Heart Health Action Plan

First Progress Report 2004

Cardiovascular Strategy Steering Group Report

EASTERN REGIONAL HEALTH AUTHORITY
Údarás Réigiúnda Sláinte An Oirthir

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Foreword

Foreword by Michael Lyons, Regional Chief Executive, ERHA

I am pleased to find that considerable progress has been made in the implementation of the Heart Health Action Plan for the Eastern Region, during its first year. During 2000 – 2004 approximately €13.5 million has been invested in Heart Health in the Region with circa 210 whole time equivalents newly appointed.

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 Action Plan, through its objectives, sets out to address the burden of heart disease experienced by people throughout the Eastern Region.

The Eastern Regional Health Authority (ERHA) 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 Group under the chairmanship of Dr. Siobhan Jennings for giving overall impetus and direction to the implementation of this important Action Plan.

Michael Lyons
Regional Chief Executive

Introduction and Acknowledgments

Heart disease is a 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 15. The Eastern Regional Health Authority established its commitment to the implementation of the recommendations of the national strategy, *Building Healthier Hearts*, by developing a five year Action Plan through a multidisciplinary and multisectoral steering group. Following on from this work a second regional Steering Group was convened to oversee the implementation of this plan. This is the first progress report of the Steering Group on heart health in the eastern region following the launch of the Heart Health Action Plan in October 2003.

This report:

a) describes recent trends in heart disease and heart health,

b) outlines activity to date within and beyond the health services in the region as well as setting out the emphasis for the coming year and

c) notes the context of the reforms for the further developments in this area of health.

Notably many improvements are to be seen and celebrated. The introduction of the legislation to ban smoking in the workplace in the past year is heartily welcomed by the Steering Group and will significantly advance the regional activities to promote heart health and reduce heart disease. Other trends from a regional perspective are the declining trend in heart attack, improvements in treatment ('door to needle time') for the patient with heart attack, reduction in smoking with further reduction expected following the smoking ban, increased facilities for cardiac rehabilitation along with the instigation of a programme of secondary prevention in primary care, increased prevalence of 'treated' heart disease, continued improvement in facilities caring for patients in the Emergency Department, in cardiac catheter laboratories etc.

Inevitably, however, challenges continue to exist. There is still evidence of gaps in treatment and facilities be it in terms of evidence based prescribing, in providing for the impending heart failure epidemic, in improving detection and treatment of diabetes or in keeping pace with increased detection and need for follow on rehabilitation and secondary prevention programmes. Ironically, having improved the delivery of thrombolysis for acute myocardial infarction compelling evidence now exists for implementing the more advanced treatment of primary angioplasty delivered through the catheter laboratories.

Two areas deserve particular focus and attention for development. One is tackling the obesity epidemic, which has been signalled by the previous Minister for Health, Michéal Martin. A similar and vigorous approach to this problem, as adopted for smoking, is now required nationally. The second is the speedy and robust implementation of modern information systems to facilitate surveillance of risk factors and behaviours, to match need for health care with supply of services, to allow improved epidemiological surveillance of outcomes and importantly to facilitate clinical audit and governance.

I wish to acknowledge the commitment of the Regional Cardiovascular Steering Group in overseeing the implementation of the Action Plan through its first year. Many people have contributed to this report, formally or informally, and to them many thanks. Also, it is clear to me that there is a huge commitment to treating heart disease and promoting heart health among the staff in health services and beyond. I want to say a special thank you to you all.

Finally, sincere thanks are offered to Ms. Bernadette Kiberd – Service Planner, Ms. Regina Black – Heart Health Project Manager and Ms. Olivia Magee – Senior Administrative Assistant for their enthusiasm and commitment to this task.

Dr. Siobhan Jennings
Chair, Cardiovascular Steering Group

Changing trends in Heart Health

1

Changing trends in Heart Health

1.0 Introduction

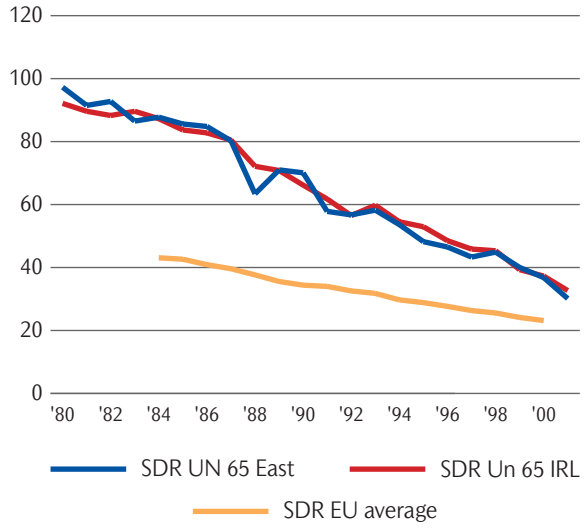
Heart disease is a major health challenge in Ireland. As death rates decline the number of people who survive with heart disease rises. Preventing heart disease and promoting heart health is showing divergent trends. Some of these changing trends are presented here.

1.1 Trend in deaths from heart disease

1.1.1 Decline in premature death rates from heart disease

One quarter of all deaths in the Eastern region are caused by heart disease and 19% of premature deaths are due to ischaemic heart disease. Deaths from heart disease are declining in the eastern region as seen nationally and internationally (figure 1.1).

Figure 1.1 Trend in IHD mortality (Under 65y) in Ireland, Eastern Region and EU 15 average



Between 1980 and 2001, the annual percentage decrease in premature (< 65 years) death rates (age standardised) for males and females in the Eastern Region has been 5.2% and 6% respectively. This compared favourably with the EU annual percentage change of 4% and 3.6%. While this decline in death rates in the Eastern Region is faster than the EU rates, the Eastern excess on the EU average is expected to remain for some years to come. For example by 2015, if the current rates of change are maintained, the Eastern excess is expected to reduce from a high of 103% in 1987 to 36% in 2015 for males. For females the Eastern excess is expected to reduce from 167% in 1982 to 13% in 2015.

Contributors

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1.1.2 Explaining decline in mortality in Ireland, 1985-2000

Coronary heart disease (CHD) mortality rates in Ireland are still amongst the highest in Europe. However, CHD mortality has been decreasing steadily since the mid-1980s. Future strategies now require a better understanding of recent CHD trends.

Our study aimed to examine how much of the decline in CHD mortality could be attributed to "evidence based" medical and surgical treatments, and how much to changes in major cardiovascular risk factors. A previously validated IMPACT mortality model was used to combine and analyse data on uptake and effectiveness of specific cardiology treatments and risk factor trends in Ireland. The main data sources were published trials and meta-analyses, official statistics, clinical audits, observational studies and national surveys.

Between 1985 and 2000, CHD mortality rates in Ireland fell by 47% in both men and women aged 25-84. This resulted in 3760 fewer deaths in 2000. Some 55% of this mortality fall was attributed to treatments (including 19% secondary prevention, 17% heart failure treatments, 5% initial treatments of AMI and 5% revascularisation). Approximately 45% of the mortality fall was attributable to population risk factor reductions (principally smoking 26%, but also blood pressure and cholesterol).

Approximately half the CHD mortality decline in Ireland between 1985 and 2000 was attributable to medical treatments and almost half to reductions in major risk factors, principally smoking. This emphasises the importance of a comprehensive strategy which actively promotes primary prevention, particularly for tobacco and diet, and which maximises population coverage of effective treatments, especially for secondary prevention and heart failure.

Contributors

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1.2 Promoting Heart Health and preventing disease

Ireland is a country with high premature mortality and also high prevalence of risk factors for heart disease both in the general population as well as the subgroup who have established disease.

1.2.1 Smoking

In the 2002 SLAN survey published in 2003 a reduction in national smoking prevalence in both males and females in all age groups was recorded. In 2002 27% of the adult population reported being regular or occasional cigarette smokers compared with 31% in 1998. However, smoking continues to be a major public health problem in the Eastern Region (table 1.1).

The highest smoking rates nationally in 2002 were seen in this region in the South Western Area Health Board and the Northern Area Health Board. Notably, in the Northern Area Health Board smoking rates were higher among females than males. There continued to be marked age related patterns to smoking with highest rates among both younger males and females.

In school children national smoking rates dropped from 21% to 19%, the drop being most noticeable in the 12-14 year age group, suggesting delayed initiation of smoking. In the Eastern Region this downward trend in smoking was marked with decreases of 7.5% among boys and 10% among girls in the 15 to 17 year age group.

In 2002 the Office for Tobacco Control in association with the Health and Safety Authority commissioned an independent scientific report which looked at the effects of Environmental Tobacco Smoke (ETS) or passive smoking. This report called for the introduction of legislation to protect workers from the adverse health effects of exposure to Environmental Tobacco Smoke. The Department of Public Health, ERHA endorses the Government decision to introduce legislation to prohibit smoking in the workplace in order to protect employees and patrons from the proven dangers associated with passive smoking.

In the second national SLAN survey there was also a reported reduction in exposure to passive smoke with reduced exposures at home, in the workplace and on public transport. Exposure rates at work were much lower than in pubs and clubs, highlighting the importance of the recently introduced smoking legislation.

In people with established heart disease the trend is equivocal. In the recently published 'CCU 2003' study patients recently admitted with a suspected AMI had a smoking rate of 39%. Studies interviewing patients months after the event show a reduction in smoking to a level somewhat lower than the general population. Table 1.2 shows the trend in the last 10 years.

Table 1.1 Data on smoking from SLAN surveys 1998 and 2002

General population	Males 1998	Males 2002	Females 1998	Females 2002
% smoking cigarettes	32.1	**28.3**	30.7	**25.8**
Mean number of years being a smoker	21.6	**22.3**	20.5	**21.1**
Smoked cigarettes in the past	58.1	**42.6**	65.3	**48.7**

Table 1.2 Trend in smoking from studies in patients with heart disease

Study	Smoking (males)
Feely et al, 1994	19%
EUROASPIRE 2000 (Irish data)	26%
Heartwatch 2004	15.9%

One of the most significant public measures to reduce smoking in this country has been the legislation, enacted in 2003, to ban smoking in the workplace. An early study of attitude and behaviour change is outlined below:

Positive impact of the anti-smoking legislation on hospitalised cigarette smokers.

Context and aim: Following implementation of recent legislation creating smoke-free workplaces, a questionnaire survey was carried out on hospital patients. The aim of the study was to determine the prevalence of smoking, attitudes towards smoking and the smoking ban, and the ban's influence on the behaviour of current smokers.

Methods: As part of an ongoing study we performed a census of all in-patients in St Vincent's University Hospital in July 2004. The census was carried out over a one-week period and the questionnaire was interviewer administered. 259 (93.8%) of those surveyed responded. Chi-square tests were used to determine statistical significance.

Results: 24.3% of patients were current smokers at the time of admission. 82.2% of all patients agreed that passive smoke damages health and there was a positive reaction to the smoking ban. These attitudes followed a trend with 92.2% of never-smokers, 79.6% of ex-smokers and 57.1% of current smokers were in agreement with the ban ($p < 0.001$). Current smokers were also asked about their intentions regarding their smoking in the future. 50.8% wished to stop, 19.0% said they might stop and only 14.3% intended continuing. Agreement with the ban was highest in those wishing to stop (71.8%) and lowest in those not intending to do so (31.5%) ($p < 0.001$). Because of the legislation smoking was only permitted in designated areas in the hospital grounds. As a result 20.6% of those smoking at the time of admission had stopped while in hospital and a further 39.7% had reduced consumption.

Conclusion: With enforcement more than 60% of smokers attending hospital were able to reduce their smoking or cease completely. If intervention and follow-up could maintain these rates after discharge a major reduction in smoking among post-hospitalised patients and thus in the population would be possible.

Contributors

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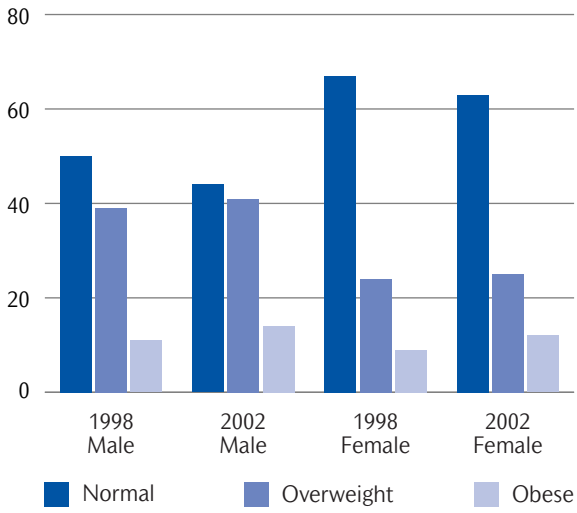
Acknowledgement

The project was funded by a Health Research Board Summer Student Grant.

1.2.2 Obesity – time to sound the alarm

Overweight and obesity is a growing problem in the Eastern Region. Between 1998 and 2002 obesity rates rose from 11% to 14% in men and from 9% to 12% in women (figure 1.2). The Northern Area Health Board has the highest rate nationwide at 15.7%. It also has the highest rate of female obesity in the country. In contrast the East Coast Area Health Board has the lowest rate at 9.8%. Of note, SLAN survey respondents in the ERHA were more likely to be on a diet than those from any other part of the country.

Figure 1.2 Trend in overweight and obesity, SLAN survey 1998 & 2002



Obesity is defined by Body Mass Index (BMI) i.e. 'weight in kilos divided by height in square metres' *BMI = Wt (Kg) / Ht (m2)*. Table 1.3 outlines the categorisation of overweight and obesity.

Table 1.3 Categorisation of weight

Weight		BMI (kgs/m2)
Underweight		<18.5
Normal		20-24.9
Overweight		25-29.9
Obese	Grade 1	30-34.9
	Grade 2	35-39.9
	Grade 3	>=40

Obesity causes premature death. It is associated with at least 2,500 deaths per year in Ireland. A person who is obese at 40 years of age is likely to die seven years younger than a person of normal weight. A young obese adult has a 50% higher mortality rate than a non-obese adult. In the US, where 97 million people are overweight, it is considered to be the second most preventable cause of death after cigarette smoking. Tackling obesity could lead to similar health benefits as that of tackling smoking.

The trend in obesity in children is a worry. The number of obese children was relatively stable until the 1980s. Obese children are likely to become obese adults. Obesity seriously threatens the health of children, reducing their life expectancy. Some will die before their parents. Today children's leisure pursuits have shifted from outdoor activities to indoor play, computer games and TV watching. Cars are used for even the shortest journey. Children's diets have also changed. They eat larger amounts of fast food and energy dense food. Obesity starts in infancy. Breast-feeding can be protective. A history of 3-6 months of exclusive breast-feeding was found to be associated with a 35% reduction in obesity at 5-6 years of age.

Type 2 diabetes is linked to diet and lifestyle. This disease is not seen in normal weight children. BMI in childhood is related to BMI in adult life. Type 2 diabetes is now being diagnosed in overweight children. Not so long ago such a diagnosis in the young would have been unimaginable as it was mainly confined to older overweight adults.

It is estimated that obesity is costing the Irish economy at least €340 million annually. The cost to the UK economy was estimated at 6% of the health budget.

A target of 5-10% reduction in weight is worth pursuing. Blood pressure drops linearly with weight loss. There are favourable effects on lipids. For each kilogram reduction in weight low density lipoprotein drops by 7% and triglycerides drop by 2%. The effects on high-density lipoproteins are positive.

Prevention is an important priority. While the health service must play a major role it cannot tackle the issue alone. Responsibility at every level in society, personal and organisational, is required to introduce multi-faceted actions.

There is a responsibility on the food industry, communities, schools, employers, local authorities, all central government agencies and policy makers to assess the wider health impact of their policies and actions and to proactively put healthy living on their agenda.

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1.3 Treating those who become ill and preventing deterioration

1.3.1 Changing trends in acute myocardial infarction

Hospital discharge rates for acute myocardial infarction are falling as shown internationally. Data for the Eastern Region shows the following picture:

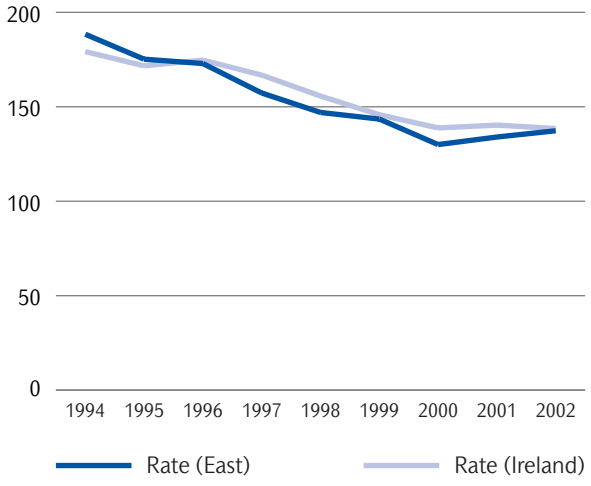
- Numbers and age standardised rates of discharge for acute myocardial infarction for residents of the region dropped steadily through the 1990s up to 2001 when an upward trend appeared. This observation is also true for national data (table 1.4 and figure 1.3)

Table 1.4 Numbers and rates of patients discharged with diagnosis of AMI

Year	Residents discharged with diagnosis of AMI (Eastern Region)	Age-Standardised death rate (per 100,000)	Residents discharged with diagnosis of AMI (Ireland)	Age-Standardised death rate (per 100,000)
1998	1643	**147.0**	5431	**155.7**
1999	1633	**143.5**	5142	**145.8**
2000	1510	**130.0**	4958	**138.8**
2001	1600	**134.0**	5151	**140.3**
2002	1671	**137.3**	5202	**138.5**

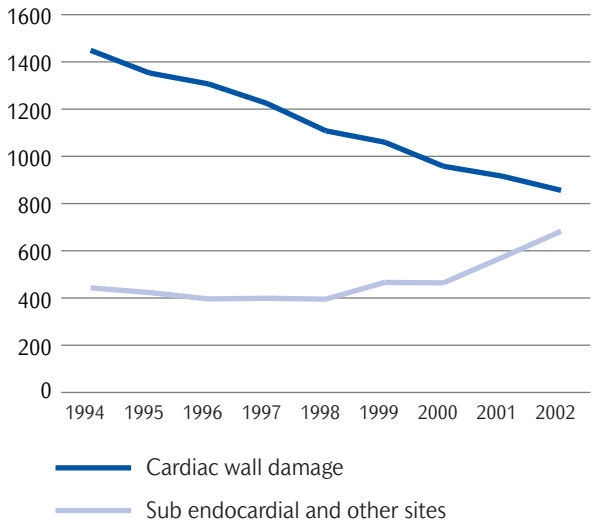
Source: HIPE data

Figure 1.3 Trend in Age standardised discharge rates for AMI in Eastern Region and Ireland



Source: HIPE data

Figure 1.4 Trend in AMI subtypes in Eastern Region



Source: HIPE data

- The subtype of AMI has changed over the period 1994 – 2002 (figure 1.4) with a decrease in patients with identifiable wall damage (ST elevated AMI, ICD code 410.0- 410.6) and a concurrent increase in patients diagnosed with either a) sub-endocardial infarction (ICD 410.7) or b) site unspecified (ICD 410.9)

1.3.2 Managing the patient with chest pain/acute coronary syndrome. *Regional audit of 'door to needle' time*

The aim of this work was to establish and compare the current baseline information on 'door to needle' times for treatment of acute myocardial infarction (AMI) in all hospitals in the Eastern Region following the recommendations in *Building Healthier Hearts*. Trends including national data since 1992 are presented in table 1.5.

Methods: Data on early care of patients with a diagnosis of AMI were collected from coronary care units (CCUs) a) from the six major Dublin hospitals and b) from the three acute hospitals in the region for the period March – May 2002.

Results: 51.5% of patients with AMI received thrombolysis in the major hospitals compared to 63% in the smaller acute hospitals. Primary PTCA was the alternative treatment modality in the major hospitals bringing emergency reperfusion within the region to 62.3%. The site of thrombolysis was the ED in the majority of cases (76.6%) for the major hospitals compared with 31% in the acute hospitals. Door to needle time of 30 minutes varied from 32 - 37% in the major hospitals to 16% in the acute hospitals (median times in table). Almost one fifth (18%) of patients presented too late for thrombolysis. 93.5% were given aspirin with 83% receiving it in ED.

Discussion: Trends in treatment of AMI have changed as observed in this study. There has been with a shift to early treatment in the ED along with the emergence of primary PTCA as an alternative treatment modality. 'Door to needle' times are still long especially in hospitals where thrombolysis is given in CCU. A significant minority of patients still present too late for thrombolysis.

It is noteworthy that many hospitals have carried out their own audits since and report further improvements.

Contributors

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Table 1.5 Trend in thrombolysis in Irish studies

	% Thrombolysed	Median time	% Thrombolysed in ED
1992 study (n = 109)	**49%**		**16%**
1994 Census (n = 620)	**58%**	**76 mins**	**4%**
2002 study Northside hosps (n= 85)	**52%** (+17% primary PTCA)	**43 mins**	**73%**
2002 study Southside hosps (n=113)	**51%** (+6% primary PTCA)	**51.5 mins**	**78%**
2002 study Acute general hosps in E. Region (n = 51)	**63%**	**76 mins**	**29%**
2003 CCU study (n= 935)	**43%** (+4% primary PTCA)	**45 mins**	**48%**

1.3.3 Modernising assessment for the lower risk patient with cardiac symptoms

The care of the lower risk patient arriving at ED with cardiac type symptoms was the subject of a seminar in Dublin in 2002 hosted by the ERHA.
This seminar promoted debate and contributed to the evolution of chest pain/ cardiac pain assessment facilities. It is now clear that the objectives of modernising care to this group of patients should be a) to clarify the risk of ischaemia, treat appropriately and so reduce morbidity and mortality in this group, b) to reduce inappropriate admissions to CCU.

Improving this area of care was prioritised in 2003 and 2004 within the ERHA. Following funding and discussions with each hospital, all hospitals are now either providing structured chest pain assessment in ED/Cardiology (n = 2), are actively making preparations to provide (n = 5) or are considering (n = 2) structured chest pain assessment. The following section gives a brief and clear description of the service.

Chest Pain Assessment Unit St James's Hospital, Dublin 8

Chest pain is the second most common complaint seen in the Emergency Department. International figures show that up to 12% of these patients are inappropriately discharged. This is associated with five–fold increase in mortality (26%).
We established the first designated Chest Pain Assessment Unit in Ireland, providing a consultant led multi-disciplinary service on a 24-hour basis for this potentially high risk patient cohort.

Aim: The objectives of this development are to provide: a) A patient centred, equitable, rapid access system to a structured assessment facility utilising best available evidence for diagnosis and early treatment of patients with chest pain of cardiac origin; b) A reproducible assessment model to allow for safe discharge in 12hours compared to an average inpatient assessment of 3-5days (significant bed saving); c) Prompt diagnosis of patients requiring 'reperfusion' therapy in order to avoid preventable mortality and morbidity associated with known weaknesses in the traditional models of assessment; d) Provide healthcare promotion to reduce risks of preventable sudden cardiac death.

Results: 60% (approximately 1,000 patients per annum) of patients presenting to the emergency department who require assessment for chest pain are now admitted to the chest pain assessment unit. 85% of these patients are safely discharged within 12 hours of admission. Though discharged all of these patients are recalled for review at 48 hours for symptom review, troponin testing and risk factor assessment and modification.

To date we have had no adverse events associated with early discharge and no patients has had missed myocardial injury as evidence by a 100% negative 48 hours troponin assessment. Of patients who are referred for further invasive assessment (angiography) over 60% of these patients are identified as having significant underlying coronary artery disease. The relative percentage of abnormal angiography is similar in men and women in our cohort. These patients are now benefiting from earlier access to disease modifying treatment tailored according to their overall disease assessment. This development has significantly improved our ability to identify patients who require further invasive assessment and treatment. Many of these patients who would be considered 'low risk' of an acute event would have been discharged without further assessment. A significant proportion of patients would have represented with subsequent acute myocardial infarction or sudden cardiac death.

Contributors

Dr Geraldine McMahon, Consultant in Emergency Medicine and Dr Peter Crean, Consultant Cardiologist, St James's Hospital.

1.3.4 Regional audit of eligibility and capacity in cardiac rehabilitation provision

Aim: A regional audit to document a) current baseline eligibility for Phase 3 cardiac rehabilitation and b) capacity to meet this need in all hospitals in the Eastern Region was carried out in 2002.

Methods: Information on the eligible population and the capacity for cardiac rehabilitation was collected in all nine hospitals retrospectively (February-March 2001). Since then eligibility is estimated to have risen but cant be calculated without a study. However capacity was updated in Summer 2004.

Results: In 2001, 47% of eligible patients were invited to participate with only two thirds attending. Completion rates were very high (89%) in attenders. Age and health board area were significant independent predictors of being invited to CR. Gender was not independent of age.

53% of the need for this service was met by capacity in the Region's nine hospitals in 2000 rising to 59% in 2002 and to 72% in 2004 (table 1.6).

Conclusion: Many eligible patients are not invited to cardiac rehabilitation. Lack of capacity is a problem. Among the invited non-participation is a factor. Inequity in age and inter hospital variation in invitation is noted.

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1.3.5 Secondary prevention
The Heartwatch programme

Heartwatch is a national programme aimed at the secondary prevention of cardiovascular disease in Ireland. It is offered through general practice in conjunction with community based dieticians, smoking cessation professionals and specialist nurse co-ordinators for patients with a history of proven Myocardial Infarction (MI), Coronary Artery Bypass Graft (CABG), or Percutaneous Transluminal Coronary Angioplasty (PTCA).

The pilot programme targets 20% of Irish General Practice and adheres to internationally recognised cardiovascular prevention guidelines ('Prevention of Coronary Disease in Clinical Practice 1998', Second Joint Task Force of European and other Societies on Coronary Prevention).

Preliminary results are available for the first year of the Heartwatch programme to the end of April 2004. In total 10,041 patients were registered into the Heartwatch programme in this period with 2192 (21.8%) recruited across the Eastern Region. The following data relate to the whole group of patients recruited nationally while regional data is awaited.

Registration details demonstrate that:

- Almost three-quarters of patients are male (73.5%);
- Less than one-fifth are aged under 55 years (14.6%);
- Almost three-quarters (73.1%) of patients had a medical card;
- Over one half of patients had no significant family history of cardiovascular disease.

Table 1.6 Numbers of patients eligible for cardiac rehabilitation in East compared with the capacity for cardiac rehabilitation in hospitals in East.

Hospital	Estimated Eligible population *	Capacity in 2000 (%)	Capacity April 2002 (%)	Capacity in June 2004 (%)
A	282	288 (!02%)	312 (110%)	312 (110%)
B	360	350 (97%)	378 (105%)	378 (105%)
C	192	60 (31%)	98 (51%)	98 (51%)
D	606	210 (35%)	236 (39%)	320 (53%)
E	126	0 (0%)	0 (0%)	120 (95%)
F	132	140 (106%)	120 (91%)	192 (145%)
G	12	60 (500%)	60 (500%)	98 (817%)
H	504	156 (31%)	176 (35%)	210 (42%)
I	366	100 (27%)	140 (38%)	140 (38%)
Total	2580	1364 (53%)	1520 (59%)	1868 (72%)

* Estimated eligible population based on 2001 data. This population is estimated to have risen but no figure is available.

Looking at patients who attended four visits in the year, statistically significant improvement in the control of identified risk factors as evidenced by a reduction in the proportion of patients outside the target measurements set by the programme occurred in the areas of:

- systolic and diastolic blood pressure;
- total and LDL cholesterol;
- smoking.

No significant improvements were observed in respect of body mass index and waist circumference. Deterioration was shown in the area of physical activity.

Substantial numbers of patients had their medications changed at their first Heartwatch visit with increases ranging from 4% of those on aspirin to 55% of those on fibrates.

30.9% of patients were referred to a dietician. 177 new cases of diabetes (1.8% of all heartwatch patients) were identified.

A final detailed report at national level is being completed at present as is an evaluation of the programme.

Acknowledgement

Independent Data Centre for Heartwatch

1.3.6 Changes in prevalence of and prescribing for ischaemic heart disease in Ireland

There is compelling evidence that aspirin, b blockers, ACE inhibitors and statins confer benefits in secondary prevention of heart disease whilst calcium channel blockers are no longer recommended in this context.

Methods: The General Medical Services (GMS) prescription database which covers ~30% of the population was used to study the prevalence of ischaemic heart disease (IHD) and the prescribing of cardiovascular therapies in the Eastern Region from 1990-2002. Data from the first quarter of 2003 was used for studying local prescribing patterns.

Patients with IHD were identified by co-prescription of aspirin and nitrate therapy. Secondary preventative therapies that were examined included statins, ACE-inhibitors, calcium channel blockers and b blockers. Age-adjusted prescription rates per 1000 GMS population were calculated and log linear regression used to examine trends (figure 1.5).

Results: A significantly increasing prevalence of 'treated' IHD over time was found, with significantly lower rates in women compared with men. Prescribing of all secondary preventative therapies showed markedly increasing trends, except for calcium channel blockers which are on the decline. When small geographical area prescribing patterns were studied, wide variations in prescribing for cardiovascular drugs (all types) were identified across the region.

Conclusion: These results suggest that there have been major changes in the detection and treatment of IHD in Ireland. These trends may reflect the growing awareness of the evidence base on the effectiveness or otherwise of the therapies with this knowledge being translated into everyday practice, the implementation of the National Cardiovascular Health Strategy, as well as the influence of pharmaceutical marketing. However, a significant 'treatment gap' still remains. The GMS database can be used to retrospectively monitor prescribing practices, but ideally the data should be available to the prescribing doctor in a format that would support prescribing in as near 'real time' as possible.

Contributors

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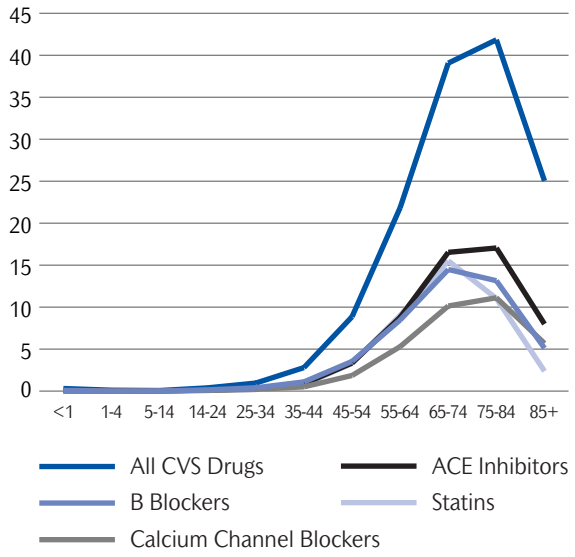
Figure 1.5 Cardiovascular age-specific prescribing (total) Jan-Mar 2003



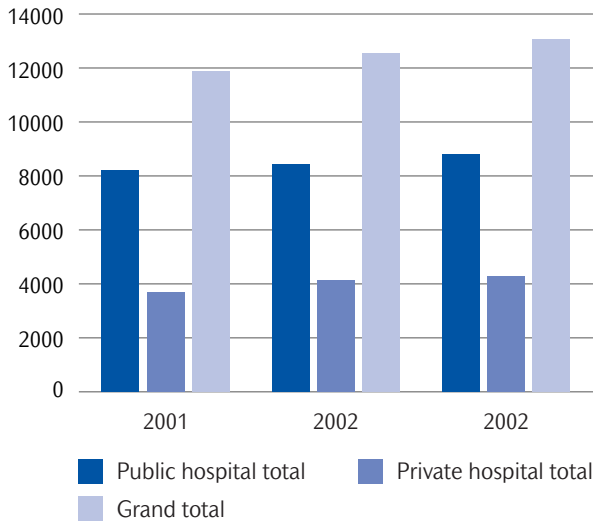
1.3.7 Trends in coronary interventional treatment

The treatment modality – percutaneous coronary intervention or angioplasty is increasingly available to residents of the region and to a wider hinterland. In 2002 a review of need and supply of treatments undertaken in Catheter Laboratories (Cath Labs) was concluded. The review showed that the rate of angioplasty of 1,137 per million in 2001 was close to the target of 1,200 per million by 2002 set out in Building Healthier Hearts.

Since then changes of note are:

- Angioplasty activity in all Dublin hospitals (public and private) has increased in 2003 by 44.4% on 2001 figures with a total of 4106 angioplasty procedures being carried out amounting to 1544 per million (table 1.7).
- Following the Cath Lab review in 2003 a second Cath Lab has opened in Mater Hospital in 2004 bringing to seven the number of Cath Labs in Dublin's public hospitals. There are three Cath Labs in the private sector bringing the total compliment for the Eastern Region to ten.
- The trend in referral to Dublin hospitals from surrounding Health Boards has remained the same for nearby Health Boards (SEHB, NEHB, MHB and NWHB) with a reduction from MWHB and WHB where regional facilities are now well established. Overall the proportion of activity in Dublin hospitals carried out on residents of other regions shows a slowly declining trend – 46% in 1998, 49% in 2001 and 40% in 2002.
- The trend in diagnostic angiography (figure 1.6) shows a 10% rise in procedures from 11,873 in 2001 to 13,061 in 2003. Yet the number waiting for angiography has also increased from 833 in 2001 to 1102 in 2003 or by 32%.

Figure 1.6 Trend in angiography, Dublin hospitals



Source: Data sent from Cath labs in each hospital

Table 1.7 Angioplasty activity in hospitals in Dublin 2001-2003

	2001	2002	2003
Mater	666	664	703
Beaumont	250	594	730
St James's	718	764	897
St Vincent's	190	188	274
AMNCH	157	211	225
Total Public hospitals	**1981**	**2421**	**2839**
Total Private hospitals	**862**	**917**	**1277**
Total in Dublin hospitals	2843	3338	4106
Rate per million**	**1137**	**1255**	**1544**

Source: Data sent from Catheter Laboratories in each hospital

** Note population served is estimated at 2.5 million in 2001 and 2.66 million in 2002-03

- Overall activity in the regions' six Cath Labs has increased by 7.6% from 2002 to 2003. This does not include some electrophysiological work. The pressure on the Mater hospital as outlined in the Cath Lab review in 2003 has been addressed with the opening of a second lab there in 2004. However, the increase in activity at Beaumont hospital over the two year period now puts the service there with one Cath lab under pressure (table 1.8) as a workload of 2000 –2500 procedures is regarded as a guide for good practice.

- Implantible defibrillators are now increasingly used (figure 1.7) with a total of 180 inserted in the Dublin hospitals (public and private) in 2003. Assuming the same referral pattern as for angioplasty, the insertion rate in 2003 was 67.7 per million.

Figure 1.7 Trend in ICD use

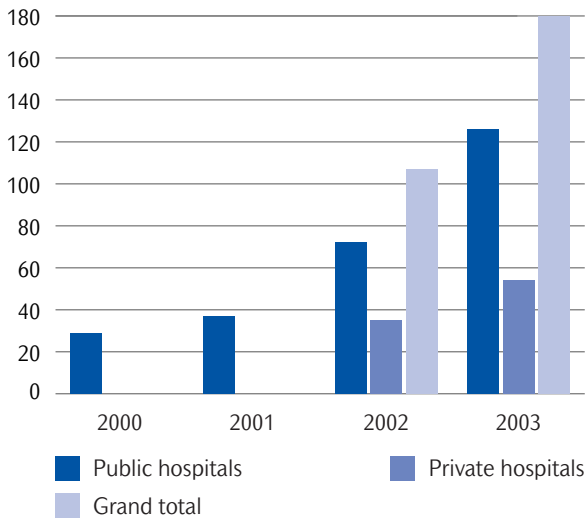


Table 1.8 The sum of the main procedures in Catheter Laboratories in public hospitals in Dublin

Hospital	Number of Labs	Total 2002	Total 2003
Mater	1	3105	3119
St Vincent's	1	1227	1457
St James's	2	3249	3456
Beaumont	1	2519	2887
Tallaght	1	1587	1655
Total	**6**	**11687**	**12574**

Source: Cath Lab data

Note Included here is PCI, angiography, ICDs and pacemakers, EP procedures are not included.

1.3.8 Trends in Heart Failure

Epidemiology: The prevalence of heart failure is approximately 2% of total population. The condition is an increasing one for a number of reasons: improved management of AMI resulting in improved survival with impaired ventricular function and the increased likelihood of developing heart failure, ageing of the population (prevalence is at least 7% in over eighties) and continued poor management of hypertension.

Economic Cost: Care of patients with heart failure consumes approximately 2% of total health care budget with cost of hospitalisation representing the most important component of this cost and amounting to circa 70% of total heart failure related spending.

Structured heart failure care: International work supported by work from the Heart Failure Unit at St Vincent's University Hospital has demonstrated that structured care can significantly reduce hospital

readmission, improve quality of life and probably lengthen life expectancy. Structured care refers to a multidisciplinary approach led up by a physician with an interest in heart failure supported by a specialist nurse with access to individuals from other allied health care professions including pharmacy, physiotherapy, psychology etc. Application of this service results in (at a minimum) a 50% reduction in readmission, producing major cost savings.

The above approach is effective for the sicker patient with heart failure. However, the majority of the heart failure population are stable in the community (approx 80%). Care of this subgroup is characterised by diagnostic inaccuracy, failure to apply proven therapies and a lack of structure to deal with impending clinical decompensation. These issues reflect a lack of a cohesive strategy between the hospital and the community physician. Solutions which need to be put in place to address these issues include a hospital based new patient clinic to ensure diagnostic accuracy when the patient first presents to the GP, assistance for the GP in the titration of effective therapies and a shared care approach to the management of early clinical decompensation. These strategies have been put in place at the Heart Failure Unit at St Vincent's University Hospital (SVUH) with impressive results, reducing the problem of inaccurate diagnoses, aiding in the titration of appropriate therapies and liasing with the GP to deal with impending decompensation by providing ready access to clinics where therapy can be changed, intravenous therapy administered and clinical stability reattained in as many as 95% of patients.

As the above solutions are applied on a national level the next major challenge in the management of heart failure will be to develop an approach to prevention of heart failure. There are interesting developments in this area which will allow for accurate identification of those at risk for heart failure. It is very likely that this will lead to effective preventative strategies which as a long term goal remain the only effective approach to stemming the impact of the well described epidemiology of this condition on our health services.

Contributor

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1.4 Information and surveillance

Many of the recommendations on improving surveillance and information systems are dependant on national decisions and agreements. Recommendations from NCIS are awaited as is the evaluation of CHAIR. Regional surveys and audits have been carried out in the meantime to inform planning as well as using HIPE and PHIS databases.

The HIPE database is very important in the context of surveillance of trends and analysing inpatient activity and patterns. A number of criticisms are made of HIPE data not least by clinicians though it has an accepted quality assurance mechanism to promote high quality data retrieval and entry. Another feature is that it is 18 months behind and so not up to date – a difficulty in areas of fast growth such as interventional cardiology. Interestingly, the Catheter laboratory review required up to date aggregate data from the labs but also needed a detailed to analysis of trends in referral, age breakdown etc. Consequently, it is important to understand the similarities and concordances between these sources of data. So, a comparison was made between the data on angioplasty sent in by each hospital Cath Lab and the HIPE data available (table 1.9)

It can be seen that there is a very close match between these two sources of data in both years studied (2001 and 2002) when the data is viewed overall suggesting that HIPE is a useful database for macro planning. However concordance at hospital level is consistently high (> 95%) only for two hospitals. In the other 3 hospitals there is a lack of concordance of 11 – 28% which can vary from year to year.

Table 1.9 Comparison of HIPE data against data from each Cath Lab for 2001 and 2002 for angioplasty

Hospital	2001 Cath Lab	2001 HIPE	2002 Cath Lab	2002 HIPE	Comparison of HIPE with C Lab data, 2001	Comparison of HIPE with C Lab data 2002
Mater	666	566	664	751	85%	113%
St Vincent's	190	174	188	194	92%	103%
St James's	718	856	764	719	119%	94%
Beaumont	250	218	594	551	87%	93%
Tallaght	157	158	211	210	101%	100%
Total	**1981**	**1972**	**2421**	**2425**	**99.5%**	**100%**

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1.5 Summary points

1. Premature mortality rates are declining faster in the Eastern Region than the EU 15 average.

2. Reduction in mortality in Ireland (1985-2000) has been studied by Bennett et al and 55% of the reduction is attributable to treatment of people with established heart disease and 45% to preventing heart disease in the first place.

3. Prevention of Heart disease is vital if we are to make a lasting impact . The smoking ban in the workplace is a boost to preventive strategies and hopefully will contribute to the downward trend in smoking in the general population.

4. Levels of obesity and overweight are high and climbing in Ireland as seen in the SLAN survey. Strategies to reduce overweight and obesity as well as diabetes are a matter of priority.

5. Rates of discharge from hospital for acute myocardial infarction (AMI) declined until 2001 when an upturn in the pattern was noticed in the Eastern Region and nationally. Fewer ST elevated AMIs are occurring with more subendocardial infarcts or those of unspecified sites.

6. 'Door to needle' time for thrombolysis has improved over the last decade with longest rates noted in hospitals still thrombolysing in CCU rather than ED.

7. Facilities for the lower risk patient with cardiac type pain are currently being established in most hospitals around the region. The service in St James's Hospital is briefly described.

8. A regional audit of eligibility for and capacity to offer cardiac rehabilitation shows an increase in places for patients in the last four years. However in the same time frame more patients have become eligible for this service but quantifying this is not possible with current information systems.

9. Preliminary information at national level from the Heartwatch programme shows improvements in many clinical measures and prescription of medication but not in many lifestyle factors. Another report on prescribing patterns also shows a significantly increasing prevalence of 'treated' ischaemic heart disease over time.

10. The angioplasty rate in 2003 for the referred population 2.66 million was 1544 per million, exceeding the target in *Building Healthier Hearts* of 1200 per million.

Review of progress 2

Review of progress

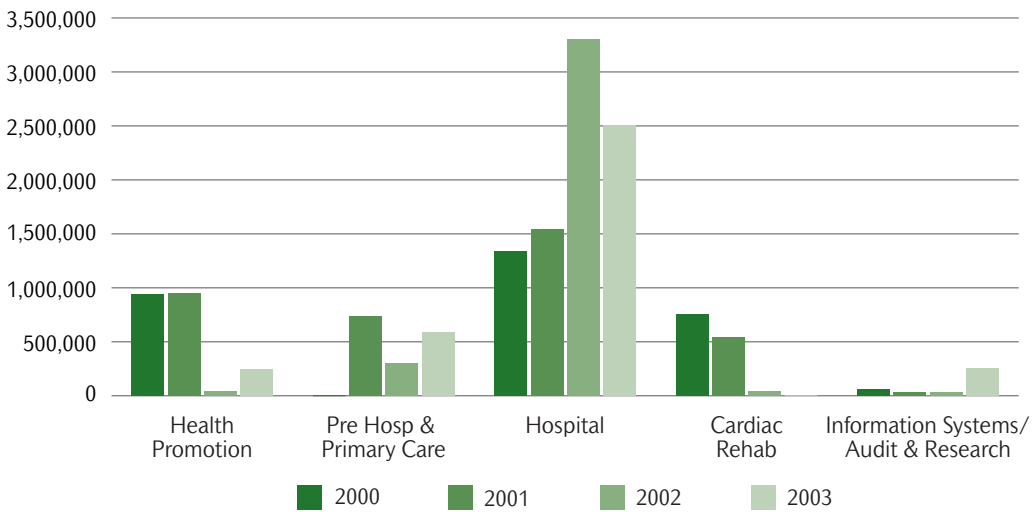
2.0 Introduction

The purpose of this chapter is to a) act as a reminder of the progress in the heart health field regionally from 2000 – 2003 and b) to outline the progress in the last year since the launch of the regional action plan in October 2003.

a) Heart health service developments 2000-2003

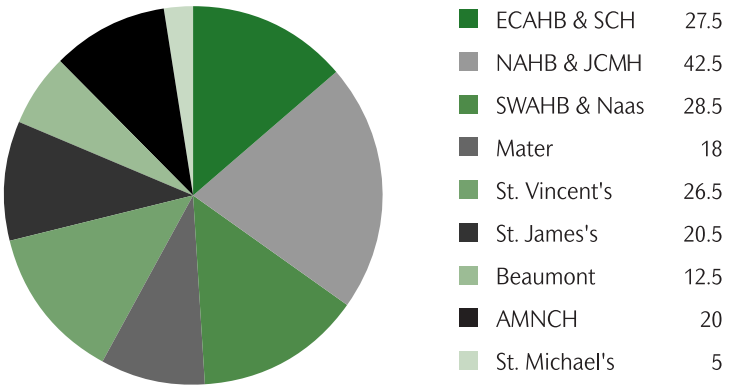
As a measure of the government's commitment to the cardiovascular strategy in the region, approximately €13.5 million has been allocated to the authority between 2000 and 2003 (figure 2.1).

Figure 2.1 Allocation of funding within Eastern Region by sector 2000 - 2003



Since 2000 cardiovascular funding has supported the recruitment of 201 new whole time equivalent posts into the system to provide a wide range of cardiology services (figure 2.2).

Figure 2.2 Increase in staffing by agency



Side by side with the work of the Regional Steering Committee in formulating an Action Plan, the authority 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, subsequently known as Heartwatch.
- 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 consultant cardiologist manpower needs of the region and submission to the National Cardiology Working Group
- Additional seven 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.

b) First year progress of the Heart Health Action Plan (2004)

2.1 Health promotion

Health Promotion goes beyond health care. It puts health on the agenda of policy makers in all sectors – directing them to take account 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.

2.1.1 What we set out to achieve

The Action Plan sets out eight objectives for Health Promotion under the following broad headings:

- Public Policy
- Media
- Settings based promotion of health (schools, workplace, health sector, community)
- Risk factor reduction (smoking, nutrition, physical activity, alcohol)

2.1.2 Achievements

All eight of the objectives in this sector have been implemented to some degree.

Public policy: The introduction of the legislation to ban smoking in the workplace is the most significant policy measure to be taken. In the area of policy within the region risk factor action plans for tobacco, physical activity and nutrition have been developed. Various policies including a breastfeeding, smoke free policy at work, alcohol and drugs free workplace policies are being finalised.

Media: The health promotion departments in each of the Area Health Boards have worked closely with their local communications departments and the national promotion programmes to encourage healthy lifestyles and many initiatives have been publicised through local and national radio and newspapers. The Irish hosting of the EU Presidency offered an opportunity to raise the profile of healthy living in the region. A submission was made to the Broadcasting Commission of Ireland on food advertising to children advocating responsible advertising to promote good health among children.

Settings: The health promotion departments are supporting the implementation of 'Social, Personal and Health Education' in schools through in-service training and support to secondary school teachers.

Health service workplaces within the region have been identified as a priority for workplace health promotion and policies are being developed in this regard. The health promotion departments co-ordinate and facilitate training for health service staff and others covering a wide range of topics and programmes including; being smoke free, eating well, stress awareness and being more active.

Many community based health promotion needs assessments and programmes have been established throughout the region with particular emphasis on disadvantaged groups and communities. In the NAHB, health promotion needs assessment and action plans are being completed in two areas (Darndale/ Belcamp and Corduff) in partnership with other organisations and the local community. These areas are targeted as community health promotion action zones. In ECAHB, a healthy towns project has been established in Arklow in partnership with other voluntary and statutory agencies which has included a needs analysis in the region and the subsequent development of initiatives to support healthy lifestyles. In SWAHB, the Fatima Mansions project has involved work between voluntary, community and statutory groups in the greater Rialto area to integrate and localise service delivery and to develop a health and well being centre in the area. Many other community based initiatives are in place for priority population groups including Travellers, the Homeless and Asylum Seekers/Refugees.

A youth health strategy is being developed in the NAHB. Work has also progressed in developing resources to support youth health, support to schools on SPHE, sexual health and training of youth workers.

Risk factors: Physical activity programmes have been established in each of the settings, including; a pilot Tai Chi programme, the Go for Life, a Swim programme, Sli na Slainte routes and an Active Parents programme. Smoking cessation services have been established in each of the three boards and in the Dublin Academic Teaching Hospitals to support others to quit smoking. Many nutrition programmes have been developed for disadvantaged communities and schools. Training on alcohol awareness was provided to youth workers in association with the National Youth Council. A strategic framework for addressing the problematic use of alcohol was finalised in NAHB. The health promotion departments in each of the Area Boards and the Department of Public Health, ERHA have made submissions to the National Task Force on Obesity.

2.1.3 Areas where limited progress has been made

A structured regional intersectoral approach to agreeing and implementing health-promoting policies is yet to be taken forward. It is envisaged that a meeting between the Chief Executives of the health services, the local authorities and other stakeholders will take place in 2005.

A meeting between the ERHA with the Advertising Standards Agency has yet to be planned.

There are considerable challenges and many unmet needs particularly in relation to addressing the determinants of health and identifying the complex interrelationship between health behaviours and these determinants.

2.2 Primary care

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.

2.2.1 What we set out to achieve

The Heart Health Action Plan set out 7 objectives for Primary Care in Year 1 under the following headings:

- Secondary prevention of Ischaemic Heart Disease
- High risk primary prevention
- Diabetes awareness raising, opportunistic pick up, reduction of IHD
- Health Promotion
- Ambulatory Care
- Heart Failure
- Quality Assurance
- Co-ordination

2.2.2 Achievements

Secondary prevention Heartwatch

The ERHA have worked with the Area Health Boards to ensure the regional provision of this national pilot programme for secondary care of patients with established heart disease, which was initiated in 2002. This programme, Heartwatch, is currently undergoing evaluation at national level.

Currently, 20% of GP's have been recruited in each of the three Area Health Boards with a total of 2320 patients recruited (table 2.1), approximately one quarter of patients registered for the pilot nationally. More detail is provided in chapter one.

As part of initiating the Heartwatch programme the ERHA and the Area Health Boards have worked with participating GP's to promote the availability of a number of modern cardiac diagnostic procedures through general practice such as ambulatory blood pressure monitoring (AMBP) and electrocardiogram (ECG).

Diabetes awareness and reduction in IHD in patients with diabetes

The ERHA have submitted plans to the Department of Health and Children to improve diabetes care including support for diabetes shared care programmes. Diabetes shared care programmes are supported in all three area health boards. Clinical and organisational audits are underway in the South Inner City Partnership and in the East Coast Area with Specialist in Public Health Medicine and GPs collaborating.

Fasting glucose testing is being carried out on recruited Heartwatch patients and 177 new diabetic patients have been identified through this process.

G.P. direct access to diagnostic services

A number of hospitals have recently introduced direct access to diagnostics for GP's i.e. holter monitoring, 24 hr blood pressure monitoring (BPM), echocardiograms and exercise stress testing. Specifically, an initiative between St Vincent's Hospital, East Coast Area Health Board, GP's and the ERHA was set up in 2003 and is being evaluated at present.

The service provides GPs with direct access to non-invasive cardiac investigations, assists them in the continued management of their patients and facilitates greater integration between hospital and primary care services.

The GP Direct access cardiac diagnostics programme in the East Coast Area Health Board saw a total of 303 tests carried out to end September 2004 (table 2.2).

Table 2.1 Heartwatch Programme

Area Health Board	Number of GPs	Number of practices	Number of patients
ECAHB	53	28	850
SWAHB	39	22	669
NAHB	45	30	801
ERHA	**137**	**80**	**2320**

Table 2.2 Direct access diagnostic procedures at SVUH

Cardiac Diagnostics	Totals
Echocardiograms	91
Exercise stress tests	84
24hr BP Monitor	56
24hr ECG monitor	72
Total	**303**

Co-ordination

A number of hospital posts in place specifically target the need to improve the communication between hospital clinicians, GPs and patients. Also emphasis has been placed on the importance of the patient held record in empowering the patient and promoting adherence to medication and lifestyle change. The Irish Cardiac Nurses Association has developed a record, which has been acceptable to many people. It is now in use in many hospitals as well as in the Heartwatch practices in the region.

2.2.3 Areas where limited progress has been made

High-risk primary prevention is an area that will likely need further work at national level and so may take some time to implement at regional and local level. Quality assurance is an area common to all the clinical areas. A seminar was planned but has yet to come to fruition. Heart failure is an area that is subject to planning and change within the hospital sector. It is expected to get a lot of attention in the coming years in both primary and acute care.

2.3 Pre-hospital sector

The factors, recognised both nationally and internationally, that affect access to emergency services are challenges in the Eastern 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.

2.3.1 What we set out to achieve

The Heart Health Action Plan set out 7 objectives for the Pre-Hospital Sector in Year 1, under the following headings:

- Single Control and Command Centre
- Protocols for delivery of care
- Response Times
- First Responder Schemes
- Public Awareness
- CPR Training
- Community response to cardiac emergencies

2.3.2 Achievements

Protocols

The Eastern Regional Ambulance Service has trained its emergency personnel in the administration of aspirin to patients with acute coronary related pain. Training is now complete for 95% of personnel and its administration forms part of the protocol for the management of cardiac related acute coronary pain.

All ambulances have been equipped with Automated External Defibrillators as a result of cardiovascular funding. Ambulances in remote areas of the Eastern Regional Ambulance Service have been equipped with 12 lead ECG telemetry and messaging facilities to Accident & Emergency departments.

First responder schemes

The Eastern Regional Ambulance Service (ERAS) is currently developing a community based 'First Responder' scheme. A list of names and addresses of all Ambulance staff who have put their names forward to act as First Responders within the community whilst they are 'off duty' has been compiled. First Responder equipment has been issued to all staff participating on the scheme on a personalised basis.

Public awareness

CPR training for relatives and friends of those with established heart disease has commenced.

2.3.3 Areas where limited progress has been made

While discussions are ongoing with regard to the establishment and operational procedures for a single command and control centre significant progress is still awaited. Public awareness regarding the importance of immediately seeking emergency services when suspected coronary related pain occurs has yet to be systematically progressed. The CPR survey planned for 2004 will now be moved to 2005. A number of other areas are outstanding but progress is expected as a result of PHECC national direction.

2.4 Hospital sector

In the public sector in the region, nine adult hospitals provide acute cardiac services to the population in the Eastern Region with five of these hospitals providing tertiary cardiology services. Specific electrophysiology work is provided in three hospitals and cardiac surgery is performed on two sites. This hospital provision also serves supra 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.

2.4.1 What we set out to achieve

The Heart Health Action Plan set out 12 objectives for the hospital sector in year 1 under various headings, including:

- Services for the acute event
- Human resources
- Non acute and chronic services
- Non invasive diagnostic services
- Invasive investigations and interventional services
- Co-ordination of Care
- Quality Assurance of cardiology service
- Information, surveillance and monitoring of the cardiology service

2.4.2 Achievements

Services for the acute event – development of acute coronary assessment facilities

Modern assessment and observation of acute chest pain/acute coronary syndrome (ACS) in ED/ Cardiology units have been supported in hospitals in the region following a successful seminar in 2002. Currently the position is that two hospitals have fully established facilities, five are advanced in planning facilities and the remaining two are initiating plans.

James Connolly Memorial Hospital (JCMH) is one of three national sites for piloting the international guidelines on care of ACS, published in 2004, along with the data set (CARDS) agreed at the conference for the EU Presidency.

Human resources

In 2002-3 six consultant cardiologists were appointed to hospitals in the region, the seventh and final consultant cardiologist, under phase 1 of the National Cardiology Manpower Review, has been commissioned for St. James's Hospital in 2004. All hospitals in the region now have consultant led service.

A submission to commence the manpower requirements under Phase 2 of the review has been submitted to the DoHC. Included in this submission is a costing for a further Catheter Lab for the region.

Non acute and chronic care services – Heart failure

As mortality declines and effective treatments such as revascularisation, therapeutics etc. 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.

Many hospitals, with support from the Authority, are increasingly focusing on care of patients with heart failure. The year 2004 saw a continuation of this activity. Significant progress has been made in the St. Vincent's/St. Michael's campus in regard to inpatient and day care provision. A national survey is underway at present and regional data from that survey will inform further developments. Also heart failure is covered in chapter one.

Non-invasive, invasive diagnostic and interventional service

With the appointment of six consultant cardiologists the ability to address the need for non-invasive and interventional services has been considerably enhanced both regionally and supra regionally.

Following the Catheter Laboratory Review in October 2003 the Authority was successful in getting funding to facilitate the opening of a second laboratory in the Mater Hospital in 2004. A formal submission for funding for a further Catheter Laboratory in the region has been submitted to the DoHC in 2004.

Activity in the Catheter Laboratories has increased considerably so that the target set in *Building Healthier Hearts* for 2002 has been well exceeded (see chapter one).

The need for a modern approach to provision of OPD type services has been signaled and preliminary discussions held within the Authority. It is proposed to study cardiology services at an early stage in the general review of OPD in 2005.

Co-ordination

See Primary care sector

2.4.3 Areas where limited progress has been made

Manpower planning for nursing, cardiac technician, radiography has been raised within the Authority and will receive concentrated attention in 2005.

Developments in the area of dedicated rather than mixed provision of CCU are linked to decisions on the provisions of primary angioplasty within the region.

Diabetes care needs a significant focus in 2005. The outcome of work of the national review group on diabetes will hopefully inform progress.

Equity of access mechanisms have yet to be established to monitor equity of access.

Quality assurance is an area common to all the clinical fields within and beyond hospital services. A seminar was planned but has yet to come to fruition. Significant developments needed to bring this area forward are those in ICT. Surveys such as 'door to needle time' have contributed in this area.

Developments in the area of information surveillance and monitoring are dependant on progress in the National Group (NCIS). However, steps towards a regional plan were initiated in November 2004. It is critical that this be furthered in 2005.

2.5 Cardiac rehabilitation

The efficacy of Cardiac Rehabilitation (CR) is well established with evidence of reduced mortality, increased exercise performance and an improved sense of well-being.

2.5.1 What we set out to achieve

The Heart Health Action Plan set out 4 objectives for Cardiac Rehabilitation in Year 1 under the following broad headings:

- Cardiac rehabilitation developments phases 1-4
- Education and Training
- Co-ordination within hospital and with primary care
- Information, Surveillance and Monitoring

2.5.2 Achievements

Cardiac rehabilitation developments

In the year 2000 eight out of nine hospitals offered a phase 3 CR service with a regional capacity of 1212 places meeting circa 50% of need. By 2002 capacity had increased to 1520 and a further increase to 1868 places was noted in 2004 with all hospitals now offering the service. While this is an increase of 54% in four years, ironically need for the service has

increased as diagnostic services uncover unmet need. Funding has been allocated to those hospitals that have submitted plans for the development of their services. The Authority has asked the remaining hospitals to develop and submit plans for future development of CR services to address current need and expected increases in need.

Education & training

BCLS training for patients and relatives has commenced in several hospitals and all hospitals are planning to offer this service in the near future. There has been very positive feedback on the success of this objective.

Information, surveillance and monitoring

The data presented above is the result of an organisational audit by the Department of Public Health. Nationally, data sets have been agreed and all hospitals are currently exploring the possibility of collecting this data. This national data set was developed in a way akin to the CARDS process and with with consultation internationally.

2.5.3 Areas where limited progress has been made

A planned seminar on evolving methods of delivery of phase 3 service provision with the IACR and in conjunction with cardiologists has had to be rescheduled to Spring 2005.

CPR survey

See hospital sector.

2.6 Information system, audit and research

Developments in the area of information, audit and research for Heart Health are affected by national and regional initiatives in ICT. The new health strategy has emphasised information needs and quality issues with the planned setting up of the Health Information and Quality Authority (HIQA). A national information strategy has been recently been published and regionally the ERHA have developed an ICT strategy.

2.6.1 What we set out to achieve

The Heart Health Action Plan set out 4 objectives for Information Systems, Audit and Research in year 1 under the following headings:

- Death certification validation
- Health service information and surveillance
- Surveillance of health behaviour
- Promoting evidenced based care

While progress in general in this area has been particularly slow, none the less there have been several significant achievements:

2.6.2 Achievements

Health service information & surveillance

Regional audits

Two regional audits have been carried out namely a) 'Door to needle time' for thrombolysis and b) capacity and eligibility for Cardiac Rehabilitation in the region.

National work

At a conference as part of the EU presidency international agreement (the CARDS project) was reached on the following data sets a) Acute Coronary Syndrome, b) Percutaneous Coronary Intervention (PCI), EP (Pacemakers, Implantable Cardioverter Defibrillators (ICD), and ablation procedures. The ACS set is to be piloted in JCMH

ICT Working Group

A working group has been established to outline a plan for ICT development in the region. This work will be in tandem with national work in NCIS. Important areas being considered are a) extend of need for the service, b) how best to supply the service, c) the possible HR aspects, d) challenges to provision, e) opportunities at this time, f) the need for criteria to appraise the options. This work of this group will continue into 2005.

Promoting evidenced based care
Research bursary structure

The Authority announced in October in 2003 that a Heart Health Research Bursary programme would be put into place in 2004 to promote the development of early research and evaluation skills in health professional staff working in the heart health arena within the Eastern Region.

A total of 22 completed applications were received for Year 1 of the Heart Health Research Bursaries. The applications were of a very high standard and the judging panel awarded a total of 7 bursaries. It is intended that the bursaries will be an annual process.

2.6.3 Areas where limited progress has been made

The area ensuring the accuracy and reliability of death certification has not been progressed, this requires national direction and agreement. Also the area of surveillance of health behaviour has not been progressed and needs attention in 2005.

The focus for 2005

The focus for 2005, in an environment of change to the new reform structure, must be to sustain momentum, preserve the synergy of working relationships and maintain emphasis on improving heart health so as to achieve better health for the population, improved working environment for staff and delivering value for money for the State's investment.

Health Promotion

We will continue to work to initiate and progress multisectoral partnerships and intersectoral working at Chief Executive level in the Health Service Executive and the local authorities and with bodies such as the Advertising Standards Agency in order to promote heart health and prevent illness.

Development of a comprehensive approach to promoting Youth Heart Health in the Out of School Setting will be furthered.

The recommendations of the National Task Force on Obesity, which is expected to report soon, will be studied and progressed as a priority.

Primary Care

Initiatives needing attention in 2005 are:
a) furthering secondary prevention for all patients including attention to medication advice,
b) improved care of patient with diabetes as well as better pick up and reduction in complications including IHD, c) quality assurance seminar and debate and d) heart failure. Notably most of these initiatives are expected to take longer than one year.

Pre-hospital

A national minimum data set for providers of emergency services with agreed definitions is expected to be finalised in 2005. The data set will then be piloted in locations to be identified and agreed within the Region.

Hospital

The four pieces of work to further a) manpower planning and wider human resource issues, b) provision of primary angioplasty within the region, c) modern OPD provision in cardiology, d) a regional heart health ICT plan will be brought to fruition in 2005.

Clinical areas, which have been initiated, will continue to be a priority such as care of patients with heart failure, chest pain assessment service, attention to medication advice to patients etc.

The area of clinical and organisational quality assurance will be explored in the context of initiatives in the health reforms such as HIQA.

A survey of CPR need among health professionals will be initiated.

Cardiac Rehabilitation

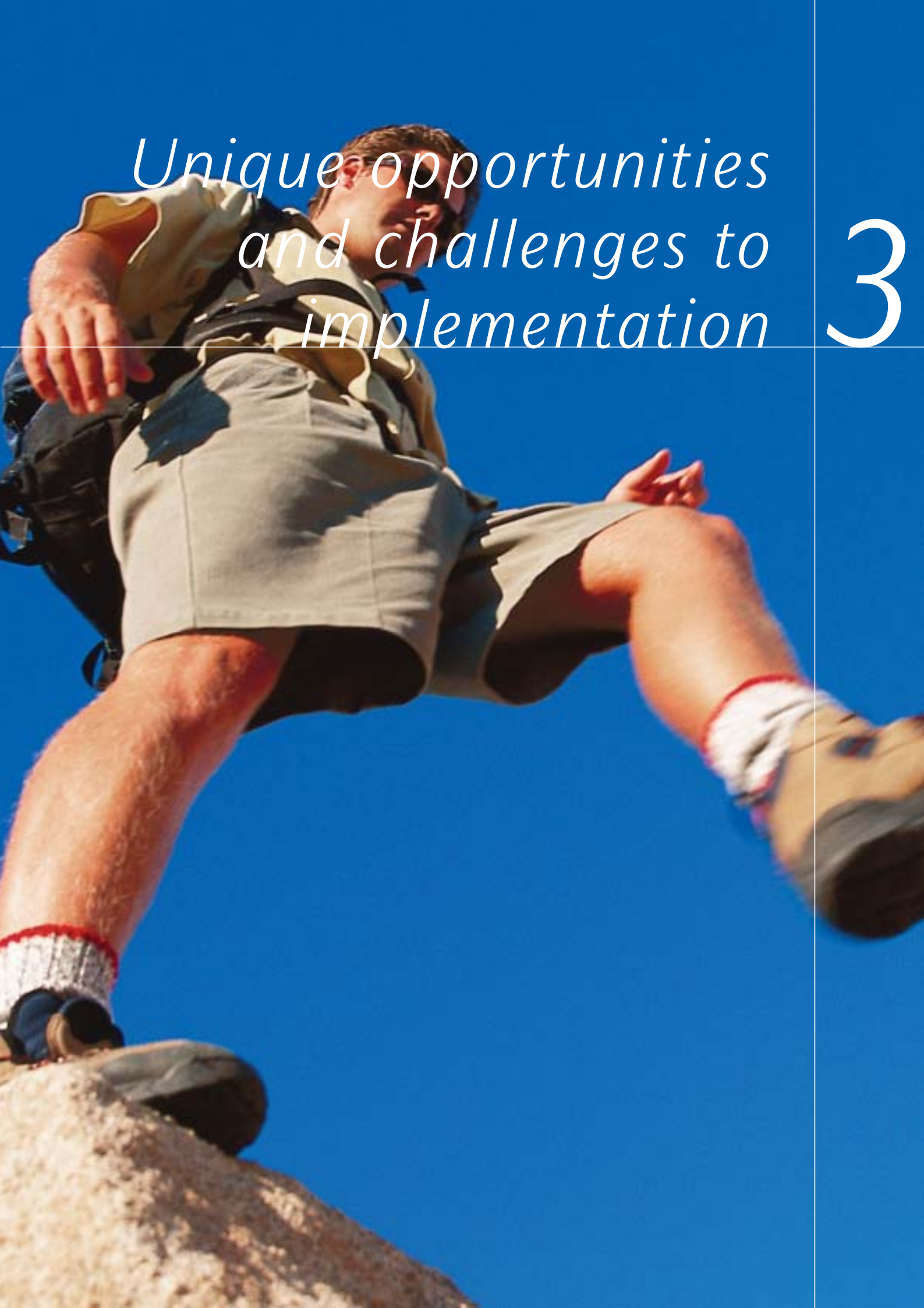
Models of further provision of cardiac rehabilitation in conjunction with secondary prevention will be discussed and brought forward.

Information Systems

See hospital section above re ICT regional plan.

Unique opportunities and challenges to implementation

3



Unique opportunities & challenges to implementation

3.0 Opportunities

The Eastern Region's five year Heart Health Action Plan clearly sets out what needs to be done to address the recommendations of *Building Healthier Hearts*.

As a result of four years of planning intersectorally and in a multidisciplinary way, coupled with investment across all key areas, there is a lot of enthusiasm, positive relationships and successful achievements in the body of stakeholders in this field. By way of example, a recent meeting with one group – cardiologists and hospital CEOs - has resulted in an opportunity to progress with major new initiatives in the area of out patients, interventional services and information, communication and technology by utilising re-engineering, skill mix issues etc.

3.1 Challenges

3.1.1 Health Reform

A key issue for the Authority will be to integrate the Heart Health Action Plan (HHAP) in the region with the national reform programme and to ensure that the vision and momentum of the HHAP is protected. The challenge will be to ensure that these new structures deliver an integrated service and that current relationships, both intersectoral and interagency, as well as improved personnel in underdeveloped fields such as health promotion are protected and supported in the new paradigm.

The aim of the new reform structure is to create a unified health service, which delivers better health for the Irish people; improves working environments for staff; and delivers value for money for the state's investment. The reform, which is the biggest change process ever undertaken in the state, will separate policy formulation (Department of Health & Children, DoHC) from service delivery (Health Service Executive, HSE). The design structure supports central direction (HSE) and local empowerment (local health offices and hospital networks). Regional health offices will provide a functional role in supporting and co-ordinating work within the regions.

The HSE has underlined the need for integration of services to deliver high quality service to service users wherever they live. It will be achieved through strong corporate commitment to integration, devolved decision-making, clinical and service governance, effective performance management systems, integrated care pathways and planning and appropriate incentives. Key features of delivering this vision of integration, will be close working arrangements between the directorates of Population Health, Primary, Community and Continuing Care and National Hospitals Office within the HSE.

3.1.2 Balancing treatment and prevention

It is important to get the balance right between treating heart disease and preventing it in the first place. While smoking rates are falling, levels of obesity and overweight coupled with low levels of physical activity are a major concern for middle aged and younger populations. Intake of salt in the diet is very high and poses a risk to the advances made in recent decades for reduction of mortality from heart disease and stroke. The health sector should lead the way in protecting patients and staff.

3.1.3 Increasing health need and modernisation of services

Changing trends in heart disease with increased ability to intervene and improve survival, albeit with a chronic disease, is leading to increased eligibility for services e.g. catheter laboratory procedures and cardiac rehabilitation services. Cognisance must be taken of this uncovered need in the planning of future services, so that capacity to meet eligibility is brought on stream. As well as the ongoing constraints of the employment ceiling, manpower planning is central to preparing for the future - planning for nursing and technician manpower is an important area as well as implementation of phase 2 of cardiology manpower review.

While many improvements have been made to aspects of treatment for heart disease, as outlined in chapter two, the pathway and waiting times in OPD is a concern and needs to be modernised. Also the environment of ICT is very underdeveloped and deserves early attention to support surveillance, clinical governance and improved inter professional communication for the benefit of the patient.

Getting the balance between the reorganisation of services, the modernisation of technology and funding is a challenge in such an area of significant growth.

Appendix

Appendix

Membership of Regional Cardiovascular Steering Group

Chair: Dr. Siobhan Jennings

Ms. Regina Black	Mr. Brian Coote	Ms. Sophie Charles
Mr. Kevin Cleary	Mr. Mike Eagen	Ms. Maeve Cusack
Ms. Fionnuala Duffy	Ms. Esther Freeman	Ms. Siobhan Fitzpatrick
Ms. Mo Flynn	Dr. William Kavanagh	Prof. Ian Graham
Ms. Mary Hanlon	Ms. Maureen McGowan	Mr. Lawrence Kenna
Dr. Brian Maurer	Dr. William Kavanagh	Ms. Bernadette Kiberd
Mr. Michael O'Shea	Mr. Pat McCreanor	Dr. Kevin O'Doherty
Ms. Thora Burgess	Dr. Jane Renehan	Ms. Brenda Wheeler

Administrative Support: Ms. Olivia Magee

Glossary of terms

ED	Accident and Emergency
ACLS	Advanced Cardiac Life Support
ACS	Acute Cardiac Syndrome
AMBP	Ambulatory Blood Pressure Monitor
AMI	Acute Myocardial Infarction
BCLS	Basic Cardiac Life Support
BHH	Building Healthier Hearts
BPM	Blood Pressure Monitor
CABG	Coronary Artery Bypass Graft
CCU	Coronary Care Unit
CARDS	Cardiology Audit and Registration Data Standards
CEO	Chief Executive Officer
CHAIR	Coronary Heart Attack Ireland Register
CHD	Coronary Health Disease
CPR	Cardiopulmonary Resuscitation
CR	Cardiac Rehabilitation
DoHC	Department of Health and Children
ECAHB	East Coast Area Health Board
ECG	Electrocardiography
ED	Emergency Department
EPS	Electrophysiology service
ERAS	Eastern Regional Ambulance Service
ERHA	Eastern Regional Health Authority
ETS	Environmental Tobacco Smoke
EU	European Union
GMS	General Medical Services
GP	General (medical) Practitioner
HIPE	Hospital In-Patient Enquiry
HIQA	Health Information and Quality Authority
HR	Human Resources
HSE	Health Service Executive
IACR	Irish Association of Cardiac Rehabilitation
ICD	Implantable Cardioverter Defibrillators
ICT	Information & Communication Technology
IHD	Ischaemic Heart Disease
JCMH	James Connolly Memorial Hospital
LDL	Low Density Lipoprotein
MHB	Midlands Health Board
MI	Miocardial Infarction
MWHB	Mid Western Health Board
NAHB	Northern Area Health Board
NCIS	National Cardiovascular Information Steering Group
NEHB	North Eastern Health Board
NWHB	North Western Health Board
OPD	Out Patients Department
PCI	Percutaneous Coronary Interventions
PCTA	Percutaneous Transluminal Coronary Angioplasty
PHECC	Pre-Hospital Emergency Care Council
PHIS	Public Health Information System
SDR	Standardised Death Rate
SEHB	South Eastern Health Board
SLAN	Survey of Lifestyle, Attitudes and Nutrition
SPHE	Social, Personal and Health Education
SVUH	St. Vincent's University Hospital Group
SWAHB	South Western Area Health Board
WHB	Western Health Board

EASTERN REGIONAL HEALTH AUTHORITY

Údarás Réigiúnda Sláinte An Oirthir