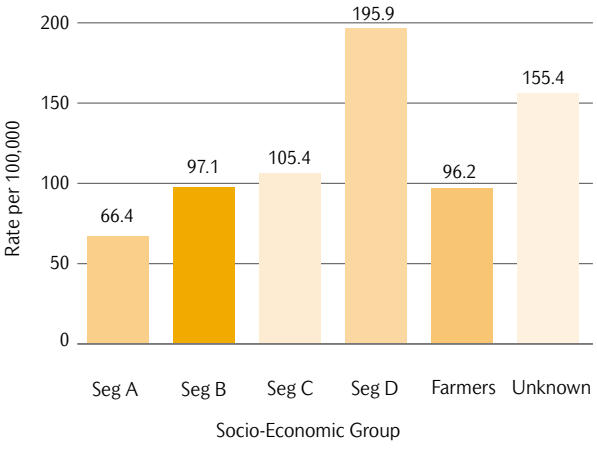
IHD Mortality – the international comparison

Irish males have the highest mortality rate from ischaemic heart disease (IHD) in the EU while the rate for females is third highest. Of note is that Ireland ranks highest for premature mortality from IHD.

IHD Mortality – the North-South comparison and indicators of inequity

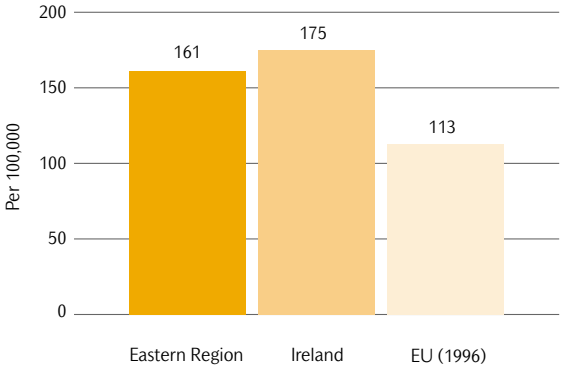
In the study of mortality for the island of Ireland, 1989-1998 by Balanda and Wilde the *all cause mortality* rate in the Republic of Ireland (ROI) was noted to be 6% higher than the rate in Northern Ireland (NI). For circulatory diseases it was 5% higher in the ROI. In both jurisdictions, circulatory disorders were responsible for almost half of all deaths. IHD and cerebrovascular disease were responsible for a higher percentage of deaths in NI while other heart diseases and other circulatory diseases were responsible for higher percentages in the ROI. Differences in data collection and methods of analysis may explain some of these findings.

Figure 3.2 Annual Directly Standardised Mortality Rates (per 100,000) for IHD in Working Age Males, by Occupational Class, Republic of Ireland



Source: Inequalities in mortality report, 1989-1998
The Institute of Public Health in Ireland

Figure 3.3 Standardised Death Rates/100,000 due to Ischaemic Heart Disease, Eastern Region, Ireland and EU: All Ages, 1999



In both jurisdictions, the annual directly standardised mortality rate for IHD was significantly higher for males than for females by 103%.

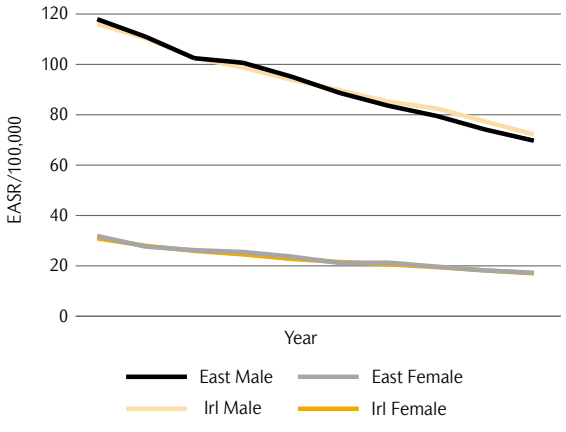
Also in both Northern Ireland and the Republic of Ireland an occupational class gradient for ischaemic heart disease mortality was notable - the mortality rate in the lowest class being significantly higher (over 120%) than that in the lowest occupational class (Fig. 3.2)

IHD Mortality – the Eastern region compared with Ireland

The eastern region has significantly lower mortality rates for ischaemic heart disease when compared with Ireland as a whole but is still seen to lag quite some distance behind the European average (1996) (Fig.3.3).

Death rates from ischaemic heart disease for males are double those of females, but have declined especially in those under 65 years during the 10 year period in the eastern region and nationally (Fig 3.4). Rates for females have also declined.

Figure 3.4 Age-Standardised Ischaemic Heart Disease Mortality by Sex, 0-64; Eastern Region and Ireland, 1990 to 1999



Source: PHIS 4

Table 3.1: Ischaemic Heart Disease, Five-Year Rolling Average for Eastern Region by County, 1995-1999. All ages and under 65 years.

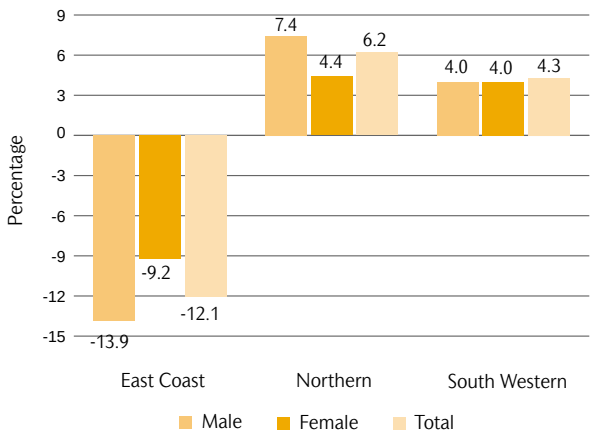
1995-1999	All Ischaemic Heart Disease (All ages)	**Ischaemic Heart Disease SDR (All ages)**	Lower CI – Higher CI	Under 65 years	**SDR Under 65 years**	Lower CI – Higher CI
Dublin	8606	**178.98**	175.16-182.8	1,588	**43.39**	41.25-45.53
Wicklow	910	**185.03**	172.83-197.22	139	**39.31**	32.73-45.89
Kildare	891	**199.34**	186.07-212.6	165	**43.67**	36.85-50.48

IHD Mortality – Data within the Eastern region

The downward trend in mortality from IHD is also found for each of the three counties in the Eastern Region (Dublin, Kildare and Wicklow). However, the standardised death rate (SDR) for Kildare is significantly higher than the region as a whole and has been consistently so over the past ten years though this pattern is not as evident in the under 65 year age group (Table 3.1).

Given the size of Dublin's population it is important to look at data at a lower level. The report *Mortality in the Eastern Region*, shows the pattern of mortality from IHD across the three Area Health Boards (Fig 3.5). Two Boards (NAHB and SWAHB) have levels of mortality significantly above the regional average with the third Board (ECAHB) having significantly lower levels. In terms of gender differences, only males in the NAHB had significantly higher levels of mortality.

Figure 3.5 IHD Mortality, 1994-1998
Excess Mortality Levels (%) by Area Health Board and Gender



Source: Mortality in the Eastern Region, Dept of Public Heatlh

Mortality – Cerebrovascular disease

As noted with IHD, there has been a decrease in mortality rates from cerebrovascular disease both in Ireland and internationally in the last 30 years. In contrast to IHD, however, death rates from cerebrovascular disease in Ireland are close to or in some cases are lower than the EU average.

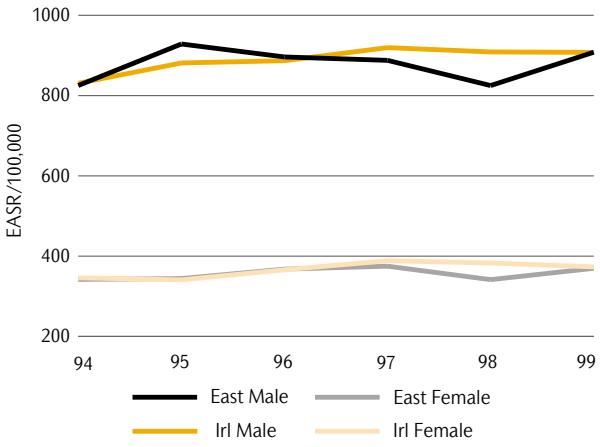
In the eastern region, death rates for males are similar to the national picture whereas rates for females are significantly lower than those for the country as a whole. Within the region, only the South Western Area Health Board had levels of mortality significantly above the regional average.

b. Hospital discharge data

As mortality from ischaemic heart disease declines, people are living longer with chronic illness. Consequently, information on morbidity or ill health due to heart disease, and the consequent demands on the health services, become ever more important. However, such information is less readily available. Data from HIPE is available for hospital activity and so will reflect illness levels and service use which is serious enough to warrant hospital attention. Little data is available on illness, which is looked after in general practice. Occasional studies chart indices, such as period prevalence for acute myocardial infarction, but are not region specific.

For the eastern region, data on discharges with a diagnosis of IHD reveal that the region has similar age standardised discharge rates to Ireland, that the rate for males is more than twice that of females and that the trend over the years shows a small year-on-year increase (Fig 3.6). A similar pattern was observed for age standardised discharge rates for those under 65 years. The rates for males were three times those of females.

Figure 3.6 Age-Standardisation Ischaemic HEart Disease Discharges by Sex, All Ages; Eastern Region and Ireland 1994 to 1999;



Source PHIS 4

In 1999, acute myocardial infarction (AMI) accounted for 5,164 discharges in Ireland with 1,633 discharges occurring in the eastern region. The rate of discharge due to AMI is shown in Table 3.2 indicating similar rates for Ireland and the eastern region.

Table 3.2 Standardised discharge rate, AMI, by Health Board, 1999

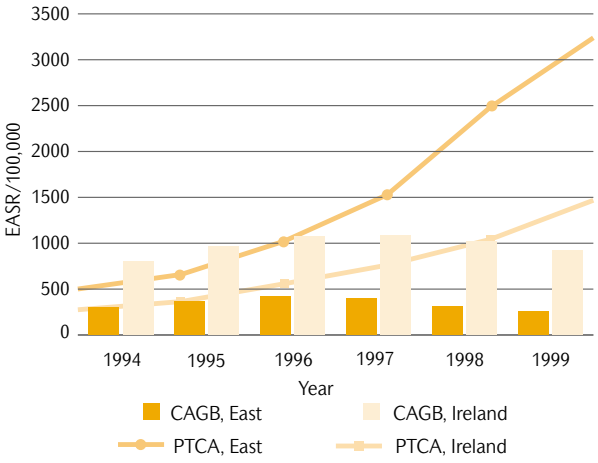
Health Board 1999	No. of Cases of AMI	SDR for AMI
ERHA	1,633	143.3
MIDHB	320	153.06
MWHB	311	99.4
NEHB	574	191.85
NWHB	375	162.8
SEHB	665	168.98
SHB	728	130.87
WHB	558	136.53
Ireland	**5,164**	**145.41**

c. Cardiac interventions

Increasingly, people with IHD require investigation and major interventions such as percutaneous transluminal coronary angioplasty (PTCA) or coronary artery bypass graft surgery (CABG). It should be noted that PHIS 4, the data base used here, only charts data up to 1999 and services for CABG and PTCA have increased since then.

PTCAs have increased in Ireland over the period 1994 to 1999 (Fig 3.7). PTCA rates (standardised) for residents of the eastern region (132 per 100,000) for 1999 were significantly higher than that for Irish residents (99 per 100,00). The same pattern is evident for residents under 65 years.

Figure 3.7 CABG, PTCA procedures 1994-1999, Number of cases, Eastern region and Ireland



Source PHIS 4

The number of CABGs have peaked and fallen somewhat over the same period. The 1999 CABG rate (standardised) for residents of the Eastern region (24 per 100,000) is lower than the Irish residents rate (29 per 100,00) but not significantly so. A similar pattern is seen for residents under 65 years.

Males were two to three times more likely to have a procedure compared to females.

A recent review of the need for Catheter Laboratory services collated information on this expanding field using data for 2001. There are nine laboratories in seven hospitals in both the public and private sectors in Dublin and 70 % of the Catheter Laboratory work took place in publicly-funded hospitals with a total of 1978 angioplasties (PTCAs) in 2001. Estimating the population needing tertiary cardiology services in Dublin as 2.5 million, the angioplasty rate for this population has reached 1,137 per million which is close to the target of 1,200 per million recommended by *Building Healthier Hearts* for 2002.

Table 3.4 Lifestyle and other characteristics associated with Ischaemic Heart Disease*

Personal characteristics (non-modifiable)	Lifestyles (modifiable)	Biochemical or physiological characteristics (modifiable)
Age	Diet high in saturated fat, cholesterol and calories	Elevated plasma total cholesterol (LDL cholesterol)
Gender	Tobacco and smoking	Elevated blood pressure
Family history of CHD or other atherosclerotic vascular disease at early age (in men <55 years, in women <65 years)	Excess alcohol consumption	Low plasma HDL Elevated plasma triglycerides
Personal history of CHD or other atherosclerotic vascular disease	Physical inactivity	Hyperglycaemia/diabetes Obesity Thrombogenic factors

** European Atherscleroisis Society and European Association of Hypertension, 1994*

d. Risk factors for heart disease

In order to prevent death and illness from heart disease it is important to know the risk factors and in particular to be aware of those risk factors which are modifiable. The risk factors for heart disease are summarised in Table 3.4. The three most important modifiable risk factors for heart disease are smoking, raised blood pressure and raised blood cholesterol.

Demographic information

The risk of heart disease increases with age. In younger age groups, it is more common in men than women. The eastern region differs from the national population in that there is a lower proportion in the older category (9.7% over 65 years). Within the region the ECAHB has an older population and the SWAHB has a younger population (Table 3.5). Population projections indicate that the age group 65 years and over is set to increase at a faster rate in the eastern region than with Ireland overall.

Information from Census 2002 indicates that the population of the eastern region has risen by 8.1% since 1996 with the SWAHB having the largest increase of 11.7%

Table 3.5 ERHA population - Census 1996 and preliminary Census 2002

Age group	< 45 years	45-64 years	65+ years	Total (CENSUS 1996)	Total (CENSUS 2002)
East Coast AHB	217,356 (68.2%)	64,883 (20.4%)	36,484 (11.4%)	318,723 (100%)	333,458
Northern AHB	323,019 (70.9%)	88,425 (19.4%)	44,084 (9.7%)	455,528 (100%)	486,305
South West AHB	383,932 (73.6%)	93,053 (17.8%)	44,703 (8.6%)	521,688 (100%)	581,551
ERHA	924,307 (71.3%)	246,361 (19.0%)	125,271 (9.7%)	1,295,939 (100%)	1,401,314

Lifestyle risk factors

The survey of lifestyle, attitudes and nutrition (SLAN) and the accompanying survey of school aged children (HBSC) in 2002 gives important baseline information. This survey indicated that 27% of the population were current smokers and there was a very strong influence of socio-economic status. One-third of people were overweight and a further 13% were obese with certain factors such as consumption of fried foods, having a strong social class relationship. Just over half (51%) of the respondents took some form of regular physical activity.

While this information is based on samples of the national population, there is little doubt that results reflect the lifestyles of the population of the eastern region. One useful way of employing this data for targeting areas for extra attention is to understand the social class composition of the region as illustrated in Map 3.1 From the map it can be readily seen that the areas most likely to have a higher proportion of risk factors (especially smoking) and so expected to have a heavier burden of heart disease, is concentrated in the inner city, and to a lesser extent in the suburbs of north and west Dublin, the westerly parts of Kildare and parts of Wicklow.

Summary points

1. Ireland has the highest premature mortality rate (under 65 years) from heart disease in the EU. The Republic of Ireland has higher mortality rates from heart disease than Northern Ireland. The eastern region has significantly lower mortality rates compared with Ireland as a whole.

2. Deaths from heart disease and cerebrovascular disease are declining in the eastern region as seen nationally and internationally.

3. Heart disease accounts for one-quarter of deaths in the eastern region each year. Inequity in mortality exists in the region as follows:

    - males are twice morte likely to die from heart disease than females.

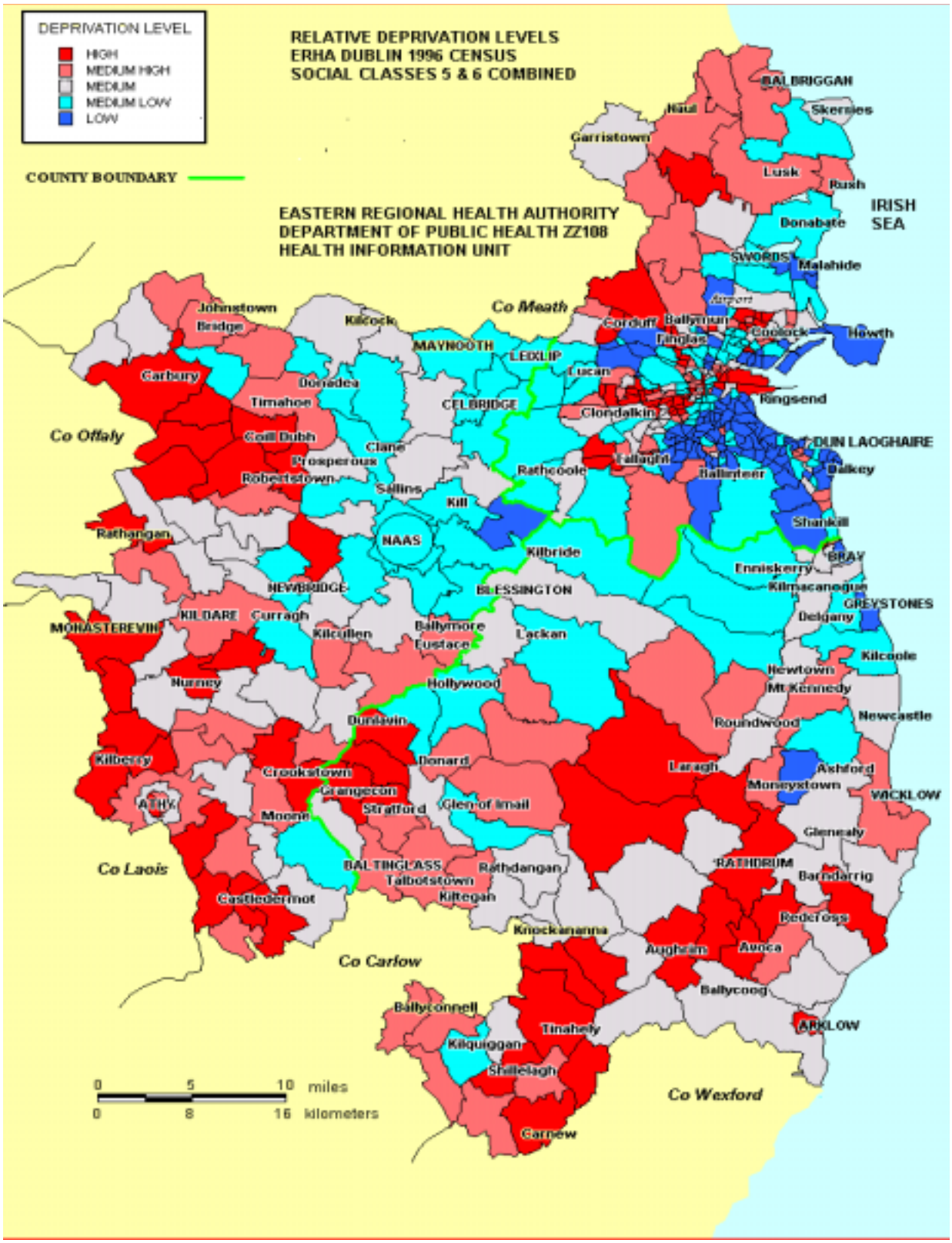
    - Kildare and parts of Dublin have higher mortality rates than the region as a whole.

    - the lowest social class has significantly higher rates than the highest (for males) in the All Ireland study. This fact is highly likely to be true also in the eastern region.

4. While death rates are on the decline, hospital discharges are slightly increasing. This is, undoubtedly, due to the changing nature of the disease to that of a chronic one and the effect of an ageing population.

5. Eastern residents are more likely to receive interventions (PTCA) than the rest of the national population. The basis for this statement is the HIPE system of data collection on public hospital activity. It does not include private hospital activity and is two years behind current activity. These are limitations.

6. Targeting effective interventions at areas of lower social class is an important factor in reducing inequity from the burden of heart disease. A multisectoral approach is essential.


DEPRIVATION LEVEL
HIGH
MEDIUM HIGH
MEDIUM
MEDIUM LOW
LOW
RELATIVE DEPRIVATION LEVELS
ERHA DUBLIN 1996 CENSUS
SOCIAL CLASSES 5 & 6 COMBINED
COUNTY BOUNDARY
EASTERN REGIONAL HEALTH AUTHORITY
DEPARTMENT OF PUBLIC HEALTH ZZ108
HEALTH INFORMATION UNIT
IRISH SEA
BALBRIGGAN
Naul
Skerries
Garristown
Lusk
Rush
Donabate
SWORDS
Malahide
Co Meath
Johnstown Bridge
Kilcock
MAYNOOTH
LEIXLIP
Lucan
Corduff
Ballymun
Finglas
Coolock
Howth
Garbury
Donadea
Timahoe
CELBRIDGE
Clondalkin
Ringsend
Co Offaly
Coill Dubh
Clane
Prosperous
Robertstown
Rathcoole
Tallaght
Ballyfermot
DUN LAOGHAIRE
Dalkey
Sallins
Kill
Rathangan
NAAS
Kilbride
Shankill
BRAY
Enniskerry
NEWBRIDGE
BLESSINGTON
Kilmacanogue
GREYSTONES
Delgany
KILDARE
Curragh
MONASTEREVIN
Kilcullen
Ballymore Eustace
Lackan
Kilcoole
Newtown Mt Kennedy
Nurney
Hollywood
Roundwood
Newcastle
Dunlavin
Kilberry
Donard
Crooksstown
Grangecon
Stratford
Glen of Imail
Moone
ATHY
Co Laois
BALTINGLASS
Talbotstown
Rathdangan
Kiltegan
Castledermot
Knockananna
Co Carlow
Aughrim
Avoca
Ballycoog
Ballyconnell
Tinahely
Kilquiggan
Shillelagh
ARKLOW
Co Wexford
Carnew
0 5 10 miles
0 8 16 kilometers

3.2 Service Provision in the Eastern Region

The Eastern Region

The eastern region, comprising of Dublin, Wicklow and Kildare, covers urban and rural areas with a population of 1.4 million. It is a mix of high-density urban and rural communities with rapidly-developing satellite areas.

Eastern Regional Health Authority

The Health (Eastern Regional Health Authority) Act 1999 established the Eastern Regional Health Authority on 1st March 2000. The Authority is responsible for the health and personal social services of the 1.4 million people in the region. The Authority is responsible for planning, arranging, overseeing and co-ordinating health and personal social services for the people of Dublin, Wicklow and Kildare.

Consequently the Authority commissions services with Area Health Boards (the Northern, East Coast and South Western), 36 statutory and voluntary organisations and other health care agencies. It is these organisations that directly provide care services for the people who live in the Authority's functional area. The main areas of care relating to heart health are: health promotion, primary care services, acute hospital services, ambulance services, and rehabilitation.

Key Stakeholders

Area Health Boards

The three Area Health Boards were established in March 2000 under the Eastern Regional Health Authority Act 1999. The three Area Health Boards have responsibility for delivery of statutory services and also plan and co-ordinate all services within their areas, in co-operation with the local voluntary service providers.

The Area Boards provide a comprehensive range of health and personal social services including health promotion, health protection, diagnosis, treatment, rehabilitation, continuing care for chronic illness, support and palliative care. The East Coast Area Health Board (ECAHB) also administers the Eastern Region Ambulance Service (ERAS) and Eastern Health Shared Services (EHSS). The ERAS has the statutory responsibility for the ambulance service in the three area health boards of the Eastern Region, providing emergency ambulance and transport service for its population, while the EHSS provide a wide range of professional, technical and information support services to the ERHA and the three Area Health Boards enabling them to focus on their core business.

The Northern Area Health Board: covers the geographic area of Dublin City north of the River Liffey and Fingal County. It serves a population of 486,300.

The East Coast Area Health Board: covers the geographic spread from south of Ringsend in Dublin City to Carnew in Wicklow and from the east coast of Wicklow to the boarders of west Wicklow and Carlow. It serves a population of 333,500.

The South Western Area Health Board: covers the geographic spread from the South Inner City through South County Dublin, all of Co. Kildare and the Baltinglass area of Co. Wicklow. It serves a population of 581,600.

> "The eastern region with a population of 1.4 million is a mix of high-density urban & rural community"

Acute Hospital Services

The five Dublin Academic Teaching Hospitals (DATHs) inclusive of St. Michaels and the three Area Health Board Hospitals provide acute hospital services for cardiovascular health in the region. The range of services includes; emergency care, diagnosis, treatment, rehabilitation, health promotion and integrated care pathways for chronic conditions. These hospitals also provide a significant amount of both secondary and tertiary care for patients from other parts of the country.

Primary Care

The Health Strategy, *Quality & Fairness* sets out the new direction for primary care as the central focus of the delivery of health and personal social services (Actions 74, 75, 76, 77) that can meet 90-95% of all

health and personal social service needs. Each year between 15 and 16 million consultations in general practice take place as compared with 1.9 million in the outpatient and A&E departments. *Primary Care: A New Direction* was launched as an integral part of the Health Strategy and outlined 20 actions to

- Put patients and clients at the centre by integrating services;
- Provide the right care, in the right place, at the right time;
- Maximise the potential of primary care.

In general, the range of primary health care services provided include health promotion, disease prevention, acute episodic care, continuing care of chronic conditions, education and advocacy.

A wide range of individuals and organisations are involved in providing primary care services. Currently within the region, primary care services are delivered from a number of settings namely, health centres, primary care centres and, in the case of most general practitioners, dentists and pharmacists from their own private premises. While the general practitioner, public health nurse, practice nurse and community pharmacist are most frequently involved with patients, other key professionals include community mental health nurses, dieticians, nutritionists, dentists, community welfare officers, physiotherapists and occupational therapists and voluntary organisations.

Irish Heart Foundation

Established in 1966, the Irish Heart Foundation (IHF) is the only national voluntary organisation in Ireland working to reduce premature death and disability from heart disease and stroke. Through medical research, school, workplace and community-based lifestyle and resuscitation programmes, the IHF is working to reduce the unacceptable level of premature death and disability from cardiovascular disease. The Foundation's medical councils play a key role in policy development and recommendations in key areas such as heart failure, hypertension, nutrition and stroke.

City and County Councils

The population of the Eastern Region (Dublin, Wicklow and Kildare) is served by six Local Authority Councils:

- Dublin City Council
- South Dublin County Council
- Dun Laoghaire/Rathdown Co. Council
- Fingal County Council
- Wicklow County Council
- Kildare County Council

Each City/County Council focus its activities on a vision of community development which is assisted by a dynamic interaction between community, voluntary and statutory sectors, working together to promote economic, social, cultural, educational and health aspects of community development. In addressing heart disease in the region the role of the councils emphasises the importance of providing a multi-sectoral holistic approach to health, disease prevention and integration of services at local level.

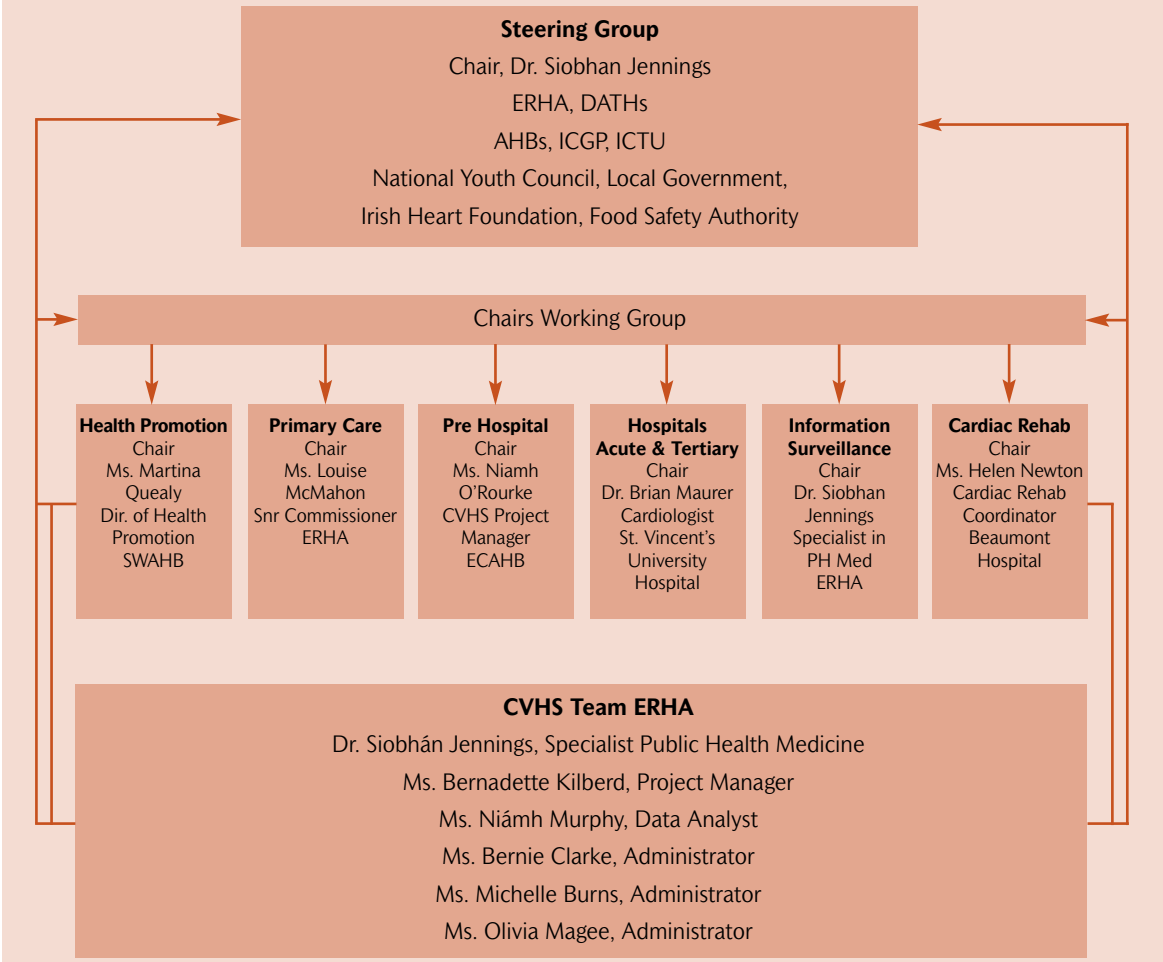
3.3 Implementation in the Eastern Region - Cardiovascular Health Strategy Steering Committee and Working Groups

In line with the implementation recommendations of *Building Healthier Hearts*, the Authority's 2001 Service Plan, made a commitment to establish a Cardiovascular Health Steering Group in the region. This was formed in May 2001.

The remit of this group was:
To advise on the formulation, monitoring and evaluation of a Cardiovascular Health Strategy Implementation Programme (Action Plan), guided by Building Healthier Hearts recommendations, which meet the needs of the population it serves.

Representation was sought across the health, social and related sectors identified in *Building Healthier Hearts* whose remit is to achieve health and social gain for the population served. The inter-disciplinary and inter-sectoral approach is crucial to the success of implementing the strategy.

CVHS Organisational Chart



"The Authority has commissioned a range of cardiovascular service developments"

Furthermore, understanding and respect for the roles of all health professionals, recognising the contribution to be made by groups and individuals beyond the formal health professions and working in close collaboration will bring significant improvements to the service provided to patients and health benefits to the region's population. To achieve the objective the Steering Group appointed working groups under the headings of health promotion, primary care, pre-hospital, hospital, cardiac rehabilitation and information/surveillance/ audit and research. Membership of these groups is outlined in Appendix A.

The Steering Group Terms of Reference:

Develop the Action Plan (3 - 5 years) for the Authority based on an analysis of the gap between current services and *Building Healthier Hearts* recommendations.

June - December 2001

Working Groups, reflecting the sector areas of health promotion, pre-hospital, primary care, hospitals, cardiac rehabilitation, information/Surveillance/Audit & Research will present an Interim Report to the Steering Group. A wide information-sharing and discussion process followed.

2002

The Final Action Plan (devised by the Steering Group in consultation with its working groups) was presented to the Board of the Authority.

3.4 Development 2000 - 2002

As a measure of the Government's commitment to the Cardiovascular Strategy €3.8 million each year was allocated to the Authority in 2000 and 2001 and a further €3.3 million in 2002. Side by side with the work of the Regional Steering Committee in formulating an Action Plan, the Authority has commissioned a range of cardiovascular service developments in the Region. These include:

Health Promotion

- Strengthening of infrastructure at Area Health Board and Hospital Sector to implement Health Promotion in a range of settings while targeting specific risk factors and groups.

Pre-Hospital

- Training of emergency personnel in the administration of aspirin to patients with chest pain
- Equipping of all ambulances with Automated External Defibrillators and those in remote areas with 12 lead telemetry with messaging facilities to Accident & Emergency departments.

Primary Care

- Implementation of the National Programme for Secondary Care of patients with established disease in Primary Care
- Initiation of GP direct diagnostic access pilot project and support for diabetes shared care programmes.

Hospital

- Acute cardiac care was enhanced by the development of Acute Chest Pain Assessment Services in hospitals in the region
- Assessment of the Cardiology Consultant Manpower needs of the Region and submission to the National Cardiology Working Group
- Additional Consultant Cardiologists
- Catheter Laboratory Review
- Other developments, i.e. heart failure care, supporting audit, enhancing nursing, medical and technical manpower and strengthening resuscitation training.

Cardiac Rehabilitation

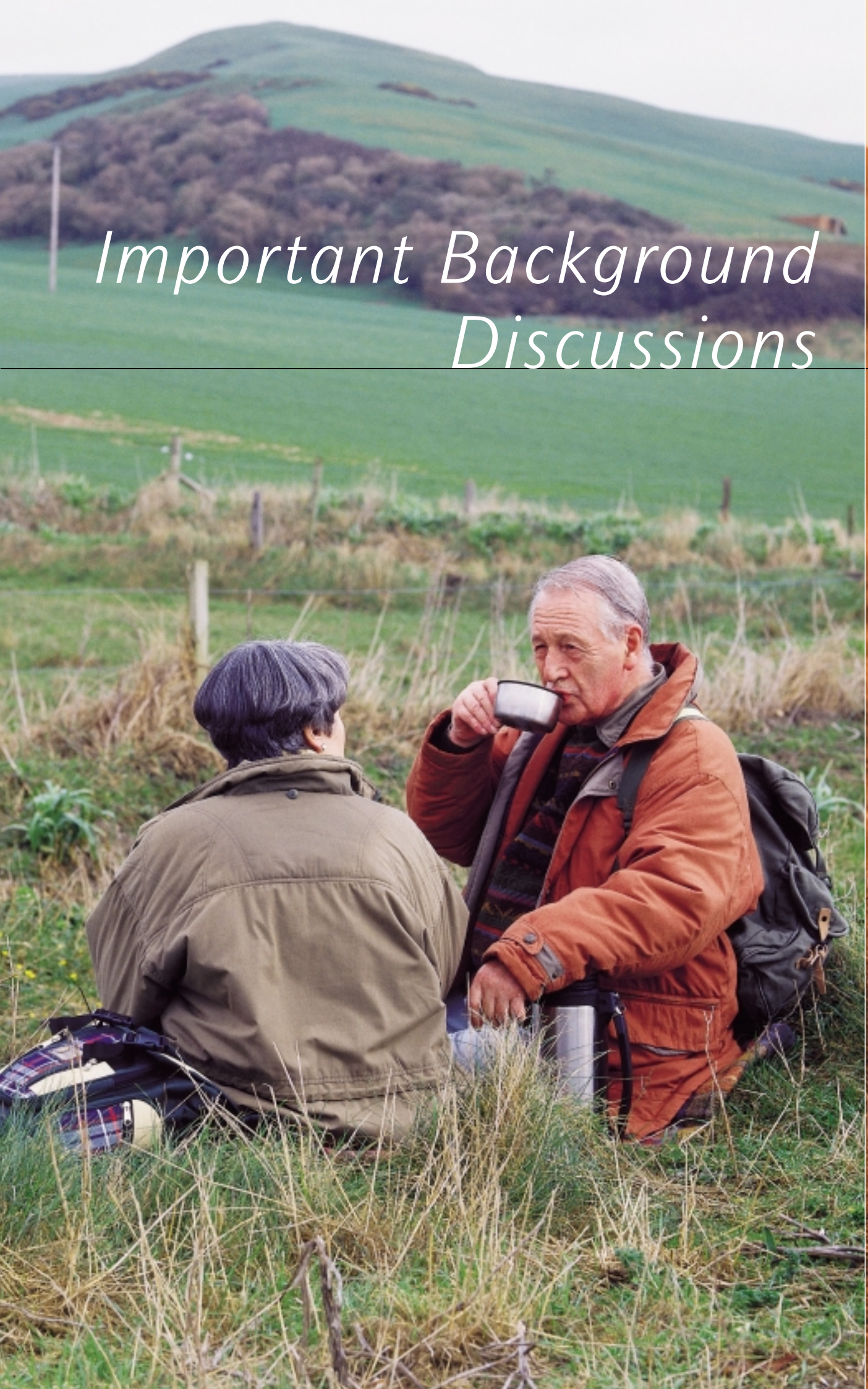
- Expansion of cardiac rehabilitation services for heart patients in all nine hospitals in the region.

Information Systems, Audit and Research

- Collaborative quality initiatives, i.e. 'door to needle' time in the nine centres providing acute services and audit of uptake of cardiac rehabilitation.

Important Background Discussions

4



Important Background Discussions

4.1 Common Themes from Consultation Process

A number of common themes emerged from the Working Groups deliberations in Phase One.

a) The Working Group signed up to the Authority's guiding principles of:

- Health and social gain
- Equity of access and service
- Quality
- Effectiveness and efficiency
- Accountability and audit

b) Manpower/Human Resources

In essence, human resource management (HRM) in the context of service delivery requires that the right people with the appropriate skills be in place at the right time and fully resourced to carry out their current and future work objectives. Some positions will require the skills of facilitation, advocacy, mediation, communications and project management. A training and development programme needs to accompany the redeployment of existing staff and the employment of new staff.

The region's human resource objective in implementing the cardiovascular strategy during 2000 and 2001 required the recruitment of approximately 200 WTEs. Considerable difficulties have been experienced by agencies in the recruitment of these key personnel. Therefore, the challenge to planners is the early identification of need, the assessment and resourcing of skills to meet those needs and the streamlining of the organisational process to facilitate the recruitment, induction and retention of personnel.

It will be important to work closely with tertiary education providers to address the supply and demand issues for staff as well as developing appropriate training programmes. Supply and demand for staff will also involve overseas recruitment especially for the implementation of the early stages of the strategy.

Consultation with all agencies has identified a range of influencing factors relevant to future plans and development

- Supply and recruitment
- Retention
- Capital needs
- Human resource models

> "The strategic approach to prevention, treatment and rehabilitation of patients will achieve health gain"

The influence of economic trends (high cost of living, inadequate transport systems etc.), gaps in supply (technicians, nurses, therapists), adaptability of working structures to retain staff (e-working structures), increased specialisation versus demand for generic professionals, future personnel needs in light of evolving cardiology arena, directly challenge the implementation of the strategy. The Authority is currently exploring mechanisms to address these issues. Models of change management will form part of the Action Plan and future changes will include flexible work models with different skill mixes. Patient representation should also be encouraged within the work models.

It will be important that all future manpower/HR strategies are planned over a three to five year time span and integrated into both the Health Strategy and the provider Service Plan.

c) Access

Much has been documented at national level regarding access and population needs in this regard. The Eastern region is unique in that its access needs are two pronged. While it is acknowledged that residents have access to high quality health care, areas of concern include: disparities in health between different groups; high levels of preventable illness, hospitals admissions that can be avoided and apparent barriers for some in accessing services. Historically, cardiovascular services, particularly in the hospital sector, have been provided by the East to other health boards.

The demand on services is therefore beyond the population which the Authority is charged to serve. Indeed, the proportionate range of patients from outside the region receiving many of our diagnostic and treatment services is in excess of national averages for other specialities (12-68% v 21 – 36%). Currently 44% of our cardiology waiting list is for non-ERHA residents. While national development plans aim to provide many services locally, during this interim period (three – ten years) demands of in-flow patients will continue. Some specialities (i.e. EPS) will continue as a national service.

The issue of equity of access for residents within the region to all services (be they in the hospital and community setting) must be based on need. The complexity of waiting lists, public and private patient issues directly impinge on such equity. Models of care embracing change in the way we deliver care (co-ordinated shared care programmes, patient empowerment, locally accessible partnership services) will form part of the action plan.

d) Standards and Quality

The need to address protocol driven care in conjunction with audit and other forms of quality assurance is recognised across all groups. Critical factors include protocol driven care, incorporating the audit cycle (clinical, organisation and patient satisfaction) in provider planning and service delivery, enhancement of performance indicators and quality assurance plans.

e) Communication and Co-ordination

Placing the person (patient) at the centre of all services and given the complexity of interaction many patients experience in interfacing with a wide range of health professionals, quality co-ordination of care is essential. It is clear from the sector reports that while professionals deliver excellent service in their area, seamless delivery of care experienced by the patient is lacking. Gaps identified include:

- Integration among service providers- i.e. partnership programmes in health promotion by Area Health Boards, Local Authorities, Education. Tasking individuals to make the healthy choice is broader than health education and requires concerted input from agencies in sectors other than health. While this principle is generally supported, programmes at regional and local level experience difficulties in translating principles into action. The commitment to closely work together, at an operational level needs senior management prioritisation by all agencies.

- Patient Information Sharing among professionals – the absence of integrated communication systems in the health sector, both within institutions and across services, (primary care and hospitals) negates against seamless delivery of care for the patient. Implementation of the Regional ICT Strategy and specific Primary Care IT framework is urgently required. To ensure that cardiac care integrates itself into these projects it is advisable that a strategy for Cardiovascular ICT be developed and a dedicated ICT manager form part of the Regional ICT Project Team

f) Health and social gain

The strategic approach to prevention, treatment and rehabilitation of patients will achieve health gain. In measuring social gain the Steering Group will apply criteria to evaluate the

Appropriateness – relevance to need, not supply or demand driven

Acceptability – to individuals, groups, society at large and integrates service providers

Accessibility – in terms of time and location, freedom of information of developments.

Improving the heart health status of the population we serve requires close examination of need, evidence that interventions make a difference, cost effectiveness based on quality and value for money. The strategy urges a change in mindset in order to alter the perception that as individuals and populations we are powerless in the fight against heart disease. Demands, such as waiting lists are real experiences for individuals and health boards. In addition, altering the profile of heart disease in the eastern region means seriously tackling risk factors (primary and secondary).

By way of example from health economics:

- Recent work examining the economic burden of smoking in Ireland reveals that between 35-40% of current smokers will die or become ill within 20 years.
- The direct cardiac medical costs for this group in two years will be £227 million rising to £1.9 billion in 20 years.
- Smoking cessation intervention programmes in the same time frame will cost approximately £25 million.
- The cost effectiveness in economic terms alone is evident.

Furthermore,

- Recent studies examining factors contributing to the reduction in mortality show in general that;
  - 50% of the reduction is due to decrease in the risk factor profile (smoking cessation/reduction being the main contributor)
  - the remaining 50% is due to health care – the main contributor being, pre hospital care, emergency care (A&E, CCU) and secondary prevention

4.2 Principles for Prioritisation

Building Healthier Hearts sets out the strategic direction to improve cardiovascular health through a balance of risk reduction and treatment. It distills the 211 recommendations into four key areas for action by key players responsible for each.

- Standardised care in the pre-hospital and hospital settings across health board regions
- Establish a protocol for appropriate primary care
- Ensure an effective surveillance system
- Expand settings-based health promotion programmes

> "Implementation of the Action Plan must be carried out in a realistic, phased process"

In rolling out this Action Plan, the Steering Committee recommends the following guiding principles to the Eastern Regional Health Authority:

- Implementation of the Action Plan must be carried out in a realistic phased process, taking cognisance of impinging factors such as funding, human resources, infrastructure, and integration with other developments and initiatives.
- Initiatives should build on existing services and programmes and be sustainable.
- Opportunities to link with other initiatives, i.e. Quality & Fairness, Primary Care, ICT strategies, should be taken.
- Addressing need should be key. This includes reducing mortality, targeting inequity, people centredness, quality and accountability.
- In achieving change be mindful of the balance between the quick wins and longer-term developments.
- Developments should demonstrate value for money.
- Particular attention is drawn to the areas prioritised by the National Cardiovascular Advisory Forum (Irish Heart Foundation 2001/2002 report).

Action Plan 5

Action Plan

5.1 Health Promotion

1.1 Introduction

Health Promotion goes beyond health care. It puts health on the agenda of policy makers in all sectors – directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health. Health promotion supports the creation of living and working conditions that are safe, stimulating, satisfying and enjoyable. The aim is to make the healthier choice the easier choice. This includes access, both physically and financially, to support these choices. The last two decades have seen health promotion evolve from a focus on individual behaviour change to a broader view encompassing social, economic and other determinants of health.

People's health behaviours are determined by the context of their everyday lives. Changes in health and health behaviours are most likely to occur when they are supported by changes in environments, public policy, community supports and community action. The Ottawa Charter for Health Promotion identifies five areas for health promotion activity within settings. These include:

- Build healthy public policy
- Develop personal skills
- Strengthen community action
- Create supportive environments
- Re-orientate health services

These areas were considered in developing the Action Plan.

Building Healthier Hearts set health promotion at the core of its strategy. Without a major focus on health promotion the problems of cardiovascular disease will not just continue, but will escalate, and patterns of health inequality in society will widen. This is not just an economic or resource issue for the health sector but also a matter of social responsibility for the political system for the general public. Individual lifestyle is in part a matter of personal control but also an indicator or signal of adverse social and environmental factors that inhibit individuals from making healthier choices.

This action plan outlines key action areas in priority settings for health promotion. For the purposes of this report, the needs of patients and the population within the region will be grouped under 'setting headings':

1.2 Context

Reducing the health and human burden of cardiovascular disease and its economic toll depends upon identifying the factors contributing to the problem and developing new methods for prevention and treatment. Contemporary health

> "Evaluation of the likely effects on human health needs to be an integral component of public policy formulation and planning so that all policies are heart health proofed"

promotion emphasises the concepts of lifestyle, risk, and preventive health behaviour alongside the broader societal concerns of the environment, public policy and culture. The recent *Health Promotion Strategy*, 2000-2005 recommends a stronger approach to health promotion for specific target population groups. Within this strategy, behavioural, environmental, policy and structural changes are recommended through targeted interventions at the level of the school, workplace, health services and community. One challenge for health promotion has been to develop and deliver appropriate initiatives to vulnerable groups. The healthcare priorities of these target populations differ from one another, and require a range of specific health promotion initiatives.

1.2.1 Health Promotion Infrastructure

With the establishment of the Authority in 2000, the former Eastern Health Board's Health Promotion Unit was devolved to health promotion departments in each of the three Area Health Boards. Strategy funding during 2000/1 provided considerable infrastructure (senior management and operational) to implement health promotion in a range of settings (e.g.workplace, schools) while targeting specific risk factors (smoking, diet, physical activity) and groups (diabetics). While these posts were principally in the Area Health Boards, funding was also provided to the hospital sector for health promotion activities and infrastructure. Furthermore, a wide range of agencies in the region are engaged in health promotion activities e.g. local authorities/county development boards, Irish Sports Council, voluntary organisations, partnership groups, Irish Health Promotion Hospitals Network.

1.3 Methodology

The Health Promotion Working Group reflects the newly formed infrastructure in the region and multi-sectoral remit of health promotion. The group took on board the comprehensive review of demographic, epidemiological and risk factors profiles conducted by the Department of Public Health. It then set out to audit the level and nature of health promotion activity in the region by:

- Conducting a selective and non-exhaustive search of key documents and relevant articles;
- Teleconference with managers and key informants in the Area Health Boards
- Identifying health promotion funding across the region;
- Tracking service developments, programmes and initiatives.

It should be noted that delays in recruiting key personnel at Area Health Board level impacted on this audit and delayed contacts with key multi-sectoral agencies.

1.4 Performance Indicators

Performance Indicators as agreed with stakeholders and outlined in Section 5.6 (information/ surveillance/audit/research) of this report will be implemented and specified in agency provider plans.

1.5 Structure of this Section

Actions within this five-year plan for the Eastern Region are based on the 58 recommendations made in *Building Healthier Hearts* in relation to health promotion. The plan outlines key action areas in priority settings for health promotion. For the purposes of this report, the needs of patients and the population within the region will be grouped under 'setting headings':

- Policy
- Media
  - Settings
  - Schools
  - Workplace
  - Health sector
  - Community
- Other Settings
- Information, Surveillance and Monitoring

1.6 Service Developments

1.6.1 Public Policy

Introduction

Health Promotion may be defined as the activities of government and other organisations and individuals to enable people to increase control over and to improve their health. Healthy public policy requires a cross-sectoral approach and is fundamental to meaningful health gain.

Rationale

Policy makers should take account of the health impact of any strategy they consider even if it is not primarily a health issue. Health-related policy documents have acknowledged the role of environmental initiatives, income inequalities, inter-departmental collaboration, responsibility and accountability to support health. It is also necessary to create a cultural and social environment, which makes it easier for individuals to practice health-promoting behaviours. For example, housing or employment development strategies affect the social conditions of the population and impact on long-term health. Other areas such as transport, food policies equally impinge on the population and individuals' health status. Evaluation of the likely effects on human health needs to be an integral component of public policy formulation and planning so that all policies are 'heart health proofed'.

Objective 1: To initiate and progress multi-sectoral partnerships to develop and implement policies to promote heart health (specifically addressing risk factors associated with heart health - physical activity, tobacco, nutrition, alcohol).

Action 1: Consultation Process

a) In Year 1 the Authority will hold a seminar to engage Chief Executive Officers of multi-sectoral agencies in the region to develop, integrate and implement methods of 'heart health proofing' into their business plans.

b) In Year 2, the Authority will actively lobby the Department of Health and Children to engage with Food and Industry sectors to develop Heart Health policies and integrate into their business plans.

Stakeholders with responsibility for delivery: ERHA, AHBs, local authorities, Government Agencies, Voluntary Agencies

Action 2: Policy Development and Implementation

Year 1 – Year 6 develop and implement an action plan for policy development on a phased basis (5 years) following consultation with all relevant partners.

Stakeholders with responsibility for delivery: ERHA, AHBs, relevant agencies

Action 3: 'Health Proofing' Provider Plans

From Year 2, each Area Health Board and the other 36 providers will be required to 'health proof' all new developments in their annual provider plans.

Stakeholders with responsibility for delivery: ERHA, AHBs, 36 Providers

Action 4: Risk Factor Action Plan

From Year 1 onwards the Risk Factor Action Plan will be implemented (in accordance with time-scales) across all settings. Challenges, i.e. manpower, infrastructure etc. will influence the stages and timing of implementation.

Stakeholders with responsibility for delivery: AHBs

1.6.2 Media

Introduction

Several distinct roles for media in health promotion can be identified. These include:

- Raising public and political awareness
- Creating a climate of opinion for action at individual and environment levels.
- Presenting a corporate image/programme identity to win support
- Providing health living information and advice
- Changing attitudes by presenting examples and role models
- Introducing skills, encouraging self-confidence
- Promoting specific events, opportunities
- Offering triggers and incentives for action and participation

- Encouraging maintenance of behaviour change
- Broadcasting achievements, rewarding action.

Media outlets for health promotion commonly comprise television, radio and newspapers together with posters, leaflets and books. Opportunities present at national, regional and local level.

Rationale

Building Healthier Hearts, through one recommendation concisely identified the benefit of and need for integration of media campaigns to maximise effectiveness.

Objective 2: To develop partnership with the media to support the recommendations of the Cardiovascular Strategy.

Action 1:

In Year 1, consult with communications departments in Area Health Boards to develop and implement an action plan to engage appropriately with the media.

Stakeholders with responsibility for delivery: ERHA, AHBs, 36 Providers, Media

Action 2:

From Year 1, the Authority will engage with the Advertising Standards Authority for Ireland (ASAI) to ensure that advertising standards are in line with Building Healthier Hearts recommendations and allied legislation.

Stakeholders with responsibility for delivery: ERHA, ASAI

Action 3:

From Year 2, all health sector agencies will target the media as an influencing mechanism for Heart Health. A seminar will be hosted to commence consultative process and develop an Action Plan in partnership with the media.

Stakeholders with responsibility for delivery: ERHA, AHBs, media

Action 4

From Year 2, the Authority will develop community wide marketing plans for Heart Health using a variety of validated approaches.

Stakeholder with responsibility for delivery: ERHA

1.6.3 Settings Approach

The World Health Organisation describes 'settings', such as schools and the workplace, as places where "people live, work and play". It recommends the use of a setting approach for improving health. *Building Healthier Hearts* recommends a coherent approach of addressing specific risk factors in different settings as a collaborate mechanism to achieve outcomes (decreased risk factor profiles, decreased morbidity and mortality) while avoiding 'reinvention of the wheel'.

Rationale

Dedicated programmes around the specific risk factors can be addressed using this framework. Settings-based approaches also ensure specific focus strategies for groups requiring special attention, particularly young people and the economically disadvantaged.

Schools/Education Institutes

Objective 3: To support the development and implementation of health promotion in schools across the region in partnership with Department of Education and Science/schools/parents/children through:

(a) The health promoting schools concept

(b) SPHE programme

Action 1: Development of Health Promoting Schools Concept

In Year 1, the Area Boards in partnership with the Department of Education and Science (DoES) will develop guidelines based on best practice to advance the development of health promotion within the school setting. The Boards will support schools in the region to adopt and implement the HPS concept (this will be undertaken on an incremental basis).

Stakeholders with responsibility for delivery: ERHA, AHBs, DoES, DoHC, HEA, FETAC, HETAC.

Action 2: Development and Implementation of health policies in schools

From Year 1, the Area Health Boards will support schools in the region to develop and implement their own health policies (incrementally) including healthy nutrition policy, school meals, breakfast clubs and 'get active' programmes.

Stakeholders with responsibility for delivery: AHBs, DoES, DoHC, schools, education institutes, teachers' unions, parents' groups

Action 3: Implementation of SPHE Programmes in schools

From Year 1, the Area Boards will support the implementation of the SPHE programme in schools.

Stakeholders with responsibility for delivery: ERHA, AHBs, DoES, DoHC

Note: Considerable planning in addressing risk factor reduction has been carried out and will feed directly into Action Three in developing a comprehensive package for the schools/education institute setting

Workplace

Within 5 years health sector workplaces will provide health-promoting environments.

Objective 4A: To develop and implement a workplace health promotion (WHP) strategy and action plan in the health sector.

Action 1: Health Sector Workplace Health Promotion Action Plan

By Year 1, in response to the Health Survey of the Health Personnel in the Eastern Region (undertaken by the Department of Public Health of the former Eastern Health Boards 2002) that explored underlying workplace health issues of staff, a five year Action Plan will be developed and implemented.

Stakeholders with responsibility for delivery: ERHA, AHBs, IBEC, ICTU, Pillar Structure, Department of Enterprise and Employment

Action 2: Workplace Health Policy Development

By Year 1 the Health Services must develop policy to improve staff's workplace health, which forms an integral part of the Health Sector Provider Plans.

Stakeholders with responsibility for delivery: ERHA, AHBs, IBEC, ICTU, Pillar Structure, Department of Enterprise & Employment, ICTU

Action 3: WHP strategy implementation

WHP Programmes will be implemented in line with strategy over a 5 year period.

Stakeholders with responsibility for delivery: ERHA, AHBs, IBEC, ICTU, others

Note: Considerable planning in addressing risk factor reduction has been carried out and will feed directly into Action Three in developing a comprehensive package for the workplace setting.

Workplace-Public/Private Sector

Objective 4B: To support the development of WHP in the public/private sector (outside of the health services) across the region.

Action 1: Consultation Process - Seminar

In Year 2, initiate partnerships with key stakeholders to progress the development of guidelines based on best practice for WHP in workplaces outside of the health services.

Stakeholders with responsibility for delivery: ERHA, AHBs, 36 Providers, Irish Heart Foundation

Action 2: Framework for Policy developments

Develop a framework document on WHP based on consultation from above in partnership with relevant stakeholders. By end of Year 2, framework document will be developed and a rollout process agreed for selected pilot sites (small, medium and large enterprises will be targeted) Year 2-Year 5

Stakeholders with responsibility for delivery: ERHA, AHBs, 36 Providers

Action 3: Workplace Health Promotion – Registration Process

From Year 2, the Authority will explore the possibility of developing a registration and award process e.g. ISQ (see UK model NHS) for WHP in the region in partnership with all relevant stakeholders

Stakeholders with responsibility for delivery: ERHA, AHBs, 36 Providers, VHI, IBEC, ICTU

Health and Social Services

Objective 5: To re-orientate the Health Services towards Health Promotion (to meet the requirements of the CVH Strategy)

Action 1:

In Year 1, the Authority will look at health service providers in the region to identify 'black spots' in terms of uptake of services and explore underlying issues and make recommendations to address barriers identified.

Stakeholders with responsibility for delivery: ERHA, AHBs, 36 Providers

Action 2:

By Year 1, health promotion training needs assessment will be undertaken in the region. By Year 3, the Area Health Boards will provide a comprehensive health promotion professional development programmes for staff in the region.

Stakeholders with responsibility for delivery: ERHA, AHBs, 39 Providers

Action 3: Health Promoting Hospitals (HPH)

From Year 1, the Authority will support the further development of the HPH concept throughout the region. By 2007, all hospitals in the region will be members of and actively participating in the HPH network. The ERHA will request details in provider plans.

Stakeholders with responsibility for delivery: ERHA, National HPH Network, EHSS, AHBs

Action 4: Integration of health promotion into service delivery

By Year 2, senior managers will be required to integrate Health Promotion into Provider Plans

Stakeholders with responsibility for delivery: ERHA, AHBs, 39 Providers

Community

A community may be thought of as a network of people. The link between them may be:

- Where they live
- The work they do
- Their ethnic background
- The way they live
- Other factors they have in common

Elements of community life, i.e. education and work have already been covered. This section will examine community in the broad sense.

Objective 6: To develop a multi-sectoral approach to heart health in the community setting.

Action 1: Community health promotion action zones

From Year 1 the Authority/Area Health Boards in targeting disadvantaged areas and population groups will adopt a community development approach as envisaged in the *Programme for Prosperity and Fairness* in developing a health promotion framework

Stakeholders with responsibility for delivery: ERHA, AHBs, Local Authorities, Government Agencies

Action 2: Development of community health promotion action plan

From Year 2 the Authority will identify key sites for action. An action plan will be developed and implemented across identified sites in the region on a phased basis.

Stakeholders with responsibility for delivery: ERHA, AHBs, local authorities, Government agencies

Objective 7: Other Settings (Out of School)
To support the development of a comprehensive approach to promoting youth heart health in the out of school setting.

Action 1: Development of partnerships for youth health

Establish and consolidate a partnership relationship with the National Youth Health Programme across the region.

Stakeholders with responsibility for delivery; ERHA, Department of Environment, local authorities, AHBs, voluntary agencies, Government agencies, National Youth Health Programme

Action 2: Strategy development for 'out of school' youth health

A Youth Heart Health Strategy will be developed and implemented for the region with relevant stakeholders

Stakeholders with responsibility for delivery: ERHA, Department of Environment, local authorities, AHBs, voluntary agencies, Government agencies, National Youth Health Programme

Objective 8: Topics
To complement the settings approach by addressing the risk factors associated with heart health, physical activity, tobacco and nutrition using a topics approach as outlined in the action plan.

As identified across the settings in previous sections.

Stakeholders with responsibility for delivery: ERHA, Local Authorities, AHBs, voluntary agencies, Government agencies.

1.7 Information, Surveillance and Monitoring

See Section 5.6 on Information Surveillance and Monitoring.

Comment

Promoting health will remain a diverse, complex and multi-faceted activity.

1.8 Summary of Estimated Costs:

Sector Costs	Recurring Costs	Once-Off Costs
Total cost of implementation of 8 Objectives	**€1,079,000**	**€132,000**

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1			
Objective 1	*Public Policy* Action 1a	Seminar – multi-sectoral agencies	ERHA, AHBs, Local Authorities, Govt & Voluntary Agencies
Objective 1	*Pubic Policy* Action 2	Policy Development	ERHA, AHBs, Local Authorities, Government Agencies
Objective 1	*Public Policy* Action 4	Risk Factor Action Plan	AHBs
Objective 2	*Media* Action 1	Consultation	ERHA, AHBs, 39 providers, Media
Objective 2	*Media* Action 2	ASAI standards & Heart Health legislation	ERHA, ASAI
Objective 3	*Settings – Schools* Action 1	Develop Guidelines	DoHC/DoES, ERHA, HEA, FETAC, HETAC
Objective 3	*Settings – Schools* Action 2	Health Policies	DoHC/DoES, AHBs, parent groups, unions, schools/ education institutes
Objective 3	*Settings – Schools* Action 3	Implementation of SPHE programmes across the region	DoHC/DoES, ERHA, AHBs
Objective 4A	**Settings – Workplace A** Health Sector Action 1	Strategy	ERHA, Dept of Enterprise & Employment, AHBs, IBEC, ICTU
Objective 4A	**Settings – Workplace A** Health Sector Action 2	Workplace Health Policy	ERHA, Dept of Enterprise & Employment, AHBs, IBEC, ICTU
Objective 4A	*Settings – Workplace A* Action 3	WHP strategy implementation	ERHA, AHBs, IBEC, ICTU & others
Objective 5	*Health & Social Services* Action 1	Community Needs Assessments	ERHA, AHBs, 36 providers
Objective 5	*Health & Social Services* Action 1	Health Promotion development programmes for staff	ERHA, AHBs, 36 providers
Objective 5	*Health & Social Services* Action 3	Regional HPH Network	ERHA, National HPH, EHSS, AHBs
Objective 6	*Community* Action 1	Develop Community Health Promotion Action Zones framework	ERHA, AHBs, Local Authorities, Govt agencies

Objective Actions Details Stakeholders with responsibility for delivery *(Continued)*

Objective 7	*Other Settings* Action 1	Development of partnerships for Youth Health	ERHA, Department of Environment, AHBs, Local Authorities, Govt agencies, National Youth H/prog
Objective 7	*Other Settings* Action 2	Strategy Development for Out of School Health	ERHA, Department of Environment, AHBs, Local Authorities Gov agencies, National Youth H/prog
Objective 8	*Other Settings* Action 1	Address additional risk factors	ERHA, AHBs, Local Authorities, Govt agencies
Year 2			
Objective 1	*Public Policy* Action 1b	Food and Industry Sectors Heart Health Policies	ERHA, AHBs, Local Authorities, Govt agencies
Objective 1	*'Heart Health Proofing'* Action 3	39 Agency Provider Plans	ERHA, AHBs, 36 Providers
Objective 2	**Media** Action 3	Seminar	ERHA, AHBs, Media
Objective 2	**Media** Action 4	Community Marketing Plans	ERHA
Objective 4B	*Settings Workplace B* Action 1	Seminar	ERHA, AHBs, 36 providers
Objective 4B	*Settings - Workplace B* Action 2	Framework for Policy Development	ERHA, AHBs, 36 providers
Objective 4B	*Settings - Workplace B* Action 3	Registration Process	ERHA, AHBs, 36 providers VHI, IBEC, ICTU
Objective 5	*Health & Social Services* Action 4	Integrate Health Promotion into Provider Plans	ERHA, AHBs, 36 providers
Objective 6	*Community* Action 2	Community Health Promotion Action Plan	ERHA, AHBs, Local Authorities, Govt Agencies

5.2 Primary Care

2.1 Introduction

The Authority's aim is to provide a range of primary care services, which are both appropriate and adequate, relative to the needs of the population it services. In general the range of primary health care services provided include health promotion, disease prevention, acute episodic care, continuing care of chronic conditions, education and advocacy.

Primary care issues specific to individual care groups are detailed in relevant chapters of this document. This chapter will address the broader organisational issues of primary care provision.

2.2 Context

Primary care is an approach to care that includes a range of services designed to keep people well. Primary care is about the day-to-day realities of peoples' lives and its range of services quietly provides the majority of health care for people. These services range from health promotion and screening for disease to assessment, diagnosis, treatment and rehabilitation as well as personal social services.

The Health Strategy *Quality and Fairness* (2001) sets out a new direction for primary care as the central focus of the delivery of health and personal social services. Primary care is the first port of call for the majority of people who use health services and can meet 90 – 95% of all health and personal social service needs.

The aim of the proposed developments outlined in the national strategy for *Primary Care, A New Direction (2001)* is to provide:

- A strengthened primary care system, playing a more central role as the first and on-going point of contact,
- An integrated, interdisciplinary, high-quality, team-based and user-friendly set of services for people,
- An enhanced capacity in the areas of disease prevention, rehabilitation, and personal social services that complement the existing diagnosis and treatment focus.

The new direction for Primary Care will provide: "of the community for the community" upholding the people-centeredness principle underpinning the *Quality and Fairness.*

> "Primary care is the first port of call for the majority of people who use heath services"

The range of primary health care services provided includes: health promotion, disease prevention, and acute episodic care, continuing care of chronic conditions, education and advocacy. A wide range of individuals and organisations are involved in providing primary care services. Currently within the eastern region, primary care services are delivered from a number of settings namely, health centres, primary care centres, and in the case of most general practitioners, dentists and pharmacists from their own private premises. While the general

practitioner, public health nurse, practice nurse and community pharmacist are most frequently involved with patients, other key professionals include community mental health nurses, dieticians, nutritionists, dentists, community welfare officers, physiotherapists and occupational therapists and voluntary organisations.

The General Medical Services (GMS) Scheme, based on a system of means testing, covers 27% of the population of eastern region and provides primary health care services, prescribing medicines, dental and ophthalmic care, which are free at the point of contact.

The introduction of the medical card to all persons over 70 years of age in 2001 is estimated to increase the provision of this service. The remainder of the population (private patients) pays for these services. However the Drug Payment Scheme introduced in July 1999 ensures that non-GMS card holders (individual or family) pay no more that €70 in a calendar month for approved drugs medicines and appliances.

The Irish health system places a considerable reliance on hospital care, the tip of the iceberg. Each year 15 to 16 million consultations in general practice take place as compared with 1.9 million in the outpatient and A&E departments. By developing the primary care model, patient care can move from secondary to primary level, through patient empowerment from primary level to self care, and through health promotion and illness prevention from self care to health.

2.3 Performance indicators

Performance indicators, agreed with stakeholders and referred to in Section 5.6 will be implemented over time. They will be incorporated into annual provider plans from each agency.

2.4 Structure of this Section

For the purposes of this report, the needs of patients and the population within the region will be grouped under the headings of:

- Secondary prevention
- High risk primary prevention
- Health promotion
- Ambulatory care
- Heart failure
- Quality assurance
- Co-ordination

2.5.1 Secondary prevention

Objective 1: A programme of secondary prevention

By Year 2 a programme of secondary prevention will be available to all patients with diagnosis of AMI, or post CABG/PTCA in the primary care setting. Achieving this objective is related to national agreements between the Department of Health and Children and key stakeholders.

Rationale

The purpose of secondary prevention of coronary heart disease is to improve longevity and quality of life of individual patients. Secondary prevention should be commenced in the acute hospital setting, continued in primary care and be supported by a programme of cardiac rehabilitation and health promotion. From the cardiac register audit there are approx 3,500 patients per year in the region with diagnosis of AMI, or post CABG/PTCA. This figure may rise as PTCAs increase even though the numbers of AMIs is on the decline. Furthermore, secondary prevention may expand to other diagnostic groups.

Action 1: Selection of phase 1 practices

By Year 1, the process of selection of general practices to participate in the pilot of secondary prevention will be complete in each Area Health Board.

Stakeholders with responsibility for delivery: ERHA, AHBs, ICGP

Action 2: Register building

a) Year 1, all GPs in the national pilot programme will have set up a practice based register of patients with diagnosis of AMI, or post CABG/PTCA which can be sustained.

b) Year 1 a system of coordination between hospitals (acute and CR) and GPs will be in place to maintain these registers.

c) Year 2 registers will be instituted and maintained in all practices in the region.

Stakeholders with responsibility for delivery: GPs, AHBs, hospitals

Action 3: Computerisation

a) By Year 1, registers in pilot practices will be computerised in a systematic way.

b) By Year 2 computerisation of other practices and for other purposes (high risk primary prevention) will be complete.

Stakeholders with responsibility for delivery: ERHA, AHBs with GPs

Action 4: Implementation of protocols of care

a) Year 1, protocols of care will have been agreed, training/ orientation completed and implementation underway in pilot practices.

b) Year 2 all practices to offer protocol driven secondary care.

Stakeholders with responsibility for delivery: DoHC, ICGP in association with the Irish Cardiac Society

Action 5: Multidisciplinary team

By Year 1 clusters of practices will be supported by a multidisciplinary team of professionals as envisaged in the Primary Care Strategy.

Stakeholders with responsibility for delivery: ERHA, AHBs

Action 6: Health passport/ patient held record

By Year 1 patients in the pilot practices will have an individual health passport / smart card/ patient held record which empowers them and facilitates communication with relevant professionals.

Stakeholders with responsibility for delivery: ERHA, AHBs

Action 7: Coordination

By Year 1 coordination between pilot practices and local hospitals will be enhanced. In particular cardiac rehabilitation will play a pivotal role.

Stakeholders with responsibility for delivery: ERHA, each hospital (Cardiac rehabilitation departmentts especially) in conjunction with AHBs.

Action 8: Quality

By Year 1 the first biannual audit of secondary prevention (process and outcome) will have taken place in line with quality assurance envisaged in this document.

Stakeholders with responsibility for delivery: AHBs, ERHA, ICGP

Action 9: Extension to all practices

By Year 2, following evaluation, secondary prevention of CHD will be offered in all practices and supported by the primary care networks as envisaged in the Primary Care Strategy. Furthermore, all patients with established CHD will be targeted. Particular attention to vulnerable populations will need to be given at this stage especially areas with higher mortality rates, higher levels of deprivation, higher levels of risk factors. The time scales for implementation of the Primary Care Strategy may impact on this rollout programme.

Stakeholders with responsibility for delivery: ERHA, AHBs

2.5.2 High risk primary prevention

Objective 2: Implementation of high risk primary prevention

To agree and implement an evidenced based plan for providing and supporting high risk primary prevention in the region. High risk primary prevention means preventing disease in those without illness but who have a higher risk than the general population of developing heart disease by virtue of known risk factors such as family history, diabetes or high blood pressure, very high cholesterol levels or clusters of several factors.

Rationale

The strategy entails the identification and counselling of individuals at high risk of a future cardiovascular disease event. Identification and counselling of such individuals is advocated by the European Society of Cardiology through its risk assessment guidelines. Screening or check ups for the whole population is not envisaged. Some risk factor measurement is undertaken currently in the health services but it is patchy and rarely translates into the estimation of risk with subsequent development of individual management plans. Furthermore, there is not equal activity across socio-economic groups. Another factor of increasing importance is that people at risk will be picked up in environments such as chest pain assessment units.

The need for co-ordination and patient awareness/empowerment will become increasingly important.

Action 1: A pilot programme of high risk primary prevention

By June Year 2 (subject to national time scales) agreement will have been reached with relevant stakeholders on how best to implement and evaluate a pilot programme of high risk primary prevention. Elements in this comprehensive programme will include a) identification of markers for high risk and subsequent practical implementation in various settings (general practice, occupation settings, pharmacies), b) generation of patient risk scores with subsequent patient based care plan, c) co-ordination between team members and between various settings d) a mechanism of patient empowerment, such as smart cards, e) facilities for patient testing such as cholesterol checks, f) quality assurance.

Stakeholders with responsibility for delivery: DoHC, ERHA in conjunction with professional bodie, AHBs

Action 2: Rollout of high risk primary prevention

By Year 2 (subject to evaluation), a plan for rollout of high risk primary prevention across the region will be drawn up. Particular attention to vulnerable populations will need to be given at this stage especially areas with higher mortality rates, higher levels of deprivation, higher levels of risk factors.

Stakeholders with responsibility for delivery: AHBs, ERHA and professional bodies

Objective 3: Diabetes: awareness raising, opportunistic pick up

To detect and treat undiagnosed diabetes in patients with diagnosed heart disease.

Rationale

The prevalence of diabetes is approximately 5% with half of the cases undetected. The likelihood of developing CHD is increased fourfold in people with diabetes. When diagnosed with diabetes, over 50% already have complications. Opportunistic screening of people with cardiac symptoms plays a vital role in improving the outcome from this disease and its complications.

Action 1: Raise awareness of undiagnosed diabetes

By Year 1, a programme of awareness raising among medical, nursing and pharmacy staff (and others as appropriate) of the extent of undiagnosed diabetes in cardiac patients.

Stakeholders with responsibility for delivery: ERHA, ICGP, AHBs, Irish Pharmaceutical Healthcare Association

Action 2: Opportunistic pick up

By Year 1, a protocol of opportunistic pick up of diabetes in cardiac patients attending their GP (or other clinical environment such as occupational health), with appropriate follow up, will be put in place and audited biannually.

Stakeholders with responsibility for delivery: ERHA, ICGP, AHBs, Occupational Health Departments

Action 3: Protocol driven diabetes care

By Year 2 a schema of protocol driven diabetes care will be put in place between hospital and patient's GP for all cardiac patients with diabetes. This protocol to be established in conjunction with the endocrinology service locally.

Stakeholders with responsibility for delivery: ERHA, AHB in conjunction with the ICGP and local hospitals

Action 4: Audit

By Year 1 a programme to promote the audit cycle in general practice will be initiated (i.e. a baseline audit of current care and subsequently a programme of improvements to clinical and organisational management to be instituted and a plan for re-auditing) and maintained biannually.

Stakeholders with responsibility for delivery: ERHA AHBs in conjunction with local hospitals and ICGP

Objective 4: Reducing CHD in patients with diabetes

To reduce complications of diabetes including clinical CHD through good control of diabetes.

Rationale

Tight control of diabetes is known to reduce complications including CHD and other vascular complications. International evidence points to the need for a) a disease register, b) a mechanism of call and recall of patients for follow up and c) regular review in order to achieve tight control.

With an increasingly aging population and an increase in the prevalence of this disease it is essential to address the need for improved shared care between hospital and GP in conjunction with improved paramedical services.

Action 1: Formal plan for diabetes care regionally

By Year 1 a formal plan for evidenced based diabetes care, including quality assurance, will be devised for the region following on from the work of the Diabetes Review Group.

Stakeholders with responsibility for delivery: ERHA, AHB and professional bodies

2.5.3 Health promotion

Objective 5: Opportunistic risk factor reduction

To reduce risk factors for CHD in the population as a whole by improving the opportunities for opportunistic detection and advice regarding risk factors when individuals encounter a health professional.

Rationale

Studies in the UK indicate that 75% of a practice population attend their GP within one year and 90% within three years. People administer self-help often with the aid of a pharmacist. Public health nurses (PHN) are in a particularly advantageous position in regard to certain groups such as mothers of small babies. These professionals could maximise the opportunity to advise on risk factor reduction in conjunction with local and national campaigns and settings based health promotion programmes. Attention is drawn to dietary salt as well as the classic risk factors.

Action 1: Blood pressure

By Year 2 all people within agreed risk categories to have an annual BP check and this result to be documented in their GP notes and on a patient held records. Each practice will conduct a biannual audit of compliance.

Stakeholders with responsibility for delivery: Each GP practice in conjunction with AHBs, occupational health departments, hospitals

Action 2: Smoking status/risk factor status

By Year 1 smoking status to be recorded in all GP, PHN notes. Each practice will conduct a biannual audit of compliance. Increasingly there, after, these professionals to record other risk factors (obesity, sedentary lifestyle).

Stakeholders with responsibility for delivery: AHBs, GP practices, PHNs

Action 3: Smoking cessation

By Year 2 all GPs to be offered courses in brief intervention techniques, so as to maximise opportunities for smoking cessation.

Stakeholders with responsibility for delivery: ERHA, AHBs and ICGP

Action 4: Health care settings based health promotion

By Year 1 an evidenced based plan to be drawn up, with an implementation time scale, on promoting healthy behaviour within the health care settings – GP surgery, community clinics, pharmacies, optometrists, dentists. The role of the PHN should be reviewed and enhanced as in *Building Healthier Hearts*. The developments regarding the primary care strategy will play a large part in shaping this action.

Stakeholders with responsibility for delivery: ERHA, AHBs in conjunction with professional bodies

2.5.4 Ambulatory care

Objective 6: Early diagnosis and management

To improve outcome from CHD by facilitating early diagnosis and management in primary care.

Rationale

Accurate diagnosis in order to underpin aggressive management plans is an important component of care. Access by the patient's GP to diagnostic facilities and consultant opinion is often not as rapid as it should be. Currently, a number of pilot projects are underway in this region and nationally exploring models of community provision and direct access. Evaluation and appropriate rollout of effective and efficient models of investigation should be an early priority.

Action 1: Access to diagnostic capacity (equipment and opinion)

By Year 1 a plan will be drawn up, with an implementation timetable (incorporating needs assessment, agreed protocols and varying models of

access), to provide all GPs with access to diagnostic equipment (24 hour BP monitors, rhythm recorders, Holter monitors and exercise stress testing) and to rapid cardiological opinion drawing on national and international experience. A high priority is given to this action.

Stakeholders with responsibility for delivery: ERHA, AHBs in conjunction with local GPs and hospitals

2.5.5 Heart Failure

Objective 7: Heart failure

To care for people with heart failure efficiently and effectively as to hospital quality of life and to hospital bed use/readmission.

Rationale

As mortality declines and effective treatment of established disease develops, more people will live to develop heart failure. Furthermore, heart failure will increase in prevalence as the population ages. Evidence for effective care of heart failure resulting in improved quality of life and reduced hospitalisation is now well established. However, this evidence must now be translated into services.

Data on estimated numbers of patients with heart failure and asymptomatic left ventricular systolic dysfunction in the region in two age categories above 45 years (prevalence) are outlined in the following table as an indication of the burden of need.

	Patients 45-64 years	Patients 65 years+	Total heart failure patients
East Coast AHB	1,946	5,837	7,784
Northern AHB	2,653	7,053	9,706
South West AHB	2,792	7,152	9,944
ERHA total	**7,391**	**20,043**	**27,434**

Source: Dr Mark Ledwidge, personal communication using the following literature: Mair FS et al. Br. J. Gen. Pract 1996;46:77 and Cleland JGF in "Prevention of Disease Progression throughout the Cardiovascular Continuum", New York 2001.

Action 1: Structured follow on care by GP and community team

By Year 2 all GPs to be offered the opportunity to participate in an evidenced based regime of heart failure care for stabilised patients supported by a community multidisciplinary team or outreach service.

Stakeholders with responsibility for delivery; ERHA, AHBs with ICGP and local hospitals

2.5.6 Quality Assurance

Objective 8: To facilitate change and adopt continuous improvement in organisational and clinical care in general practice, nursing, pharmacy and allied disciplines.

Rationale

The Health Strategy, *Quality and Fairness*, outlines the need for continuous improvement in health care and promotes the employment of agreed evidenced based standards, which are validated. In order to translate the aspiration into practice there is a need for an environment to promote continuous improvement in care. This is a complex agenda and needs to include the multidisciplinary nature of health care resulting in organisational cohesion as well as clinical care, the skills and support needed for change management, improvement in the ICT environment to support QA and a commitment to using the tools such as guidelines, audit, training/CME/CPD.

Action 1: Seminar

By Year 1 a seminar to be held to discuss facilitating continuous improvement in care of patients with heart disease or allied problems in the primary care setting.

Stakeholders with responsibility for delivery: ERHA, in conjunction with professional bodies and AHBs.

Action 2: A quality group locally

By Year 2 a structure and process to promote continuous improvement in care will be devised in each AHB area with multidisciplinary involvement. This process will address the cycle: evidenced based care, getting research into practice, continuing professional development/continuing medical education, audit/QA, managing the change process. Up to date international evidence of what works and how it works will be important in this area.

Stakeholders with responsibility for delivery: ERHA, AHBs in conjunction with professional bodies

2.5.7 Co-ordination

Objective 9: Co-ordination

Action 1: ICT (Tool for co-ordination)

By Year 1 a costed implementation plan will be agreed for improving ICT in primary care with an early prioritisation given to support for exchange of information between professionals and institutions. This action must be in agreement with the Primary Care Strategy.

Stakeholders with responsibility for delivery: ERHA, AHBs in conjunction with Primary care strategy implementation steering group

Action 2: Patient held record

By Year 1 a costed implementation plan will be agreed for instituting a patient held record for patients with heart disease.

Stakeholders with responsibility for delivery: ERHA, AHBs

Action 3: Directory of primary care services

By Year 1 a practical directory of primary care services relevant to the major users will be developed.

Stakeholders with responsibility for delivery: ERHA, AHBs

Action 4: Facilitating teamwork

By Year 2, in conjunction with changes envisaged in the Primary Care Strategy, initiatives to further teamwork between primary care professionals (GP, pharmacist, PHN, cardiac rehabilitation professionals in hospitals and health promotion teams) will be put in place. It will be important to learn from international experience in this area.

Stakeholders with responsibility for delivery: ERHA, AHBs

4.1 Summary of Estimated Costs:

Sector Costs	Recurring Costs	Once-Off Costs
Total cost of Implementation of 9 Objectives	**€4,762,506 plus linked to other national strategies and programmes**	**€0.047,000 plus linked to other national strategies and programmes**

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1			
Objective 1	**Secondary prevention** Action 1	Selection of pilot practices	ERHA, AHBs, ICGP
Objective 1	**Secondary prevention** Action 2	Register building	Various
Objective 1	**Secondary prevention** Action 3	Computerisation	ERHA, AHBs with GPs
Objective 1	**Secondary prevention** Action 4	Implementation of protocols of care	DoHC, ICGP in association with the Irish Cardiac Society

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1			
Objective 1	**Secondary prevention** Action 5	Multidisciplinary team	ERHA, AHBs
Objective 1	**Secondary prevention** Action 6	Health passport/patient held record	ERHA, AHBs
Objective 1	**Secondary prevention** Action 7	Coordination	ERHA, each hospital with AHBs
Objective 1	**Secondary prevention** Action 8	Quality	AHBs, ERHA, ICGP
Objective 3	**Diabetes: awareness raising** Action 1	Raise awareness of undiagnosed diabetes	ERHA, ICGP in conjunction with each AHB IPA
Objective 4	**Reducing CHD in patients with diabetes** Action 1	Formal plan for diabetes care at regional level	ERHA, AHBs and Professional bodies
Objective 5	**Health Promotion - Opportunistic risk factor reduction** Action 2	Smoking status/risk factor status	AHBs, GPs, PHNs
Objective 5	**Health Promotion - Opportunistic risk factor reduction** Action 4	Health promotion plan for health care settings	ERHA, AHBs in conjunction with professional bodies
Objective 6	**Ambulatory Care - Early diagnosis and management** Action 1	Access plan to diagnostic facilities	ERHA, AHBs with GPs and hospitals
Objective 8	**Quality Assurance** Action 1	Seminar	ERHA in conjunction with professional bodies and AHBs
Objective 9	**Co-ordination** Action 1	ICT	AHBs in conjunction with the Primary Care implementation steering group
Objective 9	**Co-ordination** Action 2	Patient held record	ERHA, AHBs
Objective 9	**Co-ordination** Action 3	Directory of primary care services	ERHA, AHBs

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 2			
Objective 2	**High risk primary prevention** Action 1	A pilot programme of high risk primary prevention	ERHA in conjunction with professional bodies /AHBs
Objective 3	**Diabetes: awareness raising** Action 2	Opportunistic pick up protocol	ICGP in conjunction with each AHB
Objective 3	**Diabetes: awareness raissing** Action 3	Protocol driven diabetes care	AHBs in conjunction with ICGP and local hospitals
Objective 5	**Health Promotion - Opportunistic risk factor reduction** Action 1	Annual BP for at risk patients	GP practices with AHBs/Occupational health/hospitals
Objective 8	**Quality Assurance** Action 2	Local quality groups	ERHA, AHBs
Objective 9	**Co-ordination** Action 4	**Facilitation teamwork**	ERHA, AHBs
Year 3			
Objective 1	**Secondary prevention** Action 9	Extension to all parties	ERHA AHBs
Objective 2	**High risk primary prevention** Action 2	Rollout of high risk primary prevention	AHBs in conjunction with ERHA/professional bodies
Objective 5	**Health Promotion - Opportunistic risk factor reduction** Action 3	Smoking cessation skills	ERHA, AHBs, ICGP
Objective 7	**Heart failure** Action 1	Structure follow on care by GP and community team	AHBs with ICGP and local hospitals

5.3 Pre-Hospital Services

3.1 Introduction

The components of the Chain of Survival that will be addressed under this section are:

- Early access to emergency medical services
- Early cardiopulmonary resuscitation (CPR)
- Early defibrillation
- Early advanced cardiac life support (ACLS)

3.2 Context

Factors recognised both nationally and internationally that affect access to emergency services form part of the challenges of delivering emergency service in the region. These include geographic location of caller, patient delay in calling emergency service and traffic challenges (e.g. congestion, terrain).

The East Coast Area Health Board has the statutory responsibility for the ambulance service in the three Area Health Boards of the region, providing emergency ambulance and transport services for its population in counties Dublin, Kildare and Wicklow. The East Coast Area Health Board has an agreement with Dublin City Council for the provision of Ambulance Services in Dublin City and part of Dublin County on an agency basis.

The emerging private sector involvement in emergency cases, i.e. defibrillators and CPR training programmes presents challenges and opportunities in the area of quality, audit and consistency.

"Geographic location of caller, patient delay in calling emergency services and traffic challenges affect access to emergency services"

3.2.1 Emergency Medical Services/Early Defibrillation

There are three Ambulance Control Centres located in Dublin, Wicklow and Kildare. The Command and Control Centre in Dublin is located in Townsend Street, which is a joint Command and Control

Centre for the call taking and dispatch of both Ambulances and Fire Brigades. Staff from the Eastern Region Ambulance Service and Dublin Fire Brigade jointly staff this Control Room, although full integration has yet to be achieved. In the context of responding to fires, this central control centre also covers Leinster, Cavan and Monaghan.

There are also two Ambulance Control Centres at Naas and Wicklow covering Kildare and Wicklow which are staffed by Eastern Region Ambulance Service Controllers. It is planned that these will be amalgamated into the Townsend St centre in order to establish a single command and control centre for the region. This cannot be progressed until total integration of call taking and dispatch in the Townsend Street centre is achieved.

The ambulance bases in the region are located in:

Blanchardstown	North Strand
Dolphins Barn	Phibsboro
Donnybrook	Rathfarnham
Finglas	Tallaght
Kilbarrack	Tara St
Loughlinstown	Swords
James's St	Athy
Naas	Maynooth
Arklow	Baltinglass

In addition to these directly provided services, the Eastern Region Ambulance Service provides a service through Dublin City Council in the following locations:

Blanchardstown	North Strand
Dolphins Barn	Phibsboro
Donnybrook	Rathfarnham
Finglas	Tallaght
Kilbarrack	Tara St

During 2001, the Eastern Region Ambulance Service piloted a Motorcycle Emergency Response Unit (EMRU) with the objective of reducing the response time of emergency services to patients when traffic gridlock occurs.

As part of the Cardiovascular Health Strategy initiatives in 2000 and 2001, the following developments are currently being rolled out:

- Training of emergency personnel in the administration of aspirin to patients with chest pain (pre-hospital thrombolysis).
- Equipping of all ambulances in the Eastern Regional Ambulance Service with Automated External Defibrillators (Early Defibrillation).
- Equipping ambulances in remote areas of the Eastern Regional Ambulance Service with 12 lead ECG telemetry with messaging facilities to A&E departments.

3.2.2 Pre-hospital Emergency Care Council

The Pre-hospital Emergency Care Council (PHECC), established by the Minister for Health and Children in 2000, is charged with the statutory responsibility for standards, training and accreditation in the pre-hospital sector. Its head office is located at Naas, Co. Kildare. The executive function of PHECC focuses on:

- Accreditation of training institutions and approval of course content
- National examinations setting
- Emergency medical technicians awards and register
- Review standards of training
- Research in the pre-hospital care setting
- Recommend standard operating procedures and protocols

3.2.3 Response Times

Building Healthier Hearts recommends a standard of 90 minutes from 'patient **call** to receipt of **needle**' (thrombolysis treatment). Studies identify the sequence of events that contribute to this time pattern, i.e.

- Activation time (time lapsed from receipt of emergency call to ambulance command and control centre to the departure of the emergency ambulance).
- Response time (time lapsed from the departure of the emergency ambulance to its arrive at the scene).
- Transport time (OSH) (time lapsed from arrival at the scene to arrival at the A&E department).

The Comptroller and Auditor General's Report on the Emergency Ambulance Services (1997) refers to response within a given time. Other international standards set limits within which calls must be answered but do not take account of the clinical nature or prioritisation of calls.

3.2.4 Cardiopulmonary Resuscitation (CPR)

A broad range of agencies in the region provide cardiopulmonary resuscitation training to statutory agencies, voluntary organisations, community groups and the private sector.

CPR training is provided in two forms:

- Basic Life Support (BLS) programme which trains members of the public in bystander cardiopulmonary resuscitation.
- Advanced Cardiac Life Support (ACLS) programme for medical personnel.

While the Irish Heart Foundation is actively involved in CPR training and maintains a database of trainers, a comprehensive register of individuals trained in CPR by a range of agencies is not available at this time.

The pre-hospital working group of the Authority's CVHS Steering Committee conducted a survey to scope the current activity of CPR training, particularly in the community setting. Those surveyed (50) included BLS training sites and BLS trainers (as per Irish Heart Foundation) and voluntary and national agencies.

Main findings included:

- During 2000, almost 10,000 people received CPR training in the region.
- 20% of those trained were hospital staff with 40% from the community setting.

- Less than 1% of those trained were relatives of patients with coronary heart disease.
- CPR training in the school setting needs attention.
- Accreditation criteria varies considerably.
- Health promotion messages are not included in all CPR training programmes.

3.3 Methodology

The pre-hospital working group included representation from the Eastern Region Ambulance Service, the Dublin Fire Brigade, Consultant in Emergency Medicine, PHECC, Primary Care and the East Coast Area Health Board. This group developed the pre-hospital section of the interim report which outlined:

- status of the pre-hospital recommendations
- prioritisation of recommendations
- services for development
- emerging themes: access, standards, communication and coordination, manpower, health and social gain.

This action plan was drawn up by the ERHA to reflect national developments in pre-hospital care while also recognising developments in the region.

3.4 Performance Indicators

Performance Indicators as agreed with stakeholders and outlined in Section 5.6 Information/ Surveillance/Audit/Research, of this report will be implemented and specified in agency provider plans.

3.5. Structure of this Section

For the purpose of this report, the needs of patients and the population within the Eastern Region will be grouped under the headings of:

- Central co-ordination
- Protocols
- Response times
- First Responder Schemes
- Public Awareness
- CPR
- Information, surveillance and monitoring of the CVHS pre-hospital service

3.6.1 Central Co-Ordination

Objective 1: By year 3, it is planned that a single control and command centre will be established for the region in Townsend St, Dublin. The streamlining to a single centre will incorporate the provision of prioritised dispatching throughout the region. Applications will be made to fund the necessary equipment for the provision of Medical Priority Dispatch.

Rationale

This matter was the subject of extensive assessment in the 1980s and early 1990s and the report of the Ambulance Review Group (1993) recommended immediate implementation of this objective. *The Strategic Review of the Ambulance Services* (2002) further supports this objective.

Action 1

By year 2 the East Coast Area Health Board will agree the operational procedures for the development of a single command and control centre.

Stakeholders with responsibility for delivery: ECAHB, Dublin City Council

Action 2

By year 2, the necessary resources will be identified for the establishment of the central command and control centre in Townsend St, including communication infrastructure and medical priority dispatch.

Stakeholders with responsibility for delivery: ERHA, ECAHB, Dublin City Council

Action 3

By year 3 the central command and control centre will be operational.

Stakeholders with responsibility for delivery: ECAHB, Dublin City Council

Comment:

Challenges to this objective include consensus building among the providers, impact on manpower and related resources.

3.6.2 Protocols

Objective 2: By year 1 protocols for the administration of aspirin and the operation of AED by emergency services personnel will be agreed and operationalised in line with the Standard Operating Procedures outlined by PHECC.

Rationale

It is well documented that the administration of aspirin to patients suspected with AMI has significant benefits. Combined with the early administration of thrombolysis in the hospital setting it is estimated that in excess of 50 lives per 1000 patients treated are saved. During 2001 and 2002 training of emergency personnel in both the Eastern Regional Ambulance Service and Dublin Fire Brigade in the administration of aspirin in the pre-hospital setting commenced. The new Standard Operation Procedures (SOPs) from PHECC incorporate protocols for aspirin administration.

In 2001 all frontline emergency ambulances were equipped with AEDs and these are now standard equipment in Motorcycle Emergency Response Units operating in Dublin.

Action 1

By year 1 training of all emergency medical technicians in the administration of aspirin and AED will be completed.

Stakeholders with responsibility for delivery: ECAHB, Dublin City Council

Action 2

By year 1 all emergency ambulance service units in the region will implement agreed protocols for aspirin administration and operation of AEDs.

Stakeholders with responsibility for delivery: ECAHB, Dublin City Council

3.6.3 Response Times

Objective 3: Response Times

By year 1 ambulance services in the region will provide comprehensive information for the evaluation of response times to emergency calls. This information will feed into evaluation of the 'call to needle' time standard of 90 minutes as outlined in Building Healthier Hearts and the National Performance Indicators, when determined.

Rationale

The provision of quality emergency service, responsive to patient need, is dependent on excellent communication systems. The current consultative process engaged by PHECC with providers of emergency services will scope agencies capacity in clinical record keeping, data collection and clinical audit.

Action 1

By year 1 providers of emergency care services, in conjunction with the PHECC, will discuss and agree a national minimum data set with agreed definitions that provide:

Activation time,

Response time,

OSH time (time from arrival at scene to arrival at hospital)

and other relevant data as determined by PHECC.

Stakeholders with responsibility for delivery: ECAHB, Dublin City Council, PHECC

Action 2

In year 1, the data set will be piloted in locations to be identified and agreed within the Region. This will be monitored by the ambulance service, in conjunction with the Monitoring and Evaluation Directorate of the ERHA.

Stakeholders with responsibility for delivery: ECAHB, ERHA, PHECC

Action 3

By end of year 1 the revised data-set pilot programme will be rolled out across the region.

Stakeholders with responsibility for delivery: ECAHB, Dublin City Council

Action 4

From year 1 annual Regional Monitoring & Evaluation Reviews will audit response times and where 'activation and response time' is greater than the upper target of 60 minutes, an enquiry and, where appropriate, specific operational action will be implemented to reduce the activation and response time.

Stakeholders with responsibility for delivery: ECAHB, Dublin City Council

3.6.4 First Responder Schemes

Objective 4

Provision of a GP first responder service in the Region will contribute to the target of the 'call to needle' time of 90 minutes and ensure that all patients reach an acute A&E department within one hour of calling emergency services.

Rationale

The early administration of thrombolysis in the hospital setting is estimated to save in excess of 50 lives per 1,000 patients. The delivery of this therapy is dependent on rapid response by emergency services to 999/112 calls.

The 1997 survey conducted on behalf of the Department of Health and Children reported nationally that only 42% of emergency calls had been activated in less than three minutes, 14% took more than five minutes. Furthermore, 61% of rural emergencies had not received a response within 19 minutes. The statistics for the Eastern Region at this time were:

Activation Time - 52% less than three minutes

Response Time - 62% at eight minutes

In essence these figures demonstrate that within the '90 minute call to needle time' a considerable portion of this time is utilised in activating and responding to calls.

The Eastern Region encompasses both urban and rural areas and distance to acute hospitals varies considerably. Furthermore, travel times are influenced by distance, traffic congestion and road conditions and while response and travel times in urban areas should be less than rural areas, current infrastructure challenges this pattern.

Consultation sessions have already taken place between GPs and the region Ambulance Service with regard to the establishment of a GP First Responder programme.

Evaluations of similar programmes already established in Donegal, Dingle and Arklow will be reviewed.

Action 1: Urban Areas

By year 1, areas where 'total call duration from receipt of call to ambulance arriving at hospital' (TCDR) that exceeds 60 minutes cannot be reduced by operational management (Action 4 Response Time), services changes will be reviewed by the implementing agencies where appropriate.

Stakeholders with responsibility for delivery: ECAHB, Dublin City Council

Action 2: Rural Areas

By year 1, in rural areas where for geographic reasons the TCDR time cannot be reduced below 60 minutes, a GP First Responder Scheme will be agreed with key stakeholders in the Region (ECAHB, Area Health Boards, ICGP, and IMO).

Stakeholders with responsibility for delivery: ECAHB, AHBs, ICGP, PHECC

Action 3: Rural Areas

By year 2, a GP First Responder Scheme will be implemented in rural areas identified in Action 2. Programmes will be implemented in accordance with areas identified through on-going monitoring by the ECAHB and ERHA.

Stakeholders with responsibility for delivery: ECAHB, Area Health Boards

Comment

The above actions will need to incorporate developments that emerge in the area of Emergency Medical Technicians (EMT) and related legislation governing their administration of cardiac care drugs. The development of the Motorcycle Emergency

Response Unit (EMRU) across the urban region combined with the changes in EMT legislation will need to be reviewed.

3.6.5 Public Awareness

Objective 5

By year 2, national public and targeted education campaigns on the importance of immediately seeking emergency services when suspected chest pain occurs will be implemented.

Rationale

Time is a key factor in saving people who experience a cardiac arrest. The 'chain of survival' begins with recognition of the medical emergency and initiation of appropriate intervention. In 70% of cardiac events that occur in the community setting, a family member or friend will recognise the emergency and dial 999/112. The initiating of CPR by trained persons in the community is desirable and a priority.

Through the Health Promoting Hospitals Network, many hospitals in the region have established CPR training programmes for staff and the community. In addition some Cardiac Rehabilitation departments are targeting friends and relatives of those attending cardiac rehab programmes, for CPR training.

Action 1

By year 1, the Authority will lobby the Department of Health and Children to implement on-going public awareness campaigns on the role individuals play in the 'chain of survival'.

Stakeholders with responsibility for delivery: ERHA, DoHC

Action 2

From year 1, the Area Health Boards and Acute Hospitals, in collaboration with Primary Care stakeholders will implement agreed BCLS training protocols as part of Cardiac Rehabilitation to those with established cardiac disease and their families (see Cardiac Rehab Section Public Awareness Objective).

Stakeholders with responsibility for delivery: DATHs, AHBs

Cardio-Pulmonary Resuscitation Training

Objective 6: Health Sector

The Authority will require that the 39 Providers that engage personnel in the provision of medical, nursing and paramedical services in the Region are trained and accredited in CPR.

Rationale

Time is a key factor in saving cardiac arrest victims. Employees within the health services are key people to provide CPR as needed and to act as advocates for CPR both within and beyond the health sector.

Action 1

By year 1, the Authority will complete a census of the above personnel and develop a plan with the 39 Providers for the training of all relevant personnel. A Regional Resuscitation Training Co-coordinator will be engaged to conduct this work.

Stakeholders with responsibility for delivery: ERHA, 39 Providers

Action 2

By year 1, the 39 Providers will provide CPR training and re-accreditation to the above personnel and each Provider will maintain a Register of trained personnel.

Stakeholders with responsibility for delivery: ERHA, 39 Providers

Action 3

By year 1, the CPR skills level of personnel (which will reflect the skills deficiency of personnel) will be reflected in bi-annual accredited registers maintained by 39 providers and these will be incorporated in their provider plans.

Stakeholders with responsibility for delivery: ERHA, 39 Providers

Action 4

By year 2, the Authority will collaborate with the Department of Justice to complete a census of CPR training and accreditation among Garda personnel and develop a plan with the 39 Providers for the training of all relevant personnel.

Stakeholders with responsibility for delivery: ERHA, Department of Justice

Objective 7: Community Sector

Community CPR training is an important part of the 'chain of survival'. The Authority will:

a) Liaise with the education authorities to incorporate CPR training as part of the education syllabus.

b) conduct a full survey of statutory, voluntary and community organisations in the region to ascertain the level of CPR training currently in operation.

c) lobby the Department of Health & Children to commission the establishment of a national accreditation body for CPR training.

d) review developments in early intervention techniques (i.e. community/private defibrillators) and make recommendations to the CVHS Steering Group and PHECC.

Rationale

The most important predictors of survival after cardiac arrest are whether the arrest was witnessed, the time from collapse to defibrillation and the initial cardiac rhythm identified by emergency staff. Studies have found that bystander-initiated CPR increased pre-hospital survival three to four fold.

Action 1

By year 1 the Regional Resuscitation Training Co-coordinator will liaise with the Department of Health and Children on the establishment of an accreditation body for CPR training.

Stakeholders with responsibility for delivery: ERHA & DoHC

Action 2

By year 2 the Regional Resuscitation Training Coordinator will develop plans with education authorities in the region to incorporate CPR training as part of their syllabus.

Stakeholders with responsibility for delivery: ERHA

Action 3

By year 1 a Resuscitation Training Co-coordinator will be engaged in each of the three Area Health Boards to drive CPR training in their area.

Stakeholders with responsibility for delivery: ERHA, AHBs

Action 4

By year 2, Area Board Resuscitation Training Co-coordinators will conduct the survey outlined in objective 7 (b).

Stakeholders with responsibility for delivery: ERHA, AHBs

Action 5

By year 3, the Cardiovascular Steering Group will review the survey findings and make relevant recommendations for implementation.

Stakeholders with responsibility for delivery: ERHA, AHBs

Action 6

By year 1, the Cardiovascular Steering Group based on analysis by the Regional and Area Board's Resuscitation Training Co-coordinators will submit to the PHECC recommendations governing early intervention techniques and seek their implementation.

Stakeholders with responsibility for delivery: ERHA, AHBs, PHECC

3.7 Information, surveillance and monitoring

See section 5.6 on Information, Surveillance and Monitoring

3.8 Resource Implications

A considerable number of the service developments outlined above requires minimal resources to implement. Notable exceptions include:

Objective One	Action 1	Operation of the Central Control Centre
Objective Four	Action 2	First Responder Schemes in rural areas
Objective Six	Action 1	Regional CPR coordinator
Objective Six	Action 2	CPR training of relevant personnel in 39 agencies
Objective Seven	Action 3	CPR coordinators in Area Health Boards

5.1 Summary of Estimated Costs:

Sector Costs	Recurring Costs	Once-Off Costs
Total cost of Implementation of 7 Objectives	**€1,561,408 Plus funding implications for Ambulance Service**	**€1,145,150 Plus funding implications for Ambulance Service**

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1			
Objective 1	**Single Control & Command Centre** Action 1	Feasibility Study	ERHA, PHECC, ERAS, DFB
Objective 1	**Single Control & Command Centre** Action 2	Protocols for Prioritised Dispatching	ERHA/PHECC, ERAS, DFB
Objective 1	**Single Control & Command Centre** Action 3	Agree implementation procedures	ERHA/Dublin City Council
Objective 1	**Single Control & Command Centre** Action 4	Establish infrastructure	ERHA/Dublin City Council, ERAS, DFB
Objective 2	**Protocols** Action 1	Complete Aspirin & AED Training	ERHA/Dublin City Council, ERAS, DFB
Objective 2	**Protocols** Action 2	Implement Protocols	ERHA/Dublin City Council, ERAS, DFB
Objective 3	**Response Times** Action 1	Agree minimum data set	ERHA/PHECC/Dublin City Council, DFB
Objective 3	**Response Times** Action 2	Pilot data set	ERHA
Objective 3	**Response Times** Action 3	Regional Implementation of data set	ERHA/PHECC/Dublin City Council. DFB
Objective 3	**Response Times** Action 4	Annual Reviews of Response Times	ERHA & Dublin City Council, ERAS, DFB
Objective 4	**First Responder Scheme** Action 1	Review urban areas TCDR	ERHA/Dublin City Council, ERAS, DFB
Objective 4	**First Responder Scheme** Action 2	Agree First Responder Scheme for rural areas	ERAS, Dublin City Council, AHBs, DFB, ICGP, PHECC
Objective 5	**Public Awareness** Action 1	National Public Awareness Campaign	ERHA, DoHC

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1			
Objective 5	**Public Awareness** Action 2	Targeted emergency care education	Area Health Boards, ERHA, DoHC
Objective 6	**CPR Training** Action 1	CPR Census and training plan in health sector	ERHA
Objective 6	**CPR Training** Action 2	39 Providers train personnel	ERHA, 39 Providers
Objective 6	**CPR Training** Action 3	CPR Bi-annual Registers	ERHA, 39 Providers
Objective 7	**Community Sector 1** Action 1	CPR accreditation body	ERHA/DoHC
Objective 7	**Community Sector 1** Action 3	Area Board Resuscitation Training Co-ordinators	Area Health Boards, ERHA
Objective 7	**Community Sector 1** Action 6	Early CPR Intervention Standards	PHECC, ERHA, AHBs
Year 2			
Objective 1	**Single Control & Command Centre** Action 5	Single Control & Command Centre	ERHA/Dublin City Council
Objective 4	**First Responder Scheme** Action 3	Implement Rural First Responder Scheme	ERHA/Dublin City Council/ERAS, AHBs
Objective 6	**CPR Training** Action 4	Garda personnel CPR census	ERHA/Department of Justice
Objective 7	**Community Sector** Action 2	CPR plan with education authorities	ERHA
Objective 7	**Community Sector** Action 4	Community CPR Survey	Area Health Boards, ERHA
Year 3			
Objective 7	**Community Sector** Action 5	Community CPR Recommendations & Plan	ERHA, AHBs

5.4 Hospital Services

4.1 Introduction

Nine public hospitals provide acute cardiac services to the adult population in the region with five of these hospitals providing tertiary cardiology services. Electrophysiology is provided in three hospitals and cardiac surgery is performed on two sites. This hospital provision serves national as well as regional demands in cardiology. In addition, three private hospitals provide non-invasive and invasive investigations as well as a range of interventions to referred patients from the region and beyond. The aim of this section is to set out the objectives, actions, timescales and lead responsibilities for achieving improvements in hospital cardiology services.

4.2 Context

While hospital cardiology services in the region are well established and indeed have been providing care to residents outside the region for decades, the development of these services has been challenged by a number of issues. Particular challenges at this time are: rising need due to changes in clinical practice internationally, increasing elderly population, demand from other regions where services are yet to be established, inadequate infrastructure such as day beds, chest pain assessment units (CPAUs), manpower deficiencies both at consultant, nursing and technical level, the move to a consultant delivered service.

As the emphasis is on heart health, stroke care is not included in this report although a review has been carried out by the Department of Public Health. However, many changes as a result of this action plan should impact positively on the incidence of stroke.

4.3 Performance indicators and outcome measures

Performance indicators and outcome measures, agreed with stakeholders and referred to in Section 5.6 will be implemented over time. They will be incorporated into annual provider plans from each agency.

4.4 Areas identified for development by hospital working group

Pre-hospital links

Standard region-wide protocols should be agreed between all hospitals and the ambulance services. These protocols should include regular audit against agreed standards and relevant changes in service delivery.

Chest Pain Assessment

1. A chest pain assessment unit (CPAU) should be established in all hospitals offering A&E services – adjacent to the A&E department, operating to agreed protocols, staffed by appropriately trained nurses with an immediate medical presence for rapid decision making and backed up by the cardiology department.

> "Prompt care in the event of acute chest pain has reduced mortality over the past thirty years"

2. Targets and timeframes with outcome and process measures should be agreed and mechanisms put in place to audit annually. Other measures of quality of care need to be agreed and actioned.

3. An early workshop to share experiences in development of efficient chest pain assessment would be desirable.

Cardiac Investigation

1. The need to initiate an ECHO service, a cardiology OPD service, and a consultant Cardiology post in Naas hospital is highlighted.

2. A comprehensive and efficient cardiac investigation service, as envisaged in *Building Healthier Hearts*, should be based on a) an immediate inpatient service and b) a rapid outpatient assessment. Furthermore, in planning for such a cardiac investigation service, important issues are:
    - Accommodation, especially adequate space for staff, needs to be reviewed.
    - The needs of the patient (waiting and changing space)
    - The question of need for ambulatory cardiology care centres needs to be considered.
    - Efficient fast tracking system of access by GPs to investigation and use of cardiology time is needed.
    - Ratio of new to return patients in OPD needs to be reviewed in each hospital so as to maximise OPD time.
3. A transoesophageal (TOE) service for SJH should be planned. Accommodation issues in existing services should be reviewed. The benefits of a TOE service in all acute hospitals should be reviewed with changing practice.
4. In developing the angiography service, as envisaged in Building Healthier Hearts, important issues are:
    - Methods of improving efficiency such as protected beds/trolleys/recovery bays, longer day ward opening hours, the appropriate use of 'angioseals' formal arrangements (including transport) with referral hospitals, proportion as day cases as well as information on throughput, waiting lists etc. (Cathether Laboratory Review).
    - Planning for the number of angiograms for residents of the region and referred populations (Cathether Laboratory Review).
    - Patient satisfaction and other measures of quality of service.

Cardiac Intervention

1. There is a need to plan for developments in the angioplasty service, including a feasibility study for out of hours provision, as envisaged in *Building Healthier Hearts*. Expected numbers of angioplasties to serve the regional population is 1,555 per year, with 1,400 per year needed to cover the population in the hinterland. The Cathether Laboratory Review will initiate this process.
2. There is a need to plan for developments in the electrophysiology (EPS) service. The Cathether Laboratory Review and the Cardiology Manpower assessment document will contribute to this plan. Important issues are:
    - better data on EPS activity (current and projected).
    - projected numbers of pacemakers and implanted defibrillators.
    - agreed protocols and standards for pacemaker insertion in conjunction with EPS service.
    - prioritisation in the expansion in this service.

Acute care, CCU and follow up care

1. A dedicated CCU should be considered in the hospitals with mixed provision.
2. Manpower issues which need attention are:
    - Assessment of nursing levels
    - The need to 'grow' certain staff groups, such as technicians
    - The report of the national Cardiology Manpower Working Group, which is awaited.
    - The availability of appropriately trained out-of-hours staff
3. Hospital and shared care arrangements for diabetes should be improved in conjunction with the current regional review of diabetes care.

Secondary Prevention

1. Initiate discussions on current and improved secondary prevention within the hospital setting (acute and cardiac rehabilitation) and across into General Practice.

Heart Failure

1. In general, there is a need for each hospital to

have a heart failure service, the extent of development should reflect the population to be served such as high proportion of older people.

Surveillance and audit

1. For surveillance see Section 5.6 Information systems
2. Systems of audit and other mechanisms of quality assurance need to be put in place. A regional forum to promote such QA should be considered.

Coordination

1. Formal referral arrangements with referral hospitals (within the region and outside the region) are needed with estimated demand, expected waiting time, transport and discharge plans.
2. A patient centered approach to coordination between hospital departments. General Practice and other agencies needs to be fostered. New initiatives may be needed to maximise current procedures and to promote and monitor improved shared care.

Other

1. The role of the hospital in primary prevention needs further consideration.

4.4 Structure of this Section

For the purposes of this report, the needs of patients and the population within the region will be grouped under the headings of:

- Services for the acute event
- Human resources
- Non acute and chronic services
- Non invasive diagnostic services
- Invasive investigations and interventional services
- Coordination of care
- Quality assurance of the cardiology service
- Information, surveillance and monitoring of the cardiology service

4.5 Service developments

4.5.1 Services for the acute event

Introduction

Care in the acute event has reduced mortality over the past 30 years and continuing changes in this area are expected to further improve survival and quality of life. Consequently, rapid and efficient access to facilities and expertise for acute coronary syndromes is needed as outlined in *Building Healthier Hearts*. Furthermore, a significant proportion of acute problems transpire to be of non-cardiac origin but need to be investigated efficiently.

Objective 1: Chest pain assessment units (CPAU)

By Year 2 a chest pain assessment unit will be established in all acute hospitals in the region. These units will be adjacent to the A&E, operating to agreed protocols, staffed by appropriately trained nurses with an immediate medical presence for rapid decision making, supported by access to CCU/ICU beds and backed up by the cardiology department in the hospital.

Rationale

The purpose of a CPAU is to facilitate early identification of patients with acute myocardial infarction, prevent inappropriate discharge and identify cardiac risk factors and facilitate risk factor reduction. Approximately 1,700 acute myocardial infarction discharges take place each year from hospitals in the region. Significantly greater numbers of patients present to A&E departments with symptoms of chest pain than require admission.

The assessment of these patients and confirmation of AMI, unstable angina, other cardiac event or non-cardiac event requires dedicated services. No one model of care is currently acknowledged to be superior.

The four-bed Chest Pain Assessment unit in St James's Hospital, which opened in September 2001 is an important initiative. Results to date from this unit are in line with the US figures as follows:

- 610 patients have been assessed on the CPAU. The mean age for men is 49 years and 51years in women.
- 85% of patients have been discharged from the CPAU without needing formal admission under the cardiology team with 15% of patients admitted.
- 60% of those admitted received coronary angiographies within 48 hours of admission. The remainder required medical management only.
- 6% of patients from the unit required follow up in cardiology OPD.

Action 1: Seminar on chest pain assessment

In 2002, the Authority held a seminar to agree the elements needed to provide efficient chest pain assessment in each hospital in the region. Important stakeholders at this seminar will come from cardiology, A&E, pre-hospital, general practice and management related to these disciplines.

Stakeholders with responsibility for delivery: ERHA, Cardiovascular Implementation Team

Action 2: CPA protocols

By Year 1, all hospitals providing acute cardiac care in the Region will implement agreed chest pain assessment protocols (clinical and organisational).

Stakeholders with responsibility for delivery: ERHA, each hospital in conjunction with national initiatives

Action 3: CPAU in each hospital

On a phased basis but as a high priority each acute hospital will establish a Chest Pain Assessment Unit adjacent to their A&E Department (Year 1-Year 4). This will involve both rationalisation of current resources and some new resources.

Stakeholders with responsibility for delivery: ERHA, AHBs, DATHs

Objective 2: Coronary Care Unit

To provide appropriately staffed and equipped CCU accommodation for the region, working closely with the A&E and pre hospital services. A challenge will be the nursing shortage.

Rationale

The benefits of CCUs are well established. Data from the World Health Organisation advises that approximately10 beds are needed to serve a population of 450,000. Consequently, the region needs between 53 and 60 CCU beds for care of its own population and an extra amount to serve the needs of population referred into the region for acute care and tertiary care.

In the medium term, however, consideration will need to be given to the regional configuration of CCUs in the context of rationalising A&E departments to maximise trauma care and the evolving nature of treatment of AMIs with emergency angioplasty.

Action 1: CCU staffing

By Year 1 each hospital with a CCU will have achieved an appropriate nurse staffing level per bed.

Stakeholders with responsibility for delivery: ERHA Each hospital

Action 2: Dedicated CCU

By the end of Year 2 each hospital will have a dedicated CCU. Mixed ICU/CCU provision is not desirable after Year 2. The medium term may see changes in this recommendation due to evolution in the service referred to in the rationale (above).

Stakeholders with responsibility for delivery: ERHA, ECAHB, St. Vincents Hospital, SWAHB

Action 3: CCU beds

By the end of Year 2 the number of CCU beds in the region (and pro rata in the three geographical areas) will meet international standards (WHO standard of 10 per 450,000, used here may be outdated now in terms of use of CCU for acute coronary syndromes and post intervention care of patients with PTCA) (see Tables 5.4.1 and 5.4.2). Consideration needs to be given to accommodating referrals from outside the region for acute and tertiary care.

Stakeholders with responsibility for delivery: ERHA in conjunction with the hospitals

Table 5.4.1 Data provided by each hospital in Summer 2001 updated May 2004

Hospital	Type of provision	No. of beds in 2004	No. of nurses suggested based on 4.5 per bed	No. of nurses currently in post	Extra staffing required based on 4.5 per bed
SVH	Dedicated	5 (Current) 11 (Jun '04)	27.5	19 (Current) 27.5 (Jun '04)	0
SMH	HDU/CCU	4 (+1 HDU)	10	10 (E)	0
SCH	ITU/CCU	2 (+3 ITU)	5	4 (E)	1 (E)
SJH	Dedicated	9	22.5	22.5	0
Naas	HDU/CCU	4	10	5.2	4.8
AMNCH	Dedicated	9	22.5	22.5	0
JCMH	Dedicated	5	12.5	15	-2.5
BH	Dedicated	12	30	25	5
Mater	Dedicated	8*	20	20	0

(E) = estimated due to mixed provision

** In the Mater unit there are 4 other beds described as Chest Pain beds staffed by 7 nurses.*

Table 5.4.2 CCU provision by geographical area including WHO recommendations

AHB	No. of beds required* (WHO data)	No. of beds in 2002	No. of nurses suggested based on 25 per bed	No. of nurses currently in post	Extra staffing required based on 2.5 per bed
Total ECAHB (Pop 345,000)	13+	17	42.5	41.5	1
Total SWAHB (pop 515,000)	21+	22	55	50.2	4.8
Total NAHB (pop 455,000)	19+	25	62.5	60	2.5
Total (1.3 - 1.5 million)	**Min 53 - 60**	**64**	**160**	**151.7**	**8.3**

4.5.4 Human resources

Objective 3: Human resources

To have appropriately and efficiently staffed cardiology departments in hospitals in the region in order to offer a modern cardiology service.

Rationale

The many issues around achieving adequate staffing levels in the region are set out in section 4. Getting organised in this area has effects on such areas as volume and ability to expand (technicians), quality of care (nurses) and equity (one hospital out of the nine has no cardiologist).

Action 1: Consultant manpower

By the end of Year 1, the plan for expansion in cardiology manpower (already submitted to the Joint Working Group on Consultant Cardiology requirements) will be agreed and scheduled with

Table 5.4.3 Submission to National Manpower Working Group from ERHA

Hospital	Current Cardiologist complement	Total needs in period Year 2-03	Total needs in period Year 1-06
East Coast			
St Vincents/St Michaels	3	5	7
St Columcilles	1	1	2
South West			
St James'	3	5	7
AMNCH	2	5	7
Naas	0	1	2
Northern			
MMH	3	5	7
Beaumont	3	5	7
JCM	2	3	3-5
Total	**17**	**30**	**42-44**

the Department of Health and Children. All hospitals should have a consultant-led cardiology service to ensure a quality and equitable service.

Stakeholders with responsibility for delivery: ERHA in conjunction with the hospitals

Action 2: Nursing manpower

By Year 1, a costed nursing manpower plan (covering CPAU, CCU, cardiac wards and OPD) will be completed and an implementation schedule drawn up for meeting *Building Healthier Hearts* recommendations.

Stakeholders with responsibility for delivery: ERHA

Action 3: Cardiac technicians and radiographers

By Year 1, a costed manpower plan for cardiac technicians/radiographers, to support the investigative and treatment areas envisaged in Building Healthier Hearts, will be completed and scheduled. This plan will include the mechanisms around 'growing' and retaining such technical staff.

Stakeholders with responsibility for delivery: ERHA in conjunction with the hospital CEOs

Action 4: Out of hours staffing arrangements

By Year 2 actions 1,4 and 3 should ensure the provision of an effective service with competent staff at night and at weekends.

Stakeholders with responsibility for delivery: ERHA in conjunction with the hospital CEOs

Action 5: Resuscitation Training

By Year 1 each hospital will have a plan, with time scales, to ensure that a) all medical and nursing staff are facilitated to train, and be regularly updated and certified in BLS skills and b) all medical and nursing staff in cardiac areas are facilitated to have ACLS skills.

Stakeholders with responsibility for delivery: ERHA, each hospital

Action 6: Training

By Year 1 each hospital will have a plan, with time scales, to facilitate relevant cardiac training and updating of medical, nursing and technical staff treating cardiac patients.

Stakeholders with responsibility for delivery: ERHA, each hospital

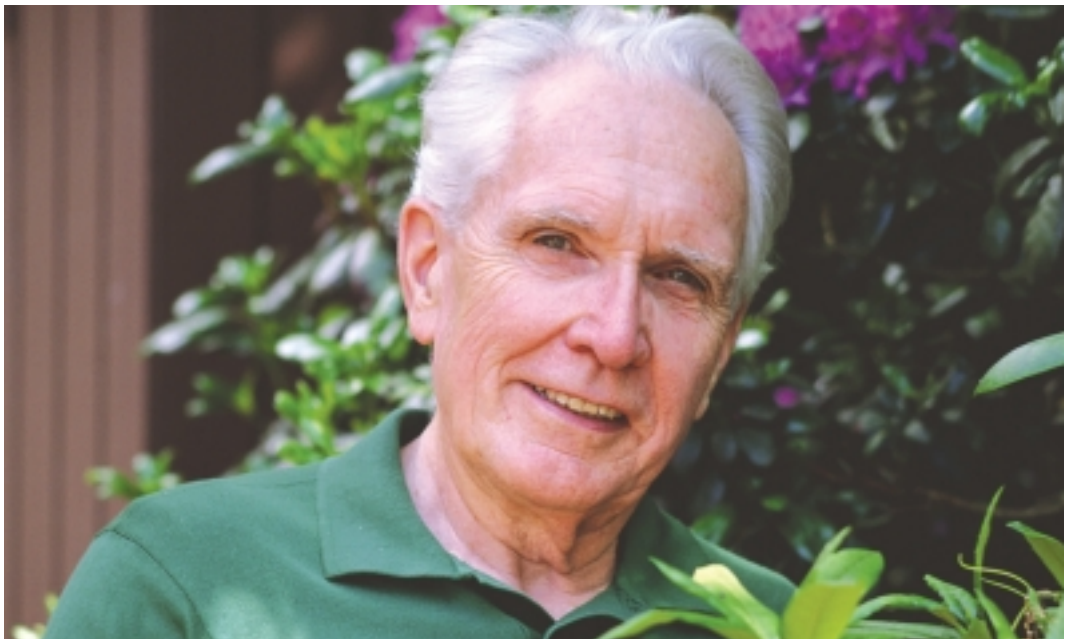
4.5.3 Non acute and chronic care services

Objective 4: Secondary prevention

To provide a co-ordinated clinically effective secondary prevention service in each hospital which integrates with primary care services.

Rationale

There are a significant number of patients who could benefit from a systematic programme of secondary prevention (effective therapeutics, lifestyle modifications, exercise programmes and addressing psychological concerns) initiated in hospital and



followed through in primary care. However, hospitals have varying levels of development in this area and little standardising of processes. A national programme of secondary prevention in primary care will commence in 10-40% of GP practices in October Year 2.

From an audit in February/March 2001 (conducted through the cardiac rehabilitation units) it is estimated that there are approximately 4,000 inpatients per year in all nine hospitals with a diagnosis of AMI, CABG or PTCA. It is notable that 1,400 patients came from outside the region and approximately 2,700 patients were resident in the region. Other coronary syndromes need to be considered also.

Action 1: Integrated care pathways within the hospital setting

By Year 1 all hospitals in the region will have evidenced based pathways of care in place to maximise the benefits of secondary prevention while the patient is in hospital, (exercise programme, lifestyle advice and support so as to promote change, relevant monitoring of risk factors and therapeutics).

Stakeholders with responsibility for delivery
ERHA, each hospital

Action 2: Agreed follow on pathways of care with patient's GP

By Year 2 all hospitals in the region will have agreed pathways of care in place with local GPs to maximise the benefits of secondary prevention when the patient returns home.

Stakeholders with responsibility for delivery:
ERHA, each hospital

Action 3: Coordinator of secondary prevention in hospital

By end Year 2 all hospitals in the region will have a coordinator in place to ensure that these protocols are initiated in the hospital and that they are communicated to the patient's GP on discharge. Cardiac rehabilitation departments are well placed to achieve this.

Stakeholders with responsibility for delivery
ERHA, each hospital

Action 4: Audit of secondary prevention pathway

By Year 1 all hospitals in the region will audit this pathway on a biannual basis at least. It is desirable that there be regional collaboration on this.

Stakeholders with responsibility for delivery:
ERHA, each hospital

Objective 5: Heart failure

To care for people with heart failure efficiently and effectively, so as to maximise quality of life and to minimise hospital bed use/readmission.

Rationale

As mortality declines and effective treatments such as revascularisation and therapeutics are expanded, more people will live to develop heart failure. Furthermore, the prevalence of heart failure will increase as the population ages. Evidence for effective care of heart failure resulting in improved quality of life and reduced hospitalisations is now well established. However, this evidence must now be translated into services.

Table 5.4.4 Estimated number of patients with heart failure and asymptomatic left ventricular systolic dysfunction

	Patients 45-64 years	Patients 65 years+	Total heart failure patients
East Coast AHB	1,946	5,837	7,783
Northern AHB	2,653	7,053	9,706
South West AHB	2,792	7,154	9,944
ERHA total	**7,391**	**20,042**	**27,433**

Source: Dr Mark Ledwidge, personal communication using the following literature: Mair FS et al. Br. J. Gen. Pract 1996;46:77 and Cleland JGF in "Prevention of Disease Progression throughout the Cardiovascular Continuum", New York 2001.

Data on estimated numbers of patients with heart failure and asymptomatic left ventricular systolic dysfunction in the region in two age categories above 45 years (prevalence) are outlined in Table 5.4.4 as an indication of the burden of need.

Data on projected activity in the region in regard to heart failure are given in Table 5.4.5 and indicates the size of the problem, the projected annual hospital utilisation rates based on prevalence estimates for the population of the region and annual admission and readmission rates of 15% and 50% respectively. The projections are compared to HIPE, 2000, data although this data includes residents from counties outside the region (approximately 11%).

Action 1: Structured heart failure service in hospitals

On a phased basis, between Year 1-Year 4, all hospitals will initiate a structured heart failure service based on current best practice. This means using a multidisciplinary approach in a physician-directed, nurse-led model of care.

Stakeholders with responsibility for delivery: ERHA, each hospital

Action 2: Structured follow on care by GP and community team

On a phased basis, between Year 1-Year 4, all GPs to be offered the opportunity to participate in an evidenced based regime of heart failure care for stabilised patients supported by a community multidisciplinary team or outreach service.

Table 5.4.5 Projected activity and costs in relation to heart failure

	Admissions	Readmissions	Total	HIPE discharges, 2000	Bed days	Costs (€)
East Coast AHB	1,168	584	1,752	1,312	22,768	5,509,855
Northern AHB	1,456	728	2,184	2,141	28,391	6,870,527
South Western AHB	1,492	746	2,238	2,372	29,086	7,038,910
ERHA total	**4,116**	**2,058**	**6,174**	**5,825**	**80,245**	**19,419,292**

Source: Dr Mark Ledwidge, personal communication using the following literature: McGowan et al. Irish Journal of Medical Science 2001; I69: 441-444, Ledwidge M et al. European Heart Journal 2001; (s44):3808 [abs]).

Stakeholders with responsibility for delivery: ERHA, AHBs

Objective 6: Diabetes - awareness raising, opportunistic pick up

To detect and treat undiagnosed diabetes in patients seen with diagnosed heart disease whether in the acute or ambulatory setting.

Rationale

The prevalence of diabetes is approximately 5% with half of the cases undetected. The likelihood of developing CHD is increased fourfold in people with diabetes. When diagnosed with diabetes, over 50% already have complications. Selective screening of those at high risk and opportunistic screening play a vital role in improving the outcome from this disease and its complications.

Action 1: Raise awareness of undiagnosed diabetes

By Year 1, all hospitals will have a programme of awareness raising among medical and nursing staff of the extent of undiagnosed diabetes in cardiac patients whether in the acute or ambulatory setting.

Stakeholders with responsibility for delivery: ERHA, each hospital

Action 2: Opportunistic pick up

By Year 1, all relevant units in each hospital (CPAU, CCU, A&E departments, OPD, cardiac investigation areas) will screen cardiac patients for glucose intolerance and follow up the results prior to discharge.

Stakeholders with responsibility for delivery: ERHA, each hospital

Action 3: Protocol driven diabetes care

By Year 1 all hospitals will have a schema of protocol driven diabetes care in place for all cardiac patients with diabetes. This protocol to be established in conjunction with the endocrinology service and with the patient's GP.

Stakeholders with responsibility for delivery: ERHA, each hospital

Action 4: Baseline and biannual audit

By Year 1 all hospitals to institute a baseline audit of current diabetes care among cardiac patients and subsequently a programme of improvements to clinical and organisational management re-audited biannually.

Stakeholders with responsibility for delivery: ERHA, each hospital

Objective 7: Opportunistic screening of patients at risk of diabetes

To reduce the complications of diabetes including heart disease by opportunistic screening of patients at risk of glucose intolerance in conjunction with the ERHA diabetes review in progress.

Action 1: Implementation of an opportunistic screening protocol

By Year 1 all hospitals to have agreed an evidenced based opportunistic screening protocol for diabetes and instituted an implementation programme along the lines of Action 1-4 above.

Stakeholders with responsibility for delivery: ERHA, each hospital

Objective 8: Reducing CHD in patients with diabetes

To control diabetes so as to reduce the likelihood of developing complications including clinical CHD

Action 1: Protocol driven care shared between hospital and GPs

On a phased basis, between Year 1-Year 3 all hospitals, in conjunction with participating GPs, will implement a plan for aggressive protocol-driven care/shared care of patients with diabetes in place in conjunction with the ERHA led diabetes review.

Stakeholders with responsibility for delivery: ERHA, each hospital in conjunction with ICGP, local GPs

Action 2: Audit

By Year 2 all hospitals to complete a baseline audit of current care and subsequently a programme of improvements to clinical and organisational management re-audited biannually.

Stakeholders with responsibility for delivery: ERHA, each hospital

4.5.4 Non invasive diagnostic services

Objective 9: Cardiac investigation service

By Year 2 each hospital will have in place a comprehensive cardiac investigation service comprising 44 hour BP monitoring, stress testing, holter monitoring, rhythm recording and ECHO with relevant technical and nursing support, adequate space and consultant expertise as envisaged in Building Healthier Hearts. It is envisaged that these investigations will be increasingly offered in an ambulatory cardiology care setting. Models exploring one stop shop, community base and direct GP access will be tried and evaluated.

Rationale

Most patients who develop heart disease need rapid specialist assessment. Difficulties in achieving such assessment have been highlighted in *Building Healthier Hearts* as a) lack of beds for acute cardiac admissions, b) lack of appropriate space from non-invasive cardiac investigations c) lack of appropriate equipment, technicians and backup secretarial staff. GPs, in particular, have identified this area as one of the early issues to be targeted for improvement.

Furthermore, discussions regionally pointed to issues for consideration in developing this aspect of care i) needs of patients (waiting and changing areas), ii) staff accommodation, iii) direct access by GPs to investigations and iv) how to reduce new to return patient ratio in OPD.

Action 1: Outpatient /ambulatory service

By Year 1 all hospitals accepting patients with cardiac problems, will submit a costed development plan (with timescales) for achieving early cardiology consultation and investigation. Waiting time will be in line with national waiting time policy. Specific targets will be agreed for a) cardiology OPD, b) non invasive investigation, c) invasive investigation and intervention. Models of provision will vary, as different solutions will be achieved in different areas following consultations in-house and in particular with local GPs. There is a need to prioritise care towards the most vulnerable socio-economic groups.

Stakeholders with responsibility for delivery: ERHA, DoHC, each hospital

Action 2: Non-invasive cardiac investigation service

By Year 1 all hospitals accepting patients with cardiac problems will submit a costed development plan (with timescales) for relevant changes to their existing non-invasive cardiac investigation service to the ERHA. These plans will be based on *Building Healthier Hearts* recommendations, the volume and case mix of their referred population, the needs of the referring GPs (including direct access) and the waiting times for this service.

Stakeholders with responsibility for delivery: ERHA, DoHC, each hospital

Action 3: Transoesophageal (TOE) service

By Year 2, St. James's Hospital will have planned for a TOE service. This will ensure that each tertiary hospital will have a TOE service.

Stakeholders with responsibility for delivery : ERHA, St. James's Hospital

4.5.5 Invasive diagnostic and interventional service

Objective 10: Interventional cardiology service

By Year 2, a plan for the development of the cardiac intervention service (to include angiography) across the region will be agreed and submitted to the Department of Health and Children.

Table 5.4.6 Projected requirement of PTCAs

	Population 1996 Census	No. of PTCAs recommended by BHH by 2004	No. of PTCAs expected to be carried out in Dublin in short to medium term*
ERHA	1,295,939	1,555	1,555
MHB	205,542	246	246
MWHB	317,069	380	-
NEHB	306,155	367	367
NWHB	210,872	253	253
SEHB	391,517	470	400
SHB	546,640	656	-
WHB	352,353	423	135
	3,646,087	**4,350**	**2,956**

** Calculation is based on communication with Health Boards and analysis of referrals*

Table 5.4.7 Trend in the number of angioplasties in Dublin hospitals, 1999 - 2001

	1998 (HIPE)	1999 (HIPE)	2000 (HIPE)	2000 (C. services questionnaire)	2001 (Cath Lab review)
Public hospitals, Dublin	1144	1350	1391	1455	2,220
Private hospitals, Dublin	(N/A	N/A	N/A	N/A	862
Total					**3,082**

Rationale

Based on *Building Healthier Hearts* recommendation of 1,400 PTCAs per million population, there is a need for approximately 3, 000 PTCAs and between 10,000 and 17,000 angiograms to be delivered in the five tertiary hospitals in Dublin to serve the population of the region and those referred from outside the region. Data available from the Cathether Laboratory Review throws new light on this (see Tables 5.4.6 and 5.4.7). Consultation with other Health Boards will be advisable in establishing need on the short and medium term.

Action 1: Cardiac Cathether Laboratory Review

By Year 1, a report of the review group on Cardiac Cath. Laboratory requirements will outline need in this area and options for filling that need.

Stakeholders with responsibility for delivery: ERHA

Action 2: A submitted Cathether Laboratory development plan

By Year 1, a costed, agreed and prioritised plan for the development of this investigation and interventional service (to include protected beds for day case angiography) will be submitted to the Department of Health and Children for funding.

Stakeholders with responsibility for delivery: ERHA, each hospital

4.5.6 Co-ordination

Objective 11: Improved communication

To improve patient outcomes through improving communication a) within the hospital setting and b) between hospital and patient's GP.

Rationale

There is some evidence and anecdotal accounts of poor communication within hospitals and between hospital and the patient's GP resulting in potential or actual harm to the patient. One Irish study by Prof Ivan Perry illustrated that the lack of follow-up of blood tests (blood glucose levels) taken on inpatients resulted in the diagnosis of diabetes/ glucose intolerance being missed in a significant proportion of the patients in the study sample.

Developments in ICT need to be planned carefully. Currently, there are a number of initiatives such as CHAIR, TOMCAT, Healthlink and other mechanisms of safely transmitting data by email. All developments in ICT should be in line with the regional ICT strategy.

Action 1: In-hospital protocols of care

By Year 1 evidenced based protocols /pathways of care, with accompanying audit programmes, will be agreed within the hospital setting on major patient or diagnostic groups such as chest pain assessment, CCU, Heart failure, secondary prevention etc.

Stakeholders with responsibility for delivery: ERHA, each hospital

Action 2: Pathways of care between hospital and General Practice

By Year 2 evidenced based protocols/pathways of care with accompanying audit programmes will be agreed between the hospital and referring GPs.

Stakeholders with responsibility for delivery: ERHA, each hospital with GP groups locally or regionally

Action 3: Communication between hospital and GP

By Year 3 communication of discharge and subsequent letters will be by e-mail or fax. In the interim, simple improvements such as a directory of email addresses of cardiologists and GPs could be published in relevant localities (by AHB, by hospital)

Stakeholders with responsibility for delivery: ERHA, AHBs, DATHs

Action 4: Patient held record/Smart cards

By Year 3 patient held records/smart cards will be initiated and all patient information will be held on this form of communication with hospitals and GPs being able to access the information and download as relevant.

Stakeholders with responsibility for delivery: ERHA, AHBs

Objective 12: Equity of access

To improve equity of access to hospital care and to reduce access difficulties for hospitals within the region and for specific hospitals referring into the region's hospitals.

Rationale

The disparity in CHD mortality between higher and lower socio economic groups is well established. Furthermore, there is geographical disparity in access to consultant cardiological opinion and intervention within Ireland. There is a need to establish practical ways of promoting equitable access to acute care, investigative and intervention services for patients using the Dublin tertiary network.

Currently, few formal arrangements exist between general and tertiary hospitals in regard to referral of patients for specialist opinion and intervention. A frequent complaint is that junior doctors often spend many hours in communication with tertiary centres prior to achieving referral of an individual patient. It should be possible to estimate the need of general hospitals for specialist services at tertiary hospitals, and plan for that demand within an agreed, structured relationship.

Action 1: Equitable access

By Year 1 a mechanism for tracking waiting times for cardiology OPD/ambulatory care, cardiology investigation and procedures by public/private and GMS status will be in place and reviewed six monthly to ensure equity of assess.

Stakeholders with responsibility for delivery: ERHA, each hospital

Action 2: Tertiary/General hospital. Service agreements (Eastern Region)

By Year 1, the projected needs of each general hospital (Naas, James Connolly Memorial, St. Colmcilles) in the region for invasive investigations and interventions will be estimated, and agreed with referral tertiary hospitals.

Stakeholders with responsibility for delivery: ERHA, AHBs, DATHs

Action 3: Tertiary/General hosp. Service agreements (Hinterland)

By Year 2, all general hospitals in the hinterland Health Boards will be invited to participate in a similar exercise based on appropriate referral protocols.

Stakeholders with responsibility for delivery: ERHA, other Health Boards outside the Eastern Region, DATHs

4.5.7 Quality assurance

Objective 13: Quality assurance

To provide a high quality, coordinated cardiology service meeting patients needs in each hospital in the region through the development of a quality assurance plan.

Rationale

There is a wide range of provision of hospital services for cardiology problems in the region. All staff involved in providing this service aim to offer a professional service. While most hospitals have some risk reduction process in place no hospital has a comprehensive quality assurance process in place which validates clinical and organisational quality as well as patient satisfaction. A number of organisational developments will take place in the next year or so and will contribute to our ability to assess quality of care. They are: a) the CHAIR project, b) The Health, Information and Quality Authority outlined in the Health Strategy, c) the work of the audit department at the ERHA d) the quality initiatives in the Health Strategy and e) rollout of hospital accreditation.

Action 1: Seminar

By Year 1 a seminar will be held to discuss how to best guarantee clinical and organisational quality for the cardiac patient.

Stakeholders with responsibility for delivery: ERHA

Action 2: A regional quality assurance plan

By Year 2 a quality assurance (QA) plan for hospital services (and related activities in conjunction with GPs/Primary care professionals) will be devised and agreed by all parties in the region. A mechanism to support QA will need consideration.

Stakeholders with responsibility for delivery: ERHA, each hospital

Action 3: Hospital quality assurance plans and quality assurance annual reports

Each hospital will implement their cardiac services quality assurance (QA) plan and by Year 2 will publish their first QA annual report.

Stakeholders with responsibility for delivery: ERHA, each hospital

Action 4: ERHA annual report on quality in cardiology services

By Year 2 the first regional cardiac services QA annual report will be published by the ERHA

Stakeholders with responsibility for delivery: ERHA

4.5.8 Information, surveillance and monitoring

See Section 5.6 on Information Systems, Audit and Research.

5.1 Summary of Estimated Costs:

Sector Costs	Recurring Costs	Once-Off Costs
Total cost of implementation of 13 Objectives	**€18,318,000 – 24,918,000** **3-5% of budgets for training** **Plus linked with "Quality & Fairness" Actions ICT Strategy Manpower review Regional Diabetic Review & Initiative** **Acute Planning and Developments**	**€4,929,000 – 5,9189,000** **Plus linked with "Quality & Fairness" Actions ICT Strategy Manpower review Regional Diabetic Review & Initiative** **Acute Planning and Developments**

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1			
Objective 1	**Chest pain assessment** Action 2	Protocols for CPA	ERHA each hospital
Objective 1	**Chest pain assessment** Action 3	CPAU in each hospital	ERHA AHBs and DATHs
Objective 2	**Coronary Care Un**it Action 1	CCU Staffing	ERHA Each hospital
Objective 3	**Human Resources** Action 1	Consultant manpower	ERHA in conjunction with the hospitals
Objective 3	**Human Resources** Action 2	Nursing manpower	ERHA- Director of Nursing and Midwifery
Objective 3	**Human Resources** Action 3	Cardiac technicians and radiographers	ERHA in conjunction with the hospital CEOs
Objective 3	**Human Resources** Action 5	Resuscitation training plan	ERHA, each hospital
Objective 3	**Human Resources** Action 6	Training	ERHA, each hospital
Objective 4	**Secondary prevention** Action 1	Pathways of integrated care within the hospital setting	ERHA, each hospital
Objective 5	**Heart Failure** Action 1	Structured heart failure service in hospitals	ERHA, each hospital
Objective 5	**Heart failure** Action 2	Structured follow on care by GP and community team	ERHA, AHBs
Objective 6	**Diabetes; awareness raising and opportunistic pick up** Action 1	Raise awareness of undiagnosed diabetes	ERHA,each hospial
Objective 6	**Diabetes; awareness raising and opportunistic pick up** Action 2	Opportunistic pick up in cardiac settings	ERHA, each hospital
Objective 6	**Diabetes; awareness raising and opportunistic pick up** Action 3	Protocol driven diabetes care	ERHA each hospital
Objective 6	**Diabetes; awareness raising and opportunistic pick up** Action 4	Baseline and biannual audit	ERHA each hospital
Objective 7	**Opportunistic screening of patients at risk of diabetes** Action 1	Opportunistic screening protocols	ERHA each hospital

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1			
Objective 9	**Cardiac investigation service** Action 1	Outpatient/Ambulatory service	ERHA, DoHC, each hospital
Objective 9	**Cardiac investigation service** Action 2	Non-invasive cardiac investigation service	ERHA, DoHC, each hospital
Objective 10	**Interventional Cardiology service** Action 1	Cardiac Cath Lab review	ERHA, each hospital
Objective 10	**Interventional Cardiology service** Action 2	A submitted Cath Lab development plan	ERHA, each hospital
Objective 11	**Improved Communication** Action 1	In hospital protocols of care	ERHA, each hospital
Objective 12	**Equity of access** Action 1	Equity of access	ERHA, each hospital
Objective 12	**Equity of access** Action 2	Tertiary/General hosp. Service agreements (Eastern Region)	ERHA, AHBs, DATHs
Objective 13	**Quality Assurance** Action 1	Seminar	ERHA
Year 2			
Objective 2	**CCU** Action 2	Dedicated CCU	ERHA, ECAHB, SWAHB SVUH
Objective 2	**CCU** Action 3	CCU beds	ERHA in conjunction with the hospitals
Objective 3	**Human Resources** Action 4	Out of hours staffing arrangements	ERHA in conjunction with the Hospital CEOs
Objective 4	**Secondary prevention** Action 2	Agreed follow on pathways of care with patient's GP	ERHA, each hospital
Objective 4	**Secondary prevention** Action 3	Coordinator of secondary prevention in hospital	ERHA, each hospital
Objective 8	**Reducing CHD in diabetic patients** Action 1	Pathways of care between hospital and General Practice	ERHA, each hospital with GP groups locally or regionally ICGP
Objective 8	**Reducing CHD in diabetic patients** Action 2	Audit	ERHA, each hospital
Objective 9	**Cardiac Investigation Services** Action 3	TOE service in St. James's Hospital	ERHA, SJH

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 2 *Continued*			
Objective 12	**Equity of Access** Action 3	Tertiary/General hosp. Service agreements (Hinterland)	ERHA, other Health Boards outside the Eastern Region
Objective 13	**Quality Assurance** Action 2	A regional quality assurance plan	ERHA, each hospital
Objective 13	**Quality Assurance** Action 3	Hospital QA plans and QA annual reports	ERHA,each hospital
Year 3			
Objective 11	**Improving Communication** Action 4	Communication between hospital and GP	ERHA, AHBs, DATHs
Objective 11	**Improving Communication** Action 4	Patient held record/ smart cards	ERHA, AHBs

5.5 Cardiac Rehabilitation

5.1 Introduction

The efficacy of Cardiac Rehabilitation (CR) is well established with evidence of reduced mortality, increased exercise performance and an improved sense of well being (Oldridge, Guyatt, Fischer et al., 1988: O'Connor, Buring, Yusuf et al., 1989). CR programmes provide psychological, social and vocational support to patients and their families. CR is usually considered in four phases:

Phase One: the inpatient phase

Phase Two: the immediate (2-6 weeks) post-discharge period

Phase Three: the intermediate (2-6 months) post-discharge period

Phase Four: the long-term maintenance period.

Currently, eight acute hospitals in the region offer Cardiac Rehabilitation (CR) services with plans to commence services in the ninth (Naas Hospital). Formal Phase Three programmes are well established in the five DATHs hospitals and recently commenced in the St. Michael's, James Connolly Memorial and St. Colmcilles hospitals.

5.2 Context

Cardiac Rehabilitation is organised differently in different countries. In Ireland, programmes are outpatient-based and currently concentrate on patients in the first few months after an acute event, interventional procedure and post cardiac surgery.

5.2.1 Needs Assessment for Cardiac Rehabilitation in the Eastern Region

One Dublin hospital has offered CR for more than 15 years with three others only commencing CR in the last 12 months. Hence this service is an evolving one with varying facilities and consultant leadership as documented in a review conducted by the Authority in 2001. A summary of findings include:

- Buildings infrastructure for cardiac rehabilitation in the region is inadequate.
- Space will become an issue for centres needing to expand.

"Cardiac rehabilitation programmes provide psychological, social and vocational support to patients and their families"

- Formalising a career structure, continuing professional development and clarifying the role of new people coming into an expanding service is necessary. Also acknowledging equivalent and new qualifications is needed.
- Consultant leadership is needed in all hospitals, not just in interested hospitals.
- A number of hospitals are developing information and audit systems. However, co-ordination across the region and nationally will be an important task.

- Phase 1 is in operation in all hospitals though the model in one hospital does not promote an integrated approach.
- Phase 111 is offered in various formats (frequency, number of hours) in the nine hospitals as noted in the literature.
- Formally, patients are not excluded from any programme. However, methods of recruitment and levels of co-ordination in various hospitals may not result in all groups being included. This area needs more attention.
- Most audit standards were met in most hospitals. However, areas of note are a) lack of patient support group in many centres, b) lack of formal links with the patient's GP.
- A systematic approach to measuring outcomes is needed.
- A systematic approach to audit with an agreed audit tool is desirable.

5.2.2 Guidelines

During 2000/2001, the Irish Association of Cardiac Rehabilitation (IACR) reviewed literature, consulted with CR professional bodies nationally and internationally and hosted a workshop to develop consensus on CR guidelines in Ireland.

Given the changing nature of Cardiac Rehabilitation Practice, the IACR will review the 2002 published guidelines in 2005.

5.3 Methodology

Since the launch of *Building Healthier Hearts* considerable funding has been dedicated to provide CR services in all nine centres providing acute cardiac services. The Cardiac Rehabilitation Working Group took on board the Needs Assessment of Cardiac Rehabilitation in the Eastern Region conducted by Dr. Mary Condon in May 2001. It then set out to:

- update the Needs Assessments
- conduct a survey of Phase 1 cardiac rehabilitation in the nine centres
- seek information from the nine centres pertaining to the type of information (data) collected and audit methods employed

During 2001 the Authority conducted a regional audit on the proportion of the population eligible for cardiac rehabilitation that receive an invitation to Phase 3 programme. Projections of service needs are based on the findings of this audit.

5.4 Performance Indicators and Outcome Measures

Performance Indicators as agreed with stakeholders and outlined in Section 5.6 Information/Surveillance/Audit/Research, of this report will be implemented and specified in agency Provider Plans.

5.5 Structure of this Section

For the purposes of this report, the needs of patients and the population of the region will be grouped under the headings of:

- Service Developments
  - Cardiac rehabilitation Phase 1-4
  - Education and training
  - CR service development
  - Coordination within hospitals and with primary care
- Information, surveillance and monitoring
- Resource implications

5.6 Service Developments

5.6.1 Cardiac Rehabilitation Phases 1 to 4

Objective 1

By Year 4 all eligible patients will be offered a quality assured CR service (secondary prevention service) coordinated within the hospital and in liaison with the patient's General Practitioner and relevant community services.

Rationale

CR programmes (Phases I – IV) provide psychological, social and vocational support to patients and their families as well as improving exercise tolerance and improving compliance with secondary prevention strategies, particularly by encouraging smoking cessation and adherence to

medication and nutrition advice. The safety and efficacy of exercise protocols in current use are well documented.

The Authority's survey of CR services in 2001 showed that there was an evolving capacity in the seven functioning units for approximately 1,270 patients per year with some increasing capacity due to the new units coming on stream.

Preliminary results from the recent regional audit of the two-month period February-March 2002, suggest that the capacity is under resourced by approximately 50%. This estimate is based on the eligibility of AMI, PTCA and CABG patients. Other populations, such as heart failure, angina will demand further capacity.

5.6.1.1 Phases 1 – 4

Action One

In Year 1, each hospital providing acute cardiac service will dedicate a cardiologist with an interest in CR service to drive the CR service.

Stakeholders with responsibility for delivery: ERHA, DATHs, AHBs

Action Two

In Year 1, regional standardised referral protocols agreed by Consultant Cardiologists and Cardiac Rehabilitation Coordinators will be implemented in acute and interventional settings in each hospital providing cardiac services.

Stakeholders with responsibility for delivery: ERHA DATHs, AHBs

5.6.1.2 Phase 1

Action One

In Year 1, a protocol driven Phase 1 will be agreed, implemented and an audit structure in place in each hospital.

Stakeholders with responsibility for delivery: ERHA DATHs, AHBs, IACR

Action Two

In Year 1, all eligible patients will be offered Phase 1 CR care.

Stakeholders with responsibility for delivery: ERHA, DATHs, AHBs

Action Three

From Year 1, all eligible patients will leave hospital with details relevant to their condition and a plan for drug therapy, lifestyle change, visit to GP and an appointment to Phase 3 CR services. The resource implication for Hospital Pharmacies needs assessment.

Stakeholders with responsibility for delivery: ERHA, DATHs, AHBs

5.6.1.3 Phase 2

Action One

In Year 1, the Authority will liaise with the Department of Health and Children (DoHC) and the IACR with regard to commissioning research to evaluate the range of Phase 2 programmes (national and international) and make recommendations for implementation in the region.

Stakeholders with responsibility for delivery: IACR, DoHC

5.6.1.4 Phase 3

Action One

In Year 2, two hospitals will pilot a mechanism to survey 'patient outcomes' at 12 months post CR. Following evaluation this will be rolled out in a phased basis across the region taking account of resource implications (research/evaluation personnel). These Performance Indicators will be incorporated in agency provider plans.

Stakeholders with responsibility for delivery: ERHA (Monitoring & Evaluation Directorate), DATHs, AHBs

Action Two

In Year 3, CR capacity for patients presenting to each hospital (taking note of the role of community based CR) will be increased as to offer protocol driven Phase 3 to 85% of patients who are post AMI, PTCA+/- Stent, CABG, Valvular Surgery, Pacemaker Implant, Implantible Cardioverter Defibrillator.

Stakeholders with responsibility for delivery: ERHA, DoHC, AHBs

Action Three

By Year 4 each hospital will have increased capacity so as to offer protocol driven Phase 3 to 85% of patients with heart failure and stable angina patients.

Stakeholders with responsibility for delivery: ERHA, DoHC

Action Four

In Year 2, annual audits, over a three-year period will be conducted to track compliance performance of each hospital with Actions Two and Three above. These Performance Indicators will be incorporated in agency provider plans.

Stakeholders with responsibility for delivery: ERHA , DATHs, AHBs

Action Five

In Year 1, a consensus workshop involving Consultant Cardiologists, CR Co-ordinators, DATHs, AHBs, General Practitioners will explore community based Phase III models and agree protocol for piloting a programme in Year 1.

Stakeholders with responsibility for delivery: ERHA, CR Working Group, DATHs, AHBs, ICGP

Action Six

In, Year 1, community based Phase III programme will be piloted in the Region and interim results evaluated after six months will full evaluation after one year.

Stakeholders with responsibility for delivery: ERHA, relevant stakeholder

Action Seven

In Year 2, a phased programme to implement community based Phase III programme will be agreed by the Authority with key stakeholders and funding sought from the DoHC.

Stake*holders with responsibility for delivery: ERHAs DATHs, AHBs*

5.6.1.5 Phase 4

Action One

In Year 1, in conjunction with the IACR a Phase 4 project will be piloted and evaluated with recommendation for Regional implementation. The integration of the service with secondary prevention programmes in General Practice need to be considered and protocols agreed.

Stakeholders with responsibility for delivery: ERHA DATHs, AHBs, IACR, ICGP

Action Two

In Year 2, a plan to implement Phase 4 across the region will be drawn up.

Stakeholders with responsibility for delivery: ERHA CVHS Steering Group

5.6.2 Education and Training

Objective 2

In Year 2, an agreed career pathway in CR will be developed which promotes the professional discipline of CR Co-ordinators.

Rationale

The core components of CR are medical diagnosis and intervention, psychosocial care, exercise, life style modification, education and vocational assessment. Ten to fifteen different professionals can form part of the CR team. However no team is likely to include all. While experts in CR state it is not possible to stipulate the particular combination of staff required to deliver CR there is concurrence regarding the knowledge and skills required (Coats et al. 1995).

Building Healthier Hearts recommends that the team should be lead by a CR co-ordinator, whose role is to effectively incorporate the skills of associated professionals without assuming any of the many roles required beyond that of their own professional training and competencies. On-going training for other team members is essential to uphold the multi-disciplinary ethos of the CR team.

Action One

In Year 1, all CR programmes will be led by personnel with appropriate qualification in CR as agreed by the Department of Health and Children and IACR.

Stakeholders with responsibility for delivery: ERHA, DATHs, AHBs

Action Two

In Year 2, CR team members will undertake training programmes as endorsed by the IACR with a target that 90% will have completed it by Year 4.

Stakeholders with responsibility for delivery: ERHA, CR Working Group, DATHs, AHBs, IACR

Action Three

By Year 2, all CR Co-coordinators, nursing/physio personnel involved in running the exercise elements of the CR programmes will be ACLS certified and accredited.

Stakeholders with responsibility for delivery: ERHA DATHs, AHBs

Action Four

In Year 1, all other members of the team will be BLS certified and accredited.

Stakeholders with responsibility for delivery: ERHA DATHs, AHBs

Action Five

In Year 1 the IACR in conjunction with Dublin City University will run the inaugural part-time certificate level training programme for appropriately trained staff in leisure centres/gyms to maintain Phase 4 in the community.

Stakeholders with responsibility for delivery: IACR, DCU

5.6.3 CR Service Development

Objective 3

By Year 3 developments in CR will be reviewed and incorporated into programmes as appropriate and based on best practice.

Rationale

In terms of demography, patients are increasingly likely to present at an older age, be female and have post complex surgical/interventional procedures. This changing profile of the cardiac population will provide new challenges to those delivering rehabilitation services and require evaluation of the elements of programmes coupled with their accessibility and acceptability.

Action One

In Year 1, the pilot survey to assess the need to incorporate BLS training for patients and their relatives will be reviewed by the CR Working Group.

Stakeholders with responsibility for delivery; ERHA, Beaumont Hospital

Action Two

In Year 1, the Authority will host a seminar to agree

the elements of BLS training for patients and their relatives as part of Cardiac Rehabilitation services.

Stakeholders with responsibility for delivery: ERHA, Cardiovascular Implementation Team

Action Three

In Year 1, all hospitals providing CR services in the Region will implement the agreed BCLS training protocol as part of CR.

Stakeholders with responsibility for delivery: ERHA, DATHs, AHBs

Action Four

In Year 2, the CR Working Group in conjunction with the IACR will conduct annual reviews of developments evolving in CR programmes at national and international level and issue recommendations for developing CR programmes within the region to the CVHS Steering Group.

Stakeholders with responsibility for delivery: ERHA, CR Working Group, key stakeholders

5.6.4 Co-ordination within hospital and with Primary care

Objective 4

By Year 2, all centres providing CR service will communicate with relevant professionals (e.g. primary care, health promotion.) to maximise patient care.

Rationale

Cardiac Rehabilitations provides a unique opportunity to meet patients' needs across the phases of their care (emergency, Phase 1, stabilisation Phase 11, secondary prevention Phase 1 and 111 and maintenance Phase IV). Seamless delivery of cardiac rehabilitation across the Phases is dependent on partnership relationships between professionals, institutions, geographic locations, care providers/sectors.

Action One

In Year 1, key stakeholders will agree protocol for communicating individual patient's data at relevant points (i.e. during cardiac rehabilitation).

Stakeholders with responsibility for delivery: ERHA CR Working Group, DATHs, AHBs, ICGP, IPS

Action Two

In Year 1, all cardiac rehabilitation centres in the region will communicate by email/fax CR relevant patient based summaries to patient's GPs, hospitals and members of the Primary Care Network. Developments will be phased in line with the Regional ICT Plan.

Stakeholders with responsibility for delivery: ERHA, DATHs, AHBs

Action Three

In Year 1, the Authority will lobby the Department of Health and Children to implement agreed audit systems for CR programmes and agree recommendations for national co-ordination of CR services.

Stakeholders with responsibility for delivery: DoHC, ERHA

5.7 Information, Surveillance and Monitoring

See Section 5.6 on Information Systems, Audit and Research. Audit will pay particular attention to socio-economic break down, evaluate uptake and target recommendations accordingly.

5.8 Resource Implications

A considerable number of the service developments outlined above require minimal resources to implement. Notable exceptions include:

5.6.1.4 Action Two
5.6.1.4 Action Three
5.6.1.4 Action Five
5.6.1.4 Action Seven
5.6.1.5 Action Two
5.6.2 Action Four
5.6.2 Action Five

Comment/Challenges

- Manpower needs
- Consultant leadership
- Career structuring and staff retention
- Capacity infrastructure
- Coordination within hospital and with primary care
- Achieving and sustaining outcomes

6.1 Summary of Estimated Costs:

Sector Costs	Recurring Costs	Once-Off Costs
Total cost of implementation of 4 Objectives	**€7,628,488** **3-5% of pay budgets Plus linked with ICT funding and National NCIS programmes and other DoH&C led initiatives**	**€557,000** **Plus linked with ICT funding and National NCIS programmes and other DoH&C led initiatives**

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1			
Objective 1	**Cardiac Rehabilitation Phases 1-4** Action 1	Consultant Led Service	ERHA, DATHs, AHBs
Objective 1	**Cardiac Rehabilitation Phases 1-4** Action 2	Referral Protocols	ERHA, DATHs, AHBs
Objective 1	**Phase 1** Action 1	Agreed Protocol	ERHA, DATHs, AHBs, IACR
Objective 1	**Phase 1** Action 2	Enhances Provision of service	ERHA, DATHs, AHBs
Objective 1	**Phase 1** Action 3	Care Pathway	ERHA, DATHs, AHBs
Objective 1	**Phase 2** Action 1	Research project	IACR, DoHC
Objective 1	**Phase 3** Action 5	Community Phase III workshop	ERHA, DATHs, AHBs, ICGP
Objective 1	**Phase 3** Action 6	Pilot Community Phase III	ERHA, relevant stakeholders
Objective 1	**Phase 4** Action 1	Evaluate Phase 4 pilot	ERHA, IACR, DATHs, AHBs, ICGP
Objective 2	**Education & Training** Action 1	CR Co-ordinators	ERHA, DATHs, AHBs
Objective 2	**Education & Training** Action 3	ACLS training for CR staff	ERHA, DATHs, AHBs
Objective 2	**Education & Training** Action 4	BCLS training of wider CR team	ERHA, DATHs, AHBs
Objective 2	**Education & Training** Action 5	Train leisure centre/gym staff to maintain Phase 4 in the community	IACR, DCU
Objective 3	**CR Service Development** Action 1	Survey on BCLS in CR programmes	ERHA, Beaumont Hospital
Objective 3	**CR Service Development** Action 2	Seminar	ERHA Cardiovascular implementation team

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1 Continued			
Objective 3	**CR Service Development** Action 3	Protocol for BCLS training in CR	ERHA, DATHs, AHB
Objective 4	**Coordination** Action 1	Patient based CR summaries	ERHA, DATHs, AHBs ICGP, IPS
Objective 4	**Co-ordination** Action 2	Messaging	ERHA, DATHs, AHBs
Objective 4	**Co-ordination** Action 3	National CR Co-ordination Plan & Audit	ERHA, DoHC
Year 2			
Objective 1	**Phase 3** Action 1	Patient outcome measurements	ERHA, DATHs AHBs
Objective 1	**Phase 3** Action 4	Audit of Phase 3 service, part 1 & 2	ERHA, DATHs, AHBs
Objective 1	**Phase 3** Action 7	Regional Community Phase III plan	ERHA, DATHs, AHBs
Objective 1	**Phase 4** Action 2	Regional Phase 4 plan	ERHA, CVHS steering group
Objective 2	**Education & Training** Action 2	Scope on-going training needs	ERHA, DATHs, AHBs, IACR
Objective 3	**CR Service Development** Action 4	Research CR programmes	ERHA, CR working group key stakeholders
Year 3			
Objective 1	**Phase 3** Action 2	Increased capacity for Phase 3, part 1	ERHA, DoHC, AHBs
Year 4			
Objective 1	**Phase 3** Action 3	Increased capacity for Phase 3, part 2	ERHA, DoHC

5.6 Information Systems, Audit and Research

6.1 Introduction

Building Healthier Hearts laid emphasis on developing surveillance of health and illness through good information systems and the development of audit. Furthermore the promotion of research was highlighted.

6.2 Context

Developments in the area of information, audit and research come at a time of strategic evolution and change in Ireland. The new health strategy has emphasised information needs and quality issues with the proposed setting up of the Health Information and Quality Authority (HIQA). A national information strategy is eagerly awaited and regionally the ERHA have developed an ICT strategy. In the context of cardiovascular health the National Cardiovascular Information Steering Group (NCIS) has been formed to guide developments. Also the Irish Cardiac Society has agreed with the Advisory Forum to develop national clinical guidelines. On a wider dimension, the national performance indicator project team, chaired by Mr. Tom Kelly, Assistant CEO of the North Western Health Board, is in place to propose national performance indicators and outcome measures.

6.3 Performance Indicators and Outcome Measures

Following on from the national work, performance indicators and outcome measures, will be agreed with stakeholders and implemented over time. They will be incorporated into annual provider plans from each agency. See Objective 4 Action 5.

6.4 Structure of this Section

For the purposes of this report, the needs of patients and the population within the region will be grouped under the headings of:

- Surveillance (including support for audit)
- Research

6.5 Areas identified for development by the working group:

a. Common Issues

- The need for a cardiac minimum data set for relevant clinical environments. The National Cardiovascular Information Steering Group (NCIS) will be instrumental in developing this.
- The need for a unique patient identifier
- The importance of agreed data definitions
- The importance of regular validation and cleaning of data
- The need for analysis and front-ending of analysed data (report generation), with dissemination of interpreted information.

"Addressing the burden of cardiovascular disease in the region requires timely, accurate and reliable surveillance systems"

- The need for the establishment of new databases as envisaged in *Building Healthier Hearts*
- The importance of support, infrastructural development, and training in this sector
- The importance of clear and useful outcome indicators
- The need for data interfacing and harmonisation with related strategies

b. Health Promotion key points

- National surveys should take cognisance of the regional needs, particularly the disadvantaged areas (i.e. inner city)
- The need for regional surveys on certain issues
- The importance of agreement on outcome indicators (e.g. risk factors prevalence)

c. Pre-Hospital key points

- The Pre-Hospital working group noted that PHECC outlined developments relevant to this sector as
  - Stage 1, in 2001, to include a national comprehensive information gathering exercise on clinical record keeping, collection of data and clinical audit mechanisms in place and proposed developments coupled with resource implications.
  - Stage 2, in 2001, to include a consultative process led by PHECC discussing common approaches to data collection with use of a minimum data set, use of clinical audit and performance indicators.
- Invitation from PHECC to the Regional Cardiovascular Steering Group to clarify the data items, definitions and conventions it wishes to see used.

d. Primary Care key points

- The need to be aware of the implementation of the Primary Care ICT Regional Strategy.
- The importance of maximising GMS, Drug Payment Scheme and Long Term Illness Scheme data.
- The importance of interfacing the core primary care professionals (GP practice, Pharmacy, PHN) as well as the primary and secondary sectors.

e. Hospital key points

- The need to implement the CHAIR project in the region.
- The importance of being aware of the need to incorporate additional data items to existing information systems (i.e. medications to clinical sets and diagnosis to drug sets).
- The need for regular updating of data sets to incorporate new developments (i.e. stents).
- The importance of validation exercises, especially for major data sets such as HIPE.
- The need for annual reporting and dissemination of information from data sets (HIPE, Registers).
- The need for agreement on data set for a PCI Register(s).
- The need to consider data collection and linkages with A&E departments.
- The importance of interfacing data sets among professionals in the seamless delivery of cardiovascular care (primary care, hospital, cardiac rehabilitation).
- The need for agreement on evaluation indicators using EuroAspire markers where possible. Also indicators such as
  - Process measures (e.g. waiting time, exit time, thrombolysis time)
  - Outcome measures (mortality, morbidity (co-morbidity).

f. Cardiac Rehabilitation key points

- The need for agreement on a data set (inclusive of definition) for Cardiac Rehabilitation.
- The importance of interfacing information across sectors, as above
- Annual audit reporting (i.e. eligibility uptake, client satisfaction)
- Follow up data at 12 months using EuroAspire markers.

6.6 Developments

6.6.1 Developments in the area of surveillance

Introduction

Addressing the burden of cardiovascular disease in the region requires timely, accurate and reliable surveillance systems to understand the extent of the problem, the evolution of change in risk factors, incidence and prevalence of disease in the population as well as the need to alter implementation policies.

A surveillance system for cardiovascular disease is required, with the following objectives:

- To access and analyse routine mortality and morbidity data to estimate trends in the burden of cardiovascular disease at population level;
- To monitor the state of health of the population with regard to lifestyles and risk factors for cardiovascular disease;
- To support clinical audit of care of patients with cardiovascular disease and evaluation of health promotion programmes;
- To estimate the use of health services resources and to support health services planning.

Objective 1: Death certification

To ensure the accuracy and reliability of death certification.

Rationale

Death is but one marker in assessing the burden of heart disease. Nonetheless, it is a very potent one as each death must be certified by law and death rates are an established mechanism for international comparison. *Building Healthier Hearts* highlighted the need for more attention to be paid to ensuring the reliability of death certificates. Problems outlined were a) the accuracy of clinical diagnosis of the cause of death by the death certifier and b) the coding of multiple causes of death by those responsible. Four recommendations cover the need for a validation exercise, the need to increase the autopsy rate, the importance of consultant completion of the death cert, and the need for more timely vital statistics.

Action 1: Nationally agreed regional contribution

By Year 1, agreement to be reached following a review with the Department of Health and Children, the Advisory Forum, the HRB and other Health Boards on the role of the ERHA in contributing to the national work in this area.

Stakeholders with responsibility for delivery: ERHA, DoHC with others

Action 2: Local initiatives

By end of Year 2 the following local initiatives within the region will be initiated:

a) Awareness raising and training in accurate completion of death certification among medical students, medical staff and GPs.

b) Survey of the accuracy of death certification in each hospital in Year 1-Year 2, and three to five yearly thereafter.

c) Discussions with hospital consultants on how to achieve recommendation R10.2.

Stakeholders with responsibility for delivery: ERHA, Medical schools, hospitals in the region, ICGP

Objective 2: Health service information and surveillance systems

To develop and enhance patient based IT systems, which will allow disease surveillance, clinical and organisational audit and measures of performance and outcome in a timely manner in health service settings.

Rationale

A number of databases are operational at present such as HIPE, prescription databases, prevalence surveys and patient registers. However, a number of common issues, which prevent maximising current data were outlined in the regional working group such as: the need for a cardiac minimum data set, the need for a unique identifier for each person, the importance of agreed data definitions, the place for regular validation and cleaning of data. The working group also highlighted new areas for attention as follows: the need for analysis and front-ending of analysed data (report generation) with dissemination of interpreted information, the need for data interfacing and harmonisation with related strategies, the establishment of new databases as envisaged in *Building Healthier Hearts*, the need for

agreed outcome indicators and finally the importance of support, infrastructure and training in the environment of IT and surveillance.

Action 1: Maximising current information

By Year 1, a regional plan to maximise current information systems will be agreed and implemented.

Stakeholders with responsibility for delivery: ERHA

Action 2: Developments

By Year 2 a regional plan will be agreed with stakeholders in regard to significant developments of a) linkages of current ICT systems, b) standardisation of coding, of data definitions and data collection, c) data set/agreed variables which meet the needs for demographic, clinical and service delivery data. This work will take place in conjunction with national recommendations from NCIS and in close collaboration with the regional ICT strategy.

Stakeholders with responsibility for delivery: ERHA, NCIS, DoHC, relevant stakeholders

Action 3: Performance indicators and outcome

By Year 1 performance indicators and outcome measures will be agreed with stakeholders in the region based on national work and will be actioned with the first report in Year 2. Performance indicators and outcome measures must be elaborated as a result of close liaison between the bodies developing guidelines and information systems in order for them to be meaningful and accepted.

Stakeholders with responsibility for delivery: ERHA, DoHC, relevant stakeholders

Objective 3: Surveillance of health behaviour

To document health behaviour and heart health risk factor prevalence on a regular basis (not greater than 3 yearly) in order to inform policy and follow trends.

Rationale

Surveillance of health behaviour is an essential building block in understanding how well we are achieving the longer-term goals of the cardiovascular strategy. National surveillance through the SLAN/HBSC surveys have been carried out in 1998 and repeated recently in autumn 2002. A number of community based and sub group based surveys have been carried out by diverse agencies such as academic departments and lobby groups.

Action 1: Targeting vulnerable groups

By Year 1 agreement will be reached on how to target vulnerable and deprived groups (such as inner city populations of large urban areas, populations with more literacy problems) within the region as an adjunct to the SLAN/HBSC surveys.

Stakeholders with responsibility for delivery: AHBs, ERHA

Action 2: Register of local needs assessments

From Year 1 - Year 4, to seek to build a regional register of local needs assessments so as to improve cohesion, maximise the gain and reduce inefficiency in this population-based area.

Stakeholders with responsibility for delivery: ERHA, AHBs

Objective 4: Promoting evidence based care

To promote a knowledge and research environment in the health services.

Rationale

A research strategy for Ireland has been outlined in *Making Knowledge Work for Health (2000)*. The Health Research Board is the main agency for prioritisation and funding of research in Ireland based on this strategy. An important application of this strategy is the appointment of a research officer in each Health Board/Authority. A recent development in Dublin is the formation of the Institute of Cardiology. The promotion of biomedical research is mainly the focus of these agencies.

The focus of the action-planning group was to identify the developments, which must be furthered in the region. Getting research into practice was thought to be central in this section, along with audit development as well as encouraging research in inexperienced staff possibly through a bursary system

Action 1: Promoting critical appraisal

From Year 1, professionals and providers to plan yearly upskilling of medical, nursing and allied professionals in critical appraisal skills in order to promote the concept of getting research into practice.

Stakeholders with responsibility for delivery: ERHA, DATHs, AHBs

Action 2: Dedicated time

In Year 1 – Year 4 to seek a mechanism, through HR structures, for agreeing dedicated time for research led by senior clinical professionals. Supportive mentoring and teaching would be integral to this model.

Stakeholders with responsibility for delivery: ERHA, HSEA, IMO, ICGP, IHCA

Action 3: Bursaries for junior staff

By Year 1 a system of awarding small bursaries will be established to promote research among junior health service staff.

Stakeholders with responsibility for delivery: ERHA in association with research institutions

Action 4: Promoting Change through Quality Assurance

By Year 3 the audit cycle (clinical, organisational and patient satisfaction) will be an intrinsic part of provider planning and service delivery in order to assure high quality care.

- In Year 1 the Authority will initiate the co-ordination of regional audit / audit cycle (clinical, organisational and patient satisfaction) for heart health.
- By Year 2 all agencies will develop an action plan. These plans will take note of national initiatives and will be cohesive across the region.

Stakeholders with responsibility for delivery: ERHA, AHBs, DATHs, ICGP, other relevant agencies

Action 5: Scientific committee

By Year 1 an exploratory group will report on the mechanisms by which a regional scientific committee to promote heart health surveillance and epidemiology along with health services research within the region can be established.

Stakeholders with responsibility for delivery: ERHA, AHBs, DATHs in association with relevant bodies

7.1 Summary of Estimated Costs:

Sector Costs	Recurring Costs	Once-Off Costs
Total cost of implementation of 4 Objectives	**€623,654** **0.5% of pay budgets Plus linked with ICT and Primary Care Strategies**	**€63,200** **Plus linked with ICT and Primary Care Strategies**

Objective	Actions	Details	Stakeholders with responsibility for delivery
Year 1			
Objective 1	**Death Certification** Action 1	Nationally agreed regional contribution	ERHA, DoHC with others
Objective 2	**Information and surveillance** Action 1	Maximising current information	ERHA
Objective 2	**Information and surveillance** Action 3	Performance indicators and outcomes	ERHA, NCIS, DoHC and relevant stakeholders
Objective 3	**Surveillance of health behaviour** Action 1	Targeting vulnerable groups AHBs,	ERHA
Objective 3	**Surveillance of health behaviour** Action 2	Register of local needs assessments	ERHA, AHBs
Objective 4	**Promoting evidence based care** Action 1	Promoting critical appraisal	ERHA, DATHs, AHBs
Objective 4	**Promoting evidence based care** Action 3	Bursaries for junior staff	ERHA in association with Research Bodies
Objective 4	**Promoting evidence based care** Action 4	Population Health Committee	ERHA, AHBs in association with academic and clinical bodies
Objective 4	**Promoting evidence based care** Action 2	Dedicated time	ERHA, ICGP, IMO, HSEA, IHCA
Objective 4	**Promoting evidence based care** Action 4	Scientific committee	ERHA, AHBs, DATHs, ICGP, other relevant agencies
Year 2			
Objective 1	**Death Certification** Action 2	Local initiatives	ERHA, ICGP, Medical schools each hospital
Objective 2	**Information and surveillance** Action 2	Developments	ERHA, NCIS, DoHC, others

Appendix

Appendix

Appendix A

Cardiovascular Health Strategy Working Group Members

Health Promotion Working Group

Ms. Martina Queally, Director of Health Promotion, South Western Area Health Board (Chair)
Ms. Margaret O'Neill, Dietician Manager, South Western Area Health Board
Ms. Sharon Foley, Director of Health Promotion, East Coast Area Health Board
Ms. Maria Lordan Dunphy, Director of Health Promotion, Northern Area Health Board
Mr. Gerry Hanley, Operations Manager, Northern Area Health Board
Dr. Catherine Hayes, Specialist in Public Health, Eastern Regional Health Authority
Ms. Colma NicLughadha, Health Promotion Officer, Irish Heart Foundation
Mr. Karl Mitchell, Assistant Community Development Officer, Dublin City Council
Ms. Doreen Bracken, Manager Physiotherapy Services, Irish Congress of Trade Unions (Community & Voluntary Pillar)
Ms. Siobhan McGrory, Youth Health Co-ordinator, National Youth Council of Ireland
Dr. Ailis Ni Riain, Irish College of General Practitioners
Ms. Olive McGovern, Youth Health Promotion, Department of Health & Children
Ms. Anne O'Riordan, Director of the Irish National Health Promotion Hospital Network
Ms. Mary Hanlon, Community Development Officer, Dublin City Council
Ms. Deirdre Whitfield, Community Development Enterprise Officer, Wicklow County Council
Ms. Bernadette Kiberd, CVHS Project Manager, Eastern Regional Health Authority

Primary Care Working Group

Ms. Louise McMahon, Senior Commissioner, Eastern Regional Health Authority (Chair)
Ms. Karen Burke, Service Planner Primary Care, Eastern Regional Health Authority
Dr. Siobhan Jennings, Specialist in Public Health Medicine, Eastern Regional Health Authority
Ms. Pauline Bryan, Director of Primary Care & Acute Services, South Western Area Health Board
Ms. Siobhan Fitzpatrick, CVHS Project Manager, South Western Area Health Board
Ms. Mary O'Connell, Director of Acute Services & Primary Care, East Coast Area Health Board
Dr. Peter Crean, Consultant Cardiologist, St James's Hospital
Mr. Kieron O'Leary, Manager/Dr. Tony O'Sullivan, Diabetes Federation of Ireland
Mr. John Corr, Community Pharmacist, Irish Pharmaceutical Union
Dr. Martin Henman, Pharmacy Lecturer, Irish Pharmaceutical Union
Dr. John O'Brien, General Practitioner, Irish College of General Practitioners
Dr. Kevin O'Doherty, General Practitioner Unit Doctor, East Coast Area Health Board
Dr. Richard Aboud, General Practitioner Unit Doctor, East Coast Area Health Board
Dr. Brid Holywood, General Practitioner Unit Doctor, Northern Area Health Board
Ms. Maria Greene, A/Director of Public Health Nurse, East Coast Area Health Board
Ms. Margaret O'Brien, Public Health Nurse, South Western Area Health Board
Ms. Julie Lynch, Dir of Public Health Nursing, Northern Area Health Board
Ms. Lita Griffin, Practice Nurse, Irish Practice Nurse Association
Mr. Declan Nolan, Clinial Liaison Manager, Northern Area Health Board
Ms. Bernadette Kiberd, CVHS Project Manager, Eastern Regional Health Authority

Pre Hospital Working Group

Ms. Niamh O'Rourke, CVHS Project Manager, East Coast Area Health Board (Chair)
Mr. Pat McCreanor, Chief Ambulance Officer, Eastern Regional Ambulance Service
Mr. Martin O'Reilly, FF/Training Officer, Dublin Fire Brigade
Dr. Pat Plunkett, Consultant in Emergency Medicine, St James's Hospital
Prof. Gerard Bury, General Practitioner, Coombe Woman's Hospital
Dr. Geoff King, Director, Pre Hospital Emergency Care Council
Ms. Bernadette Kiberd, CVHS Project Manager, Eastern Regional Health Authority

CVHS Hospital Working Group

Dr. Brian Maurer, Director of Cardiology, St Vincent's University Hospital Incorporating St. Michael's Hospital (Chair)
Dr. Siobhan Jennings, Specialist in Public Health Medicine, Eastern Regional Health Authority
Ms. Louise McMahon, Senior Commissioner, Eastern Regional Health Authority
Ms. Joan Love, Sister Cardiology, Adelaide & Meath incorp. National Children's Hospital
Ms. Anna Clarke/Ms.Daphne Owens, Diabetes Federation of Ireland
Ms. Siobhan Fitzpatrick, CVHS Project Manager, South Western Area Health Board
Mr. Pat Bennett, Assistant Chief Executive, South Western Area Health Board

Cardiac Rehabilitation Working Group

Ms. Helen Newton, Snr Cardiac Rehab Co –ordinator, Beaumont Hospital (Chair)
Prof. John Horgan, Consultant Cardiologist, Beaumont Hospital
Ms. Shirley Ingram, Cardiac Rehab Co-ordinator, Adelaide & Meath incorp. National Children's Hospital
Prof. Ian Graham, Consultant Cardiologist, Adelaide & Meath incorp. National Children's Hospital
Ms. Sophie Charles Cardiac Rehab Co-ordinator, Irish Association of Cardiac Rehab
Ms. Nena Sheridan, Sister Cath Lab Coronary Care Unit, Mater Hospital
Ms. Bernadette Kiberd, CVHS Project Manager, Eastern Regional Health Authority

CVHS Information Systems, Audit & Research Working Group

Dr. Siobhan Jennings, Specialist in Public Health Medicine, Eastern Regional Health Authority (Chair)
Ms. Bernadette Kiberd, CVHS Project Manager, Eastern Regional Health Authority
Ms. Bridie Kelly, IT Consultant, Easter Regional Health Authority
Ms. Valerie Nagle, Economist, Eastern Regional Health Authority
Ms. Niamh Murphy, Data Analysis, Eastern Regional Health Authority
Dr. Catherine Hayes, Specialist in Public Health, Eastern Regional Health Authority
Ms. Karen McNeill, Information Analysis, Eastern Regional Health Authority
Ms. Martina Queally, Director of Health Promotion, South Western Area Health Board
Prof. Hanna McGee, Department of Psychology, Royal College of Surgeons in Ireland
Ms. Kathleen Bennett, Statistician, St James's Hospital
Dr. Peter Crean, Consultant Cardiologist, St James's Hospital
Dr. Mary Codd, Epidemiologist, Mater Hospital
Dr. Margaret Fitzgerald, Chief Specialist, Food Safety Authority of Ireland
Dr. Geoff King, Director, Pre Hospital Emergency Care Council
Dr. Brian Meade, GP Regional Co-ordinator Irish College of General Practice

Glossary of Terms

A&E	Accident and Emergency
ACLS	Advanced Cardiac Life Support
AED	Automated External Defibrillation
AHB	Area Health Board
AMI	Acute Myocardial Infarction
ASAI	Advertising Standards Authority of Ireland
BHH	Building Healthier Hearts
BLS	Basic Life Support
BP	Blood Pressure
CABG	Coronary Artery Bypass Graft
CCU	Coronary Care Unit
CEO	Chief Executive Officer
CHAIR	Coronary Heart Attack Ireland Register
CHD	Coronary Health Disease
CME	Continuing Medical Education
CPA	Chest Pain Assessment
CPAU	Chest Pain Assessment Unit
CPD	Continuing Professional Development
CPR	Cardiopulmonary Resuscitation
CR	Cardiac Rehabilitation
CVHS	Cardiovascular Health Strategy
DATHs	Dublin Academic Teaching Hospitals
DCU	Dublin City University
D.Ed	Department of Education and Science
DED	District Electoral Division
DFB	Dublin Fire Brigade
DoES	Department of Education and Science
DoHC	Department of Health and Children
ECAHB	East Coast Area Health Board
ECG	Electrocardiography
EHSS	Eastern Health Shared Services
EMRU	Emergency Motorcycle Response Unit
EMT	Emergency Medical Technician
EPS	Electrophysiology service
ERAS	Eastern Regional Ambulance Service
ERHA	Eastern Regional Health Authority
EU	European Union
FETAC	Further Education and Training Awards Council
GMS	General Medical Services
GP	General (medical) Practitioner
HEA	Higher Education Authority
HBSC	Health Behaviour in School-Aged Children (survey)
HETAC	Higher Education and Training Awards Council
HIPE	Hospital In-Patient Enquiry
HIQA	Health Information and Quality Authority
HPH	Health Promoting Hospital
HR	Human Resources
HSEA	Health Service Employers Agency
IACR	Irish Association of Cardiac Rehabilitation
IBEC	Irish Business and Employers Confederation
ICGP	Irish College of General Practitioners
ICT	Information & Communication Technology
ICTU	Irish Congress of Trade Unions
ICU	Intensive Care Unit
IHCA	Irish Hospital Consultants Association
IHD	Ischaemic Heart Disease
IHF	Irish Heart Foundation
IMO	Irish Medical Organisation
IPA	Institute of Public Administration
IPS	Irish Pharmaceutical Society
IT	Information Technology
M&E	Monitoring and Evaluation
NAHB	Northern Area Health Board
NCIS	National Cardiovascular Information Steering Group
NI	Northern Ireland

OPD	Out Patients Department
ORCAN	Organisation Catastrophe Neuchâteloise (Ambulance Standards)
OSH	Occupational Safety and Health
PCI	Percutaneous Coronary Interventions
PCTA	Percutaneous Transluminal Coronary Angioplasty
PHECC	Pre-Hospital Emergency Care Council
PHN	Public Health Nurses
QA	Quality Assurance
SAHRU	Small Area Health Research Unit
SJH	St James's Hospital
SLAN	Survey of Lifestyle, Attitudes and Nutrition
SOP	Standard Operating Procedure
SVUH	St Vincents University Hospital
SWAHB	South Western Area Health Board
TCD	Trinity College Dublin
TCDR	Total Call Duration from Receipt (of call)
TOE	Transoesophageal
TOMCAT	Cardiac Diagnostic Management System
UK	United Kingdom
US	United States (of America)
VHI	Voluntary Health Insurance
WHO	World Health Organisation
WTE	Whole Time Equivalent

References

A Health Survey of Health Personnel in the Eastern Region, Department of Public Health, Eastern Regional Health Authority, February 2002.

Balanda K, Wilde J., *Inequalities in Mortality 1989-1998: A report on All-Ireland mortality data Ireland (2001).* The Institute of Public Health in Ireland.

Cleland J.G.F in *Prevention of Disease Progression throughout the Cardiovascular Continuum*, New York 2001.

Building Healthier Hearts: Report of the Cardiovascular Health Strategy Group. Stationery Office, Dublin.

Codd M., *50 years of Heart Disease in Ireland: Mortality, Morbidity and Health Services Implications* (2001) Irish Heart Foundation, Council for Heart Disease in Women.

Friel S., Nic Gabhainn S., Kelleher C., *The National Health and Lifestyle Surveys,* (1999). Health Promotion Unit, Department of Health and Children, Dublin.

Johnson Z., *Mortality patterns in Dublin 1986-87*, Department of Public Health, Eastern Heath Board, Dublin.

Johnson Z., Dack P., Small Area Mortality patterns. Irish Medical Journal, 1989 Sept; 82 (3): 105-8.

Public Health Information System, Version 4, Information Management Unit, Department of Health and Children.

Mortality in the Eastern Region, 1994-98, Analysis by Area Health Board. (In print)

Mair F.S. et al. *British Journal of General Practice 1996;* 46:77.

O'Connor T.G., Buring J.E., Yusuf S. et al. *An overview of randomised trials of rehabilitation with exercise after myocardial infarction.* Circulation 1989; 80:234-44.

Oldridge N.B., Guyatt G.H., Fisher M.E., Rimm A.A., *Cardiac rehabilitation after myocardial infarction: combined experience of randomised trials.* JAMA 1988; 260: 945-50.

The National Health & Lifestyle Surveys, Centre for Health Promotion Studies, National University of Ireland, Galway 2002.

EASTERN REGIONAL HEALTH AUTHORITY

Údarás Réigiúnda Sláinte An Oirthir