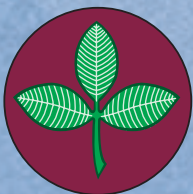


SEPTEMBER 2001



DEPARTMENT OF PUBLIC HEALTH
EASTERN REGIONAL HEALTH AUTHORITY

PUBLIC HEALTH IN THE EASTERN REGION



Eastern Region Health Authority

Department of Public Health Report

November 2001

Title: Public Health in the Eastern Region

Published by: Eastern Region Health Authority

November 2001.

ISBN 0 9485627 1 4

Typeset and Design: Typeform Repro, Portside Business Centre, East Wall Road, Dublin 3

Printed by: ColourBooks Ltd., Baldoyle, Dublin 13

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Foreword

This is the third Public Health Report on the health status of people living in the Eastern Region and the first since the establishment of the Eastern Regional Health Authority. Our Department of Public Health measures the health of the population, identifies priorities for improving health and informs stakeholders of important health issues. It is through reports such as this that valuable health information is distributed and areas for health and social improvement can be addressed.

Over the past 30 years there has been a real improvement in health status in the Region. Mortality has dropped by more than 30 per cent and infant mortality is among the best in the world. It is particularly gratifying to note the substantial reduction in deaths from heart disease and cancers given the large investment both financially and by our personnel in tackling these conditions.

Though our health has improved, we cannot be complacent. We need to make many more advances to be on a par with many European countries. The challenges before us will always be substantial. Our fast growing population has evolving health and social needs. We must recognise and address the specific health needs of certain groups in society, for example, older people and marginalised groups who often have poor health status.

A major priority is to reduce inequalities in health status and access to health care between different groups in society and to focus on social gain. Preventable premature death, for example, road traffic accidents is a real concern. Though road traffic accident death rates in the Region are among the lowest in the country it is essential that our national strategy remains focused as there is much room for improvement in road safety.

There has been real health gain in our Region in terms of communicable disease control, for example, the introduction of the Meningitis C



vaccine. Yet there are always new challenges in infectious diseases, such as, the increasing importance and concern of blood borne infection and hospital acquired infection. The outbreak of measles in 2000, despite the fact that there is an effective vaccine for it, shows that the importance of infection control can never be underestimated.

I would like to thank the Director of Public Health, Dr. Brian O'Herlihy and all his staff for producing this report. It makes an important contribution to the priority setting process in the Eastern Region.

A stylized, handwritten signature in blue ink, appearing to read 'Donal O'Shea'.

Mr Donal O'Shea

Regional Chief Executive

Eastern Regional Health Authority

Acknowledgements

In the compilation of this report, the contribution of a number of individuals must be acknowledged:

- Thanks to all members of the Department of Public Health who contributed to this report
- Sincere appreciation and thanks must be recorded for the contribution of:

Dr Paul McKeown	Dr Howard Johnson
Ms Deirdre Carey	Dr Lelia Thornton
Ms Mary McCann	Dr Joan O'Donnell
Dr Bob McDonnell	Dr Maire O'Neill
Dr Marie Laffoy	Dr Freda O'Neill
Dr Siobhan Jennings	Dr Joe Barry
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Physical and Sensory Disabilities / Health Promoting Hospitals

Communicable Diseases Surveillance and Control

Acute Hospital Services / Mental Health

Drugs / HIV / Traveller Health

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Glossary of Terms

Age Specific Rate	The rate of occurrence of a particular event in a specified age group.
Age Specific Rate	The rate of occurrence of a particular event in a specified age group.
Age Standardised Rate	Rate, which has had the effect of differences in age between populations, removed by application of a statistical process.
Standardised Mortality Ratio	An estimate can be made of the number of deaths that could be expected in a particular group of individuals if they had the same age-specific death rates as the total population. The ratio of the number of deaths observed to the number expected is known as the standardised mortality ratio (SMR).
CIN 111	Cervical intraepithelial neoplasia (CIN): a pre-cancerous condition of the uterine cervix. CIN 111 refers to the most advanced form, which if left untreated could progress to invasive cancer.
Epidemiology	The study of the distribution and determinants of health-related states or events in specified populations and the application of this study to control of health problems.
Health Gain	Concerned with health status, both in terms of increases in life expectancy and improvements in quality of life through the cure or alleviation of illness or disability or through any other general improvement in the health of the individual or the population at whom the service is directed.
Incidence	The number of new cases of a particular condition arising in a given population in a given time period (usually one year).
Morbidity	Any departure, subjective or objective, from a state of physiological and psychological well-being.
Mortality Rate	The proportion of a population that dies during a specified period (usually one year).
Prevalence	The number of cases of a particular condition in a given population at a specified point in time.
Public Health	One of the efforts organised by society to protect, promote and restore people's health. It is the combination of sciences, skills and beliefs that is directed to the maintenance and improvement of the health of all the people through collective or social actions.
Screening	The presumptive identification of disease or defect by the application of tests, examinations or other procedures which can be applied rapidly. Screening tests sort out apparently well people who probably have a disease from those who probably do not. A screening test is not intended to be diagnostic. Persons with positive or suspicious findings must be referred to their physicians for diagnosis and necessary treatment.
Social Gain	Concerned with the broader aspects of the quality of life. It includes, for example, the quality added to the lives of dependent elderly people and their carers as a result of the provision of support services, or the benefit to a child of living in an environment free of physical and psychological abuse.
Surveillance	The process of continuous collection and analysis of data and its subsequent dissemination to those who need to know.

Frequently Used Abbreviations

CSO	Central Statistics Office	ESRI	Economic and Social Research Institute
NDSC	National Disease Surveillance Centre	SAHRU	Small Area Health Research Unit based in Trinity College Dublin
NPIC	National Poisons Information Centre	RICHs	Regional Interactive Child Health System
GMS	General Medical Services	OPD	Out Patient Department
PHIS	Public Health Information System	WHO	World Health Organisation
HIPE	Hospital In-Patient Enquiry		
A&E	Accident and Emergency Department		

Key Health Indicators in the Eastern Region

Indicator	Eastern Regional Health Authority (%)		Ireland (%)	
Population (Census, 1996, CSO)				
Total population	1,295,939	(35.7%)	3,626,087	(100%)
Total Children 0-14 years	294, 051	(22.7%)	859,424	(23.7%)
Total persons >65 years	125,271	(9.7%)	413,882	(11.4%)
Total persons >75 years	50,363	(3.8%)	174,531	(4.8%)
Increase 1966-1996	374,060	(40.6%)	742,095	(25.7%)
Population estimate 2011	1,590,000	(37.9%)	4,200,000	(100%)
Births (CSO 1998)				
Total births	20,619		53,551	
Crude birth rate/1,000	14.5		14.8	
Teenage births (1996)	1,052	(5.6%)	3,138	(5.8%)
No births outside marriage (1997)	6,562	(32.7)	13,892	(26.6%)

		Ireland	EU
Life Expectancy in years (trends at birth)			
Females	1980-2	75.6	77.1
	1990	77.6	79.4
	1995-7	78.8	80.5
Males	1980-2	70.1	70.5
	1990	72.1	72.8
	1995-7	73.2	74.0

Morbidity		Eastern Regional Health Authority (%)		Ireland (%)	
Infant Mortality (CSO 98)					
Number of deaths		130		330	
Infant mortality/1000 live births		6.3		6.2	
Number of Deaths, All Ages (PHIS 99)					
All causes		9,506	100%	31,683	100%
Circulatory system diseases		3,755	(39.5%)	13,541	(42.7%)
Malignant neoplasms		2,475	(26.0%)	7,454	(23.5%)
Respiratory disease		1,413	(14.9%)	5,204	(16.4%)
Injuries and poisoning		423	(4.4%)	1,492	(4.7%)
(of which road traffic accidents)		(100)	(1.1%)	(398)	(1.3%)
(of which suicide/self inflicted injury)		(133)	(1.4%)	(439)	(1.4%)
Directly standardised death rates/ 100,000 population					
All causes		787.8		806.9	
Circulatory system diseases		310.3		324.8	
Malignant neoplasms		214.0		201.3	
Respiratory disease		114.7		126.0	
Injuries and poisoning		31.8		38.9	
Average Years of Potential Life Lost as a result of premature mortality (ages 0-64) 1999					
All causes		41,274		116,083	
Malignant neoplasms		9,187	(22.3%)	26,196	(22.6%)
Injuries and poisoning		9,138	(22.1%)	30,400	(26.2%)
Circulatory system diseases		6,258	(15.2%)	17,734	(15.3%)
Respiratory disease		1,299	(3.1%)	3,897	(3.4%)

Morbidity	Eastern Regional Health Authority (%)		Ireland (%)	
Hospital Discharges ¹				
All causes of hospitalisation	241,919	(32.3%)	749,271	
Circulatory system diseases	20,636	(8.5%)	66,891	(8.9%)
Injuries and poisoning	18,525	(7.7%)	62,625	(8.4%)
Respiratory disease	17,219	(7.1%)	60,638	(8.1%)
Malignant neoplasms	15,792	(6.5%)	42,867	(5.7%)
Bed Days				
Total bed days	1,088,425		3,207,909	
Circulatory system diseases	203,995	(17.3%)	541,539	(16.3%)
Respiratory disease	125,517	(12.6%)	368,048	(12.4%)
Injuries and poisoning	96,412	(9.9%)	296,838	(10.0%)
Malignant neoplasms	99,770	(9.1%)	308,262	(8.6%)
Day Cases				
Total day cases	93,537		246,651	
Circulatory system diseases	4,480	(17.3%)	13,580	(16.3%)
Respiratory disease	1283	(12.6%)	3335	(12.4%)
Injuries and poisoning	921	(9.9%)	2326	(10.0%)
Malignant neoplasms	8,590	(9.1%)	18,184	(8.6%)
Percentage of cases which are managed as day cases				
All causes of hospitalisation		38.7%		32.9%
Circulatory system diseases		21.7%		20.3%
Injuries and poisoning		6.9%		5.3%
Respiratory disease		5.3%		3.8%
Malignant neoplasms		54.4%		42.4%
Average Length of Stay (days)				
All causes of hospitalisation	7.3		6.3	
Circulatory system diseases	12.9		10.1	
Injuries and poisoning	5.5		4.8	
Respiratory disease	7.9		6.4	
Malignant neoplasms	13.9		12.4	

1. Discharge figures are from the HIPE data-base (1999) and relate to people resident in the Eastern Region. However, about 20% of the discharges from the Region's Hospitals come from outside the Region.

Indicators of Disadvantage (CSO, 1996)	Eastern Regional Health Authority (%)		Ireland (%)	
Unemployed population aged 15+ including first time job seekers (unemployment rate)	32,900	(4.7%)	96,900	(5.7%)
Self Declared Unemployment Rate (Final Quarter 2000) ²	2.9		3.9	
Population in Social Class 5&6	240,841	(18.6%)	774,007	(21.3%)
Eligible persons under GMS (Payments) Board	333,989	(25.7%)	1,183,554	(31.9%)
Older People				
Population aged >69	84,386		287,073	
Population aged >69 in private households	74,516	(88.3%)	256,657	(89.4)
Population aged >69 living alone in private households	24,485	(32.9%)	81,121	(31.6%)

Eastern Region		
Infectious Diseases (1999)	Number	Rate/100,000 population
Notifications of vaccine preventable diseases:	248	18.9
• Measles	108	
• Mumps	23	
• Rubella	34	
• Pertussis	78	
• Haemophilus influenzae B	3	
Meningococcal disease notifications	231	17.8
Tuberculosis notifications	180	13.8
Vaccine coverage (Quarter 4 2000)	Aged 12 months	Aged 24 months
DPT (Diphtheria/pertussis/tetanus)	72%	82%
DT (Diphtheria/tetanus)	2%	3%
Hib (Haemophilus influenzae b)	73%	84%
Oral polio vaccine	73%	84%
MMR (Measles/mumps/rubella coverage at 24 months)	—	81%

2. Quarterly National Household Survey Fourth Quarter, 2000.

Introduction

While this is the third formal Report covering public health issues since the establishment of the Department of Public Health in 1995, it is the first Report to the Chief Executive of the Eastern Regional Health Authority.

The role of the Department of Public Health includes determining and monitoring the health status of populations, identifying needs, contributing to the planning process, developing health information systems, surveillance and control of communicable diseases, environmental health and health services research.

Public Health is principally concerned with improving the health status of the population or sub-sets of the population, as distinct with dealing with the health of individuals. Health has been defined by the World Health Organisation as:

“A state of complete physical, mental and social well-being, not merely the absence of disease or infirmity.”

This definition indicates that there are few, if any, aspects of life and daily activity that do not influence health. While human biology and health services are important key determinants of health, lifestyle and environmental factors such as education, employment, housing, social cohesion, community networks, food production, water and sanitation are also determinants of health. It is for this reason that a section of the report deals with ‘Population Health’ and stresses that improving health is a shared responsibility, and intersectoral collaboration is necessary in many incidences.

Attention is drawn throughout the report, where appropriate, to opportunities for Health and Social Gain.

In Chapter 2, the demography of the Region is described. The population of the Eastern Region has been increasing over the years at a significantly faster rate than that of the rest of the country and this trend is projected to



continue. This has implications in relation to the provision of health services. Further, in the East there is a marked ‘bulge’ in the 15-44 year age group which is currently cushioning demand on health services, but in the coming years this ‘bulge’ will move into an older age group requiring proportionally more health services. Thus there is a need to plan now for significantly greater levels of health service for the Region. In this regard a brief summary of an Eastern Regional Health Authority bed capacity review is included, which shows a need for a significant number of additional acute hospital beds in the Eastern Region up to the year 2011.

It is thanks to the Public Health Information System (PHIS), which has been developed jointly by the Information Management Unit of the Department of Health & Children and the Directors of Public Health, that we can show the trends for the Eastern Region in relation to age standardised mortality rates for a number of important diseases. The diseases referred to are important indicators of health status.

These show an impressive fall in mortality rates,

both for the Eastern Region and Ireland as a whole for ischaemic heart disease, cerebral vascular disease, cancer in the 0-64 year age group, lung cancer in men and breast cancer. At the same time hospital admission rates for these conditions are rising, perhaps due to the burden of chronic disease. For some of these conditions the fall in the mortality rate is greater in the East than in the rest of the country. However, one must be concerned to note that there is no improvement in the age standardised lung cancer mortality rate for females.

Although the fall in some mortality rates over recent years is significant, these must be kept in perspective as is seen when rates for Ireland are compared with the EU. This shows rates to be higher in this country than in Europe as a whole, consequently there is significant scope for greater improvement.

A measles outbreak is described in the Region during which there were two measles related deaths. Over 100 children were hospitalised, six of whom required admission to the Intensive Care Unit. This is a timely reminder of the importance of all children receiving childhood vaccines and completing the schedule within the appropriate time.

Unfortunately the level of childhood vaccination uptake continues to be sub-optimal. As a result of the success of vaccination programmes a generation have grown up who have little knowledge of the devastation caused by childhood infectious diseases in the past, and thus have never experienced the fear caused by outbreaks of infectious diseases. Unfortunately this has led to complacency among both parents and health professionals.

In October 2000, a National Vaccination Programme to protect against Group C meningococcal disease was introduced. The importance and effectiveness of vaccination is underlined by the fact that one can report, that in the first 6 months of year 2001 only 7 cases of this disease were notified in the Region which represents a 74% decrease in notifications compared to last year.

The number of tuberculosis cases notified for the Region last year showed a reduction for the first time in 3 years. Further the number of cases of this disease reported in non-nationals appears to have stabilised.

Nationally there has been a significant increase in HIV infection over the past 2 years. The increase in the heterosexual population appears particularly marked over this same period. There is no room for complacency as regards HIV infection, and in particular there is a need for ongoing vigilance in relation to safe sex practices. Surprisingly HIV infection, unlike other infectious diseases, is still not a notifiable disease. This anomaly should now be rectified.

In many respects the health of people living in the Eastern Region has never been better. However, there is no room for complacency as we have some way to go, in respect of a range of diseases, to reach health status levels comparable to the EU average.

We face important challenges in the coming years, including the provision of adequate hospital facilities and resources to cope with an increasing and ageing population. It will be important to target health resources at those most in need and where they can have the greatest impact.



Brian P O'Herlihy
Director of Public Health

Chapter 1 Population Health

Introduction

The term *population health* has no easy definition. At its core, is the understanding that health and wellbeing require to be described in terms far more elaborate than simple medical definitions concerning illness and disease. There is a clear and explicit recognition that socio-economic conditions and the social and physical environment in which people live are crucial determinants of their health and wellbeing. Social and economic inequalities account for much of the difference seen in the health status of better and worse off groups of people. The poorest and the least powerful in our society experience the worst health. Although the middle class has better health than the poorest in our society, the health of the middle class is poorer again than of the very wealthiest and most powerful.¹

Key Point

Socio-economic conditions and the social and physical environment in which people live are crucial determinants of their health and wellbeing

A population health approach underlines the fact that investment in health care alone cannot ensure people's health and wellbeing. A population health approach will identify the most effective response to socio-economic inequalities.

Population Health

Population health is concerned with improving the health status of populations or sub-sets of populations as distinct from dealing with the health of individuals.

Health has been defined by the World Health Organisation as:

Key Point

A population health approach underlines the fact that investment in health care alone cannot ensure people's health and wellbeing

“A state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity”

Using such a broad definition, few would feel confident in describing themselves as healthy. Furthermore, this definition suggests that there are few, if any, aspects of life and daily activity that do not influence health.

Key Point

There are few, if any, aspects of life and daily activity that do not influence health.

Population health is an approach to health that aims to improve the health of entire populations, or sub-groups within the population, and to reduce health inequities among population groups. In order to reach these objectives, it looks at and acts upon the broad range of factors and conditions that have a strong influence on our health.

The understanding of what makes and keeps people healthy continues to evolve and be further refined. A population health approach reflects the evidence that factors outside the health-care system, or sector, significantly affect health. In common with health promotion, population health believes that the delivery of health care is only a part of what properly constitutes health. Population health considers the entire range of individual and collective factors and conditions and their interactions that have been shown to be correlated with health status. These are commonly referred to as “determinants of health”.

Key Point

A population health approach seeks to act upon the root causes of ill health

Important foundations of adult health are laid in prenatal life and early childhood. Slow growth and lack of emotional support during this period raise the lifetime risk of poor physical health and reduced physical, cognitive and emotional functioning in adulthood.

The achievement of physical and mental well-being is not the responsibility of the individual alone but is impacted by a range of social, economic and environmental factors, together with issues of equity, equality and access. People's lifestyles and the conditions in which they live and work strongly influence their health.

In the last 150 years or so the factors that have had the greatest impact on people's health have been:

- The provision of a clean water supply
- Adequate Housing
- Education
- Adequate nutrition
- Vaccinations (by providing protection against infectious diseases and in some cases eliminating a disease, e.g. smallpox)
- Antibiotics

There is a considerable amount of evidence to point to the fact that health has many different determinants and many of these fall outside the health system or established health sector. Put at its simplest the key factors that seem to determine health status are:

Key Point

Many determinants of health fall outside the health system.

- Lifestyle
- Education
- Environment
- Human biology
- Health services

However, such factors are continually being refined and added to so that currently the "determinants of health" would be seen to include:

- Genetic inheritance
- Income and social status
- Healthy child development
- Social support networks
- Employment / working conditions
- Social environments
- Physical environments
- Personal health practices and coping skills
- Culture

- Gender
- Health services

It must be borne in mind that while each of these factors are important in their own right, at the same time, the factors are inter-related. There can be a complex interaction among determinants that can have a far more significant affect on health. For example, unemployment can lead to social isolation and poverty, which in turn influences one's psychological health and coping skills. Together, these factors can then lead to poor health.

External determinants of health include such elements as social cohesion, community networks, education, employment, housing, work environment, food production, water and sanitation, and health services.

The population health approach which seeks to alter the health experience of populations rather than the individual for the better, i.e. bring about health and social gain, can also be applied within the health sector. Relevant aspects of this include:

- **Protection**
e.g. vaccination, child protection services, water fluoridation, community mothers programme
- **Screening for disease**
e.g. metabolic disorders in infancy, breast screening
- **Health Promotion**
e.g. programmes to educate, reduce, or eliminate risk taking behaviour, programmes to increase self-esteem

A population health approach recognises that improving health is a shared responsibility and intersectional collaboration is necessary in many cases. There are many opportunities to improve health and the responsibilities for action to do so are widely spread.

Opportunities for Health and Social Gain

- Recognise the importance of a "population health approach" and keep this matter to the fore.
- Recognise that decisions of many bodies outside the health services impact on health

- Partnership approach
- Parenting skills programmes
- Adequate housing
- Set minimal education standards
- Special programmes for those who fall out of the educational net, or do not reach target standards
- All significant developments should be subjected to a “health impact assessment”

Key Point

There are many opportunities to improve health and the responsibilities for action to do so are widely spread.

- All major Government, Local Authority policies, etc, to be the subject of a health impact assessment
- Core programmes of health promotion / education (e.g. anti-smoking, drug abuse, alcohol abuse, etc)
- Health screening programmes and health prevention programmes to be evidence based
- Target interventions at those most in need.

Chapter 2 Health Status

Introduction

The Eastern Regional Health Authority, which was established on March 1, 2000, is the statutory body with responsibility for health and personal social services for approximately 1.5 million people living in Dublin, Kildare and Wicklow (the Eastern Region).. Its functions include planning, commissioning, funding service providers, monitoring and evaluation and overseeing the provision of services. The three Area Health Boards, the Voluntary Hospitals and other voluntary agencies provide health services for the population of the Eastern Region.

The number of people in the Region, their age distribution, employment status and income, access to services and a strong cohesive community, educational opportunities and degree of engagement in society dictate their health status and therefore their need for services. This chapter gives an overview of the principal health statistics of the population of the Eastern Region.

Demography

The Eastern Region has the largest and most densely concentrated population in the country. The population of this region is unique due to its younger age profile and greater mobility. The Eastern Region is where the greatest wealth and some of the greatest deprivation in the country is located.

Key Point

By 2011, 38% of the Irish population is likely to live in the Eastern Region.

The population in the Eastern Region has been steadily increasing throughout the last century. Figure 2.1 shows the trend in population in the Eastern Region as a percentage of the National population between 1961 and 1996. Currently, 35.7% of Ireland's population is concentrated in the Eastern Region, compared with 29.8% in 1961. By 2011, this is likely to rise to about 38%.

Figure 2.2 shows the population of the Eastern Region based on the last full census data from 1996. This shows clearly where the bulk of the population lies in relation to age and is useful in

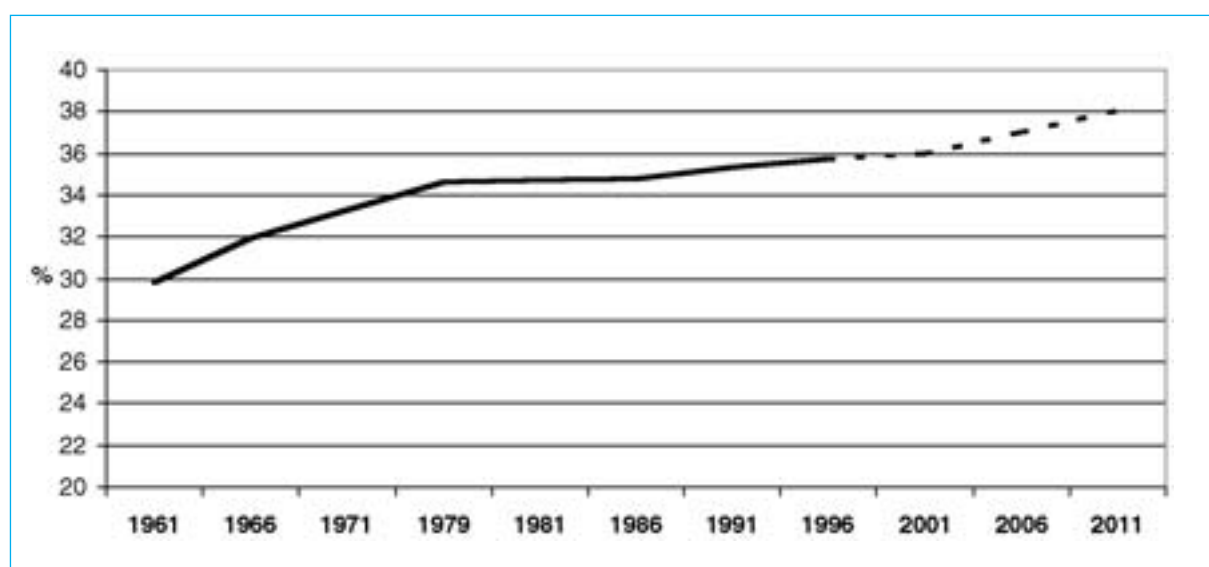


Figure 2.1.
Population Growth in the Eastern Region as a Percentage of the National Population: 1961-1996
Source: Department of Health, 2000; CSO, Health Information Unit, Department of Public Health²

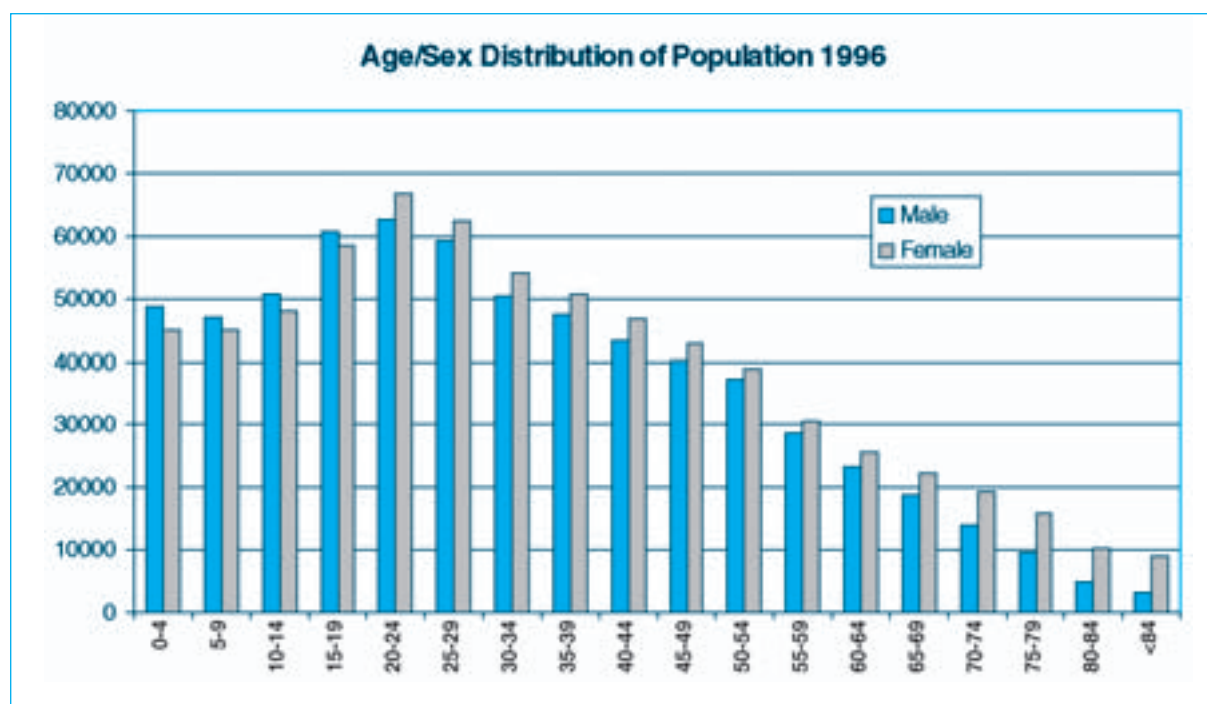


Figure 2.2. Population Pyramid of the Eastern Region – 1996

Source: CSO

planning services for the future. A marked demographic “bulge” exists in the 15-44 year age group and accounts for approximately 45% of the population in the Region. There are greater numbers of females than males in every age group over 20.

Figure 2.3 below shows the projected population changes in the Eastern Region and nationally in greater depth. The shifts in the two populations are similar but more dramatic in the Eastern Region.

Tables 2.1 and 2.2 below show some of the

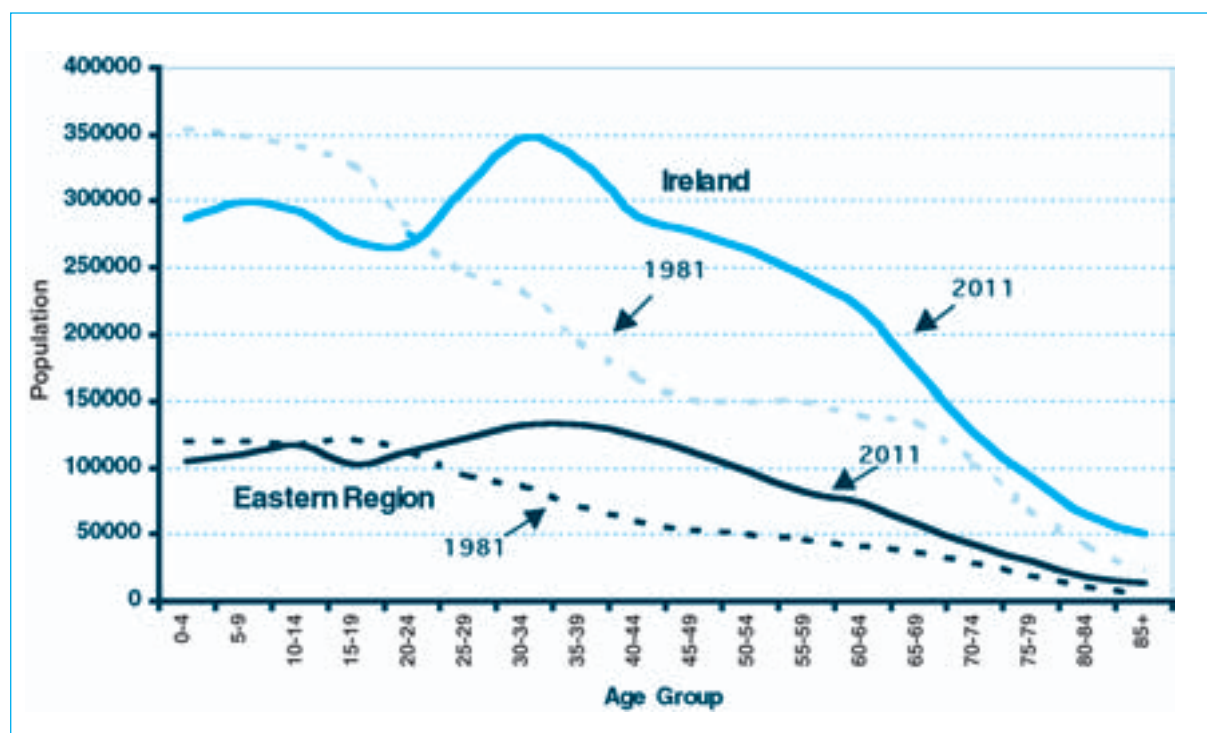


Figure 2.3. Population Structure Ireland & Eastern Region, 1981-2011

Source, Health Information Unit, Department of Public Health

projected shifts in populations of the Eastern Region and in the country as a whole between 1981 and 2011. During this period, the national population is expected to grow by about 860,000 or 22%. Over the same time period, the population of the Eastern Region is expected to grow by approximately 390,000 or 33%.

It is estimated that by 2011, approximately 118,000 people (or 7.5% of the population) will be recent migrants to the Region. The population will get older. Between 1996 and 2011, it is estimated that there will be 35,000 extra people aged over 65 and 10,000 extra aged over 75.

Key Point

By 2011, almost 8% of the population of the Eastern Region will be recent migrants.

Table 2.1 Projected Population Growth and Rate of Population Increase between 1981 and 2011 in Ireland and the Eastern Region

	Eastern Region	Ireland
Population 1981	1.20 million	3.44 million
Population 2011	1.59 million	4.20 million
Percentage Increase	33%	22%

(Source: Health Information Unit)

Table 2.2 Projected Change in the Population in Different Age Groups between 1981 and 2011 in Ireland and the Eastern Region

Age	Eastern Region	Ireland
0-14	↓ 7%	↓ 16%
15-44	↑ 34%	↑ 26%
45-64	↑ 90%	↑ 70%
>64	↑ 59%	↑ 37%
>74	↑ 69%	↑ 57%

(Source: Health Information Unit, Department of Public Health)

There is currently quite a marked “bulge” in the 15-44 year age group which is cushioning demand on health services as present but this bulge will in future years be converted into an

elderly population requiring proportionately more services.

Table 2.3 compares the age distributions of the Eastern Region and Ireland using the last available data from 1996. There are proportionately fewer children under 14 and older people, and more young people aged 14-44 in the Eastern Region when compared to the country as a whole.

Table 2.3 Population Statistics Ireland & Eastern Region, 1996

Age Groups	Eastern Region		Ireland	
	No	%	No	%
<15	294,051	22.7	859,424	23.7
15-44	630,256	48.6	1,648,981	45.5
45-64	246,361	19.1	703,800	19.4
65-74	74,908	5.8	239,351	6.6
>74	50,363	3.9	174,531	4.8
Total	1,295,939	100	3,626,087	100

(Source: PHIS, Version 4)

Since 1981, important changes have occurred in the demographic profile of the population, both nationally and in the Eastern Region.

The under 15 population comprised 22.7% of the population in 1996. This is expected to rise over the next 10 years at a higher rate in the Eastern Region than nationally. The most notable changes, however, relate to older people. The over 65 year age group comprised 9.7% of the population in 1996; by 2011 this group will have increased by 25% in the Eastern Region. The over 75 year age group comprised 4% of the population in 1996; by 2011, it is estimated that this group will have increased by 19%.

The Dependency Ratio

The dependency ratio is the ratio of the population aged under 15 and over 64, expressed as a proportion of the population. This ratio is a measure of the proportion of the population, which, along with other groups such as the homeless and drug users, are likely to have the greatest need for health services. The Dependency Ratio for the Eastern Region is 0.52, which is the lowest figure of all the Regions. The current national figure is 0.54.

Health Status

At the beginning of the last century, communicable diseases (particularly tuberculosis, childhood infections and enteric or gastrointestinal disease) were the principal killers, generally producing death at an early age. Improvements in social conditions produced a considerable increase in life expectancy. With the growing appreciation of the importance of hygiene and the development of effective control measures (including better immunisation and powerful antibiotics), communicable disease became less important and, in an increasingly older population, chronic disease such as cardiovascular disease and cancer, more important causes of disease and death. Today, cardiovascular disease and cancer account for two-thirds of all deaths in the Eastern Region.

Key Point

The age-standardised mortality in Ireland has fallen by almost 1/3 in the last 30 years.

Key Point

Circulatory disease causes 40% and cancer 26% of deaths in the Eastern Region.

Figure 2.4 shows the principal causes of death in the Eastern Region. Deaths due to diseases of the circulatory system and cancer account for over two-thirds of all deaths in the Region.

Over 4% of deaths are due to injury, with road traffic accidents accounting for 1% of total deaths. These deaths are even more significant in that they generally involve younger people and result in very high numbers of potential years of life lost.

Ireland has made remarkable improvements in health in the last 30 years – our age-standardised mortality rate has fallen by almost 1/3rd from 1,204/100,000 in 1968 to 806/100,000 in 1999 and during the same period, our infant mortality rate has fallen by 300% from 21/1000 to 6.2/1000 live births.³ The position in the Eastern Region compares favourably; in 1999, the mortality rate was 787 deaths/100,000, the second lowest regional level in the country.

Our health, however, when compared to that of other EU countries, is relatively poor. We have the third highest level of cancer mortality among the 15 EU member states and amongst the very highest rate of death due to ischaemic heart disease.³ Premature mortality from ischaemic heart disease in Ireland is also the highest in the EU while our premature mortality from cancer is fifth highest in the EU. In 1996, Ireland's age specific mortality rate was 853 deaths/100,000 population, third highest after Denmark and Portugal and well above the European average of 719 deaths/100,000 population.³

Given the level of mortality from heart disease, cancer and injuries, the Department of Health and Children has identified these areas as requiring special attention.⁴ As part of this process, national strategies have been produced for reducing the incidence and mortality caused by cancer⁵ and heart disease.⁶

Key Point

The Eastern Region has the second lowest regional mortality level in the country.

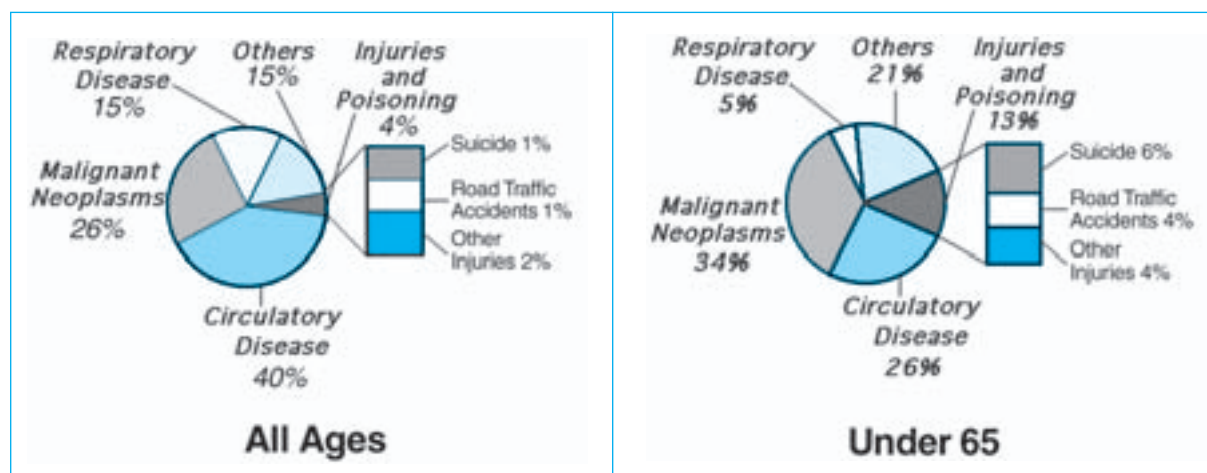


Figure 2.4. Principal Causes of Death in the Eastern Region, in All Age groups and in those Under 65 – 1999.

Source, PHIS Version 4

Table 2.4 Age Standardised Mortality Rates in The Eastern Region, Ireland and the EU, 1996³

	Eastern Region	Ireland	EU
Age Standardised Mortality Rate/ 100,000 population	832	853	719

Table 2.5 Life Expectancy at Birth – Ireland and the EU

Life Expectancy in years (trends at birth)		Ireland	EU
Females	1980-2	75.6	77.1
	1990	77.6	79.4
	1995-7	78.8	80.5
Males	1980-2	70.1	70.5
	1990	72.1	72.8
	1995-7	73.2	74.0

(Source: Department of Health, 1999)³

In Ireland, life expectancy at birth has increased by 6.9% for men and by 7.5% for women since 1970 (Table 2.5).³

Figure 2.5 shows death rates standardised for age for various categories of disease and compared to the national average. The Eastern Region has slightly lower rates of death than the rest of the country in all categories except cancer. A large part of this is accounted by higher levels of lung cancer in the Eastern Region.

Trends in Mortality and Hospital Discharge Data

The following figures demonstrate trends in mortality and hospital discharges over the last number of years. Data have been extracted from the Public Health Information System (PHIS) Version 4. The trends in age-standardised rates and sex breakdown in each of the principal disease categories are shown. Rates are given as *age-standardised rates* – this method of calculation allows comparison of regions as if they had the same age profile and is a more accurate measure than crude rates. The graphs show total age and premature deaths and discharges. Premature deaths refer here to deaths in people aged 0 to 64 years of age.

What is most striking is that, when trends over the last five years are examined, for virtually

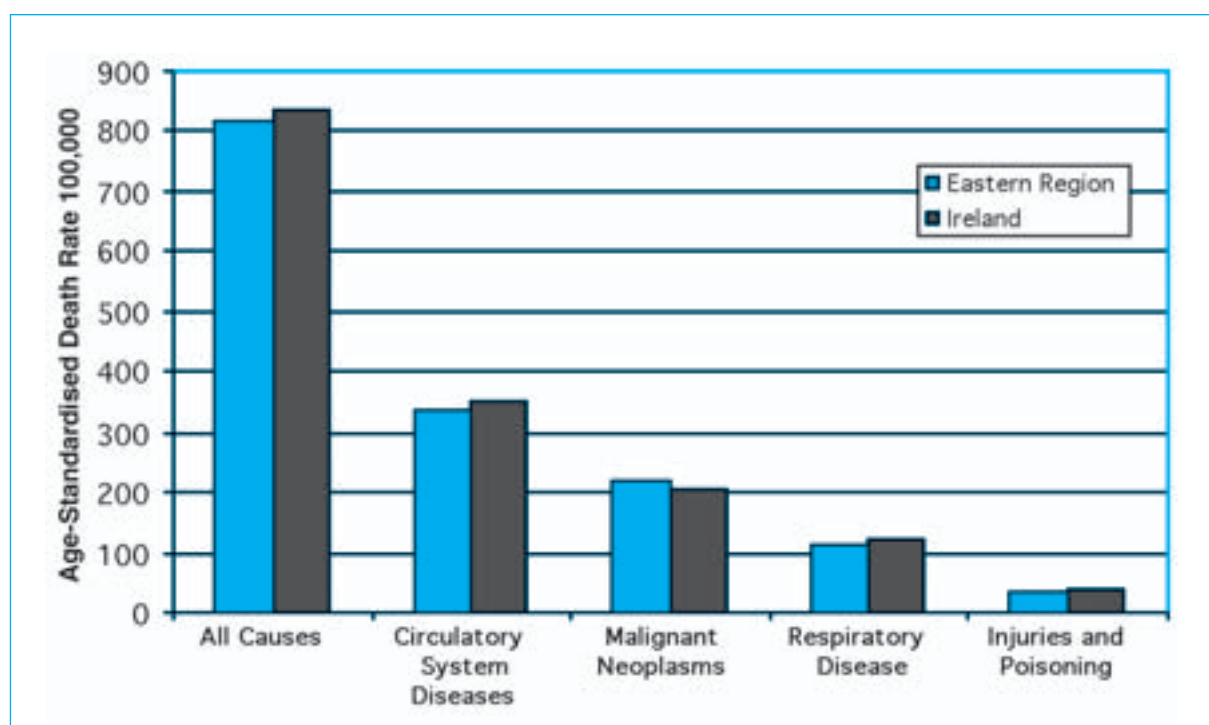


Figure 2.5. Standardised Death Rates/100,000 population in the Eastern Region and Ireland. Principal causes of death, 1999

Source: PHIS, Version 4

every category of disease, the mortality rates are falling, while hospital admissions (measured in discharge rates) show a corresponding rise.

Key Point

While mortality rates are falling, hospital discharge rates are rising.

Figure 2.6 compares the trends in age-standardised death and discharge rates for all diagnoses and for all ages, in the Eastern Region, between 1994 and 1999. As death rates fall, hospital admissions rise.

This trend is repeated for many different

diseases – Figure 2.7 shows the trends in the case of ischaemic heart disease, a progressive rise in admissions against a backdrop of a falling death rate.

How these two trends are related is quite complex. Increased admission to hospital may be having an effect on mortality, but there is an elaborate interplay between enhanced health through improving socio-economic conditions, reduced levels of smoking and other disease risk factors and improvements in lifestyle and dietary factors. The rising admission rate is likely to be a reflection of such factors as an

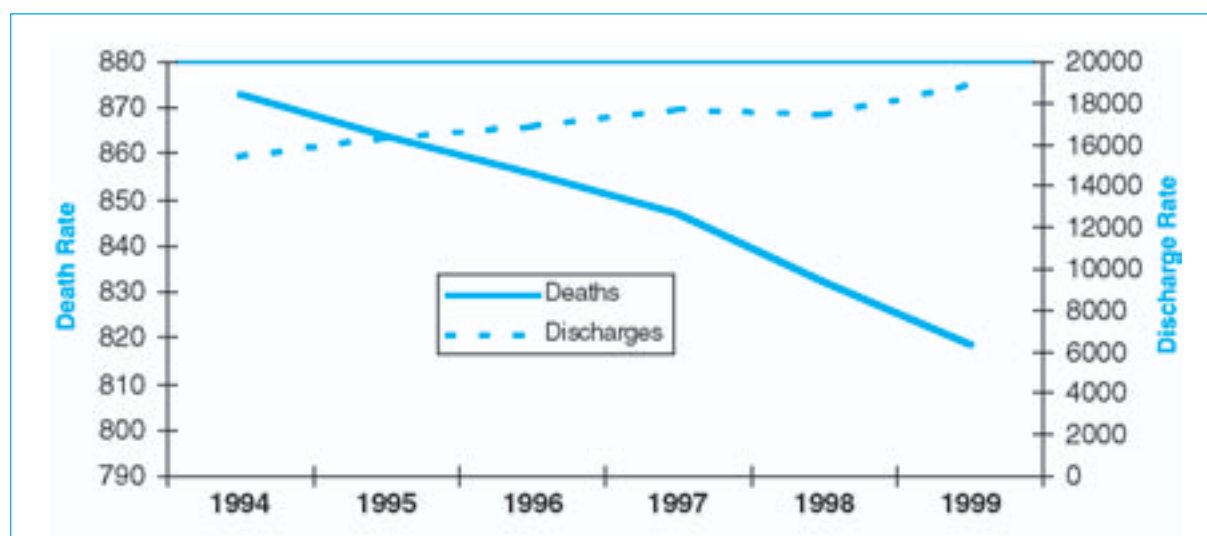


Figure 2.6. Trends in Age Standardised Death and Hospital Discharge Rates for All Diagnoses, Eastern Region, All Ages: 1994-1999

Source: PHIS, Version 4

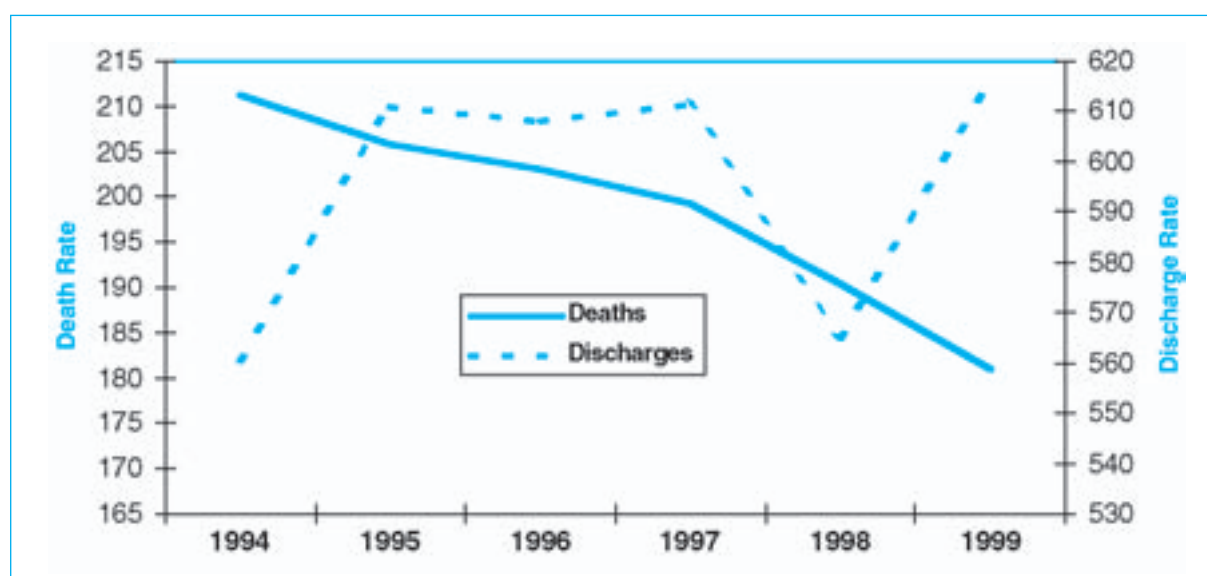


Figure 2.7. Trends in Age Standardised Death and Hospital Discharge Rates for Ischaemic Heart Disease, Eastern Region, All Ages: 1994-1999

Source: PHIS, Version 4

increasingly elderly population, improved treatment and rising public expectation.

Care Groups

Children

Table 2.6 shows birth data for the Eastern Region and Ireland. Ireland has the highest birth rate in the EU. The crude birth rate (per 1000 population) and the number of births outside marriage, in the Eastern Region are the highest in the country. The latest comparative figures (from 1999) show that rates of teenage pregnancy are continuing to rise and now account for 6.5% of births in the Eastern Region.

The birth rate in the Eastern Region has gradually risen from a rate of 14.4 births/1000 in 1994.

Ireland has perinatal and infant mortality rates considerably higher than the EU average.³ The perinatal mortality rate in the Eastern Region is 9.7 deaths per 1000 live and still births and is amongst the lowest in the country.³ The infant mortality rate in the Eastern Region is 6.3 deaths during the first year of life per 1000 live births and is marginally above the national average.³

Table 2.6 Birth Data – Eastern Region and Ireland

	Eastern Region (%)	Ireland (%)
Births 1999 (PHIS, Version 4)		
Total births	20,462	53,354
Crude birth rate/ 1,000	15.3	14.3
No. births outside marriage	7,463 36.5%	16,461 30.9%

(Source: PHIS, Version 4; Department of Health, 2000)³

Surveillance of Congenital Anomalies

Surveillance of congenital anomalies in the Eastern Region is carried out by the Dublin EUROCAT Registry (European Registration of Congenital Abnormalities). There are approximately 30 such registries participating in the EUROCAT network of congenital anomaly

registries in Europe. The Dublin Registry was established in 1979 by the Medico-Social Research Board and was one of two pilot registries that led to the formation of EUROCAT. In 1989, the operation of the Registry was taken over by the Health Information Unit, which is a section within the Department of Public Health of the Eastern Regional Health Authority.

The catchment population of the Registry is comprised of all babies born to mothers resident at birth in the counties of Dublin, Wicklow and Kildare in the Eastern Region of Ireland. This area accounts for approximately one third of all births in the state. Ninety per cent of the population resides in urban areas and 99% of births take place in hospital. Data are collected from birth to five years of age as some anomalies may be obvious at birth such as spina bifida, with others not becoming apparent until early childhood, for example, some forms of congenital heart disease.

The objectives of the Registry are:

- (i) to provide baseline epidemiological information on congenital anomalies in the Eastern Region;
- (ii) to detect and investigate trends in the frequency of congenital anomalies in order to assess the impact of known or suspected risk factors;
- (iii) to evaluate the effectiveness and efficiency of health services (primary prevention and treatment);
- (iv) to provide a well-documented database for etiologic and clinical research;
- (v) to act as an information centre that can respond to specific needs, such as the assessment of the impact of environmental accidents or change, or the suspicion of teratogenic influences from food, drugs or other exposures.

EUROCAT defines congenital anomalies as structural defects (congenital malformations, deformations, disruptions and dysplasias), chromosomal abnormalities, inborn errors of metabolism, and hereditary diseases. Data are collected on the length of gestation, type of birth, birth weight, outcome and malformations present are collected in addition to other data. The Dublin Registry operates an active

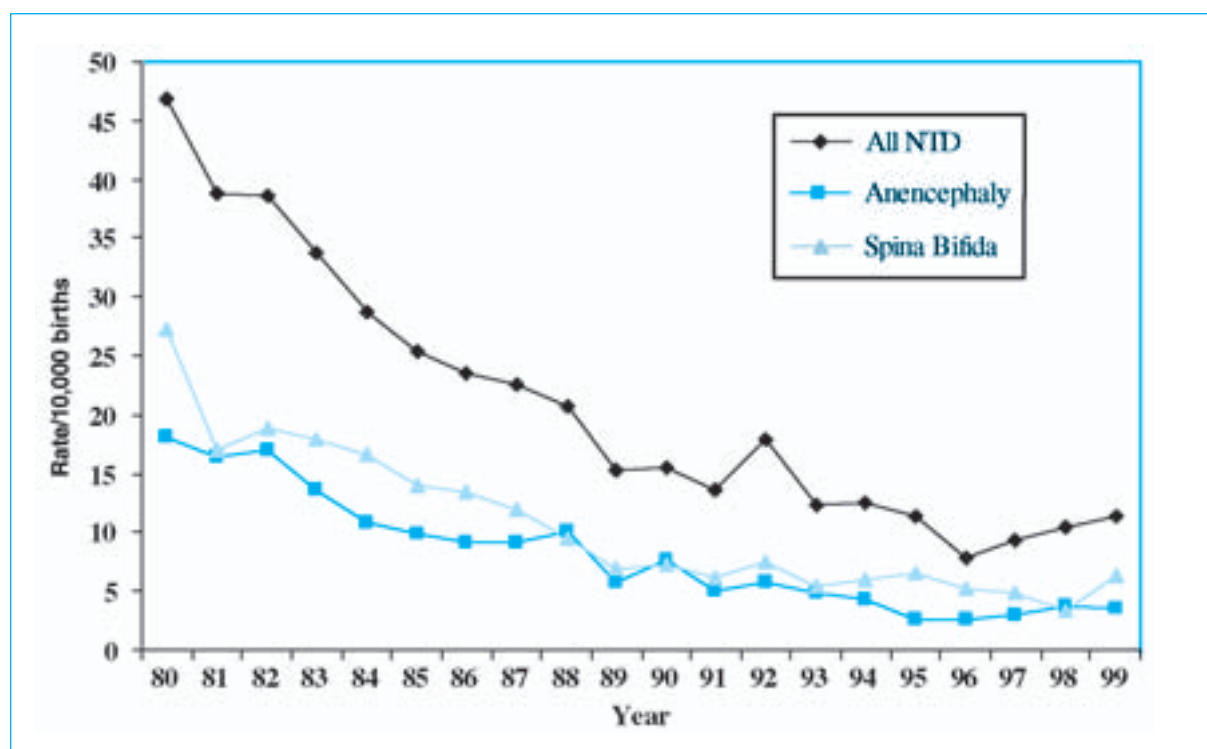


Figure 2.8 Neural Tube Defects: birth prevalence rate in the Eastern Region from 1980-99

surveillance system. Cases are ascertained by using multiple sources which include: birth notifications, data from the Hospital Inpatient Enquiry System (HIPE), death certificates, pathology reports, long term illness and records of recipients of the Domiciliary Care Allowance. The data are computerised and retained in encrypted form; access is restricted to a nominated account, protected by password.

The Dublin EUROCAT Registry is also a member of an international network of congenital anomaly registers, the International Clearinghouse for Birth Defects Monitoring Systems (ICBDMS). The Dublin Registry is and has been involved in a number of collaborative projects with other registries in EUROCAT and ICBDMs. A major collaborative project currently being undertaken is the investigation of neural tube defects in relation to different folic acid policies in participating countries. Research carried out by the Dublin Registry includes the investigation of trends in Down syndrome, neural tube defects, congenital anomalies of the diaphragm and abdominal wall defects. A report on 20 years of congenital anomaly surveillance in the Eastern Region has recently been published by the Registry.

Figure 2.8 shows the birth prevalence of Neural

Tube Defects in the Eastern Region between 1980 and 1999

Spina bifida and anencephaly account for almost all Neural Tube Defects (NTD). During the 1980s and early 1990s, there was a marked fall in the birth prevalence rate, followed by a slower rate of decline. This trend has also been evident in other 'Celtic' regions of Europe e.g. Scotland and N. Ireland, pre-dating recommendations on folic acid, which can prevent between 50-70% of NTD. Although the reason for the fall in rates is unknown, it is thought to be due improved nutrition (including the availability and consumption of foods containing folic acid) in the population over the past twenty years. However, rates of NTD are still higher than in a number of other regions in Europe.

Figure 2.9 below shows the birth prevalence of chromosomal anomalies in the Eastern Region between 1980 and 1999.

The most frequent chromosomal anomalies from 1980-99 were Down syndrome, Patau's syndrome-Trisomy 13 and Edward's syndrome-Trisomy 18. The overall rate of chromosomal anomalies remained relatively stable from 1980-92. Since 1992, the birth prevalence for Down and Edward's syndromes increased, with a peak

in the rate for all chromosomal anomalies in 1996. However, the age at which mothers give birth has also increased during the past decade, with the majority of births in 1999 among mothers in the 30-39 year age group. This is likely to have influenced the changes observed during the period, as advancing maternal age is a risk factor for chromosomal anomalies.

The main abdominal wall anomalies are

omphalocele and gastroschisis – Figure 2.10. Whilst the birth prevalence rate for omphalocele has fluctuated, there was a rise in the rate for gastroschisis in the 1990s particularly in 1995/96. Although a rare anomaly, the trend has been observed in a number of other countries in Europe and in the United States, particularly among children of younger mothers.

There has been a gradual rise in the birth

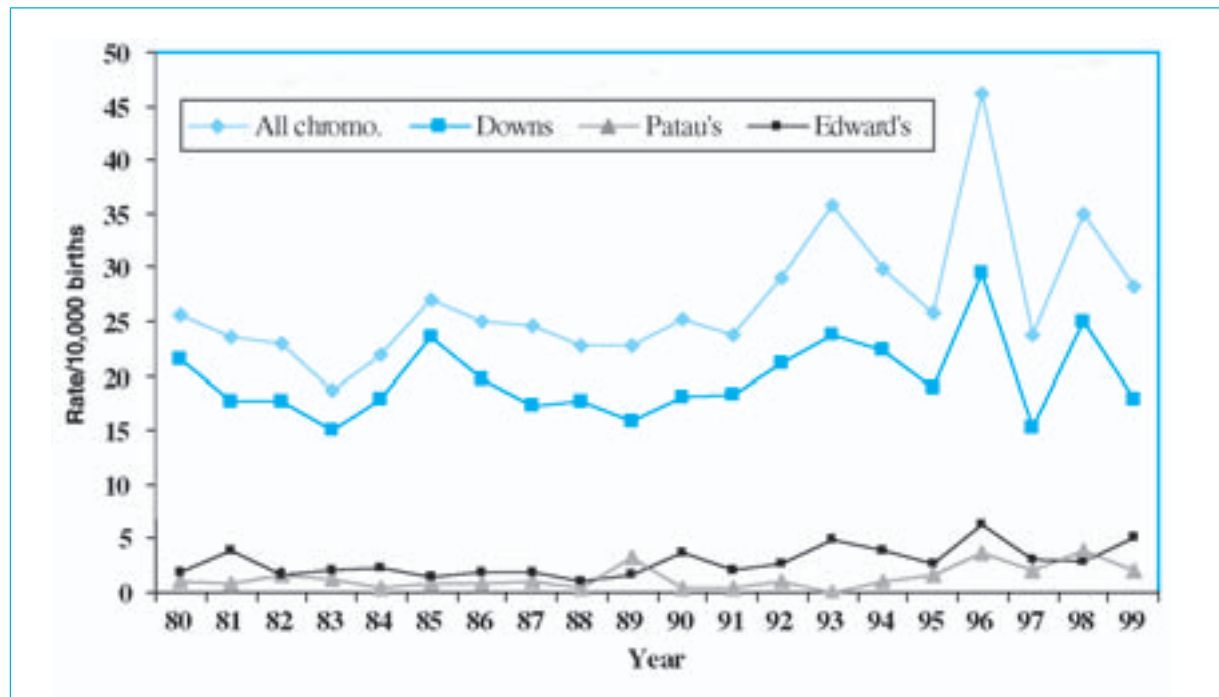


Figure 2.9 Chromosomal anomalies: birth prevalence rates in Eastern Region from 1980-99

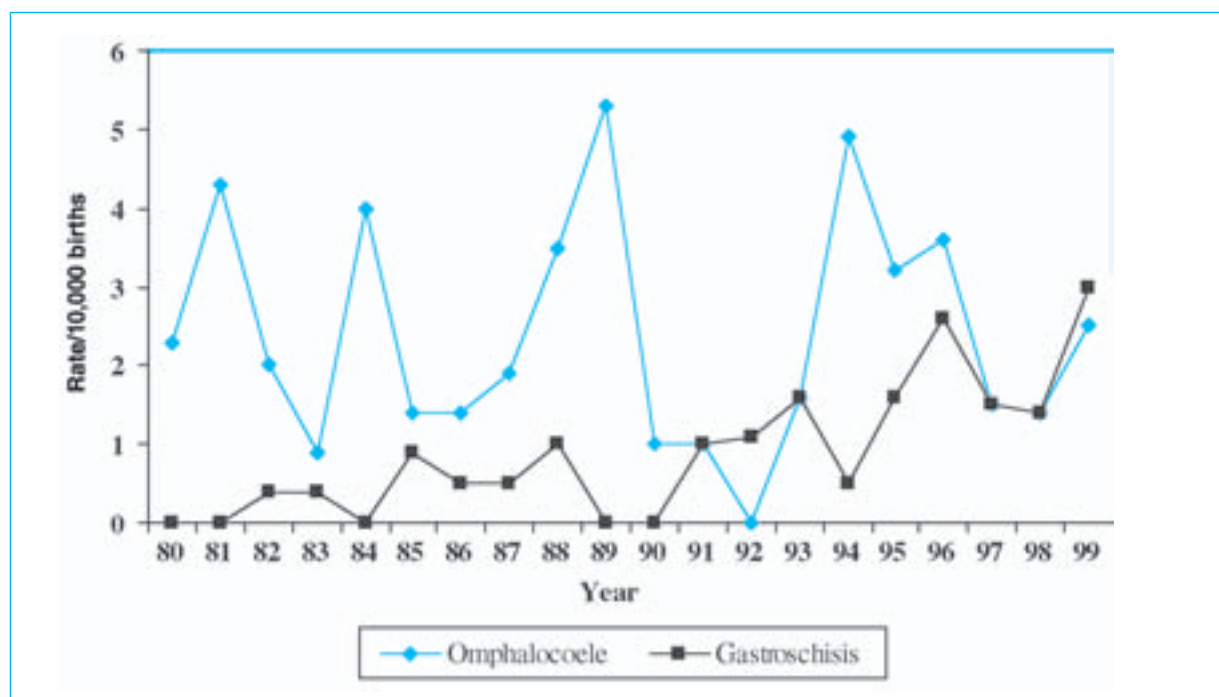


Figure 2.10 Abdominal Wall Defects: birth prevalence rates in the Eastern Region from 1980-99

Table 2.7 Data on Disadvantage – Eastern Region and Ireland

Indicator	Eastern Region (%)		Ireland (%)	
Unemployed population aged 15+ including first job seekers (unemployment rate) (CSO, 1996)	32,900	(4.7%)	96,900	(5.7%)
Self Declared Unemployment Rate (Final Quarter 2000)	2.9		3.9	
Population in Social Class 5&6 (CSO, 1996) ⁷	240,841	(18.6%)	774,007	(21.3%)
Eligible persons under GMS (Payments) Board (Dec 2000) ⁸	333,390	(25.73%)	1,148,055	(30.32%)

(Source: CSO, 1996; GMS (Payments) Board, 2001)

prevalence rate of congenital diaphragmatic anomalies, amidst fluctuations, since 1989, although overall numbers are relatively small – Figure 2.11. There is currently a case control study being undertaken in the Eastern Region to investigate possible causes of this rise.

Older People

Since 1990, the population in the Eastern Region aged 65 and over has increased from 115,856 to 127,654 in 1999, more than a 10% increase in the same number of years. From the latest census data in 1996, 74,516 people in the Eastern Region, aged 70 or over were living in private households. Almost one-third of these (or 24,485) lived alone.⁷ The Department of Public Health is currently examining best practice in relation to rehabilitation after a stroke. Recommendations will be made on the

number of stroke units required in the region per head of population.

The Disadvantaged

Table 2.7 shows data on disadvantage in the Eastern Region. While the unemployment rates and the rate of those in Social Class 5&6 are slightly below the national average, the actual numbers are considerable. The rate of GMS eligibility is less in the Eastern Region compared with the rest of the country.

Figure 2.12 shows the trends in unemployment rate in the Dublin Region and the country as a whole. Dublin Region figures are given, as the last data available at county level, from the Central Statistics Office are those from the 1996 Census.⁷ National unemployment figures have shown a consistent fall during the late 1990's. Figures for the Dublin Region remain about one

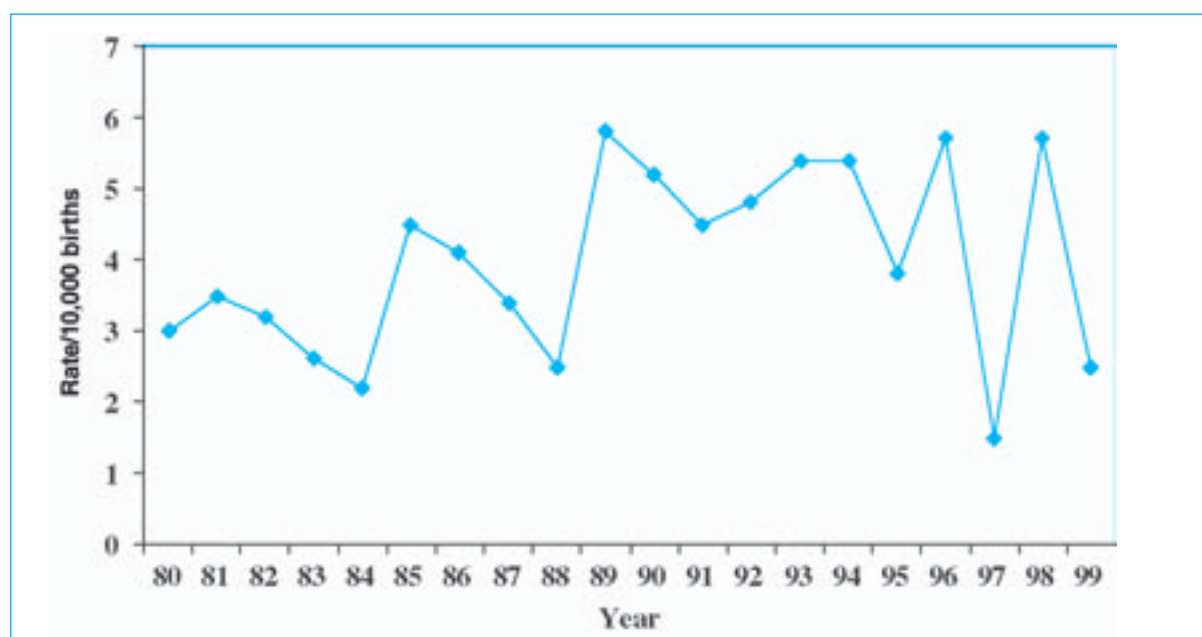


Figure 2.11 Diaphragmatic anomalies: birth prevalence rates in Eastern Region from 1980-99

percentage point below national figures.

Homelessness is an increasing problem in the Eastern Region. In a survey undertaken by the Economic and Research Institute in 1999, it was

estimated that there were 2900 homeless adults in the region. Of these 1850 (64%) were male and 1050 (36%) were female.

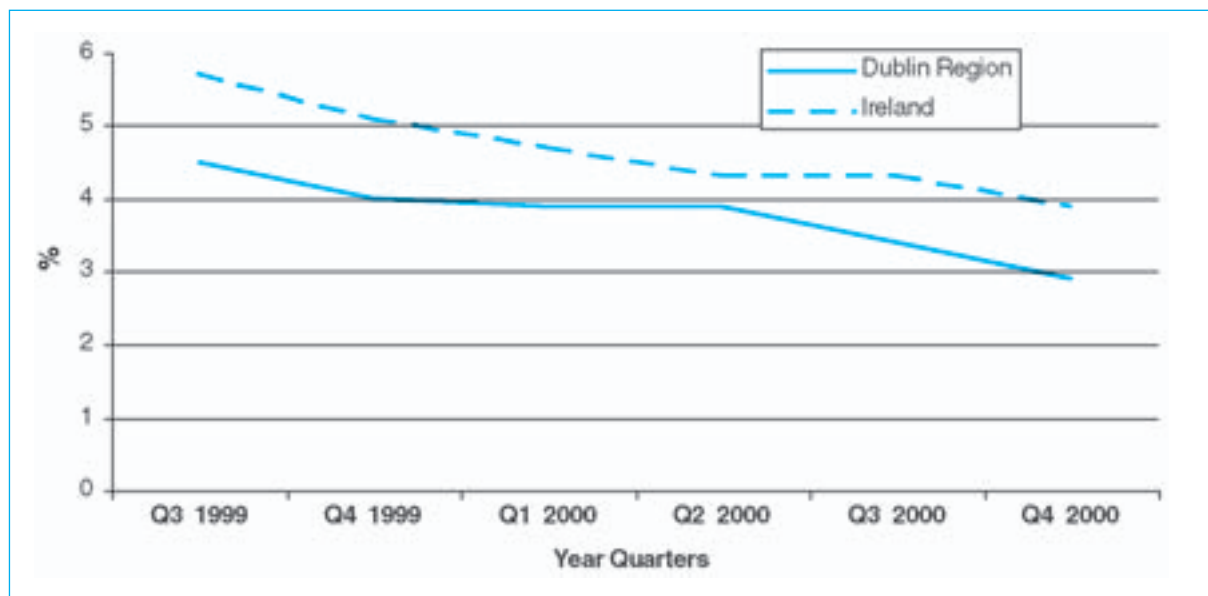


Figure 2.12. Trends in Unemployment Rate in People Aged 15 and over

Source: Quarterly National Household Survey Fourth Quarter, 2000⁸

Chapter 3 Heart Health in the Eastern Region

Introduction

Mortality and hospital discharge data taken from the Public Health Information System (PHIS) provide much of the data used in this and the following two chapters. Hospital discharge data, taken from the Hospital Inpatient Enquiry (HIPE) scheme, is one of the main descriptors of a hospital's activity. The data from HIPE relates to activity – a person admitted three times to the same hospital will appear as three separate 'episodes' – it does not give a direct measure of the *number* of patients with a particular condition. The data in the following figures and tables refer to admissions of people *who are resident in the Eastern Region*. Neither will the following data reflect the actual activity of the regions hospitals – approximately 20% of patients treated in the Region come from outside it.

Heart disease is a major killer and disables many people in Ireland and internationally. Moreover, Ireland has the highest rate of heart disease 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, known as Building Healthier Hearts⁶.

The strategy states that heart diseases eventually kill almost a quarter of the Irish population, yet heart disease is not inevitable. These facts are both sobering and challenging. Building Healthier Hearts (BHH) urges a change in mindset in relation to cardiovascular disease in order to alter the perception that as individuals and populations we are powerless in the fight against heart disease. Taking up the challenge of reducing mortality and morbidity from heart disease in the Eastern Region demands a highly organised and committed approach to health

Key Point

Ireland has the highest rate of heart disease in the EU and heart disease kills one quarter of the Irish population.

promotion in conjunction with other sectors such as local authorities and voluntary organisations, to the planning, monitoring and evaluation of health services and to the surveillance of cardiovascular diseases in the region.

Reports of particular importance in understanding the burden of heart disease are:

- (a) *Building Healthier Hearts* (1999) by the Cardiovascular Health Strategy Group⁶,
- (b) *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 Women⁹ and
- (c) *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.¹⁰
- (d) A report produced for the former Eastern Health Board written by the late Dr Zachary Johnson in 1989 entitled *Mortality Patterns in Dublin 1986-87* gives insight into mortality black spot areas in Dublin while a repetition of this work is being undertaken in 2001.¹¹
- (e) The National Health and Lifestyle surveys in 1999 reflect the issues of relevance in relation to risk factors for heart diseases.¹²
- (f) The Public Health Information System (PHIS) version 4, the national database of analysed mortality and hospital discharges data is also used here.¹³

The Burden of Heart Disease Mortality

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. 4.1. Forty one percent of all deaths, an average of over 3800 deaths per year in the region, are caused by Cardiovascular Disease (CVD). 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.

Key Point

Cardiovascular Disease accounts for 41% of deaths in the Eastern Region.

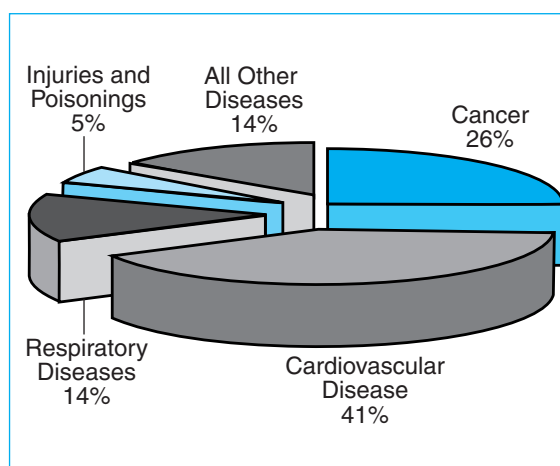


Fig. 3.1 Principal Causes of Death, 1995-1999, Eastern Region, All Ages

Source: PHIS version 4

Mortality – Time Trends in Ireland

Study of Irish mortality data by Codd reveals that IHD rose between 1950 and 1974, levelled off until 1985 and then steadily declined from 1985 to 1999. Consequently, by 1999 mortality from IHD declined by 37% in men and by 30% in women from the peak year of 1985. Similarly, acute myocardial infarction (AMI) mortality rates declined from 1968 when data were 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 BHH 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+ is rising rapidly. This points to a growing burden on the health services to cater for elderly patients, a significant proportion of whom will have cardiovascular disease.

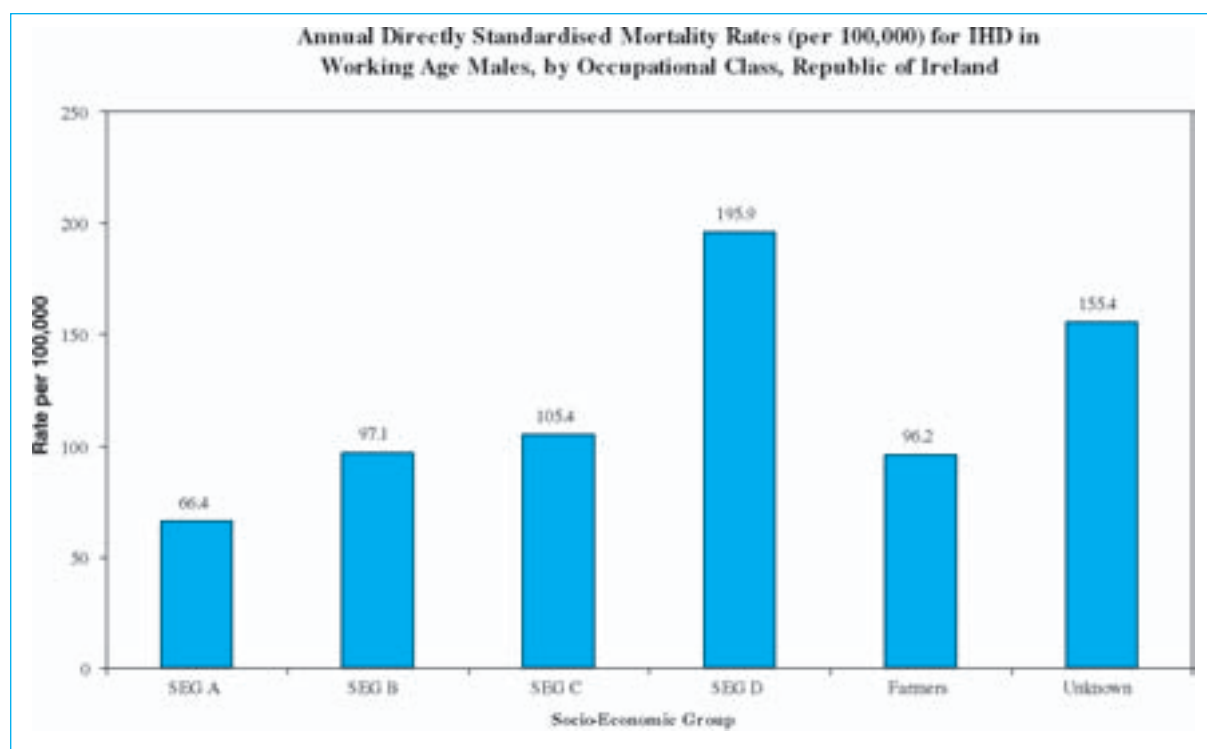


Figure 3.2. Ischaemic Heart Disease Mortality for Males by Socio-economic Group

Source: *Inequalities in mortality Report.*

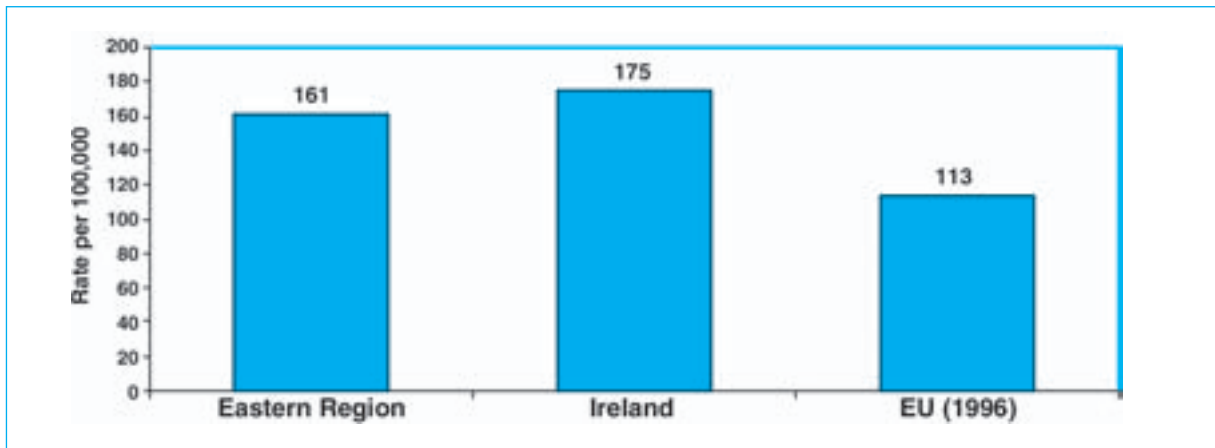


Figure 3.3 Standardised Death Rates/100,000 due to Ischaemic Heart Disease, Eastern Region, Ireland and EU: All Ages, 1999

Mortality – The International Comparison

Data extracted by Coddshows that Irish males have the highest mortality rate from ischaemic heart disease (IHD) in the EU while the rate for females is 3rd highest⁹. Of note is that Ireland ranks highest for premature mortality from IHD.

Key Point

Ireland has the highest level of premature mortality due to heart disease in the EU.

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 South. Differences in data collection and methods of analysis may explain some of these findings.

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

Mortality – the North-South comparison and indicators of inequity

The *all cause mortality rate* in the Republic of Ireland was 6% higher than the rate in Northern Ireland. For circulatory diseases it was 5% higher in the South. In both jurisdictions, circulatory disorders were responsible for almost half

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 highest occupational class (Fig. 3.2)

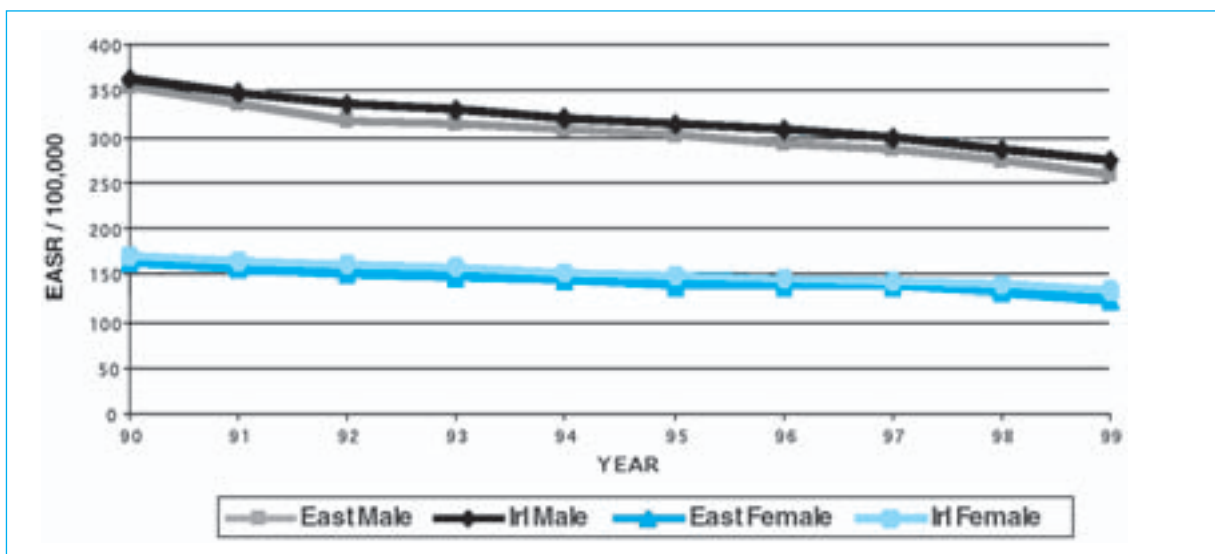


Fig 3.4 Age-Standardised Ischaemic Heart Disease Mortality by Sex, All Ages: Eastern Region and Ireland, 1990 to 1999.

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 (Fig 3.3) the most recent European average (1996).

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 and 3.5). Rates for females have also declined but to a lesser extent. This is at variance with the national picture.

Key Point

Rates of death from heart disease are falling but more slowly in women.

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 either of the other two counties and has been consistently so over the past 10 years though this pattern is not

seen in the under 65 year age group (Table 3.1). This data will be studied further to understand why this difference has occurred in the county.

As Dublin has a big population it is important to look at the data by small area. This is not easily done, as mortality data is not routinely coded for small area. In the early 1990's, Dr Zachary Johnson coded mortality data for the two years 1986-87 and showed that there were places in Dublin which had significantly higher mortality rates for IHD in males compared with the rest of Dublin¹⁴ (Map 3.1).

Hospital Discharge Data

As mortality from ischaemic heart disease declines, people are living longer with chronic illness. Consequently, information on morbidity

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) Number	Ischaemic Heart Disease SDR (All ages)	Under 65y Number	SDR Under 65y
Dublin	8606	178.98	1588	43.39
Wicklow	910	185.03	139	39.31
Kildare	891	199.34	165	43.67

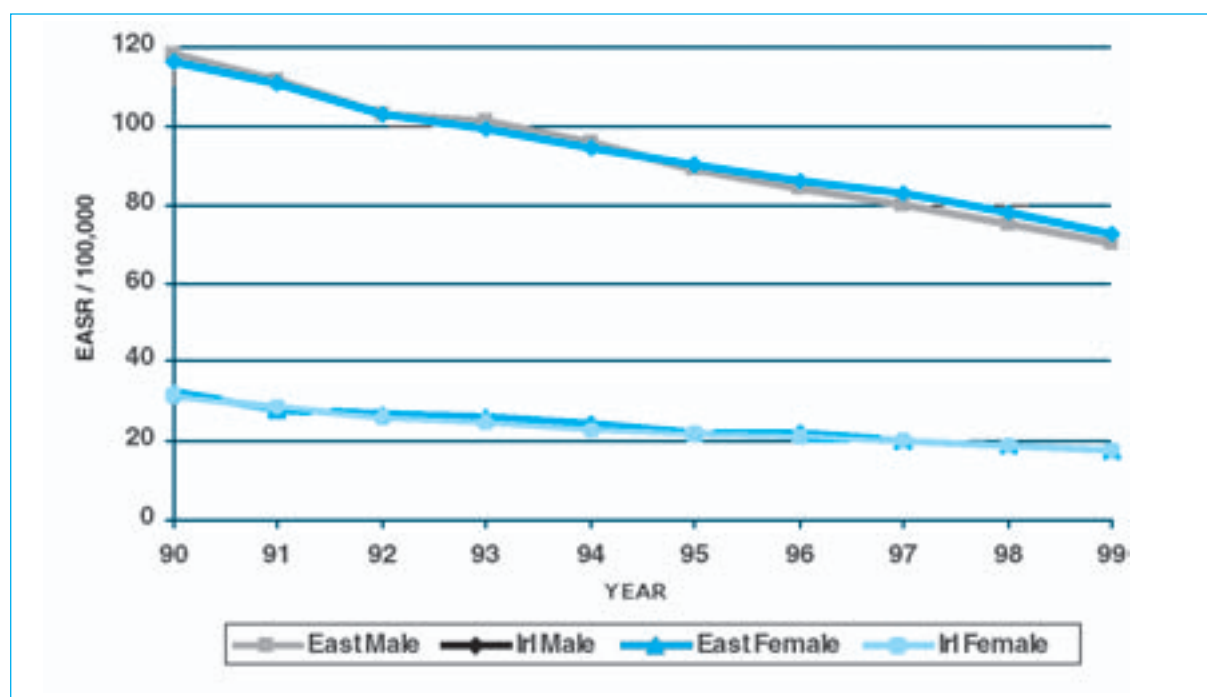
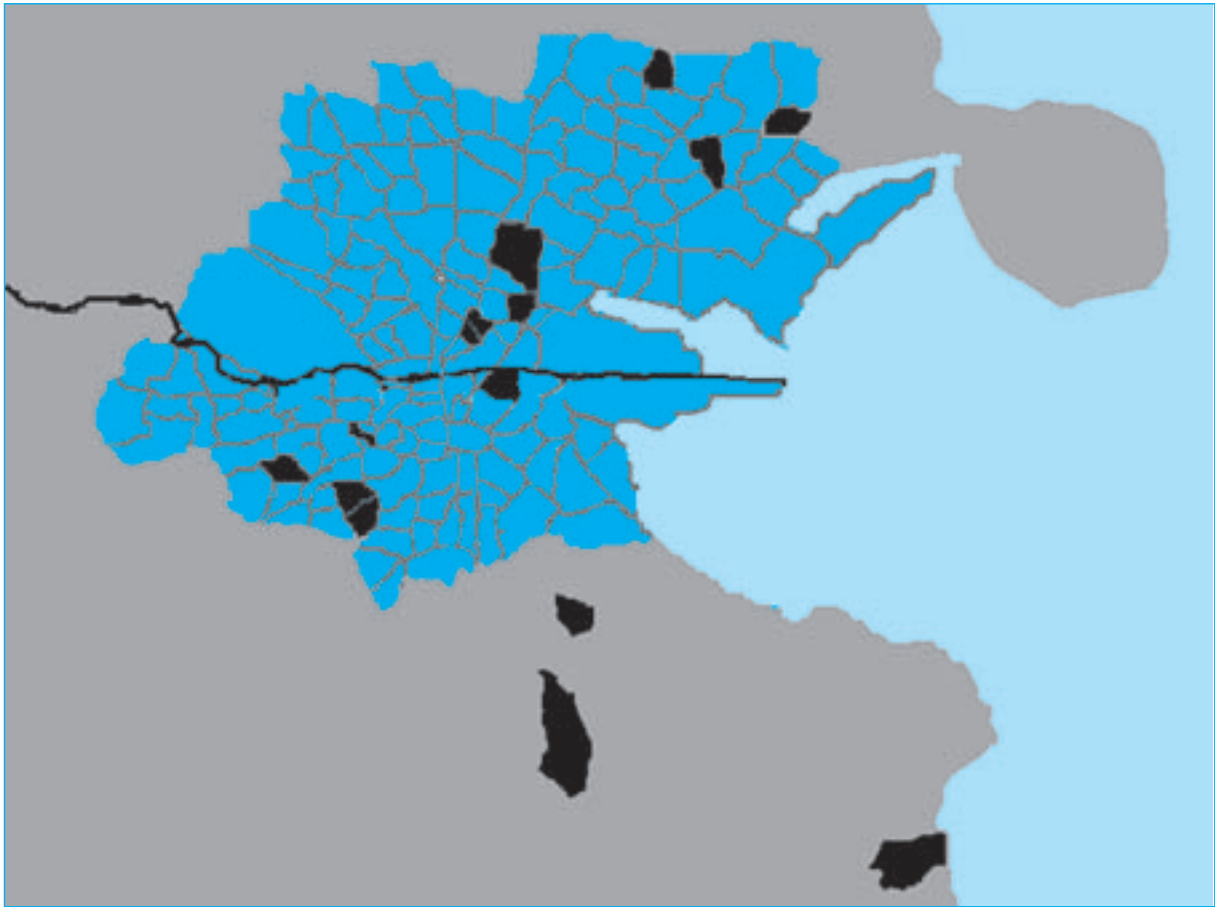


Fig 3.5 Age-Standardised Ischaemic Heart Disease Mortality by Sex, 0-64: Eastern Region and Ireland, 1990 to 1999.

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 that is looked



Map 3.1 Analysis of male Ischaemic Heart Disease mortality 1986-1987.
Black areas show significantly above average SMR* (Standardised Mortality Ratio).

Source: HIU, Dept of Public Health, ERHA.

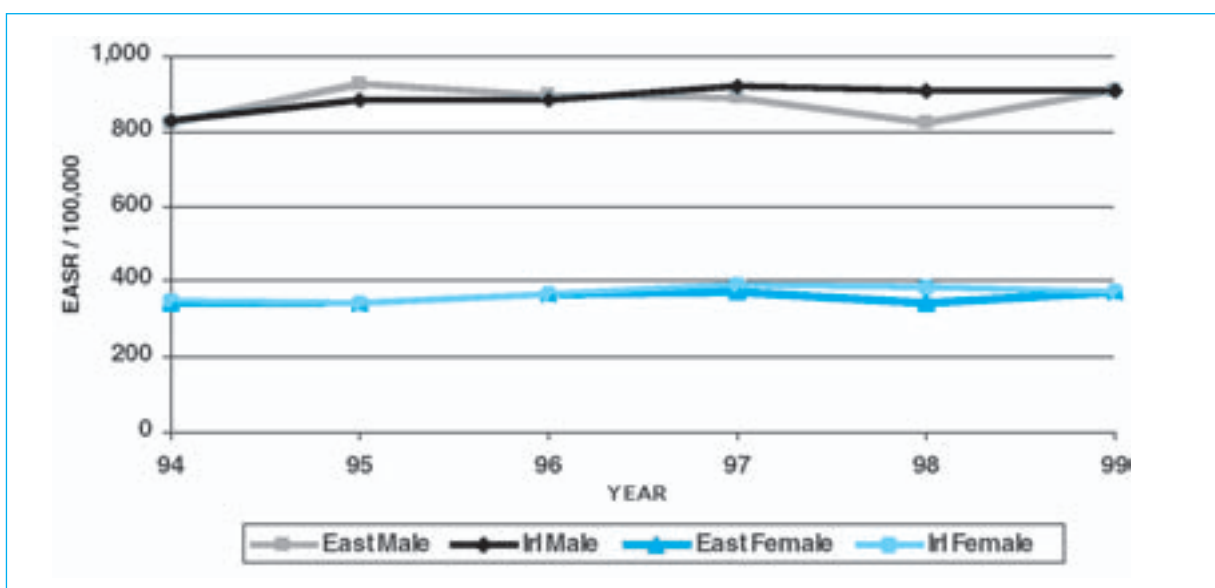


Fig 3.6 Age-Standardised Ischaemic Heart Disease Discharges by Sex, All Ages: Eastern Region and Ireland, 1994 to 1999

after in General Practice. Occasional studies chart indices, such as period prevalence for acute myocardial infarction, but are not region specific.

Key Point

Little data is available on illness that is looked after in General Practice.

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.

Table 3.2 Rates of Discharge for Acute Myocardial Infarction

Region 1999	No. of Cases of AMI	SDR for AMI
East	1633	143.3
Midland	320	153.06
Mid West	311	99.4
North East	574	191.85
North West	375	162.8
South East	665	168.98
South	728	130.87
West	558	136.53
Ireland	5164	145.41

In 1999, acute myocardial infarction (AMI) accounted for 5164 discharges in Ireland with 1633 in the Eastern Region. The rate of

discharge due to AMI is shown in table 4.2 showing that the East and Ireland as a whole have similar rates. Rates vary across Health Boards with the Eastern Region ranking fifth highest out of eight regions.

Cardiac interventions

Increasingly, people with IHD require investigation and major interventions such as percutaneous transluminal coronary angioplasty (PTCA) or coronary artery bypass graft (CABG). 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 100,000). The same pattern is seen for residents under 65 years.

The number of CABGs has 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 100,000) but not significantly so. A similar pattern is seen for residents under 65 years.

Within the region, Dublin had a significantly the higher PTCA rate in 1999. There was no significant difference between Wicklow and Kildare for PTCA rates. While the rates for CABG differ across the region in 1999 the differences are not significant (Table 3.3).

Also males were two to three times more likely to have a procedure as females. This was true for each county as well.

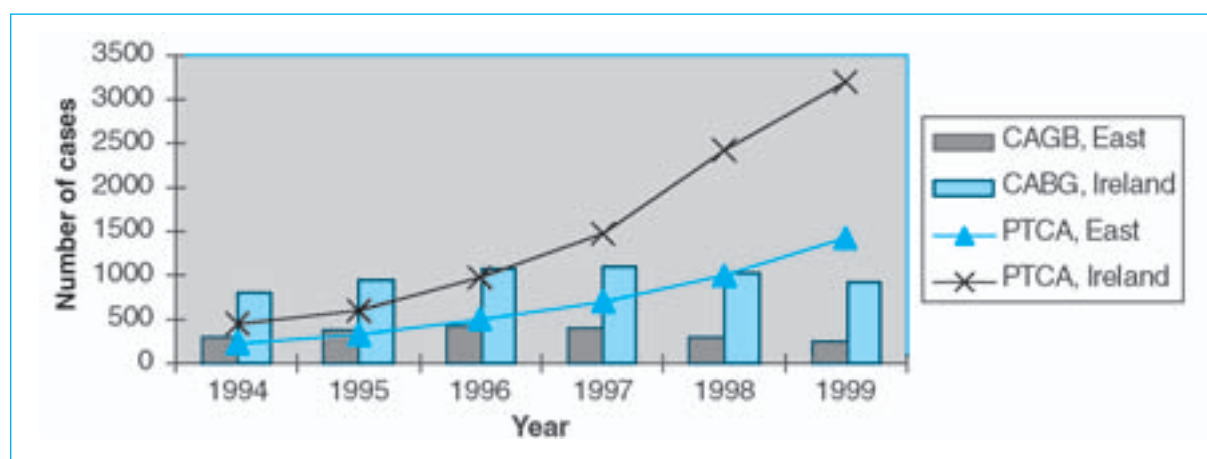


Fig 3.7 CABG, PTCA procedures 1994-1999, Number of cases, Eastern region and Ireland.

Table 3.3 Numbers of Cardiac procedures, 1999

County	Number of PTCA's	Standardised rate for PTCA	Number of CABG	Standardised rate for CABG
Dublin	1247	138.45	212	23.78
Wicklow	75	88.19	26	30.63
Kildare	97	106.64	17	18.96

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 on Table 3.4. The risk of heart disease increases with age. In younger age groups, it is more common in men than women. The three most important modifiable risk factors for heart disease are smoking, raised blood pressure and raised blood cholesterol.

Age in the population

The Eastern Region is different to the population of Ireland in that there is a lower proportion of the population 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)

Lifestyle risk factors

The survey of lifestyle, attitudes and nutrition (SLÁN) has shown that there is no significant geographical variation in the distribution of lifestyle risk factors for heart disease. However, lifestyle risk factors vary with social class. Smoking, poor diet, lack of physical activity etc. are all much more common in lower social class. SLÁN found an overall smoking prevalence of 31%. Details for smoking by social

Table 3.4 Lifestyle and other characteristics associated with Coronary 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)
Sex	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
Personal history of CHD or other atherosclerotic vascular disease	Physical inactivity	Elevated plasma triglycerides Hyperglycaemia/diabetes Obesity Thrombogenic factors

*European Atherosclerosis Society and European Association of Hypertension, 1994

Table 3.5 Eastern Region, population in age categories

Age group	<25 years	25-44 years	45-64 years	65+ years	Total
East Coast AHB	122 707 (38.5%)	94 649 (29.7%)	64 883 (20.4%)	36 484 (11.4%)	318 723 (100%)
Northern AHB	186 867 (41%)	136 152 (29.9%)	88 425 (19.4%)	44 084 (9.7%)	455 528 (100%)
South West AHB	223 169 (42.8%)	160 763 (30.8%)	93 053 (17.8%)	44 703 (8.6%)	521 688 (100%)
Eastern Region	532 743 (40.8%)	391 564 (30.1%)	246 361 (19.2%)	125 271 (9.9%)	1 295 939

class for males are shown in Figure 3.7.

Consequently, looking at the variation in social class in the Eastern Region would give a good indication of where these risk factors are highest and hence where efforts to reduce heart disease should be targeted. Variation in social class is studied by looking at areas of deprivation (outlined by the SAHRU unit at Trinity College Dublin) and mapped by district electoral divisions (DEDs) for Dublin. The SAHRU index is a composite of five indicators (unemployment, low social class, lack of a car, living in rented accommodation and overcrowding) which are widely believed to be determinants of material disadvantage.

From the map (Map 3.2), it can be readily seen that the areas most likely to have a higher proportion of risk factors and so 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.

Current Activity in Targeting Health Disease in the Region

In addressing the challenge of reducing heart disease, a multi-disciplinary and multi-sectoral approach is being taken in the Eastern Region.

Chief among the initiatives is the formulation of an Action Plan for a 3-5 year period for the main areas:

- health promotion,
- pre-hospital care,
- primary care,
- hospital care,
- cardiac rehabilitation and
- information and surveillance.

To do this work, the Authority has set up a Cardiovascular Steering Group with supporting working groups which have an ambitious programme outlined in order to report on the actions needed in the region by next February.

There are many important activities in support of the working groups, not least being ongoing needs assessment to ensure that plans of action are informed by and based on need, that inequity is outlined and targeted, that quality is emphasised and that effectiveness and efficiency are included.

The Region has received two years of initiative funding for cardiovascular health to date and improvements have been made in many areas:

- Health promotion infrastructure and campaigns,
- supporting personnel (nursing and dietician) in advance of the national primary care/general practice pilot programme,
- aspirin training, semi-automatic defibrillators and audit structures in the ambulance service,

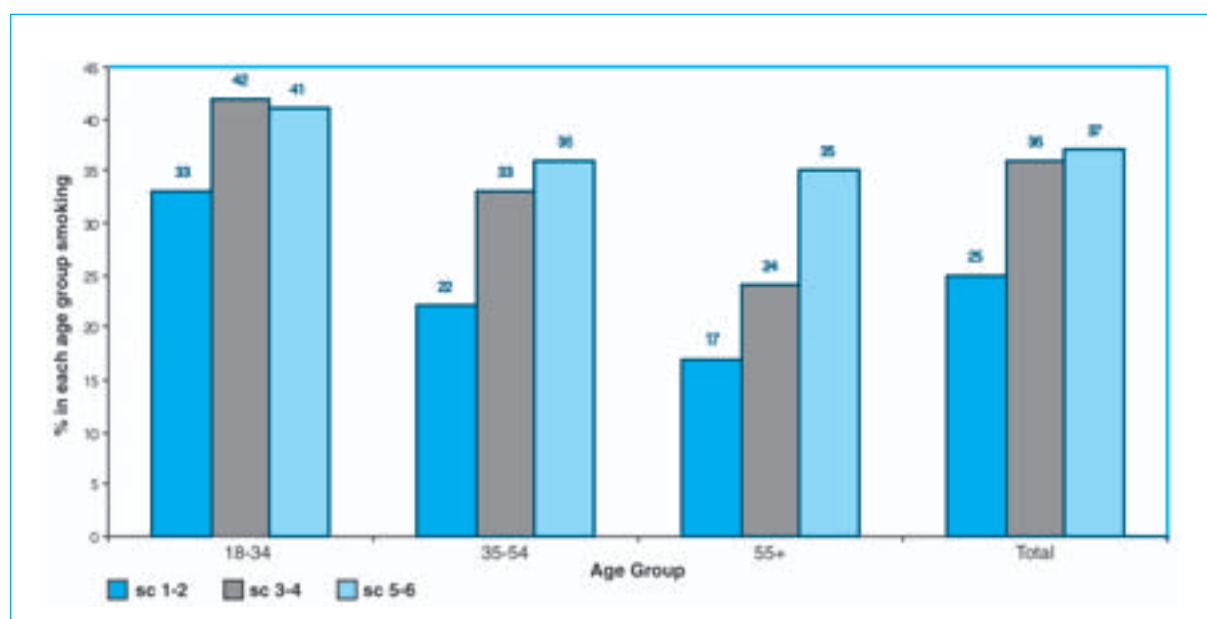
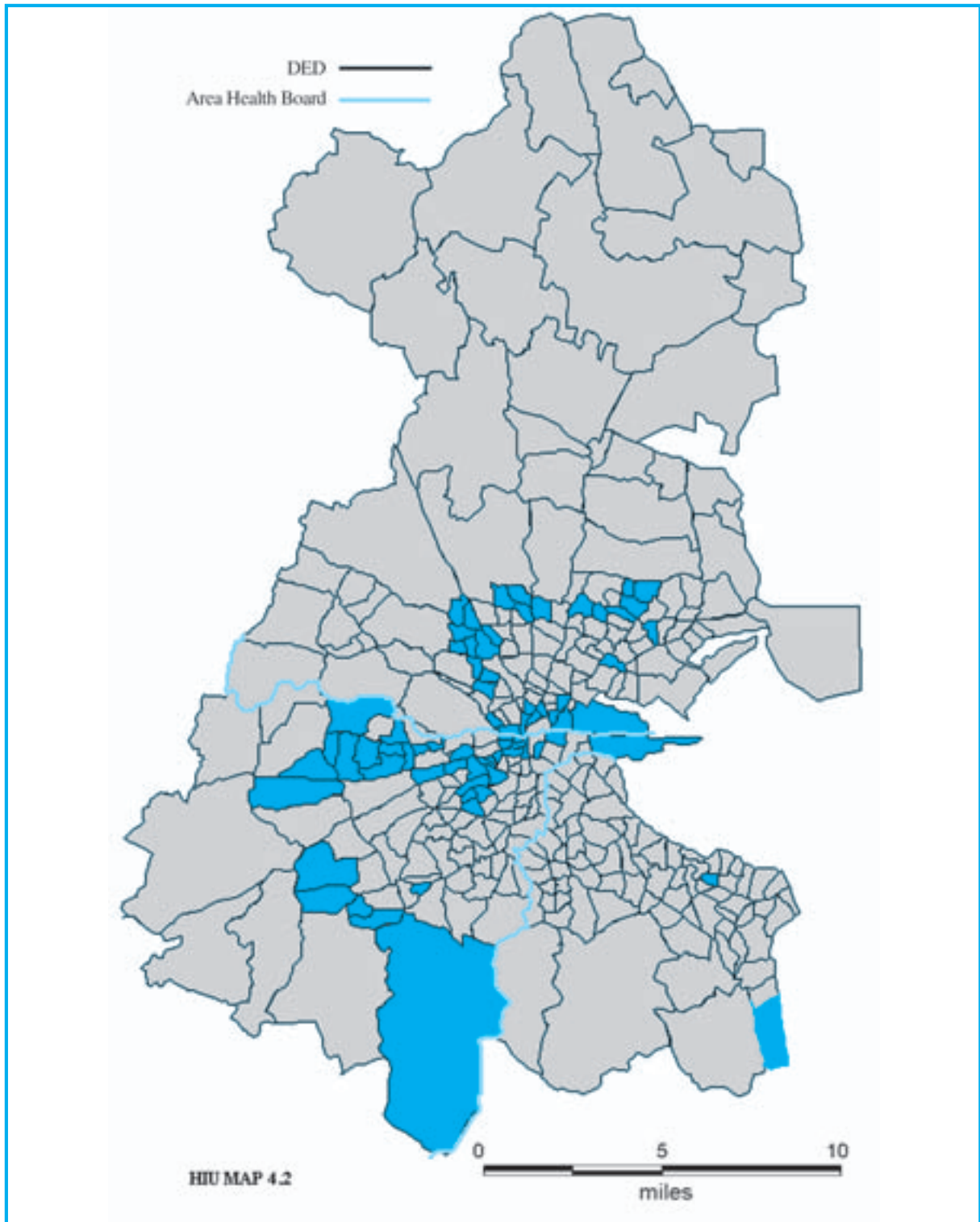


Fig 3.8 Smoking prevalence by Gender, Age and Social Class -Male.

Source: SLÁN survey.

- d) hospital initiatives including chest pain assessment structures in a number of hospitals, resuscitation training, improving cardiac technical expertise,
- e) establishment of cardiac rehabilitation in all nine hospitals
- f) public health/epidemiological initiatives including cardiology manpower projections, mortality analysis by small area, collaboration with hospital colleagues on audit of 'door to needle time' and proportion of eligible patients receiving cardiac rehabilitation.



Map 3.2 Deprivation by DED Dublin showing the more deprived areas (levels 4 & 5 combined).

Source: SAHRU, Trinity College, 1996 census

Further funding from the Department of Health and Children has been signalled for the next few years and will increasingly be allocated in accordance with the Action Plan currently being developed.

Summary points

1. Heart disease kills one quarter of the population of the Eastern Region each year.
2. Deaths from heart disease are declining in the Eastern Region as seen nationally and internationally.
3. Ireland has the highest premature mortality rate (under 65 years) from heart disease in the EU.
4. The Republic of Ireland has higher mortality rates from heart disease than Northern Ireland.
5. The Eastern Region has significantly lower mortality rates compared with Ireland as a whole.
6. Inequity in mortality exists in the Eastern Region as follows:
 - males die twice as often as females from heart disease in the region.
 - 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.

These findings need to be further explored in order to understand correctly the factors that need to be targeted.

7. Death rates for IHD for females both in the Region and nationally appears to have levelled off since 1996 compared with a steep decline in males. This is the reverse of earlier findings in Building Healthier Hearts.
8. While death rates are on the decline, hospital discharges are 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.
9. Eastern residents are more likely to receive

interventions (PTCA) but less likely to receive surgery (CABG) than Irish residents. The basis for this statement is HIPE system of data collection on public hospital activity and does not include private hospital activity. This is a limitation.

10. 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.
11. A five-year action plan is being developed to inform investment in the region so as to effectively target heart disease.

The Health Risks of Tobacco Smoking

Introduction

In the past, among the things that produced a major contribution to improving the health of people were:

- Provision of clean water supply and the separation of drinking water and sewage
- Introduction of vaccination
- Antibiotics

In today's world a major contribution to improving health would be to stop people smoking, prevent people from starting to use tobacco, and protect non-smokers from tobacco smoke from others.

Over recent decades, powerful and consistent evidence has accumulated that identifies smoking as the single greatest risk factor which threatens the health of the community. By 1990, smoking represented the most extensively documented cause of disease ever investigated in the history of biomedical research. As an example, about 90% of lung-cancers are directly attributable to (active) smoking.

Sidestream smoke released into the environment around the smoker also contains numerous toxins, including ammonia, benzene, carbon monoxide, nicotine

Key Point

A major contribution to improving health would be to stop people smoking, prevent people from starting to use tobacco, and protect non-smokers from tobacco smoke from others.

Box: The Health Risks from Tobacco Smoke – An Historical Outline of the Evidence.^{15,16,17,18}

- 1962 to 1964: Causal relationship between smoking and lung cancer described in landmark reports from the Royal College of Physicians in London and the Surgeon General of the United States (US).
- Subsequent research confirmed that smoking affects virtually every organ system.
- 1982: US Surgeon General, on reviewing the first three epidemiological studies showing an increased risk of lung cancer in non-smoking women whose husbands smoked, identified a potential cancer risk from environmental tobacco smoke (ETS).
- 1986: US Surgeon General, on reviewing 13 “spousal studies” on passive smoking and lung cancer, concluded that “involuntary smoking is a cause of disease, including lung cancer, in healthy non-smokers”. Four other reports from authoritative bodies in the United States, Britain, France and Australia came to similar conclusions.
- 1993: Environmental Protection Agency (EPA) of the US, on reviewing 30 epidemiological studies on passive smoking and lung cancer from eight counties, classified ETS as a known human carcinogen, and documented causal associations between exposure to ETS and lower respiratory tract infections such as pneumonia and bronchitis, middle ear disease and exacerbations of asthma in children.
- 1997: California EPA affirmed the findings of the US EPA on the link between ETS and lung cancer and respiratory illness. It also concluded that passive smoking is a cause of heart disease mortality, acute and chronic heart disease morbidity, retardation of fetal growth, sudden infant death syndrome, nasal sinus cancer and induction of asthma in children.
- 1997: Wolfson Institute of Preventive Medicine in London published two reports, one of which determined that marriage to a smoker increased the risk of lung cancer by 26% and the other showing that ETS increases the risk of coronary heart disease by 23%.

and several substances which are known to be highly carcinogenic. As shown in the above Box, research on passive smoking followed a somewhat later but parallel course as active smoking. Recent studies have quantified the important hazard posed by exposure to environmental tobacco smoke (ETS) in relation to lung cancer and CHD.

Terms such as ‘involuntary’ or ‘enforced’ smoking are now being used to emphasise the undesirable effects on the health of non-smokers of breathing tobacco smoke produced by smokers.

The fact that exposure to ETS even at a low level has an important effect on health is of particular concern, especially in relation to children. Sudden infant death syndrome, asthma and ear disease leading to deafness are associated with exposure to ETS, whether from the mother or another member of the household.

The risk is further increased if there is more than one smoker in the household.⁴

The weight of the evidence outlined makes it clear that exposure to tobacco smoke is one of the leading preventable causes of morbidity and premature death. However, while history repeated itself in the identification of the health risks from both active and passive smoking, it has also been repeated in the cynical actions of the tobacco industry to deny and obfuscate the findings of that research.^{15,16,17,18}

Effective action to reduce smoking prevalence and to eliminate exposure to environmental tobacco smoke is clearly a public health priority.

Opportunities for Health and Social Gain

- Further restriction of smoking in public places
- Significantly increase tax on tobacco.

Chapter 4 Cancer

This chapter gives information on cancer incidence, hospitalisation and mortality. It describes important initiatives in cancer services in the Eastern Region that will lead to major health gain.

Key Point

Cancer is the second biggest killer in the Eastern Region, being responsible for 26% of all deaths.

Cancer Incidence

Forecasted population growth in the East, of over 33% by 2011, will have a critical impact on the number of people diagnosed and living with cancer in the Region. As older age groups will have the greatest population growth, the number of people with cancer in the Region will escalate. This will influence service developments and demands. Figure 4.1 shows that cancer incidence increases sharply over the age of 65 particularly for males.

Table 4.1 shows average cancer incidence between 1994 and 1997; 36% of all cancers in Ireland occurred among residents of the Eastern Region as did 42% of all lung cancers.

Figure 4.2 shows forecasted cancer incidence between 1994 and 2015. Overall

Key Point

Between 1994 and 2015, the incidence of cancer is expected to rise by 57%.

Table 4.1 Average Cancer Incidence 1994 – 1997

Average Cancer Incidence 1994-1997		
Cancer Type	Eastern Region No. (%)	Ireland No. (%)
Skin (non-melanoma)	2741 (36.6)	7171 (34.9)
Breast	632 (8.4)	1663 (8.1)
Lung	610 (8.1)	1464 (7.1)
Colon / rectum / anus	607 (8.1)	1836 (9.0)
Cervix *	403 (5.4)	928 (4.5)
Prostate	338 (4.5)	1118 (5.5)
Skin (melanoma)	190 (2.5)	532 (2.6)
Stomach	177 (2.4)	480 (2.3)
Lymphoma	164 (2.2)	677 (3.3)
Ovary	109 (1.5)	323 (1.6)
Brain	94 (1.3)	261 (1.3)
Other	1420 (19.0)	4069 (19.8)
Total	7485 (100)	20522 (100)

*includes CIN 111

incidence is forecast to increase by 57%, while incidence, excluding non-melanoma skin cancer, will increase by 41%.

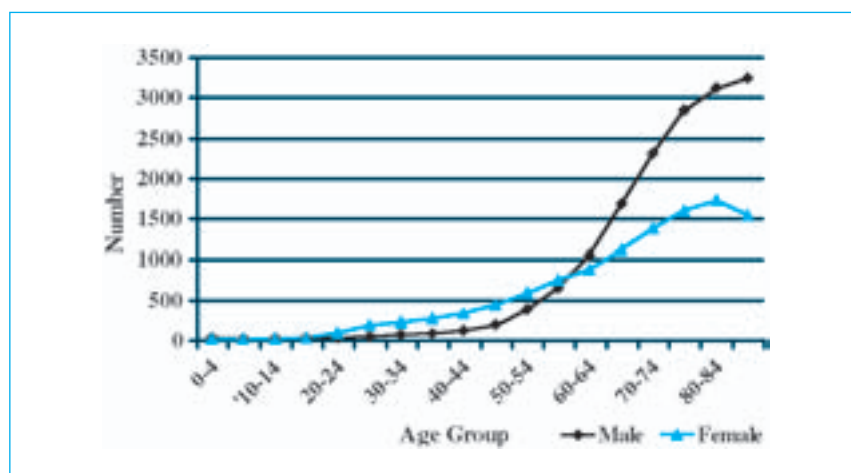


Figure 4.1 Age Specific Cancer Incidence 1994-1997

Source: National Cancer Registry.

The expected rate of increase in the Eastern Region may actually be higher than nationally because:

- overall cancer incidence in Dublin is significantly higher than the national average
- the growth of older age groups is escalating in the Region at a faster pace than nationally and
- some cancers are more common in the East (e.g. lung).

Hospitalisation due to Cancer

Hospitalisation for cancer is rising. Cancer is now responsible for over one-quarter of all hospital discharges (inpatient and day case) in

the Eastern Region. Figure 4.3 shows age-standardised hospital cancer discharge rates in the Eastern Region and Ireland between 1994 and 1999. The overall rate for males living in the East increased by 14.7% (national increase 17.6%) while the overall rate for females living in the East increased by 33.3% (national increase 25.7%). Hospitalisation for males and females living in the Eastern Region is higher than nationally and the hospitalisation rate for females in the Eastern Region is higher than the rate for males nationally.

Hospitalisation for males and females *under 65 years* of age who live in the Eastern Region is also higher than nationally (Figure 4.4). Between 1994 and 1999 the rate increased among males living in the East by 16.5%

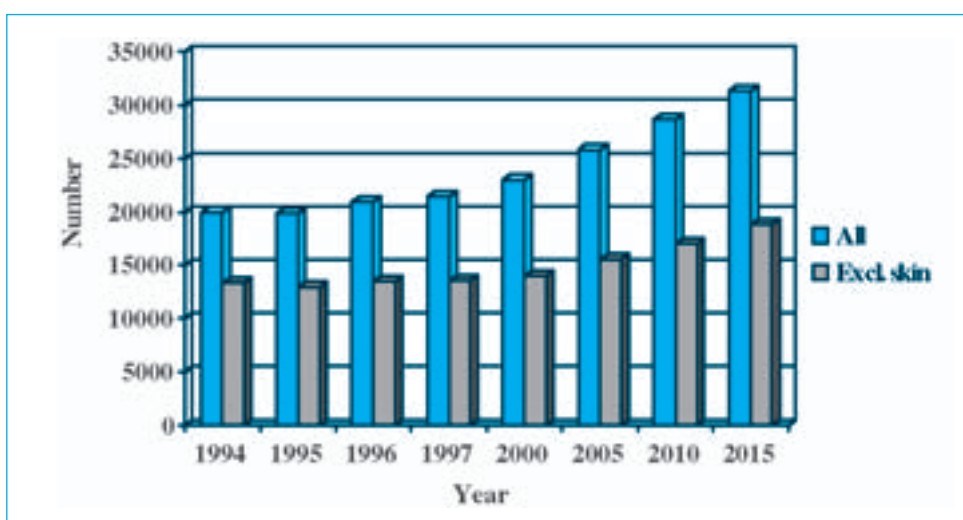


Figure 4. 2 Cancer Incidence and Forecast Nationally (1994-2015)

Source: National Cancer Registry

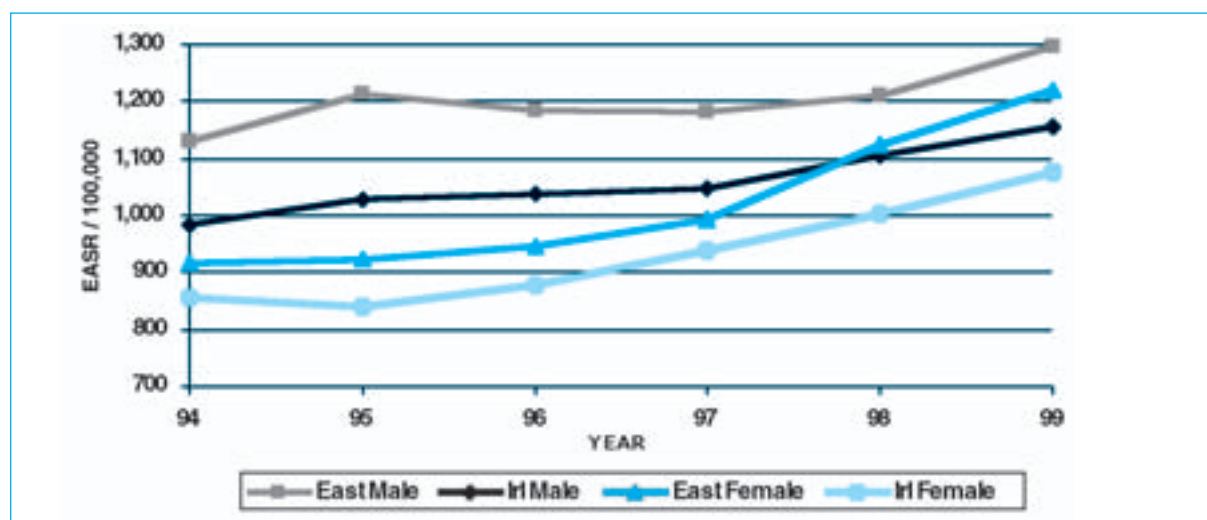


Figure 4.3 Age-Standardised Cancer Discharges by Sex, All Ages: Eastern Region and Ireland, 1994 to 1999

Source: PHIS, Version 4

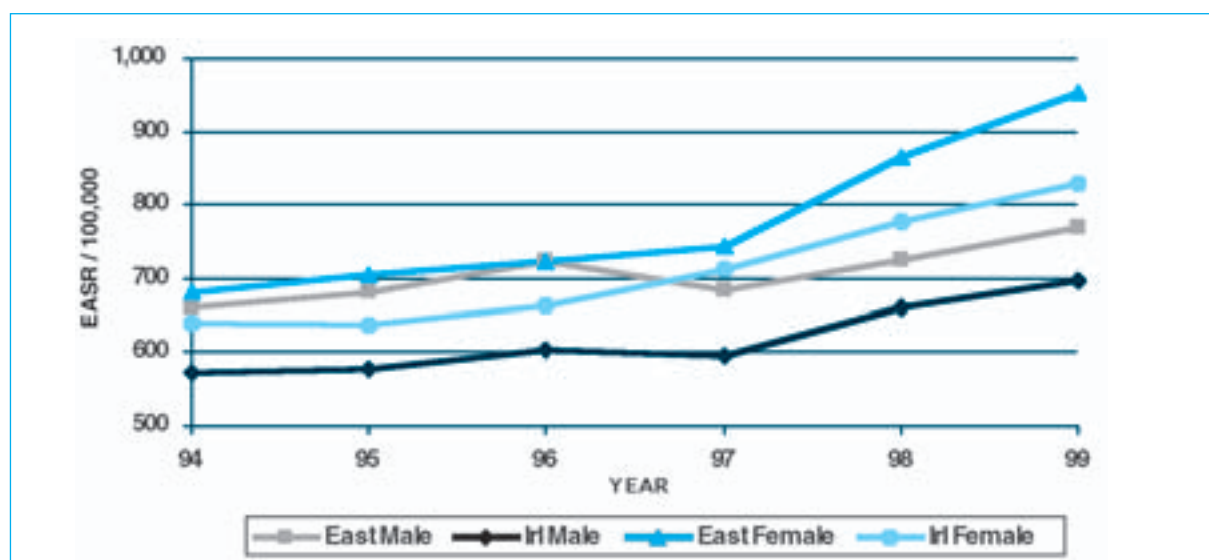


Figure 4.4. Age-Standardised Cancer Discharges Sex, 0-64: Eastern Region and Ireland, 1994 to 1999

Source: PHIS, Version 4

Table 4.2 Cancer discharges 1999

Hospital	All discharges	Cancer discharges	Cancer discharges as a % of all discharges
Mater	34585	6552	18.9
St Vincent's	28033	7159	25.5
St James's	42119	11363	27.0
Beaumont	38971	7892	20.3
AMNCH	22414	3127	14.0
AMNCH (children)	8402	645	7.7
St Colmcille's	6333	452	7.1
Naas	4893	213	4.4
James Connolly Memorial	10304	1013	9.8
Rotunda	3336	246	7.4
Holles Street	3297	543	16.5
Coombe	4290	383	8.9
Our Lady's Hospital Crumlin	17082	2211	12.9
Temple Street	9791	241	2.5
Cappagh	1497	***	***
Cherry Orchard	1986	***	***
Royal Victoria, Eye and Ear	6241	416	6.7
Hume Street	330	***	***
Peamount	609	42	6.9
St Luke's	7048	6817	96.7
St Michael's	4780	451	9.4
Total	256341	49780	19.4

*** small numbers

(national increase 22.2%) and for females by 40% (national increase 29.5%).

Many hospitals in the Eastern Region have developed expertise in treating cancer and provide a service, not only to patients who live in the East, but also for many other parts of the country. In 1999 almost 50% of all national cancer discharges were from hospitals in the Eastern Region when there were 49,780 cancer discharges recorded on the HIPE system (19.4% of all hospital discharges), Table 4.2. The greatest number of discharges was from St. James's hospital at 11,363 (27% of all hospital discharges).

Cancer Mortality

Cancer is the second biggest killer in the Eastern Region being responsible for 26% of all deaths (2,475 in 1999). It is the commonest cause of death in people under the age of

65 (789 deaths in 1999). Age standardised death rates for cancer are higher in the Eastern Region than in Ireland as a whole and the EU average, Figure 4.5. For all ages, Ireland has the 3rd highest rate of cancer death in the EU.³

Table 4.3 shows the main causes of cancer death in the Eastern Region between 1995-1999. Lung cancer is the most common cause for men and women. Breast

Key Point

Lung cancer has become the commonest cause of cancer death in women.

cancer is the second commonest cause of death in women. Colorectal cancer is the second commonest cause of cancer death overall. Prostate cancer remains an important cause of death in men.

Figure 4.6 shows trends in age-standardised cancer mortality in the Eastern Region and Ireland between 1990 and 1999. Rates for both males and females

Key Point

Cancer mortality is higher in the Eastern region than in Ireland as a whole.

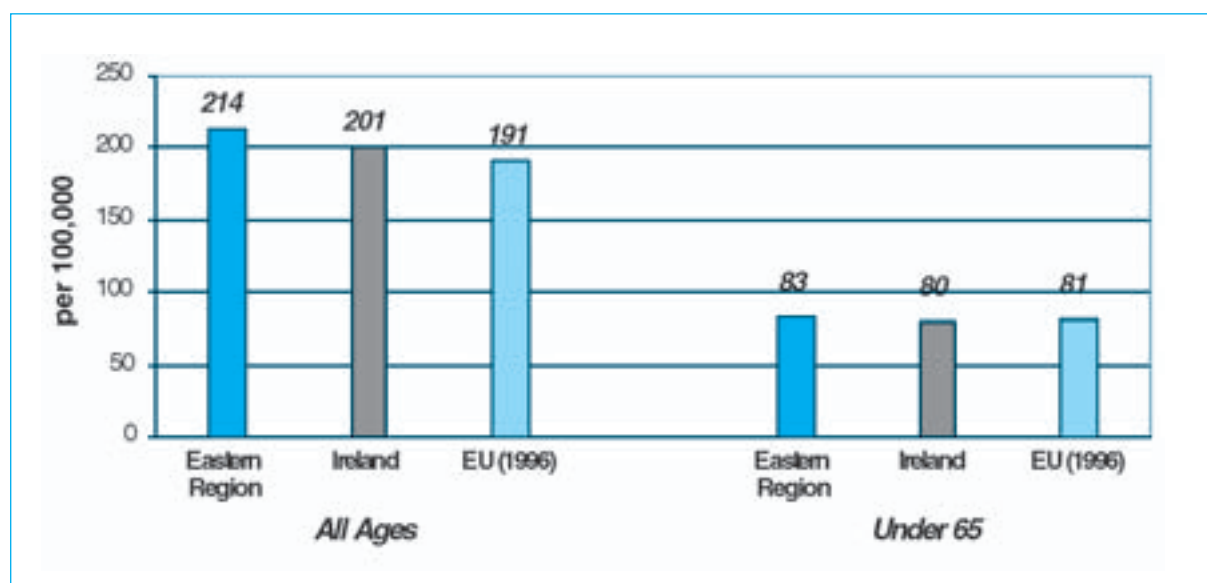


Figure 4.5. Standardised Death Rates/100,000 due to All Cancers, Eastern Region and Ireland; All Ages and Under 65: 1999.

Source: PHIS Version 4, HFA Database

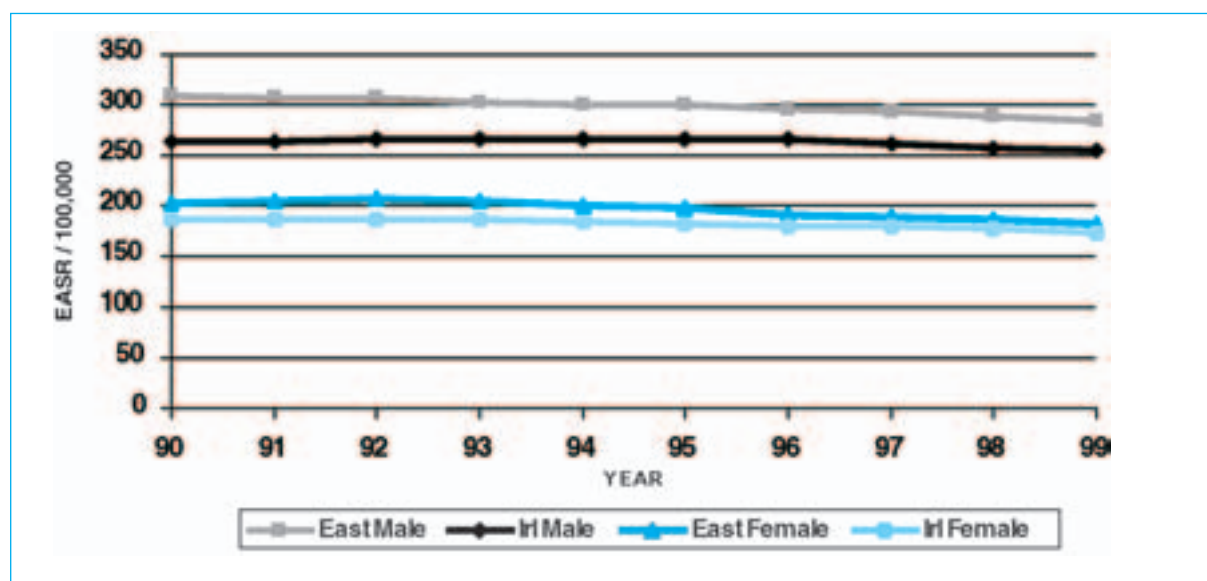


Figure 4.6. Age-Standardised Cancer Mortality by Sex: Eastern Region and Ireland, All Ages, 1990 to 1999

Source: PHIS, Version 4

Table 4.3 Numbers of Deaths due to Various Types of Cancer in the Eastern Region in Men and Women: 1995 - 1999

	Men	Women	Total
Lung	1801	1159	2960
Colorectal	816	693	1509
Breast	—	1054	1054
Stomach	394	266	660
Lymphatic and Haematopoietic	477	429	906
Pancreas	240	281	521
Prostate	688	—	668
All Cancers	6386	6031	12417

Source: PHIS Version 4.

were higher in the Eastern Region than nationally though the difference in female rates is small. Overall age standardised mortality rates are higher for males than females. Reduction in mortality rates between 1990 and 1999 for males living in the East was 8.4%

(national reduction 3.4%) while the reduction for females living in the East was 9.7% (national reduction 6.4%).

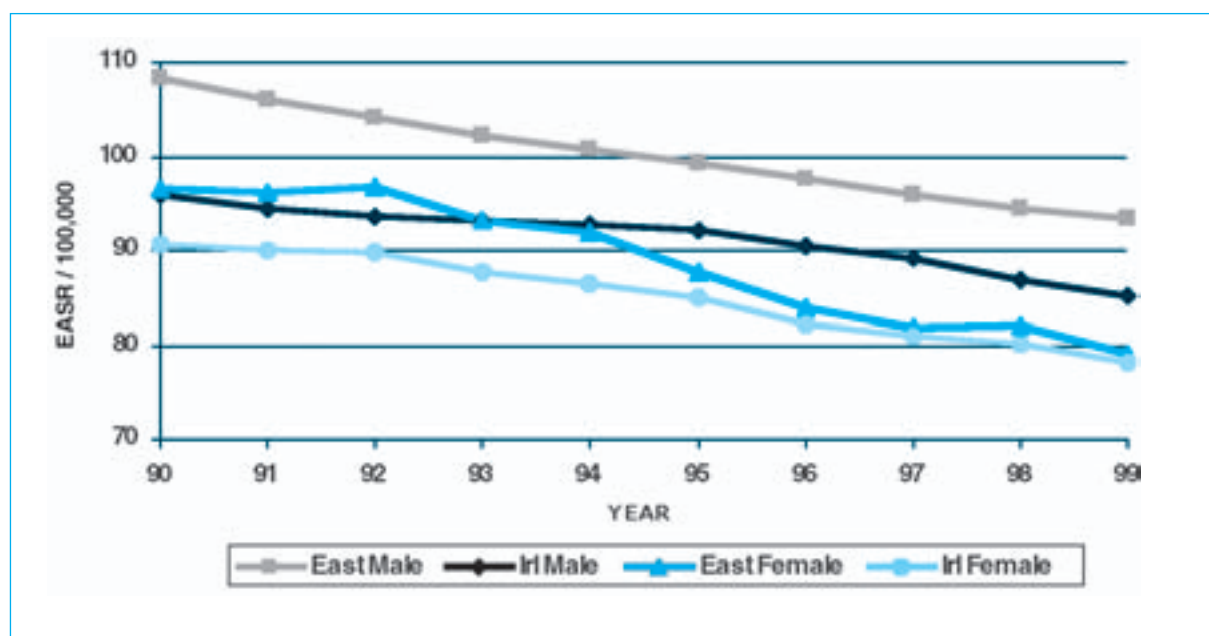
Between 1990 and 1999 age standardised premature mortality rates (*under 65 years*) for cancer declined for males and females in the Eastern Region and nationally. The downward trend was most noticeable in the Eastern Region (Figure 4.7). The rate for males under 65 living in the East reduced by 13.7% (national reduction 11.1%) while the reduction in rates for females living in the East was 18.2% (national reduction 13.9%).

Selected Cancers in Greater Detail

Lung Cancer

Incidence

Lung cancer is the third commonest cancer diagnosed in the Eastern Region after skin and breast cancer. The average incidence between 1994 and 1997 was 610 cases per year.

**Figure 4.7. Age-Standardised Cancer Mortality by Sex: Eastern Region and Ireland 0-64, 1990 to 1999.**

Source: PHIS, Version 4

Hospitalisation

Figure 4.8 shows age-standardised lung cancer hospital discharges in the Eastern Region and Ireland between 1994 and 1999. There was an overall decline in discharge rates over these years. The decline for males living in the East was 14.4% and 15.2% nationally. The decline for females living in the East was 6% and 5.2% nationally. Rates in the East are higher than

nationally.

Figure 4.9 shows that lung cancer hospital discharges declined in males and females under the age of 65 between 1994 and 1999. The male decline in the East was 10.7% and nationally it was 21.4%. The female decline in the East was 6.6% and nationally it was 10%. Rates for females rose between 1996 and 1997 in the East.

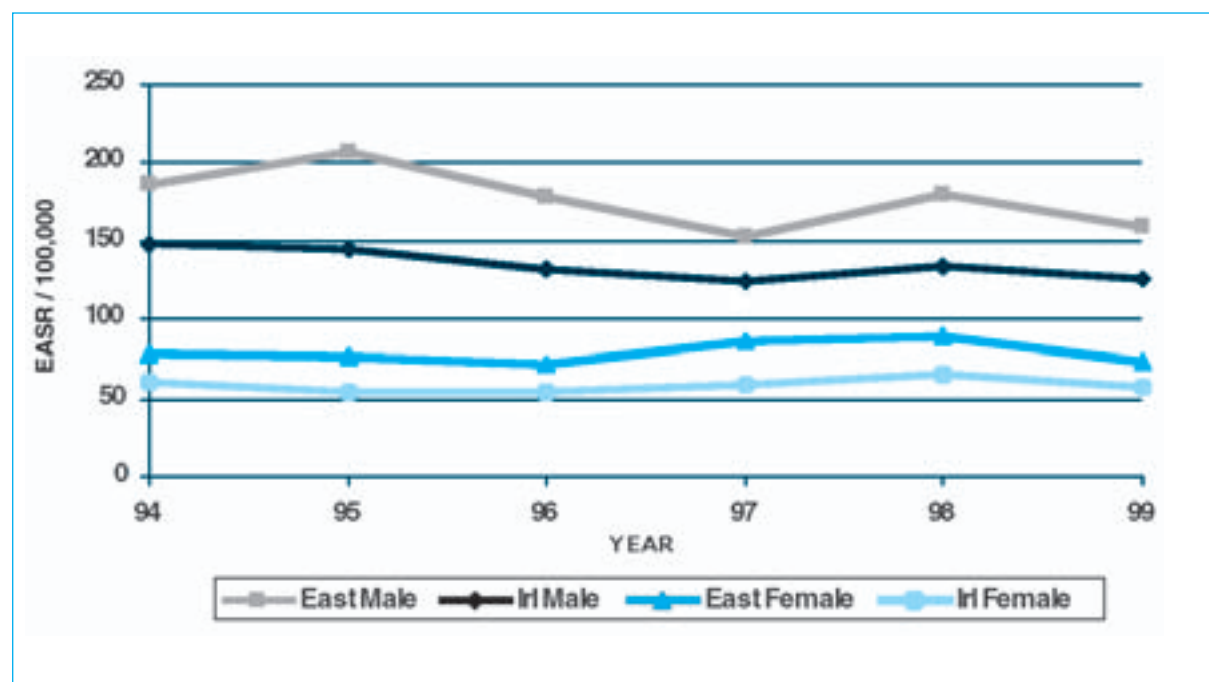


Figure 4.8. Age-Standardised Lung Cancer Discharges by Sex, All Ages: Eastern Region and Ireland, 1994 to 1999

Source: PHIS, Version 4

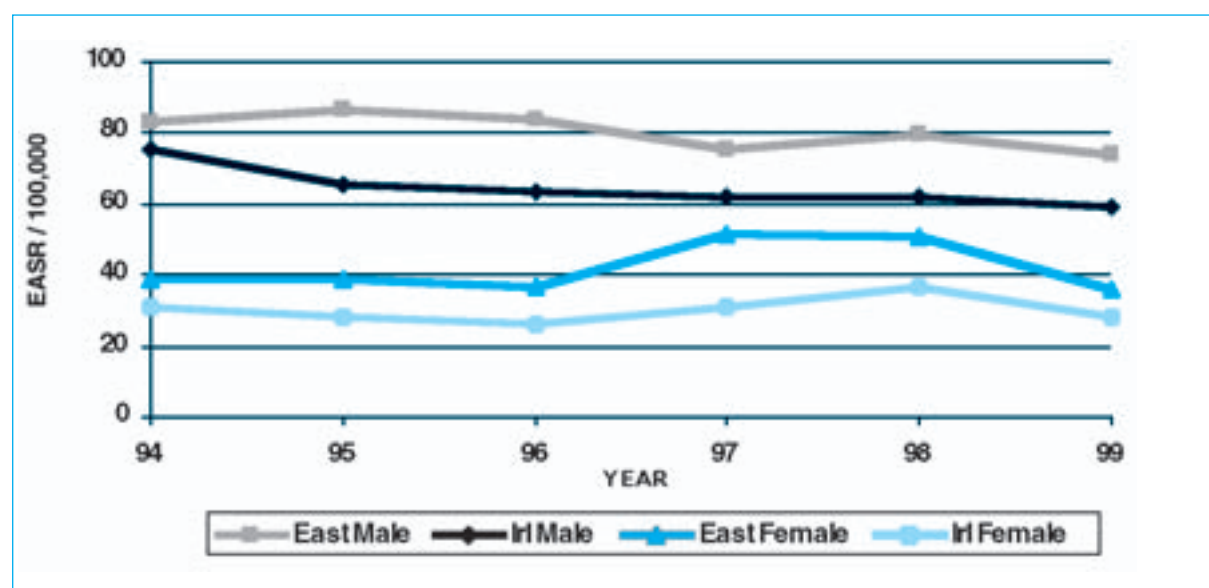


Figure 4.9. Age-Standardised Lung Cancer Discharges by Sex, 0-64: Eastern Region and Ireland, 1994 to 1999

Figure 4.10 shows that age standardised discharge rates are higher in the Eastern Region than nationally.

Mortality

Lung cancer is the commonest cancer death in the Western World. In the Eastern Region 586 people died from lung cancer in 1999; 158 were under 65 years of age. The Eastern Region has the highest mortality rate from lung cancer in

the country. For men, the death rate fell by almost 20% over the last 10 years; the decline in the East was 21.5% and the decline nationally was 17.1%. For women the decline in mortality was disappointingly small at 5.5% in the East and 3.2% nationally, Figure 4.11.

Key Point

The Eastern Region has the highest lung cancer mortality rate in the country.

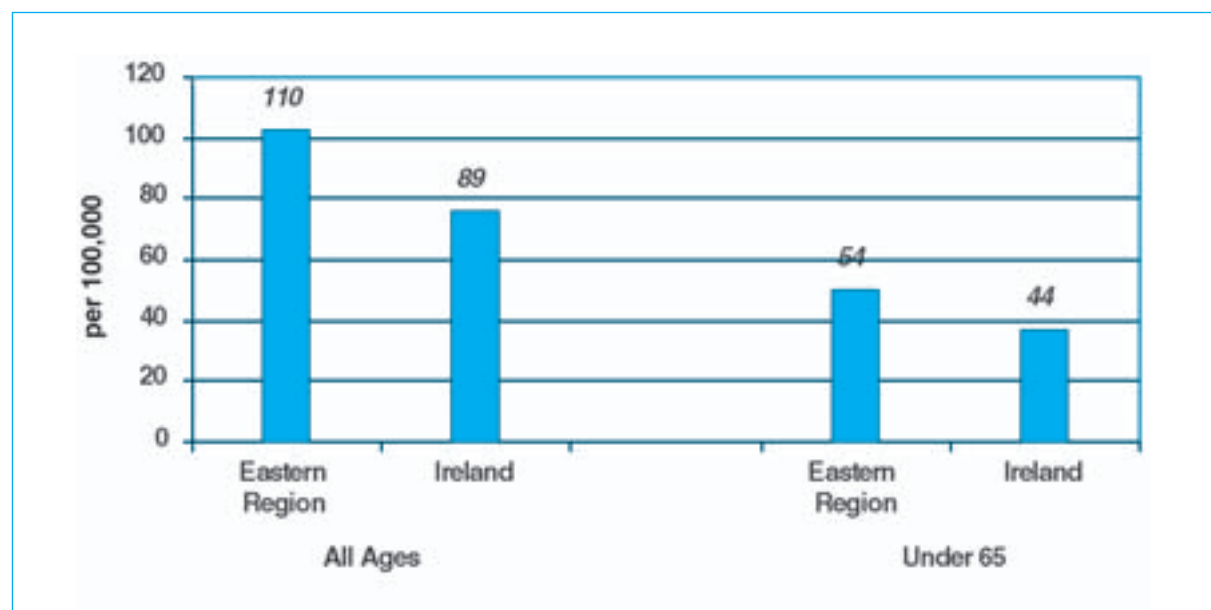


Figure 4.10. Standardised Discharge Rates/100,000 due to Lung Cancer, Eastern Region and Ireland; All Ages and Under 65: 1999

Source: PHIS Version 4

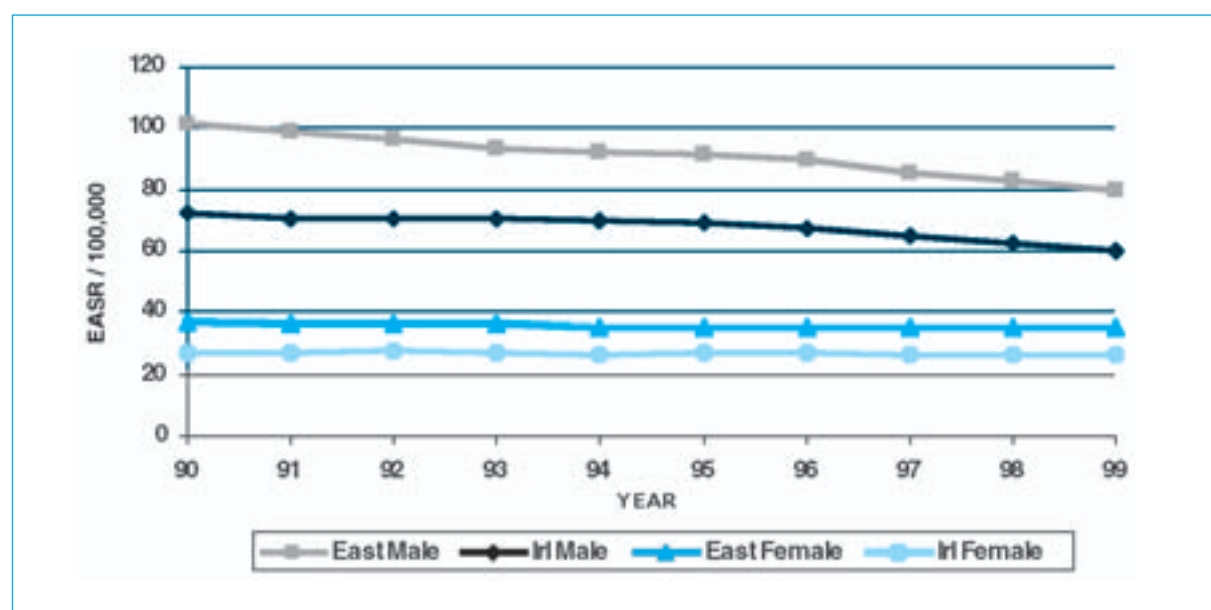


Figure 4.11. Age-Standardised Lung Cancer Mortality by Sex: Eastern Region and Ireland, All Ages, 1990 to 1999

Source: PHIS, Version 4

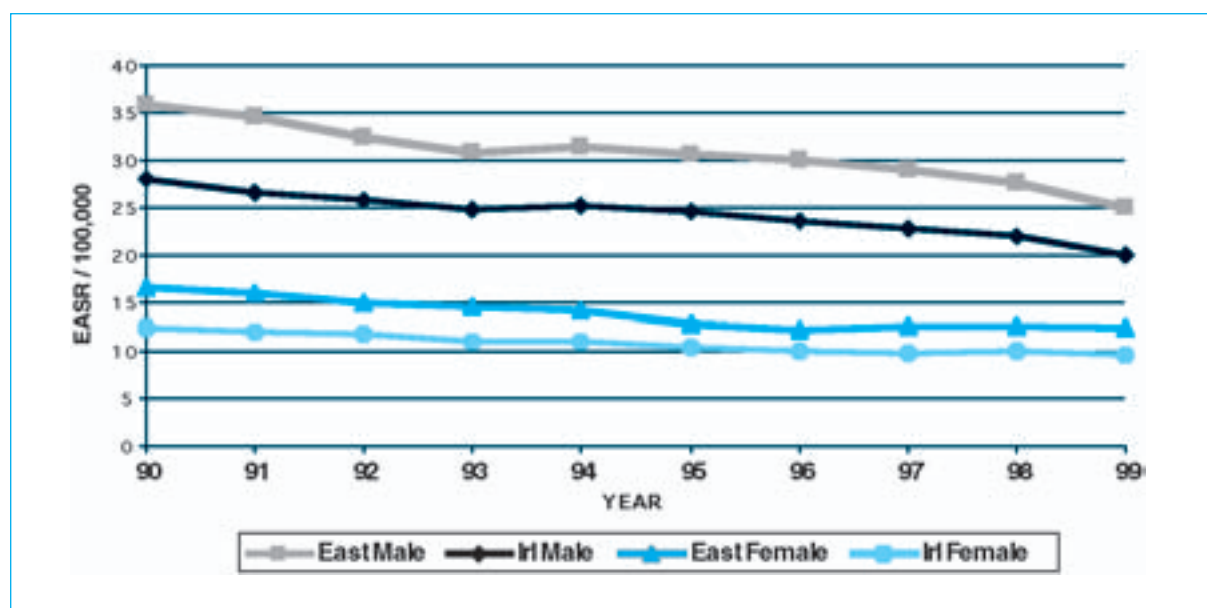


Figure 4.12. Age-Standardised Lung Cancer Mortality by Sex: Eastern Region and Ireland, 0-64, 1990 to 1999

Source: PHIS, Version 4

In relation to premature lung cancer mortality (under 65 years) the rate for males declined by 30.2% in the East and 28.8% nationally. For females the rate declined by 24.9% in the East and 22.8% nationally, Figure 4.12.

Our regional lung cancer mortality rate is higher than the EU average, Figure 4.13. It is similar to the rate in Denmark, the EU country with the highest death rate from lung cancer.

Breast Cancer

Incidence

After non-melanoma skin cancer breast cancer is the commonest cancer diagnosed in females nationally and in the Eastern Region. Between 1994 and 1997 the average annual incidence was 632 cases in the East.

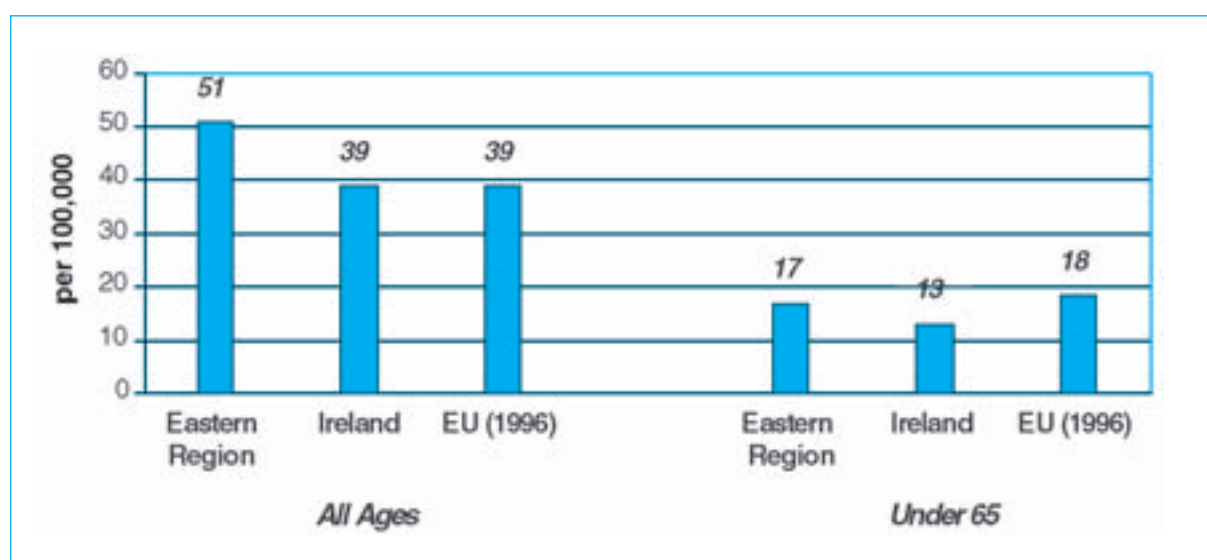


Figure 4.13. Standardised Death Rates/100,000 due to Cancer of the Trachea, Bronchus and Lung, Eastern Region, Ireland and EU; All Ages and Under 65: 1999

Source: PHIS Version 4, HFA Database

Hospitalisation

Hospitalisation for breast cancer treatment has increased dramatically in recent years.

Figure 4.14 shows that age-standardised female breast cancer hospital discharges are rising sharply. In the East the increase between 1994 and 1999 was 46% and nationally it was 41.8%.

The same pattern was observed for women

under the age of 65 years where discharge rates increased by 47.4% in the East and 44.8% nationally (Figure 4.15).

Mortality

Ireland has the third highest rate of death from breast cancer in the EU after the Netherlands and Denmark.³

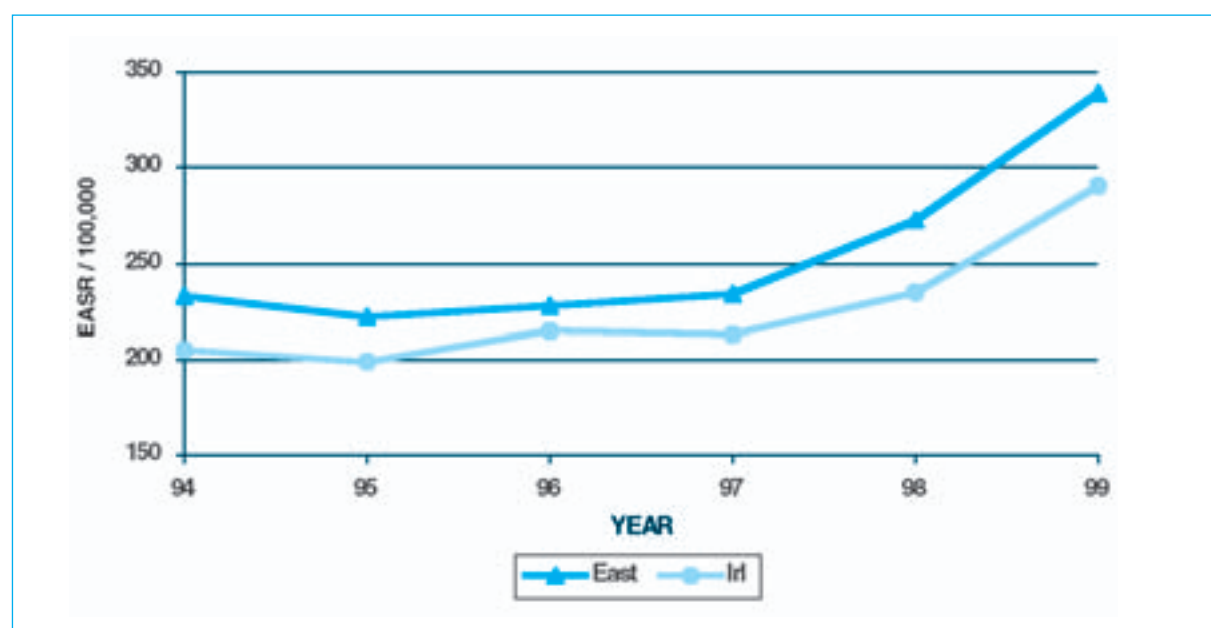


Figure 4.14. Age-Standardised Female Breast Cancer Discharges, All Ages: Eastern Region and Ireland, 1990 to 1999

Source: PHIS, Version 4

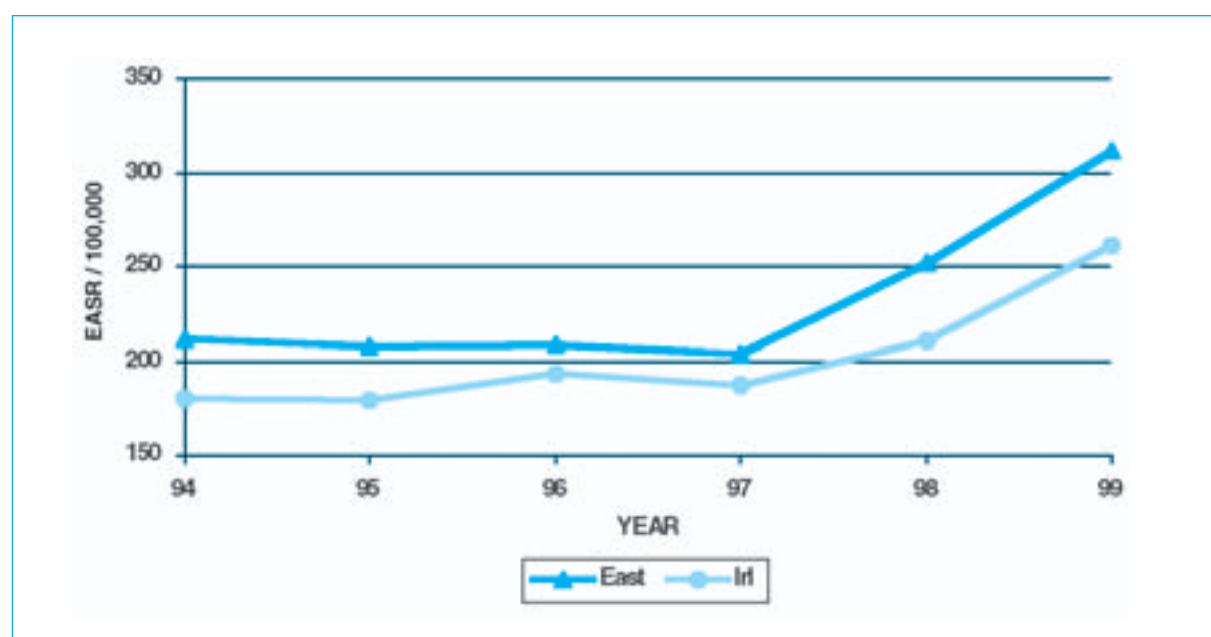


Figure 4.15. Age-Standardised Female Breast Cancer Discharges 0-64 Years: Eastern Region and Ireland, 1990 to 1999

Source: PHIS, Version 4

Breast cancer is the second commonest cause of cancer death in Irish women after lung cancer. The Eastern Region had the second lowest rate of death from breast cancer in the country in 1999, with 205 deaths from the disease. In those under 65, the mortality rate is the lowest in the country, with 93 deaths in 1999, (Figure 4.16)

Figure 4.17 shows age-standardised breast cancer mortality in the Eastern Region and Ireland between 1990 and 1999.

Key Point

Ireland's breast cancer mortality rate is third highest in the EU.

The Eastern Region's rate is second lowest in the country and the lowest for premature mortality.

Mortality from breast cancer has declined from a peak in 1992, when the Eastern Region had the highest mortality rate from breast cancer in Ireland. The decline in the Eastern Region since

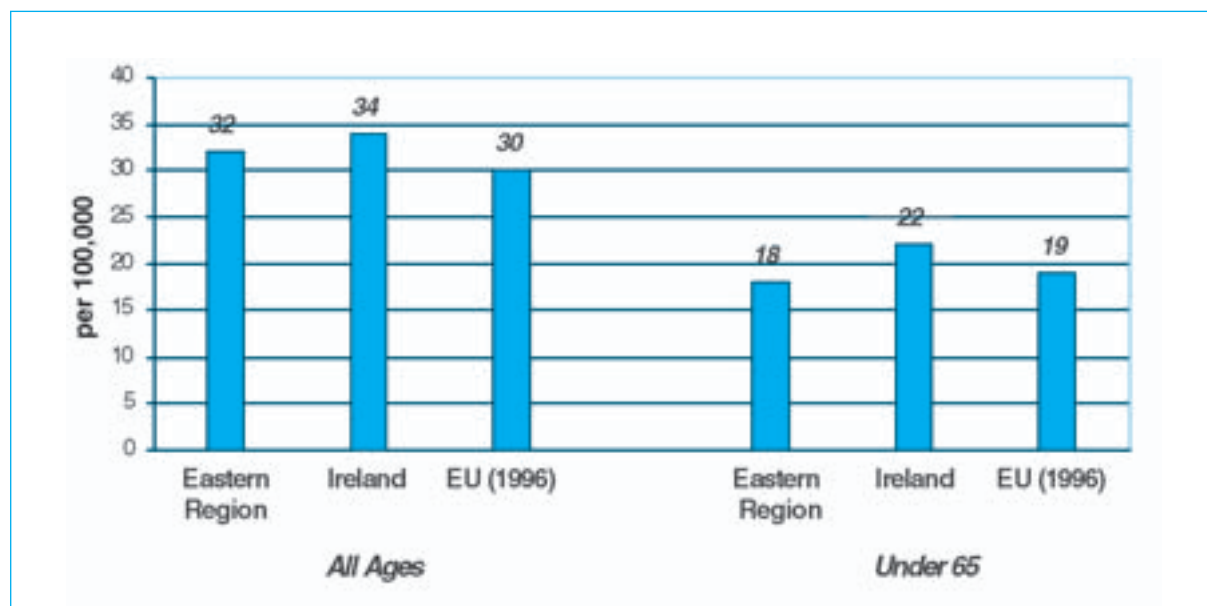


Figure 4.16. Standardised Death Rates/100,000 due to Breast Cancer, Eastern Region and Ireland; All Ages and Under 65: 1999

Source: PHIS Version 4, HFA Database

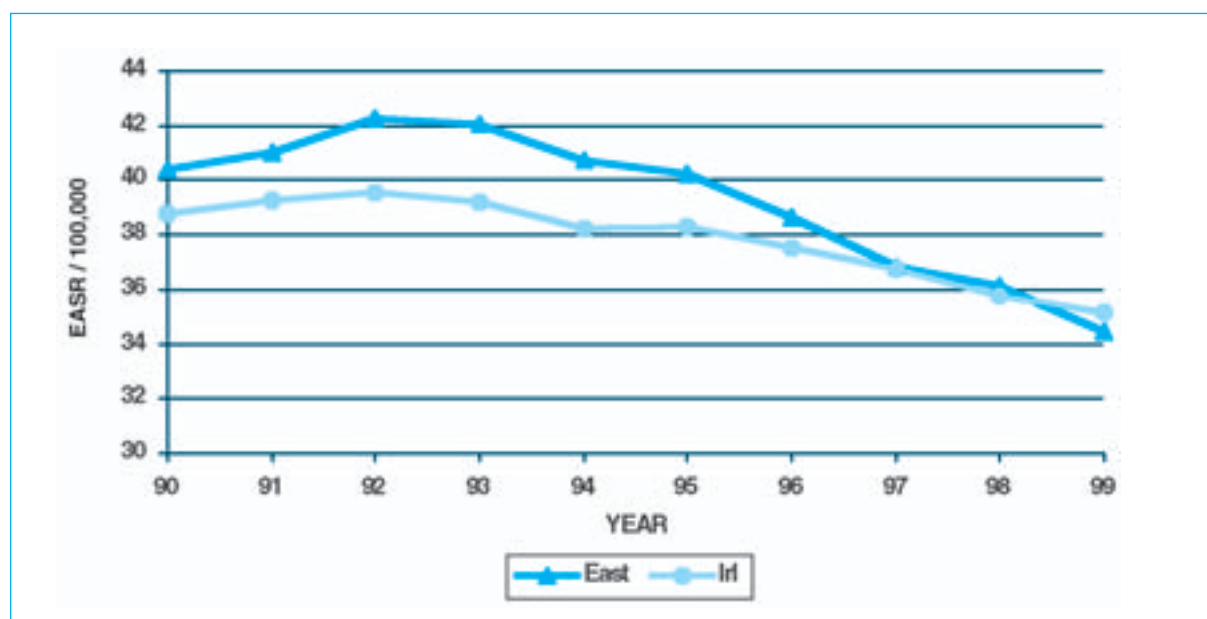


Figure 4.17. Age-Standardised Breast Cancer Mortality, All Ages: Eastern Region and Ireland, 1990 to 1999

Source: PHIS, Version 4

1992 was 18.4% and nationally it was 11.1%. This may reflect a combination of more effective treatment and earlier detection.

Key Point

The decline in breast cancer mortality in the Eastern Region since 1992 was 18.4%.

The same pattern was observed among women under the age of 65 years where the decline in mortality was 19.5% in the East and 13.8% nationally since 1990. Since 1992 the decline was 21.4% in the East and 13.7% nationally (Figure 4.18).

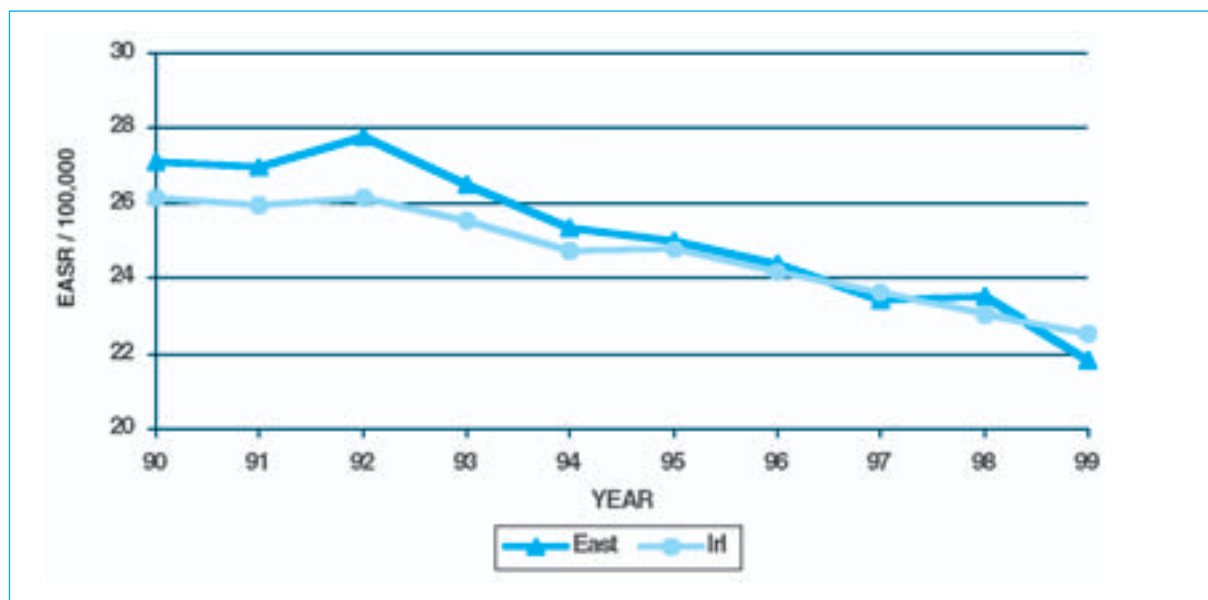


Figure 4.18. Age-Standardised Breast Cancer Mortality: Eastern Region and Ireland, 0-64, 1990 to 1999

Source: PHIS, Version 4

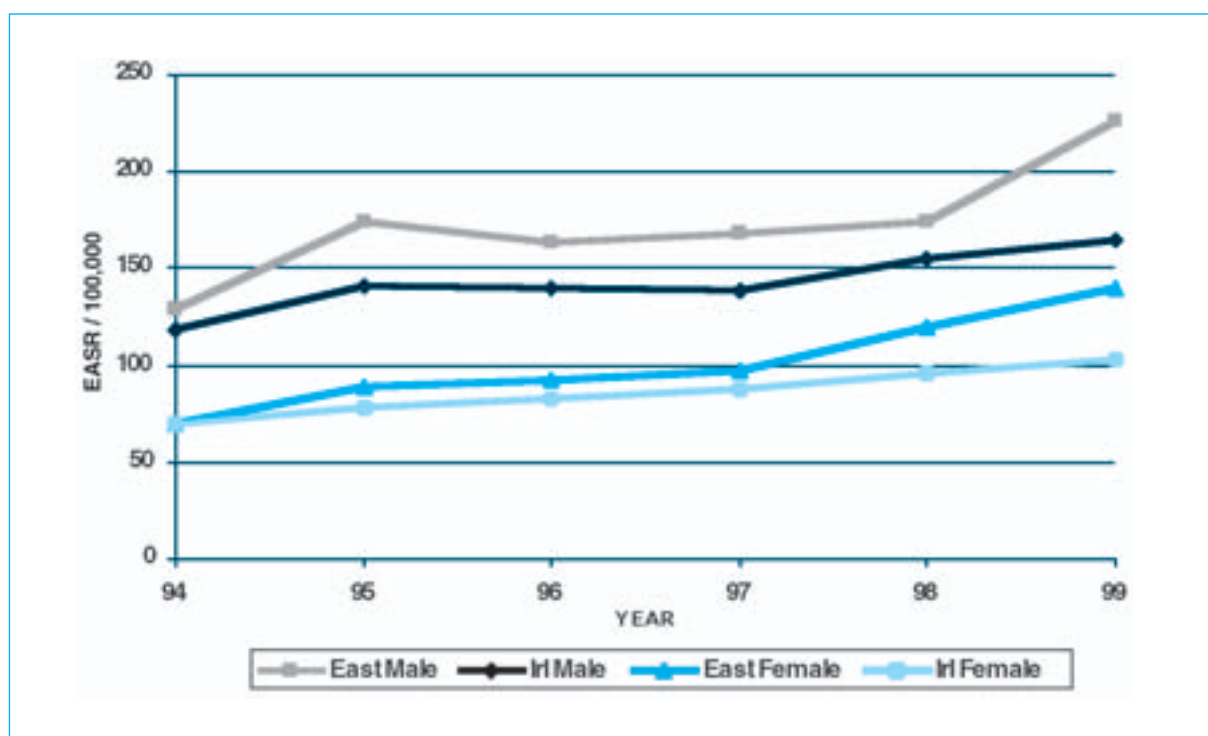


Figure 4.19. Age-Standardised Colorectal Discharges by Sex, All Ages: Eastern Region and Ireland, 1994 to 1999

Source: PHIS, Version 4

Colorectal Cancer

Incidence

The average annual incidence of colorectal cancer between 1994 and 1997 in the Eastern Region was 607 cases. In Ireland between 1994 and 1997 colorectal cancer was the second most common cancer diagnosed after skin cancer. In the Eastern Region colorectal cancer was the fourth most common cancer diagnosed after skin, breast and lung cancers, Table 4.1.

Hospitalisation

Hospital discharge rates for colorectal cancer are rising. Figure 4.19 shows age-standardised hospital discharge rates between 1994 and 1999 in the Eastern Region and in Ireland. For males residing in the East the rate increased by 74.7% (national increase 39.1%). For females residing in the East the rate increased by 98.3% (national increase 48.3%).

Hospital discharge rates also increased for patients *under the age of 65 years*. The male increase was 58.5% in the East (national increase 29.6%). The female increase was 98% in the East (national increase 58.1%), Figure 4.20.

The Eastern Region has the highest discharge rate in all age groups for colorectal cancer and the second highest rate in those aged under 65 (Figure 4.21).

Mortality

Between 1995 and 1999 colorectal cancer was responsible for 1509 deaths in the Eastern Region.

Age standardised mortality from colorectal cancer fell between 1990 and 1999 in the Eastern Region and in Ireland. For males in the Eastern Region the rate dropped by 10% (the national decrease was 6.7%). For females in the East the rate dropped by 18.4% (the national decrease was 19.7%), Figure 4.22.

Age standardised mortality for patients *under 65 years* also fell between 1990 and 1999. For males in the Eastern Region the rate dropped by 12.4% (the national decrease was 9.3%). For females in the East the rate dropped by 27.9% (the national decrease was 29.7%), Figure 4.23.

Plan to Develop Symptomatic Breast Services in the Eastern Region

Nationally there are approximately 1,700 new

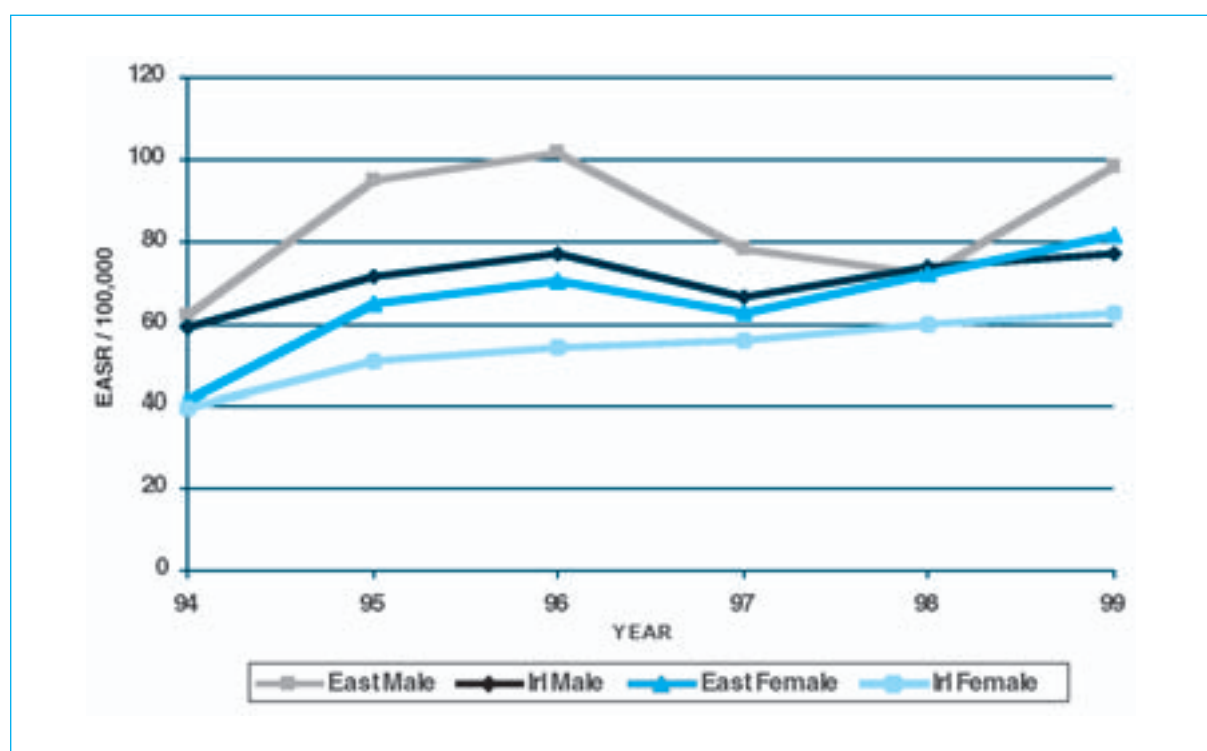


Figure 4.20. Age-Standardised Colorectal Discharges by Sex, 0-64: Eastern Region and Ireland, 1994 to 1999.

Source: PHIS, Version 4

cases of breast cancer diagnosed each year and 650 deaths from the condition. Breast cancer incidence is high in the Eastern Region with over 600 new cases diagnosed each year. The incidence is higher in Dublin compared with the country as a whole; (age standardised incidence rate is 103 in Dublin compared with 95 nationally).

Key Point

The incidence rate of breast cancer in the Eastern Region is one of the highest, and the mortality rate one of the lowest, in the country.

Background to the Eastern Region Plan

In March 2000 a sub-group of the National

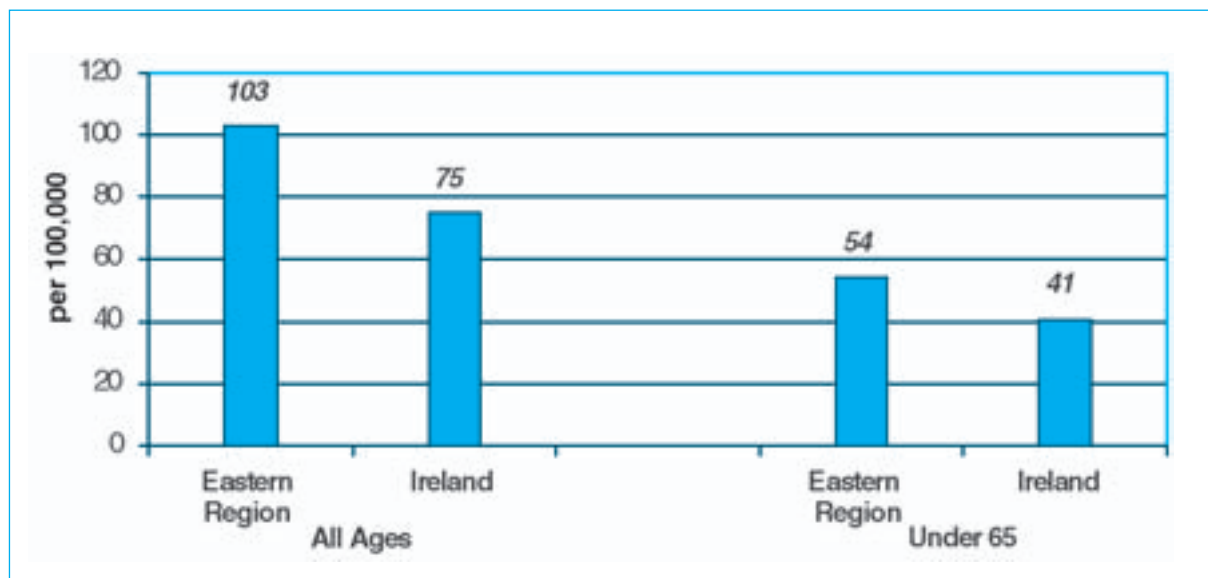


Figure 4.21. Standardised Discharge Rates/100,000 due to Colorectal Cancer, Eastern Region and Ireland; All Ages and Under 65: 1999

Source: PHIS Version 4

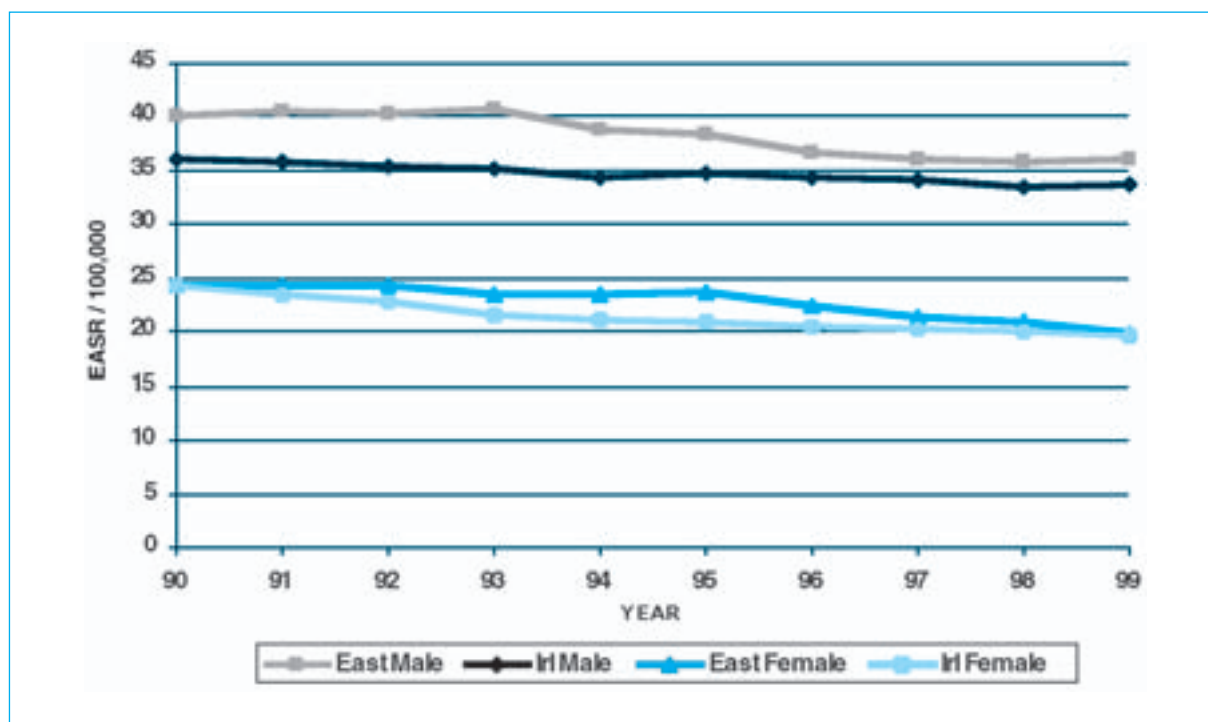


Figure 4.22. Age-Standardised Colorectal Cancer Mortality by Sex: Eastern Region and Ireland, All ages, 1990 to 1999

Source: PHIS, Version 4

Cancer Forum published a report on Development of Services for Symptomatic Breast Disease in which a 'best practice' model for the delivery of symptomatic breast cancer services is described. The Report recommends that symptomatic breast services in Ireland be provided according to this 'best practice / high quality' approach.

For the Eastern Region the Report recommends

that two specialist breast units be developed on the north side, one in the Mater Hospital and a joint unit between Beaumont and James Connolly Memorial Hospitals. It recommends three specialist breast units on the south side, one each in St. Vincent's Hospital, St. James's Hospital and in The Adelaide and Meath Hospital incorporating the National Children's Hospital (AMiNCH). Reasoned argument is

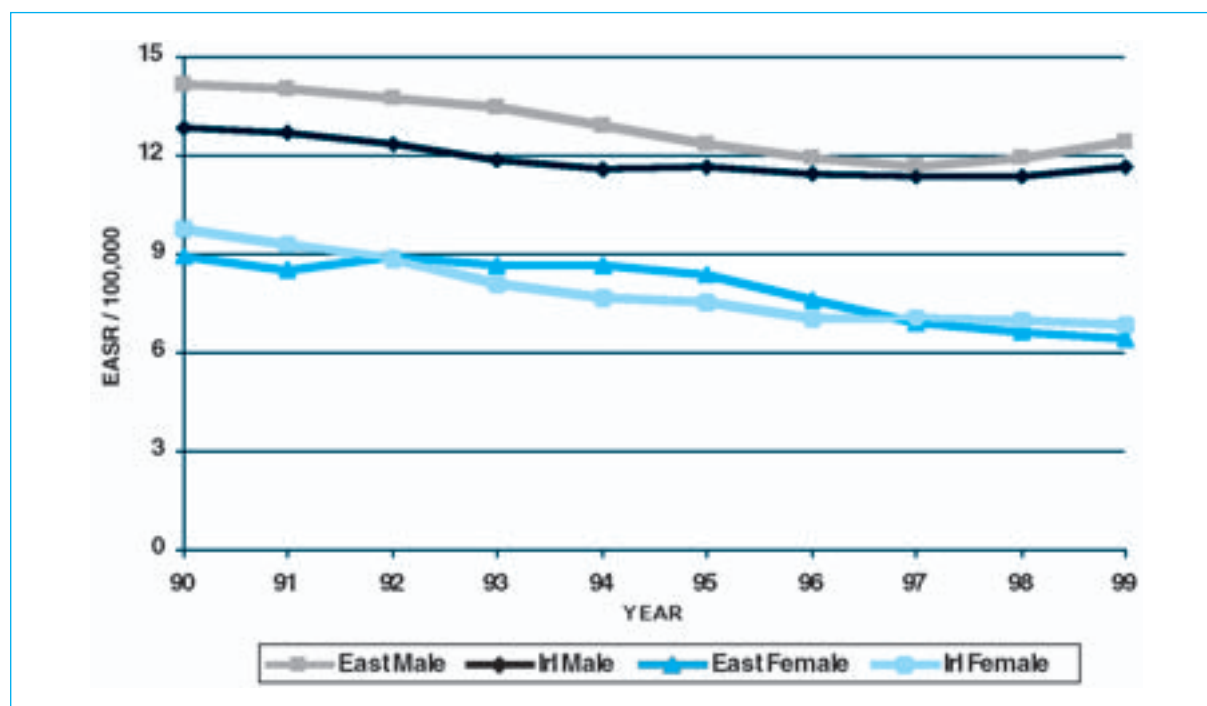


Figure 4.23. Age-Standardised Colorectal Cancer Mortality by Sex, 0-64: Eastern Region and Ireland, All Ages, 1990 to 1999

Source: PHIS, Version 4

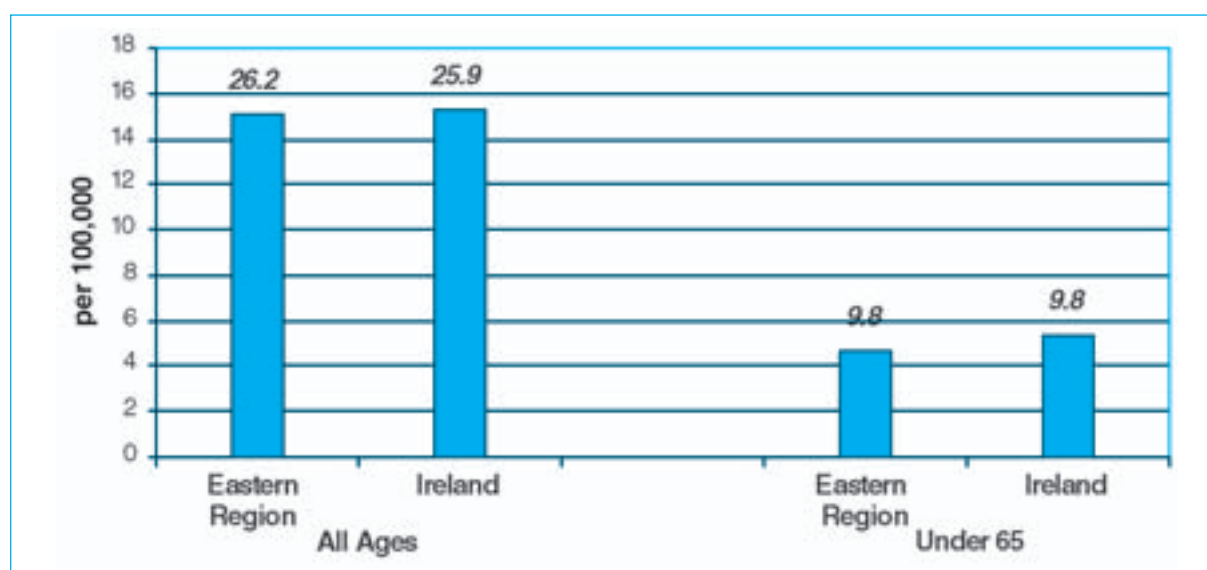


Figure 4.24. Standardised Death Rates/100,000 due to Colorectal Cancer, Eastern Region and Ireland; All Ages and Under 65: 1999

Source: PHIS Version 4

Table 4.4 Admissions to Hospital with Breast Conditions in 1999 (HIPE Data)

Hospital	Malignant (including in-situ)	Benign	Other diagnosis	Total throughput
Mater	135	39	113	287
St. Vincent's	286	159	958	1403
St. James's	102	42	152	296
JCM	23	34	87	144
Beaumont	122	35	192	349
AMiNCH *	89	38	88	215
Total	757	347	1590	2694

* the numbers at this hospital are increasing and it will reach the minimum caseload of 100 per year.

given for developing the units on these sites. The Eastern Region agrees with this recommendation and has undertaken a process of consultation with the hospitals to determine their needs to meet the standard of a specialist breast unit i.e. throughput and referral, personnel and the multidisciplinary team, equipment and IT, infrastructure and outpatient department, organisation of services and training. All women living in the Eastern Region who develop breast cancer should now be treated in a specialist breast unit.

Opportunities for Health and Social Gain

All women with breast cancer will receive a service that provides the highest quality and best outcomes in the most desired approach.

There is evidence that:

- Outcomes are influenced by the method of care
- The use of guidelines can improve the process and outcome of care
- There is a correlation between volume and survival. A 20% improved survival has been noted in patients attending specialised breast units compared with women not treated in such centres
- There is a demand for the use of protocols for treatment. All specialist breast unit should work to agreed protocols with audit based systems and standardised data collection

Key Point

A common database, enabling audit of the symptomatic breast service, should be developed immediately.

- Protocols for treatment consistent with best modern practice requires an in-built audit system to allow comparison of outcomes from centre to centre. It should also lead to external benchmarking with centres of excellence internationally.
- A minimum workload is needed for specialists treating breast cancer patients.
- Each specialist breast unit should treat at least 100 new cases per year. This number would ensure the multidisciplinary and specialised approach. For every 100 cancers treated each year the unit would see approximately 1,000 women with breast symptoms. Such a volume of patients would be expected from a population of 250,000-300,000.
- International studies show that there are variations in practice among surgeons and hospitals in the management of breast cancer and that patients treated by specialists have better outcomes. The information to acquire such evidence is not available in Ireland at present.

Existing data

Table 4.2 shows HIPE data for 1999 in relation to hospital admissions in the Eastern Region for breast conditions.

Radiotherapy Services

Patients with cancer require a responsive, high quality, equitable and accessible radiotherapy oncology service that is thoroughly integrated

with the other modalities of cancer care. Radiotherapy is a critical component of multi-disciplinary cancer treatment, curative and palliative. The role of radiotherapy is expanding. It is increasingly being used as a curative treatment. In 70% of patients treatment intent is curative. The National Cancer Strategy, 1996, proposed enhancements in cancer services and though many developments have occurred, to-date there has been little development of radiotherapy services.

Radiotherapy services in the Eastern Region need major enhancement because the proportion of older people living in the Eastern Region will rise steeply and as a result the number who will be diagnosed with cancer is forecast to increase. Consequently demand for all cancer services will escalate.

Radiotherapy services in the Eastern Region are based at St. Luke's Hospital which has seven radiotherapy machines. There are also private facilities in Dublin, in St. Vincent's and Mater private hospitals with one machine in each facility. In 1999 there were 62,386 inpatient and outpatient radiotherapy treatments in St. Luke's hospital. In 2000 the number increased to 69,420 (11.3% increase).

The uptake of radiotherapy services in the Eastern Region is 23% and is below recommended standards internationally. The recommended uptake figure is 50%. Consequently radiotherapy services in the Eastern Region are insufficient to meet the needs of the resident population and of patients from other regions who receive radiotherapy in this Region.

An assessment of the need for radiotherapy services was conducted in 2001 and this indicates that by 2011 the Eastern Region requires between 18-20 radiotherapy machines to provide radiotherapy services.

This level of provision will improve cancer outcomes and lead to real health gain due to:

- Greater access to radiotherapy by patients who need it
- A reduction in radiotherapy waiting times
- A reduction in delays to start radiotherapy and interruption in treatments
- Completion of radiotherapy courses within the prescribed time

- Developments in specialised treatments.

Conclusion

Approximately 50% of patients with cancer can be cured and 50% of patients need radiotherapy. Better technology has changed practice and has facilitated complex treatments with fewer complications. The Eastern Regional Health Authority's plan to expand radiotherapy services to 18-20 radiotherapy machines is a major task and will be undertaken in phased manner. It is essential that there is a great emphasis on quality assurance, safety, regular audit in relation to staffing, technology, workload and patient outcomes, which should be monitored, evaluated and published.

Chemotherapy for Cancer

Medical oncology is a rapidly advancing specialty. For patients with many types of cancer the provision of chemotherapy is an increasingly important treatment. The impact of chemotherapy on the health services is also escalating.

All patients with cancer require a best practice approach to their treatment, including those receiving chemotherapy. This is a complex specialty and new advances in treatment are constantly being researched and rapidly coming into practice in an effort to improve patient outcomes.

In an effort to ensure an evidence-based approach to chemotherapy the National Institute of Clinical Excellence (NICE) in the UK has appraised a number of chemotherapeutic agents e.g. a study of the effectiveness of taxanes in breast and ovarian cancer was published this year. A further 13 chemotherapy treatments are being rigorously assessed by NICE with a view to providing guidance on the effectiveness of different types and combinations of chemotherapy for a wide range of cancers including colorectal, lung, brain, breast, pancreas and ovary. However, such guidance cannot override individual clinical responsibility.

Issues in relation to chemotherapy are similar in Ireland and include:

- Use of best practice guidelines thereby ensuring an evidence based approach to treatment

- Availability and use of audit systems to measure practice and patient outcome
- Cost effectiveness of different treatments for example, the impact of newer agents which may be more expensive but have less toxicity
- Importance of increased enrolment in clinical trials to speed up evaluation of new approaches to treatment
- Information for patients on what to expect from chemotherapy
- High quality and safe facilities for administering chemotherapy including the availability of multi-disciplinary teams with the appropriate skills
- Impact on chemotherapy on hospitals and the health service including forecasting need, increasing workloads, patients who require retreatment, new drugs and regimes, effect on hospital budgets and hospital capacity.

Colorectal Cancer in the Eastern Region and Issues Related to Screening

The incidence of colorectal cancer is of major concern for the medical profession and health care providers. In the Eastern Region, there are close to 600 new cases of colorectal cancer (CRC) each year and approximately 300 deaths from the condition.

The feasibility of population screening for people at average risk of CRC would seem to be some time away yet. However, there is evidence that some people are at higher risk of developing CRC. People at highest risk (“High risk group”) are those with the hereditary syndromes of familial adenomatous polyposis coli (FAP) and hereditary non-polyposis coli (HNPCC), where the risks of developing CRC are 100% and 80% respectively. It is important that such patients are appropriately screened, treated and followed up. There is also evidence of a second group of people at medium risk of developing CRC (“Medium risk group”). This medium risk group is composed of people with a family history of CRC i.e. first-degree relatives developing CRC, especially at a young age (< 45 years). It is in regard to this group that

most of the discussion around screening for CRC centres. There are few rigid guidelines on screening criteria for this group. The best evidence to date suggests that family history risk should be defined, in accordance with the definition used by the Imperial Cancer Research Fund (ICRF, 2001), as having one first degree relative who developed CRC at < 45 years of age or two or more first degree relatives with CRC.

It would seem advisable to research a programme to screen the medium risk group, using the ICRF definition of family history risk, in order to establish the role and value of screening in this group. Both the outcomes, which should be well defined and measurable, and the costs of the research screening programme should be carefully monitored and evaluated. In addition, it is important to establish that the existing programme for screening those with hereditary syndromes is working effectively and efficiently before expanding the current screening programme. General population screening is not advised at present, though research is currently being undertaken in this area. The views of the ERHA may be modified in future once new evidence becomes available.

Recommendations

1. Population screening for CRC is not recommended at this time. It is recommended that the emerging evidence from studies on population screening for CRC be followed up and considered by all relevant staff in the ERHA. The Department of Public Health has a key role to play in this area.
2. Certain definite “at risk groups” of people have already been identified as being at high risk of developing CRC. These are people with the hereditary syndromes of FAP and HNPCC, the “high risk” group. It is recommended that the programmes in place to identify, screen, treat and follow up these people are reviewed to ensure that they are functioning effectively before an expansion of the any screening programme is considered.
3. There is a growing body of evidence that a positive family history of CRC confers an increased risk of CRC among relatives. This group of people can be categorized as being

at “medium risk” of developing CRC. It is recommend that research be undertaken to explore the effectiveness of screening those at “medium risk” of CRC because of a positive family history of CRC. It is essential to define this “medium risk” group adequately.

4. Where such research is being considered, it is recommend that the definition of family history risk used in the research is based on the best evidence to date. A significant family history, as defined by the Imperial Cancer Research Fund, i.e. where one first degree relative is diagnosed with CRC at < 45 years or where two first degree relatives, of any age, are diagnosed with CRC, particularly if one is <45 years, should be considered for use in any proposed research study. It may be useful to consider the forthcoming guidelines on screening currently being drawn up by the British Society of Gastroenterology.
5. It is recommend that both the outcomes and costs of a research study on screening people with a defined family history of CRC be carefully monitored and evaluated.

Prostate Cancer: Issues Related to Screening

There were 1,130 cases of prostate cancer diagnosed in Ireland in 1997 and 536 deaths. It was the second commonest cancer in men in Ireland in 1997 representing 10.7% of all cancers (National Cancer Registry Ireland, 2000). In the Eastern Region there were 340 new cases of prostate cancer diagnosed in 1997. Men have a 5% risk of developing prostate cancer before age 75, and a 1.65% chance of dying from it. Prostate cancer incidence has increased since 1994, at an annual rate of 1.6%. Whether this is due to better case-finding, more incidental diagnosis or a true increase in incidence is unclear. Prostate

Key Point

Prostate cancer incidence has increased since 1994, at an annual rate of 1.6%.

cancer is predominantly a disease of older age, and due to increasing life expectancy the number of cases is expected to increase in the coming years.

The effect of screening on prostate cancer mortality has not been clearly documented. (Advisory Committee on Cancer Prevention, 2000). Screening cannot be

Key Point

Prostate cancer is predominantly a disease of older age, and due to increasing life expectancy the number of cases is expected to increase in the coming years.

justified unless people who are screened have better health outcomes than those who are not. To date it has been established that prostate screening increases early detection but there is no substantial evidence that it reduces mortality. Prostate cancer does not fulfil the

WHO screening criteria. There is a reservoir of unsuspected indolent cancers in the population and uncertainty regarding the effectiveness of aggressive treatment. Neither the improvement of screening tests nor the restriction of screening to high prevalence populations will improve desirability of screening if treatment itself is not of net benefit.

Major questions remain regarding the natural history of the disease, the specificity of screening tests, the potential costs (financial, social and psychological) of screening, the effectiveness and cost-effectiveness of treatments for localised disease (Selly et al, 1997). The lack of evidence to justify screening and the above concerns indicate that that population screening for prostate cancer cannot be recommended at present. As long as randomised studies do not show an advantage on prostate cancer mortality or quality of life, screening for prostate cancer is not recommended as healthcare policy (Advisory Committee on Cancer Prevention, 2000).

Recommendation

Population screening for prostate cancer is not recommended at this time. If and when evidence emerges that it may be worthwhile, the current position should be reviewed.

Chapter 5 Unintentional Injury

Introduction

In June 2001 a major report highlighting the enormous impact of unintentional injury in Ireland was published. The report is the result of a collaborative effort between our Department of Public Health, the Department of Public Health and Epidemiology, UCD, and the Department of Community Health and General Practice, TCD. Health Research Board funding enabled the project to take place. Routine data on unintentional injury were analysed, assimilated and documented i.e. mortality data (1980-1996) and HIPE data (1993-1999). Some of the results of this work are presented in this chapter, with permission from the authors.

The key facts in relation to unintentional injury in Ireland are:

- Injury causes up to 1,500 deaths each year. Over 4% of deaths in the Eastern Region are due to unintentional injury. Many can be prevented.
- Death in childhood is mainly caused by unintentional injury.
- In terms of 'years of life lost' unintentional injury is one of the most important causes of death being responsible for over 22% of 'years of potential life lost'.
- Males have a higher incidence rate, hospital admission rate and death rate from injury than females.
- Road traffic accidents (RTAs) exert a huge burden in Ireland. Though death rates from road traffic accidents have decreased since 1980 the rates are unacceptably high at

Key Point

There are up to 1,500 deaths due to injury in Ireland. In terms of years of life lost injury is one of the most important causes of death.

Key Point

Irish death rates from RTAs far exceed many comparable countries e.g. United Kingdom and Australia.

18.4/100,000 for males and 5.7/100,000 for females.

- Irish death rates from RTAs far exceed many comparable countries e.g. United Kingdom and Australia.

Death due to Unintentional Injury

Between 1980 and 1996 the Eastern Region had the lowest standardised mortality ratio (SMR) from injury (86.5). Regions with the highest SMRs were the North West (121.5) and North East (118.3), Table 5.1.

Table 5.1 Unintentional injury deaths by region of residence, 1980-1996

Region	Number	%	SMR
South East	2184	11.5	106.3
North East	1857	9.8	118.3
Midland	1224	11.5	106.3
West	2121	11.2	103.0
North West	1504	7.9	121.5
South	2896	15.3	98.0
Mid-West	1723	9.1	101.5
Eastern Region	5416	28.6	86.5
Total	18925	100.0	

Table 5.2 shows SMRs for the major causes of unintentional injury death in each Region of Ireland. For RTAs, the South had the lowest SMR (80.3) followed by the East (88.8) while the North East had the highest SMR (144.2). For falls, the Midland Region had the lowest SMR (86.5) while the South had the highest SMR (127.8).

Key Point

The Eastern Region has the lowest standardised mortality ratio for unintentional injury in the country.

Though the injury mortality rate is lower for males in the East than in Ireland as a whole, the rate for females in the East and

Table 5.2 Standardised Mortality Ratio for the Leading Cause/Mechanism of Unintentional Injury Death by Region of Residence, 1980-1996

Cause / Mechanism	Eastern Region	Midland	Mid West	North East	North West	South East	South	West
Fall	93.9	72.8	98.0	100.2	115.2	96.9	127.8	86.5
RTA	88.8	125.9	105.3	144.2	103.7	108.9	80.3	100.0
Drowning	57.5	109.8	86.9	87.3	203.7	111.4	119.7	157.9
Poisoning	135.7	67.1	66.0	79.5	103.9	92.8	77.6	84.3
Suffocation	86.0	159.8	132.0	79.3	101.0	81.5	92.0	131.5
Fire / burn	84.8	114.6	97.7	94.8	121.1	95.4	118.0	105.6

nationally is similar and is approximately half that of males, Figure 5.1. Unlike cardiovascular disease and cancer, the rate of decline in injury death during the past 10 years is disappointingly low.

Trends in premature mortality (<65 years) from unintentional injury show a similar disappointing pattern (Figure 5.2).

International comparisons show that the East occupies a favourable position overall in relation to injury deaths when compared with the EU average, Figure 5.3.³ However, this is no reason for complacency given the preventable nature of many injuries and the great advances

that can be made in prevention especially for RTAs. As a nation we should consider Australia and the UK as benchmarks to measure our strategy for RTA reduction rather than comparing ourselves with the EU average.

Inpatient Hospital Treatment for Unintentional Injury

Information on people who required inpatient hospital treatment for unintentional injury between 1993 and 1999 shows:

- There are over 45,000 hospital discharges nationally each year and the number of

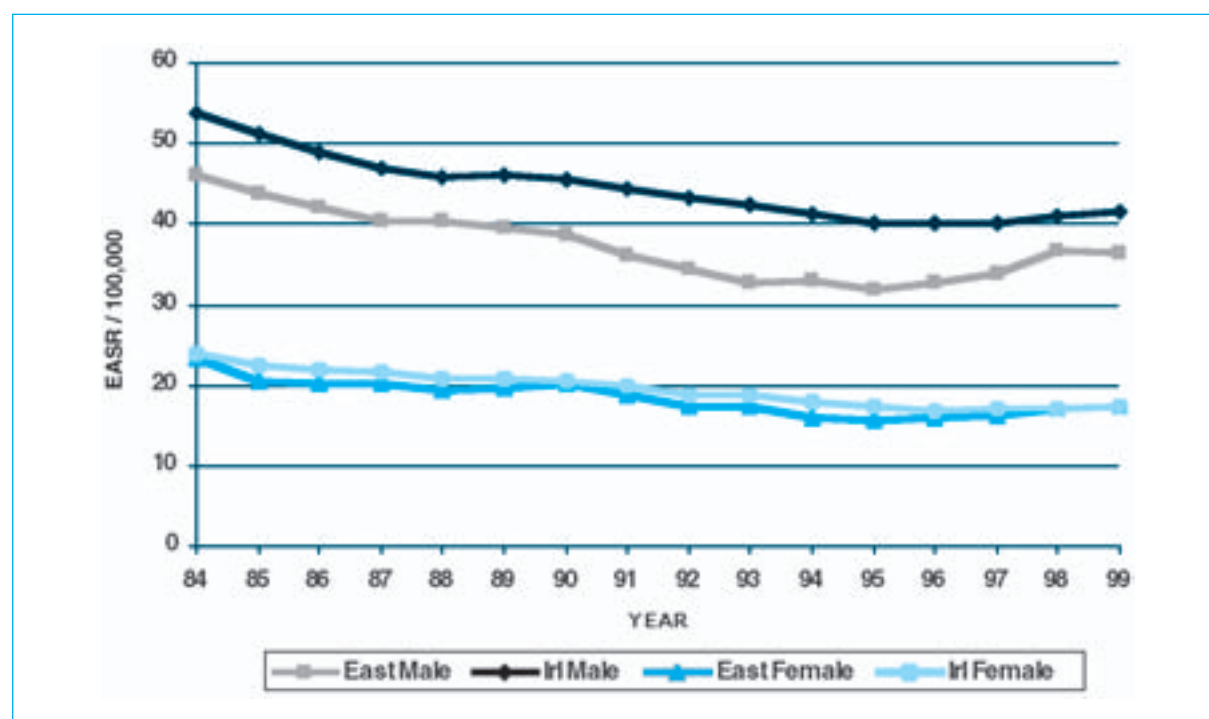


Figure 5.1. Age-Standardised Mortality due to Unintentional Injury by Sex, All Ages: Eastern Region and Ireland, 1984 to 1999.

Source: PHIS, Version 4

inpatient hospital treatments is steadily increasing.

- The highest *risk* of inpatient hospital treatment is among young males primarily due to the large excess of RTAs in this age group.
- The highest *rate* of inpatient hospital treatment is in older people (>65 years)

primarily due to the serious nature of falls in this age group.

- Apart from RTAs and falls, other major causes of inpatient hospital treatment are burns and poisoning and drowning.
- Almost one-third (31.1%) of patients discharged from hospital were resident of the Eastern Region. However, the Eastern

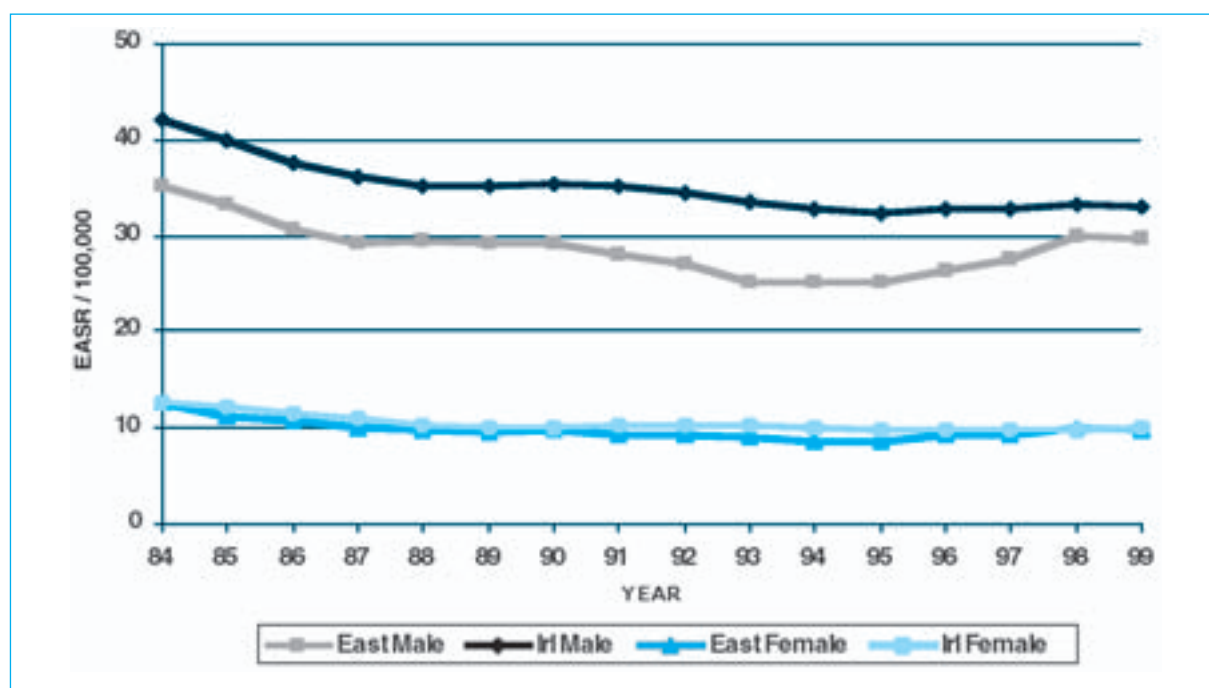


Figure 5.2. Age-Standardised Mortality due to Unintentional Injury by Sex, 0-64: Eastern Region and Ireland, 1984 to 1999.

Source: PHIS, Version 4

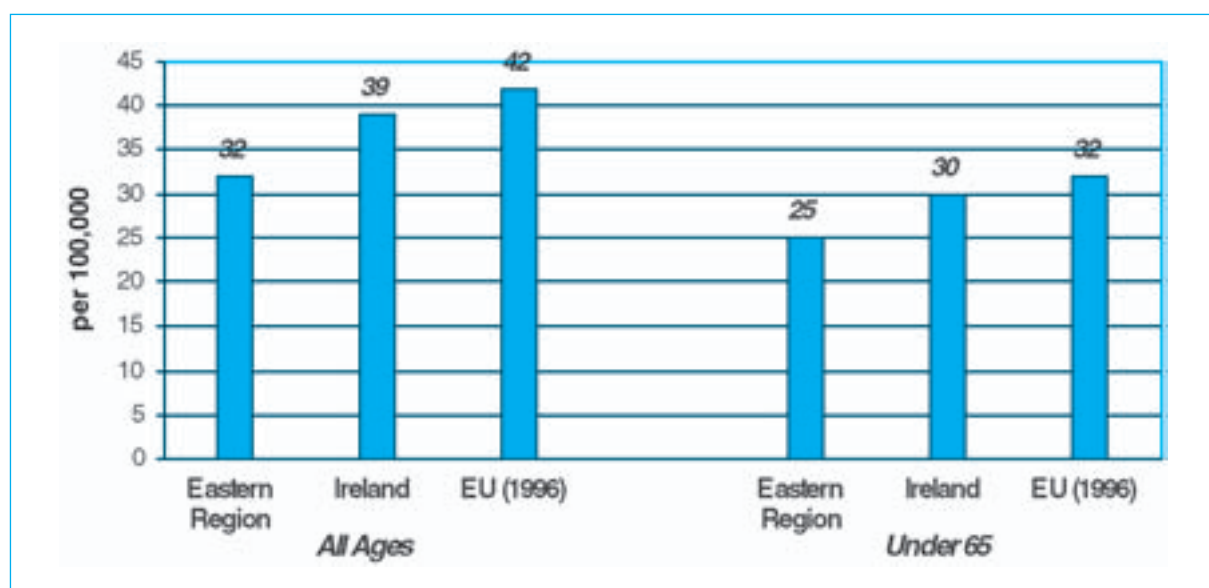


Figure 5.3. Standardised Death Rates/100,000 due to All Causes of Injury and Poisoning, Eastern Region and Ireland; All Ages and Under 65: 1999.

Source: PHIS Version 4, HFA Database

Region had the second lowest standardised discharge ratio (SDR) at 88.4. The Mid-West had the lowest SDR at 87.7. The highest SDR was in the South-East at 128.5, Table 5.3.

Table 5.4 documents hospital discharge rates for the major causes of unintentional injuries.

Table 5.3 Inpatient Hospital Treatment for unintentional injury by region of residence, 1993-1997

Region	Number	%	SDR
South East	31,092	13.9	128.5
North East	21,814	9.8	115.4
Midland	14,658	6.5	114.9
West	25,008	11.2	112.7
North West	13,590	6.1	102.2
South	30,618	13.7	90.4
Mid-West	17,248	7.7	87.7
Eastern Region	69,528	31.1	88.4
Total	223,556	100	

Eastern Region residents had the lowest average annual discharge rate for falls, road traffic accidents (RTA) and fire/ burns.

Table 5.5 shows standardised discharge rates (SDR) for major injuries. Residents of the South East had the highest SDR for falls (116.6) while the South had the lowest (92.6). Residents of the North East had the highest SDR for RTAs (165.8) while those in the East had the lowest (75.6). The East also had the lowest SDR for fires/burns. The South East had the highest SDR for 'being struck by or against an object or person' (176.4) and poisoning (137.7).

Figure 5.4 shows age-standardised injury discharges by sex for residents of the Eastern Region and Ireland, between 1994 and 1999. There was a slight fall in discharge rates per 100,000 population for both males and females from 1997-99.

A similar trend was apparent for those under the age of 65 years, particularly males (Figure 5.5).

Table 5.4 Average Annual Discharge Rate for the Leading Causes of Unintentional Injury Admission by Region of Residence, 1993-1997

Cause / Mechanism	Health Board / Authority								Total
	Eastern Region	MHB	MWHB	NEHB	NWHB	SEHB	SHB	WHB	
Fall	478.2	548.9	498.7	549.0	603.0	628.2	500.4	638.9	532.5
RTA	140.5	240.6	156.8	291.2	203.3	238.5	141.3	188.9	179.4
Struck by / against	104.0	168.5	133.5	112.2	84.9	233.6	122.6	166.9	132.8
Poisoning	102.7	78.9	80.2	112.4	75.9	119.8	52.4	70.7	89.8
Cut / pierce	60.8	87.9	47.1	72.5	54.1	73.9	77.6	84.6	68.0
Fire / burn	18.2	35.9	23.8	31.0	28.3	30.0	27.7	25.4	25.0

Table 5.5 Standardised Discharge Ratio (SDR) for the Leading Causes of Unintentional Injury Admission by Health Board of Residence, 1993-1997

Cause / Mechanism	Eastern Region	MHB	MWHB	NEHB	NWHB	SEHB	SHB	WHB
Fall	93.4	100.4	93.3	102.9	107.1	116.6	92.6	113.6
RTA	75.6	137.0	87.9	165.8	118.3	135.9	79.1	107.8
Struck by / against	77.0	125.9	100.6	83.6	66.6	176.4	93.4	129.5
Poisoning	108.6	88.5	91.8	128.6	89.4	137.7	59.5	82.7
Cut / pierce	87.6	130.7	68.9	105.5	83.0	109.8	115.6	127.2
Fire / burn	74.0	143.1	97.4	119.5	115.4	120.1	113.0	102.1

Road Traffic Accidents

Mortality due to road traffic accidents in the Eastern Region is the lowest in the country. Ireland's national figure is very close to the 1996 EU average but it far exceeds countries that have prioritised RTA prevention (Figure 5.6)³

Key Point

Mortality due to road traffic accidents in the Eastern Region is the lowest in the country.

Hospital discharge rates for residents of the Eastern Region for road traffic accidents are the

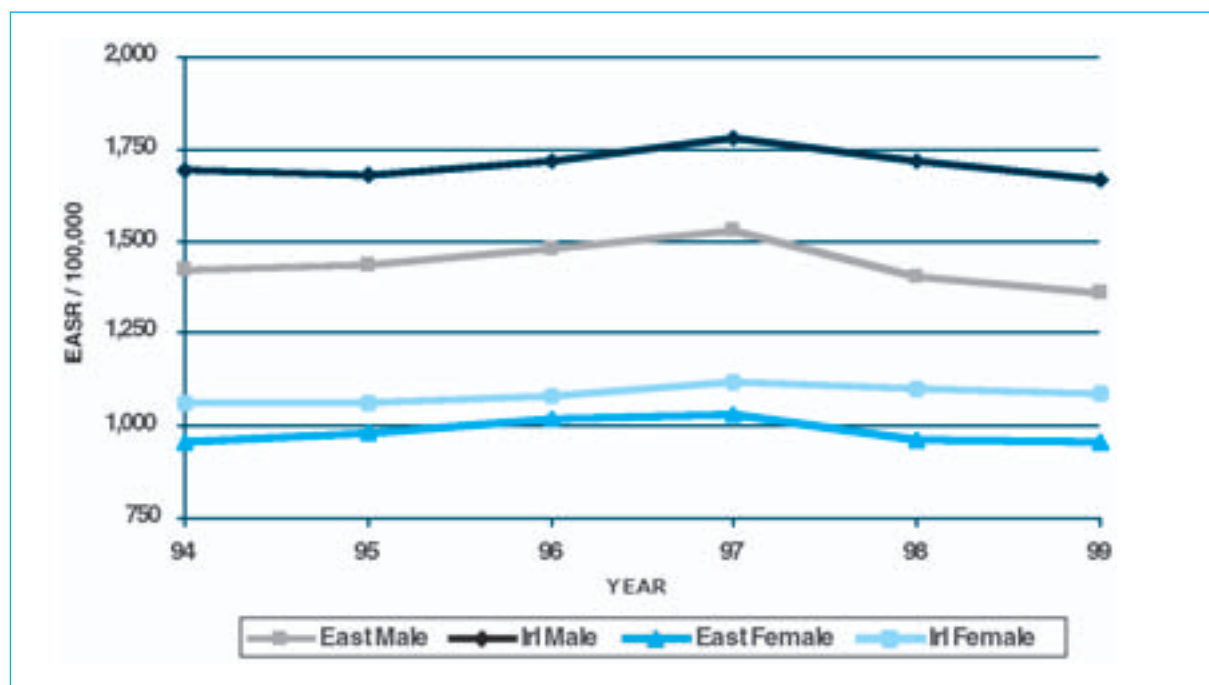


Figure 5.4. Age-Standardised Unintentional Injury Discharges by Sex, All Ages: Eastern Region and Ireland, 1994 to 1999

Source: PHIS, Version 4

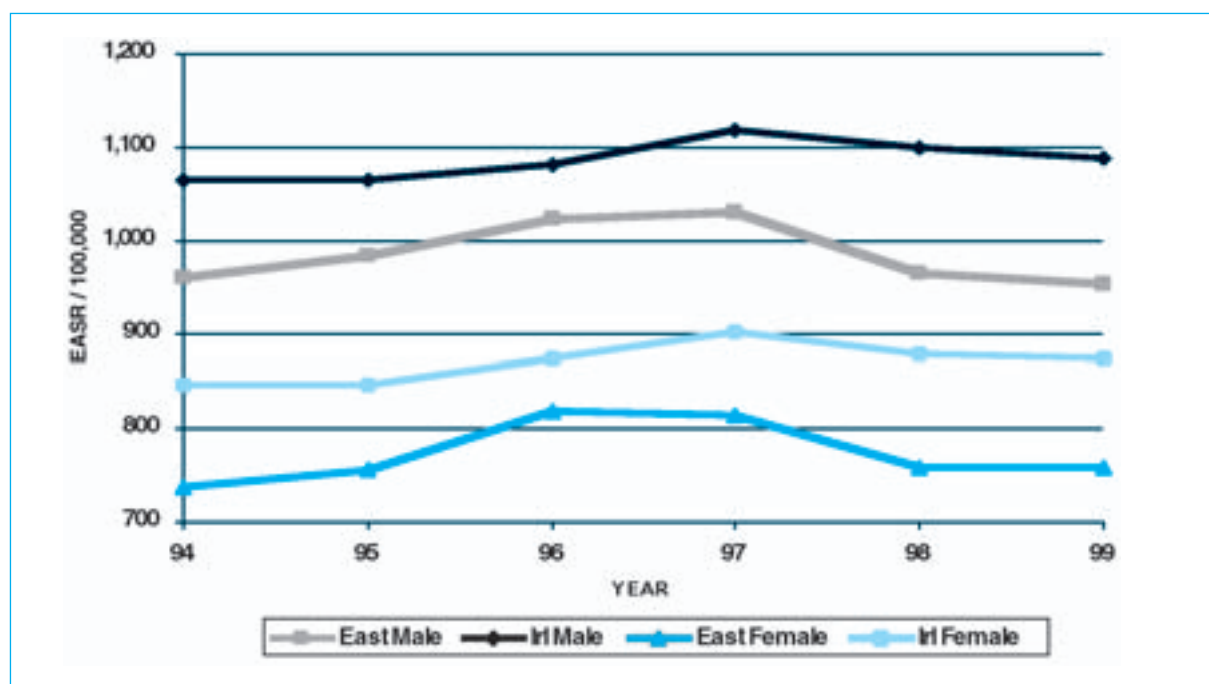


Figure 5.5. Age-Standardised Unintentional Injury Discharges by Sex, 0-64: Eastern Region and Ireland, 1994 to 1999

Source: PHIS, Version 4

lowest in the country in each age group (Figure 5.7).

Paracetamol Availability and Overdose in Ireland

Paracetamol is a commonly used medicine. It is usually safe when taken correctly. It is cheap and widely available. It is regularly used in suicide attempts. Intentional and unintentional overdose is a frequent cause of hospital admission on both sides of the Atlantic where it is the single most common identifiable cause of

fulminant hepatic failure. The incidence of paracetamol poisoning is related to its ease of access.

In an effort to reduce the incidence and the potentially severe consequences of overdose, The Irish Medicine's Board (IMB) revised its conditions for the supply and sale of paracetamol in 1997. The revised conditions, which do not have a statutory basis, state that non-pharmacy outlets should only sell emergency supplies in a maximum pack size of 12 tablets and just one pack should be sold on each occasion.

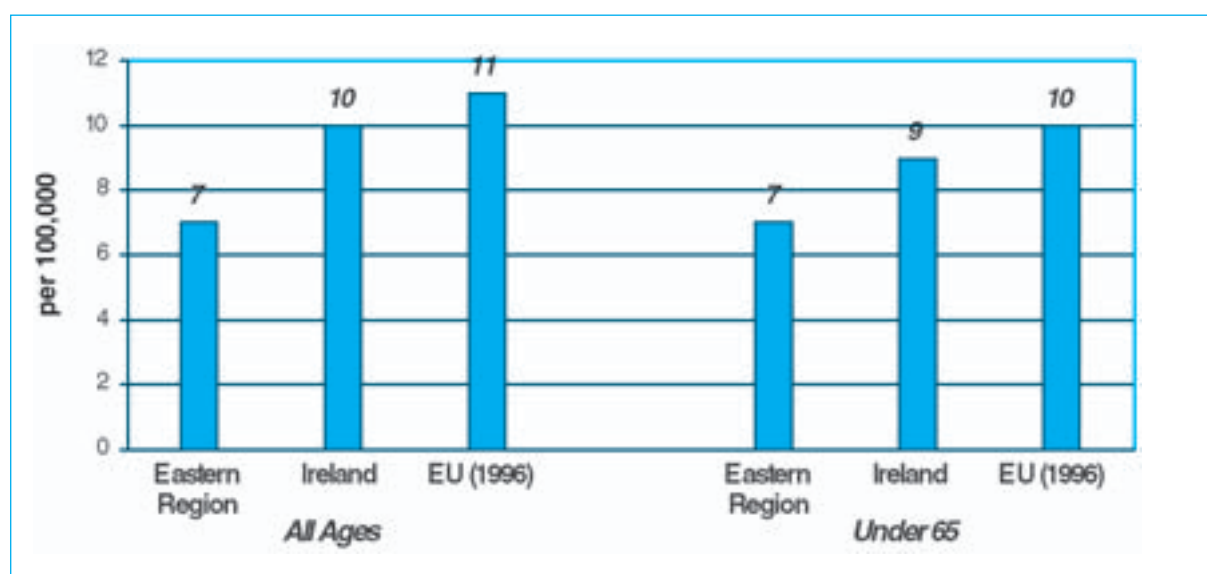


Figure 5.6. Standardised Death Rates/100,000 due to Road Traffic Accidents, Eastern Region and Ireland; All Ages and Under 65: 1999.

Source: PHIS Version 4, HFA Database



Figure 5.7. Standardised Discharge Rates/100,000 due to Road Traffic Accidents, Eastern Region and Ireland; All Ages and Under 65: 1999.

Source: PHIS Version 4

Research conducted by our Department of Public Health found that paracetamol poisoning is still the most common form of overdose leading to hospital admission in Ireland. Admissions increased by 29% between 1993 and 1999 from 1,111 to 1,433. This persistently high number is a source of concern as most cases are young people. Following the introduction of the IMB's revised conditions, admissions dropped by only 1.9%. The research concluded that non-pharmacy outlets do not comply with the IMB conditions as the researchers successfully bought 48 paracetamol tablets from each of 100 non-retail outlets surveyed.

The IMB guidelines have little influence on the sale of paracetamol from non-pharmacy outlets. Consequently the mere 1.9% reduction in admissions since the introduction of the revised conditions is not surprising. In contrast, after the UK introduced legislation in 1997 in relation to paracetamol supply and sale there was a substantial drop in the occurrence and severity of paracetamol poisoning.

Opportunities for Health and Social Gain

- Voluntary guidelines regarding the sale and supply of paracetamol are ineffective.
- In April 2001, the Minister for Health and Children announced that legislation controlling the sale of paracetamol would come into force in October 2001 (S.I. No. 150 of 2001). This is an extremely worthwhile development and should lead to a substantial reduction in the incidence of paracetamol poisoning.
- Non-pharmacy outlets should be made aware of the legislation and of the dangers of paracetamol.
- They owe a duty of care to the public and should comply with the legislation.
- Cash registers in non-pharmacy outlets should be programmed to allow only one sale of paracetamol (12 x 500mg).
- Once legislation is enacted, procedures should be put in place to ensure that it is enforced.

Key Point

Legislation to control the sale and supply of paracetamol will lead to a real reduction in paracetamol poisoning.

Preventing Accidental Falls among Older People in Long Stay Units

Falls are common in older people (65 years and over) and are associated with considerable morbidity. Prevention is important. Of older people living in the community, 30% fall each year and at least 10% of them sustain a serious injury from a fall such as a fracture, joint dislocation or severe head injury. The risk of falling is higher among elderly hospitalised patients. Each year in Ireland approximately 280 people die from accidental falls and more than 75% of these are over 65 years. Of the 8,000 older people hospitalised annually due to injury, falls cause 80% of those admissions.

Intervention

A fall prevention programme for older long-stay patients in a 95 bedded District Hospital was undertaken. Data on falls and resulting injuries for the year prior to the intervention were compared with equivalent data after one year (Year 1) and after two years (Year 2) of the intervention.

Initially staff were trained in fall prevention. An occupational therapist conducted an environmental audit of the hospital. Enhancements to the physical environment were made. Risk factors for falling, intrinsic to each patient, were assessed and corrective action was taken where possible e.g. remediable visual problems, mobility assistance, medication use and replacement of unsuitable footwear or provision of special footwear.

Key Point

Of the 8,000 older people hospitalised annually due to injury, falls cause 80% of those admissions.

Results

In the pre-intervention year 25% of patients had at least one fall compared with 20.9% and 17.4% in Year 1 and Year 2 respectively. This difference was not statistically significant. However, there were 21% fewer falls in Year 1 and 49.3% fewer in Year 2 than in the pre-intervention year. This difference was significant in Year 2. In both intervention years there was a significant reduction in the incidence of fracture from 20.5% of falls (pre-intervention) to 2.8% in Year 1 and no fractures occurred in Year 2. Significant reductions in soft tissue injuries occurred in Year 2. They dropped from

38.5% (pre-intervention) to 36.1% (Year 1) and 15.4% (Year 2). The percentage of patients uninjured after a fall increased from 41% to 61.1% to 84.6%.

Opportunities for Health and Social Gain

This intervention reduced falls and their adverse consequences for older people living in the long stay unit. The effect of the intervention escalated in Year 2. Fall prevention should be part of the routine care of older people in all types of long stay care.

Key Point

All long stay units and nursing homes should have a fall monitoring and prevention programme in place.

Conclusion

The burden of unintentional injury in Ireland is simply unacceptable. Though hospital discharge and mortality rates in the Eastern Region compare well with other parts of the country, we cannot be content with this. Injuries exert a massive toll on all age groups in terms of premature death, disability, illness and lost productivity. Injuries can be prevented. Often simple, inexpensive measures are highly effective. A national strategy on injury prevention and control is required.

Opportunities for Health and Social Gain

The priorities for health and social gain in terms of injury reduction are:

- In relation to road traffic accidents: the permissible level of blood alcohol should be reduced from 80 mg/ 100 mls to 50 mg /

100 mls. This is a most urgent requirement and it will lead to a substantial reduction in alcohol related RTAs

- The speed limit in urban areas should be reduced from 30 mph to 20 mph (in keeping with evidence of the effectiveness of this measure)
- Random breath testing should commence. (At present the limited system of evidential breath testing occurs).
- The penalty point system should be introduced without further delay.
- A thorough review of the national strategy on RTA prevention is required given the limited success of our current approach.

1. Fall prevention should become part of the routine health care for older people especially those in long stay units. There is substantial evidence that such an approach leads to reductions in falls and serious injury.

2. Medicines not already packaged in blister packs should be dispensed in child resistant containers. This should be a professional requirement for pharmacists. In other countries where it is a professional requirement there has been a reduction in childhood poisoning. This proposal has been advocated to the pharmacy profession on many occasions and it is very disappointing that it still remains a voluntary code, which is not effective.

Chapter 6 Communicable Disease and Environmental Health

Introduction

Communicable diseases were once the major cause of death in Ireland and are globally the biggest killer of children and young adults.¹⁹ Latest research shows that communicable diseases are threatening economic growth and globalisation.²⁰

The National Disease Surveillance Centre has identified antimicrobial resistance to antibiotics, meningitis, tuberculosis and foodborne disease as priority areas for research in Ireland.²¹

Vaccination

Vaccination provides one of the safest and most cost-effective ways of protecting health.¹⁹ When rates of immunisation fall, the number of people protected also falls, which increases the likelihood of disease outbreaks. When this happens with childhood immunisation, all children are at risk, but the risk will be greatest among the poorest children.²²

Table 6.1 shows the immunisation uptake rates in children 12 and 24 months of age in the fourth quarter of 2000. The rates in the Eastern Region are close to

Key Point

Vaccination is one of the safest and most cost-effective ways of protecting health and saves lives.

Key Point

When vaccination uptake rates fall, disease, disability and death become more likely, particularly amongst the poorest children

but slightly below the national average at 12 and 24 months. These figures show that work remains to be done in order to bring immunisation levels up to the 95% uptake levels considered necessary for the protection of the entire population.

Measles

Measles outbreak, Eastern Region 2000

Background

In January 2000, the Consultant Clinical Microbiologist at The Children's Hospital, Temple St, Dublin, contacted the Department of Public Health, to report that 12 children had been admitted to the hospital since 22nd December 1999 with a diagnosis of clinical measles. In the Eastern Region, there were 30 cases of clinical measles notified during January 2000, compared with 107 cases during the whole of 1999. The sub-optimal uptake of MMR vaccine, (mean uptake 74.7% at 24 months for children born during the first three months of 1998 in Dublin, Wicklow and Kildare) gave serious cause for concern. The last outbreak of measles in Dublin had occurred in 1993 when there were over 2500 cases notified (Figure 6.1).

The Director of Public Health, wrote to all general practitioners in the region, to alert them to the outbreak of measles and to ask that they encourage parents to vaccinate their children. An outbreak control team, chaired by a

Table 6.1 Immunisation Uptake Rates in Children 12 and 24 Months of Age in Quarter 4, 2000

	% Uptake at 12 months Cohort born 01/10/99-31/12/99					% Uptake at 24 months Cohort born 01/10/98-31/12/98					
	D ₃ §	P ₃	T ₃	Hib ₃	Polio ₃	D ₃	P ₃	T ₃	Hib ₃	Polio ₃	MMR ₁
Eastern Region	74	72	74	73	73	85	82	85	84	84	81
Ireland	76	74	76	76	76	87	83	87	86	87	83

Source: Immunisation Uptake Statistics for Ireland, Quarter 4, 2000, National Disease Surveillance Centre⁵

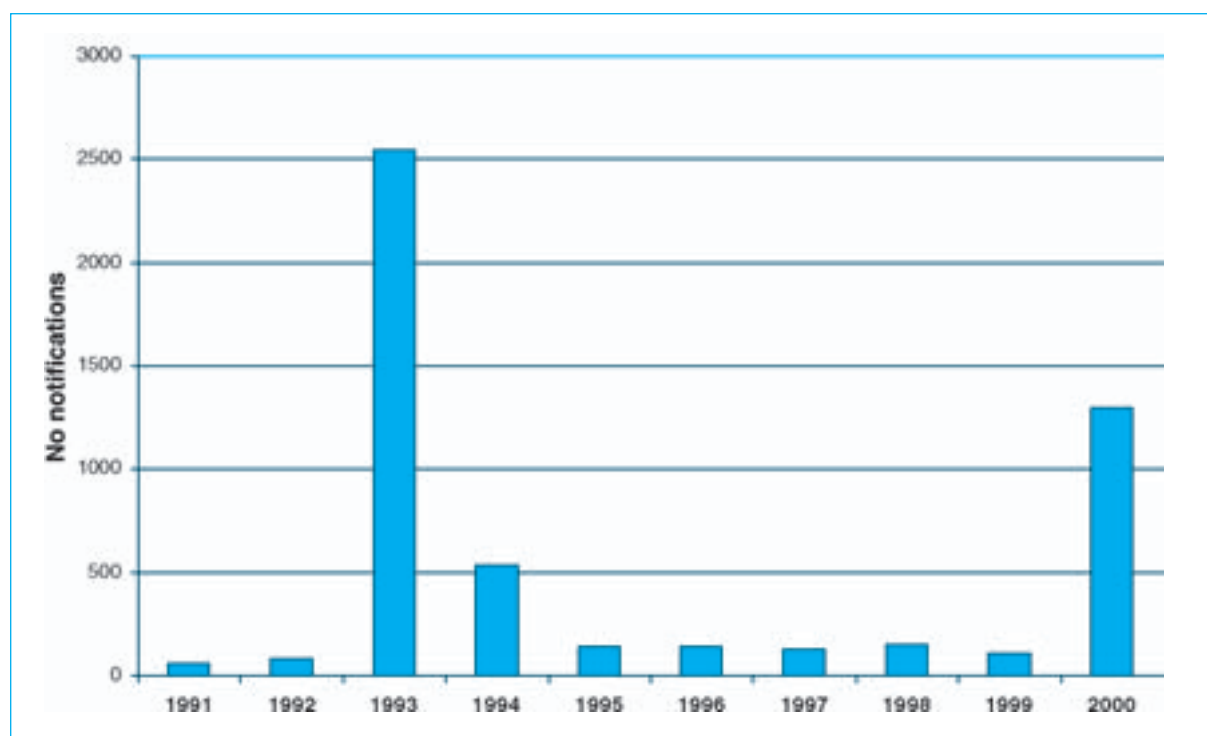


Figure 6.1. Notifications of Measles Dublin, Wicklow and Kildare 1991-2000.

Specialist in Public Health was convened. Membership of the team included: Senior Area Medical Officers, Directors of Public Health Nursing, General Managers, a representative from the Regional GP Unit, the Consultant Clinical Microbiologist and Infection Control Sister from The Children's Hospital, Temple St, the Director of the National Disease Surveillance Centre and a virologist from the Virus Reference Laboratory (VRL), University College, Dublin (UCD).

Epidemiology

The following chart shows the numbers of cases, by week of notification, for the Eastern Region. Most of the cases occurred in the north Dublin City area.

MMR Status

Each District Electoral Division (DED) in the region was categorised in terms of MMR uptake as follows: >80%, 70-79%, and <70%. The calculation was based on all children, aged 2-12 years, with an address in a particular DED, for whom there was no record of the child ever having had MMR vaccination. The notified cases for each DED were superimposed on this "uptake" map. There was a correlation between areas of high measles notifications and low MMR uptake.

In the Northern Area Health Board, data from the Regional Interactive Child Health System (RICHS) and in one Community Care Area, parental recall, was used to establish the immunisation status of cases notified. 61% of cases had not been vaccinated, 12% had had one dose of MMR and in 27% of cases it was not possible to establish if MMR vaccination had been given. These figures are similar to international comparable rates.²⁴

Morbidity

Since the 1 January 2000, over 100 children with measles have been admitted to the Children's Hospital, Temple St, Dublin. Six of the children required intensive care and there have been two measles related deaths. Again these figures are similar to international rates.²⁵

Control measures

The outbreak team instituted the following control measures during this outbreak:

- Press releases urging parents to have their children vaccinated. These generated a lot of interest from both local, National and U.K. media and a good response from parents. It was fortuitous that a Vaccination Awareness Campaign, which was launched on 12th March by the Irish Pharmaceutical Healthcare Association (IPHA) in conjunc-

tion with the Department of Health and Children, heightened media interest in this outbreak of measles.

- Parents/guardians of children for whom there was no record of MMR immunisation on the Child Health Information System (system has records of children born since 1989) were written to, advising that they should contact their GP to arrange for immunisation of their child/children.
- A decision was taken at the first meeting of the outbreak control team (OCT), to recommend that the age for the first dose of MMR vaccine be reduced to 12 months on

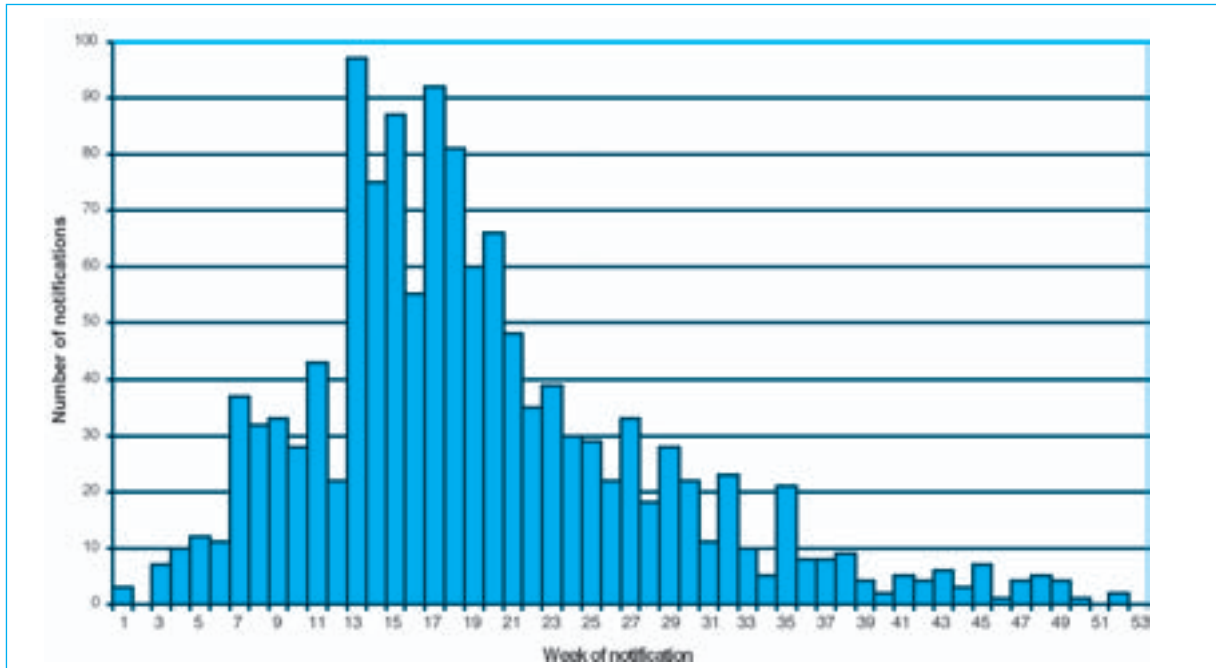


Figure 6.2. Measles by week of notification, Eastern Regional Health Authority – 1 Jan 2000-13 Jan 2001.

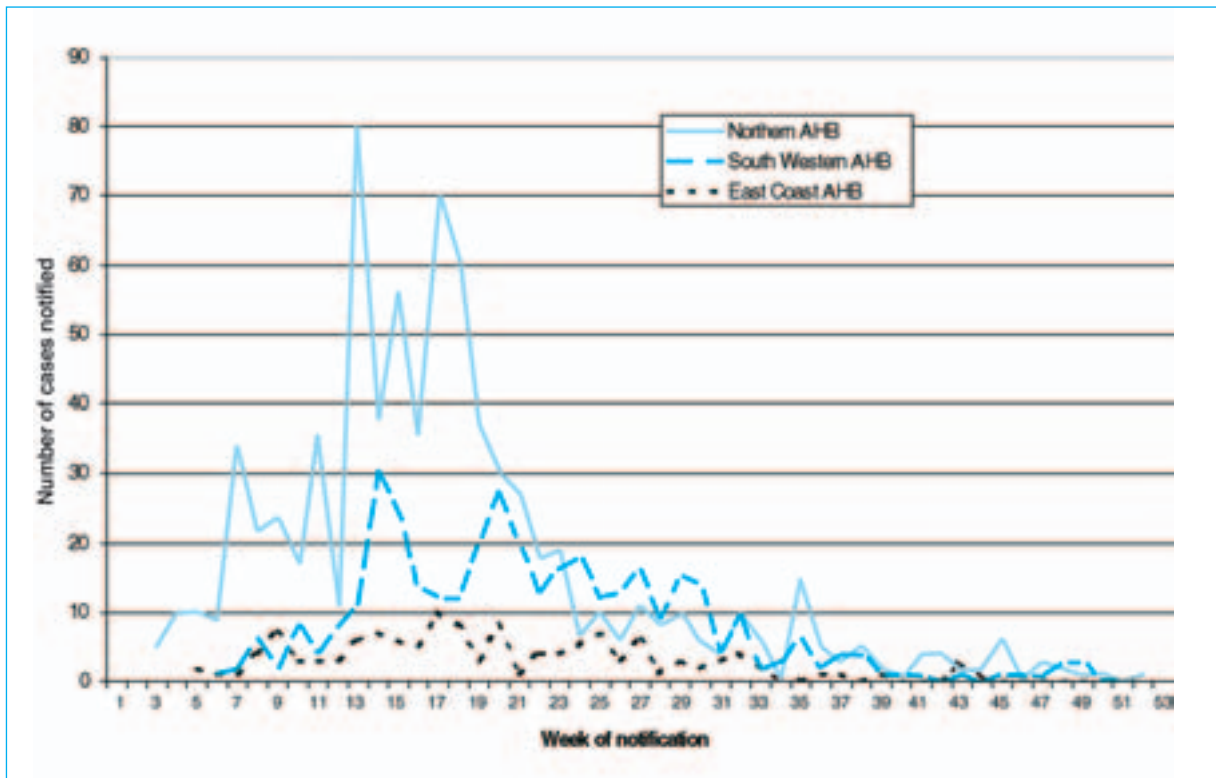


Figure 6.3. Measles Notifications by Area Health Board – 1 Jan 2000-13 Jan 2001.

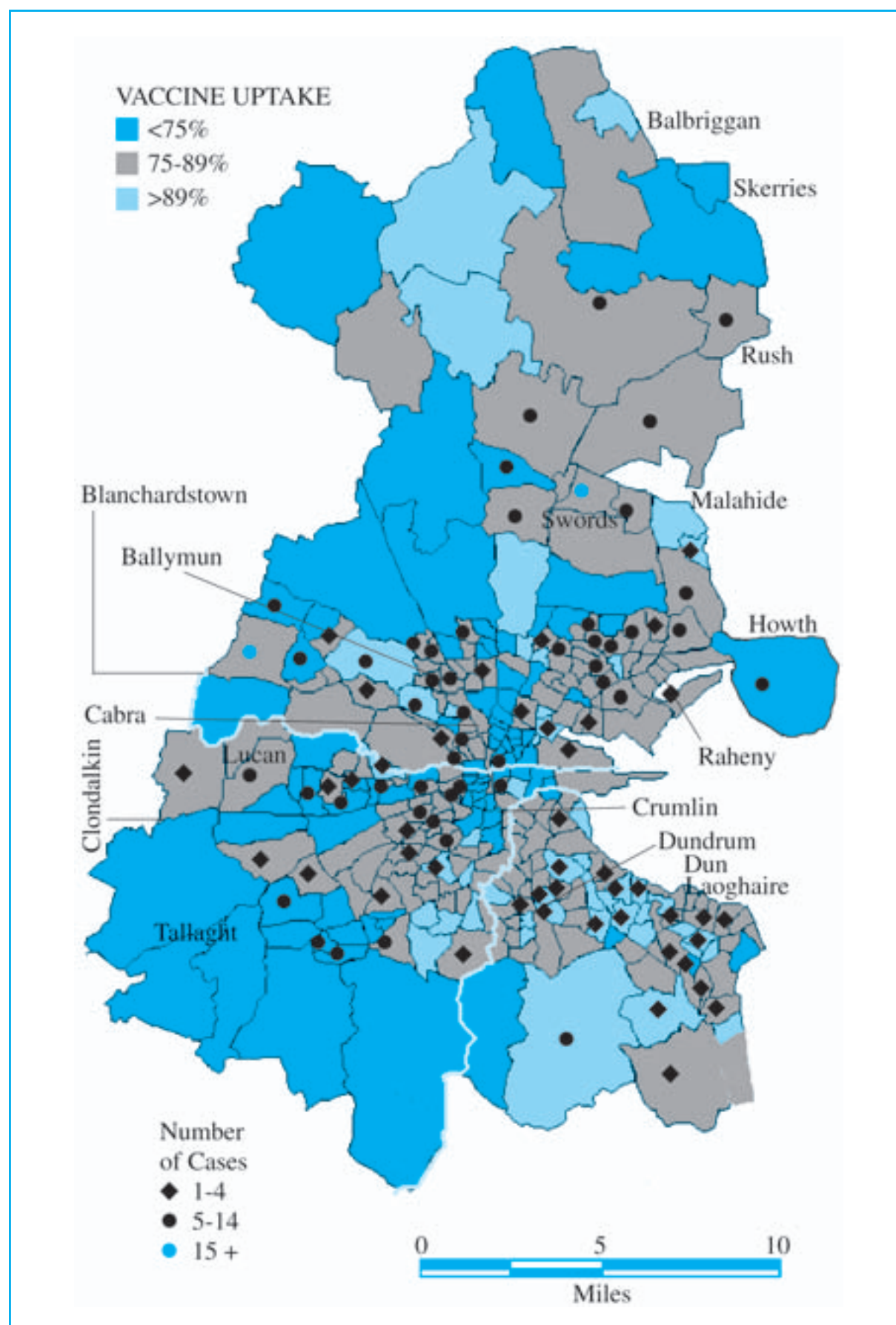


Figure 6.4. MMR Vaccine Uptake 24 Months of Age: 1997-1998 Births.

Source: Department of Public Health HIU (H Johnson & E Boyle)

the northside of Dublin for the duration of the outbreak, because of the high age specific attack rate in the 12-14 month age group. The recommended age for first MMR was subsequently reduced to six months in the Northern Area Health Board and 12 months in the East Coast Area and South Western Area Health Boards.

- For the duration of the outbreak, when a case occurred in a school on the northside of Dublin, the parents/guardians were advised that their child should have MMR vaccine immediately, whether this was a primary or booster immunisation. Parents were given the option of attending their GP or health board clinic, which were set up.
- Managers of pre-school facilities were written to, alerting them to the outbreak and asking that they encourage parents to have their children vaccinated. Managers were asked to alert the Senior Area Medical Officer in their local health board offices, if a case occurred in their facility so that specific control measures could be put in place to prevent secondary cases among other children attending the facility.
- When a case of measles was notified in a child attending a pre-school facility, it was recommended that attendees over 12 months of age should receive two injections of MMR vaccine at least 28 days apart.
- Because of the number of cases of measles which were acquired nosocomially, the Children's Hospital, Temple Street recommended that children due for admission for elective procedures (estimated 40% of all admissions) or who were frequent attenders (e.g. children with cystic fibrosis), receive two MMR shots (at least 28 days apart) prior to admission.

Opportunities for Health and Social Gain

Low vaccination coverage levels against MMR contributed to the large measles outbreak in the Eastern Region.

- There is a need to greatly improve the current sub-optimal uptake of MMR vaccine uptake in the region.
- There is a need to address ongoing public concern re vaccine side effects

- In outbreak situations, there is a need to vigorously respond to outbreak situations rapidly and with a multi-disciplinary response. To this end the Scientific Advisory Committee of the National Disease Surveillance Centre has set up a subcommittee to develop a protocol for the management of future measles outbreaks.

Key Point

Low vaccination coverage levels against MMR contributed to the large measles outbreak in the Eastern Region.

Bacterial Meningitis

Introduction

There were 224 notifications of bacterial meningitis including meningococcal septicaemia in the Eastern Region in 2000 (crude rate 17.2/100,000), which is a little higher than the provisional national rate of 16.0/100,000 reported by the National Disease Surveillance Centre in February 2001.²⁶ The breakdown of the notifications by organism is outlined in Table 6.2.

Table 6.2 Breakdown by organism of the notification of bacterial meningitis including meningococcal septicaemia in the Eastern Region, 2000.

Organism	Number	%
Neisseria Meningitidis	192	86%
Streptococcal Pneumonia	16	7%
Bacterial (organism unknown)	11	5%
Haemophilus Influenzae type b (Hib)	2	1%
Staphylococcal Aureus	1	0.3
Group B Streptococcus	1	0.3
E Coli	1	0.3

Meningococcal Disease

Meningococcal infection is the commonest cause of bacterial meningitis nationally and indeed in the Eastern Region. The vast majority of cases occurs sporadically without known contact with a case and are acquired from the 10-20% who carry meningococci in their throats without any ill effects. In the Eastern Region in

2000, it accounted for 86% of the notifications of bacterial meningitis. 192 cases were notified (crude rate 14.7/100,000 population). This is slightly higher than the national notification rate of 13.8/100,000 as per NDSC but is lower than the 1999 rate for the Eastern Region, which was 17.8/100,000. Of these 83% were confirmed, 15% were presumed and 2% were possible. The majority where a group was identifiable was Group B (73.5%), 26% were Group C and 0.5% were Group W135. The most frequent sero/subtypes were B: 4:P1.4 and C: 2a:P1.5, P1.2. There were 10 deaths attributed to the disease (case fatality of 5%) in comparison with five deaths in both 1998 and 1999.

In October 2000, the Department of Health and Children introduced a National Immunisation Programme against Group C meningococcal disease. Phase 1 of the programme commenced in October 2000, targeting children up to and including 4 years of age and children aged

Key Point

Meningitis remains an important cause of death and disability but vaccination has markedly reduced the numbers of cases due to *H. influenzae* and Meningococcal C disease.

15-18 years. Even, though it is still far too early to remark on the success of the campaign in reducing the incidence of Group C disease in the targeted age groups, preliminary evidence would suggest that there has been a reduction in the incidence in the disease. The overall number of cases of Group C disease in the last quarter of 2000 in the Eastern Region was three compared to 17 in the last quarter of 1999. There were two cases in the under 5's in 2000 compared to seven cases in that age group in 1999. There was one in 2000 compared to three cases in the 15-18 year age group in 1999.

Between January and June 2001, 7 cases of meningococcal C disease were notified to the Department of Public Health, Eastern Region. This represents a 77% decrease on the number of cases (30) for the same period in 2000. This is mainly due to the effectiveness of the ongoing National meningococcal C immunisation programme. There have been no deaths from Group C meningococcal disease as yet in 2001. This is also reflected in the National Disease Surveillance Centre report on the period October 2000 to March 2001, which indicated 74% reduction in cases compared to the same period in 1999/2000.

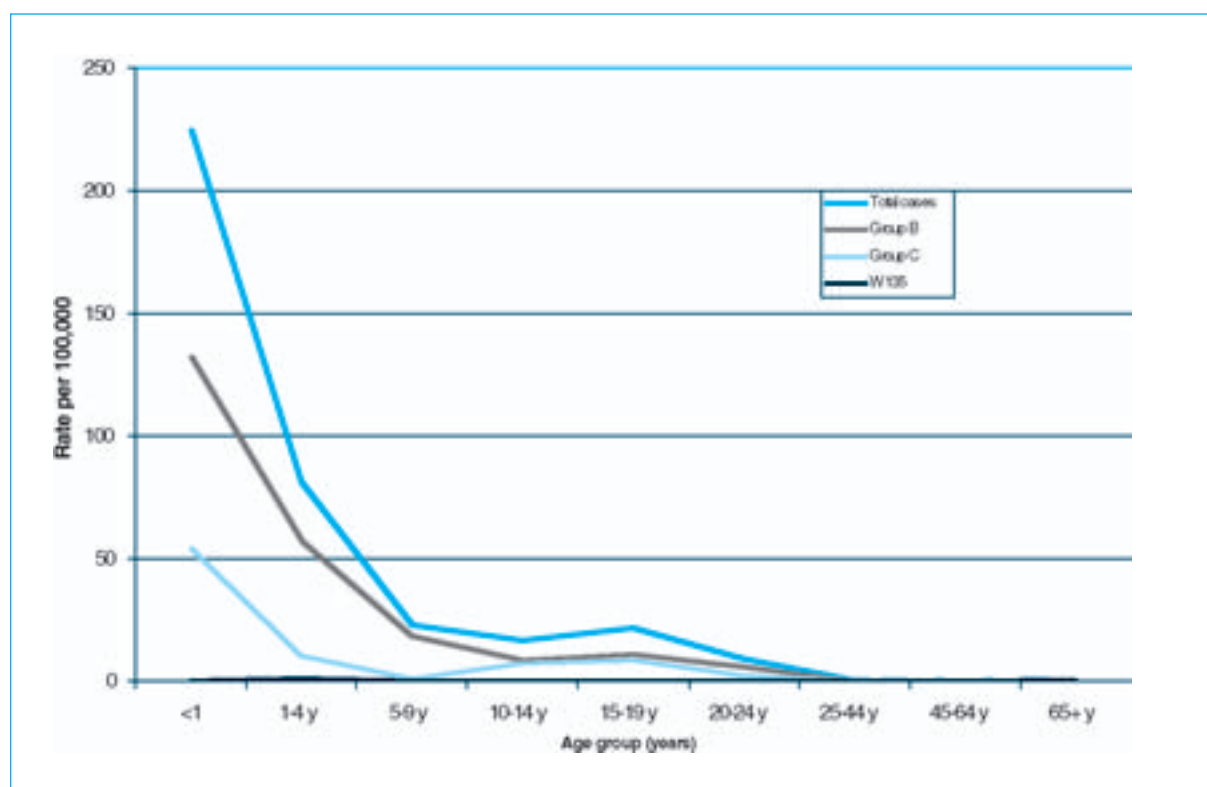


Figure 6.5. Age-specific incidence rates of notified meningococcal disease, all cases and sero-groups B, C and W135, Eastern Region, 2000.

As shown in Figure 6.5, most cases occur in infants and young children with a second smaller peak in late adolescence.

Other Types of Bacterial Meningitis

The next most common form of bacterial meningitis notified was that caused by *streptococcus pneumoniae*. There were 16 cases notified (crude rate 1.2/100,000). However there were three deaths giving a case fatality rate of 19%. All those who died were children of 5 years and under. The low level of *Haemophilus influenzae* type b (Hib) at 0.2/100,000 is due to the advent of the *Haemophilus influenzae* type b vaccine in 1992. The remainder of the cases were caused by a variety of organisms including eleven that were considered a bacterial cause but where no organism was isolated.

Tuberculosis

The trend of tuberculosis notifications in Ireland is downward.²⁷ In the Eastern Region, however, most recent data show an upward trend since 1996 (Figure 6.6). Since 1990 when there were 191 notified cases of tuberculosis, notifications fell to a trough of 113 in 1996, peaking at 180

cases in 1998 before falling to 145 cases in 2000. The 3-year moving average, a method of smoothing slight year-to-year variations also shows a sustained rise since 1996.

When the crude rates of tuberculosis notification are considered (Figure 6.7), the same trends are evident with a trough in 1996, a peak in 1999 and a falling back in 2000. In 1998, the crude rate of tuberculosis notification was the same in the Eastern Region as in the country as a whole – 11.7 cases per 100,000 population.²⁷ When the age-standardised rate is considered (taking into consideration differences in the age profile of the populations in the Eastern Region and Ireland as a whole) the rate in the Eastern Region, 12.0 per 100,000, is only slightly above that of the national figure, 11.7 per 100,000.

When cases are considered by country of origin, there has been a rise in the proportion of notifications from other countries (Figure 6.8). In 1996, 8.8% of cases were among non-nationals, rising to a peak in 1999 of 24.4% and falling back in 2000 to 16.5%.

Key Point

The rate of tuberculosis notification is no longer falling in the Eastern Region.

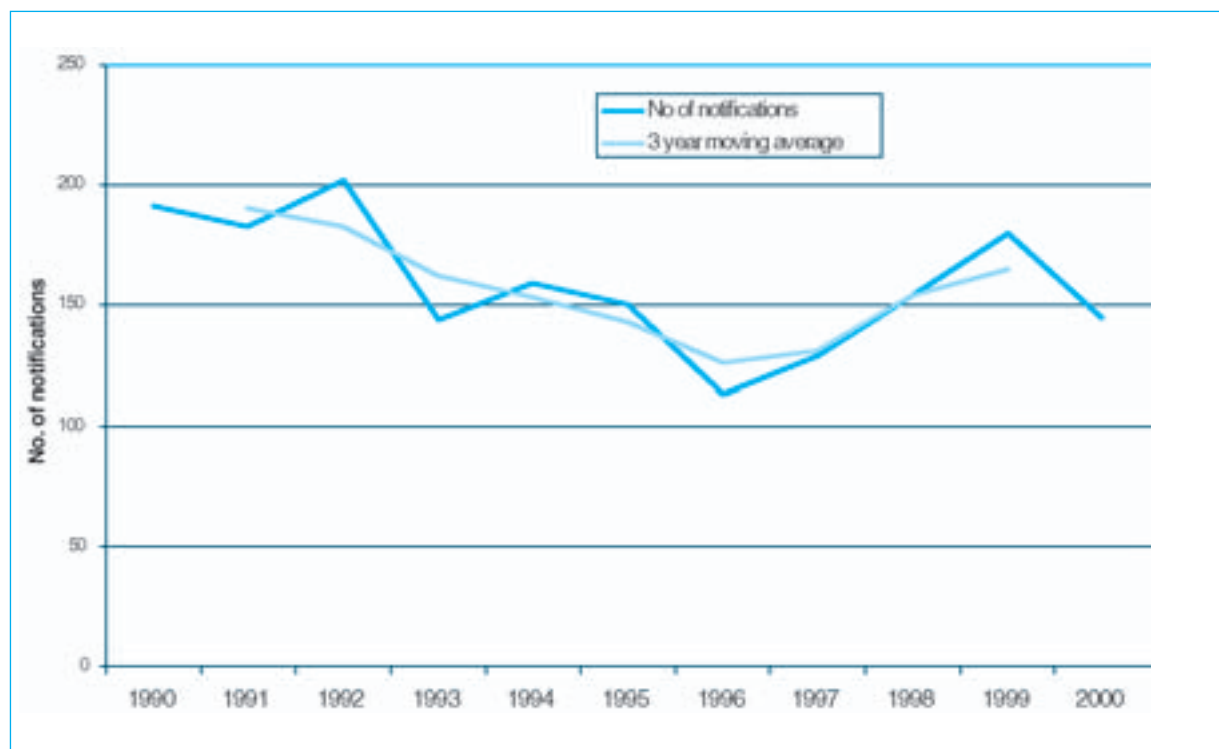


Figure 6.6. Number of notifications of TB and 3-year moving averages Dublin, Wicklow and Kildare, 1990-2000.

Campylobacter Surveillance

Introduction

Campylobacter is a bacterium carried by poultry and cattle that can produce sporadic outbreaks of gastro-enteritis. During 2000, a review of the epidemiology of Campylobacter notifications

from the laboratory surveillance system was undertaken for the regional Zoonosis Committee. 592 cases were reported during 1999 giving an overall rate of 45.7/100,000 total population.

Key Point

Campylobacter levels are lower in the Eastern Region than in the rest of the country.

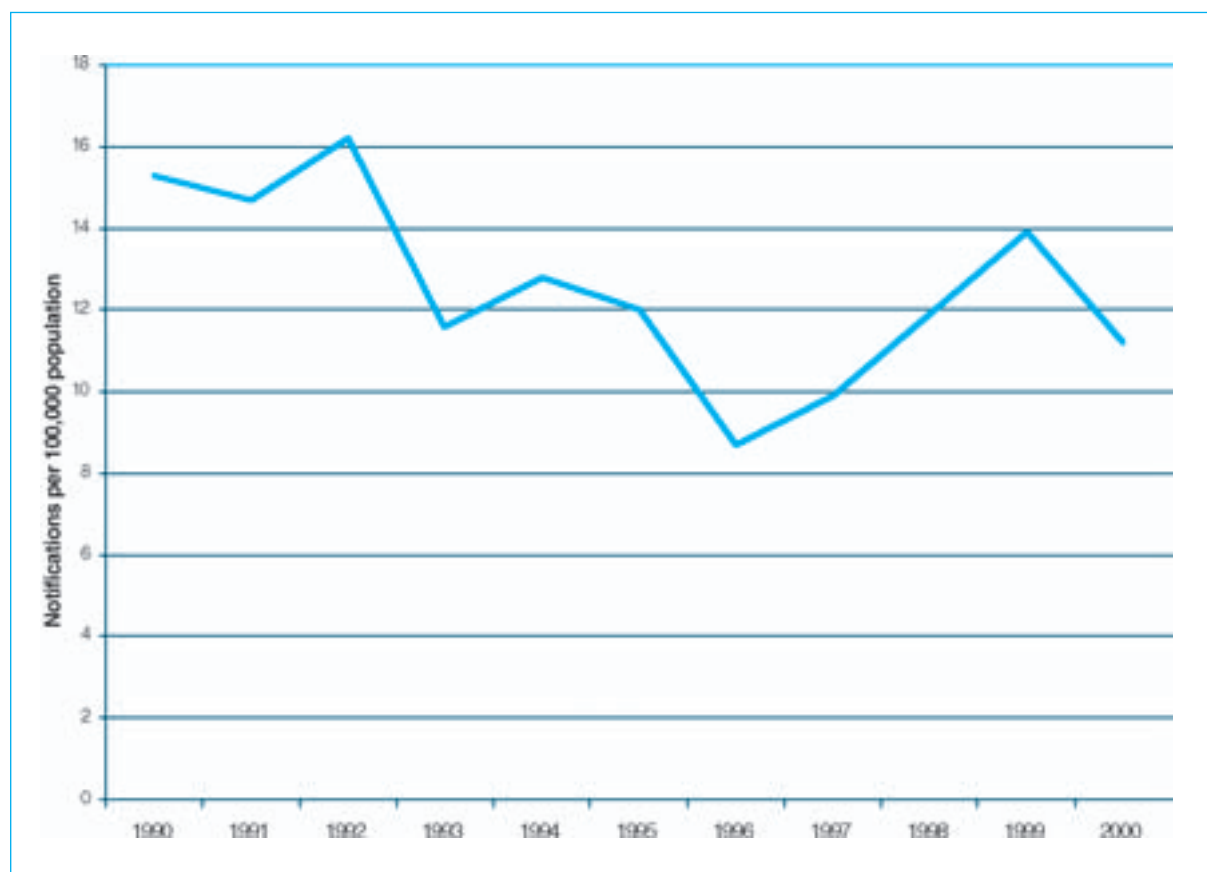


Figure 6.7. TB notifications per 100,000 population 1990-2000, Dublin, Wicklow and Kildare.

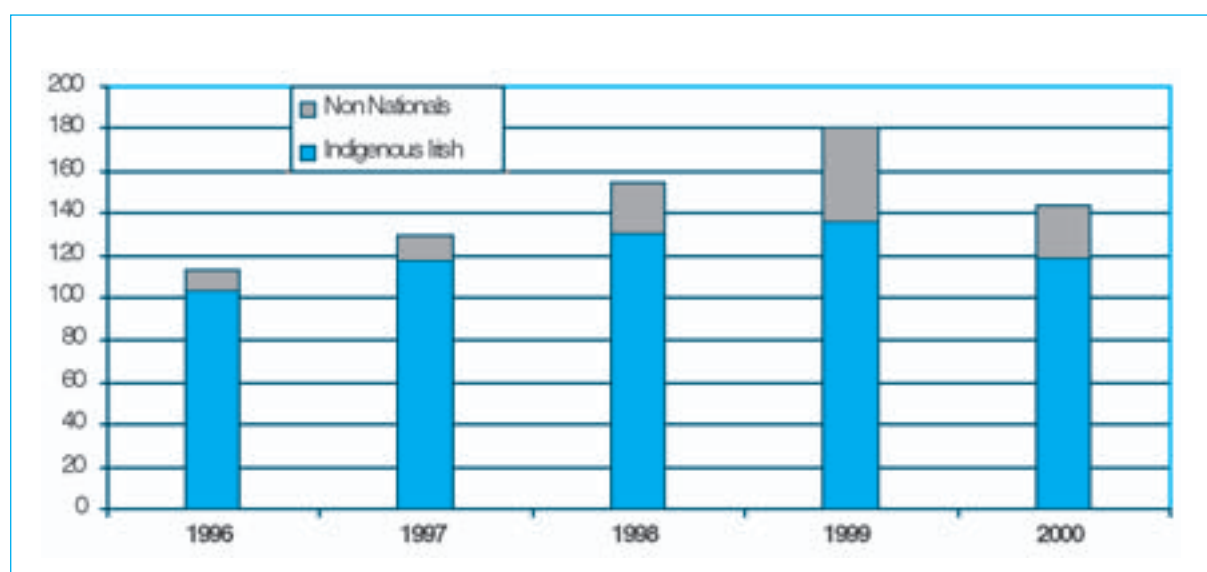


Figure 6.8. Number of Tuberculosis notifications, indigenous Irish and non-Nationals, 1996-2000, Dublin, Wicklow and Kildare.

This compares with 57.7/100,000 for the Republic of Ireland and 51/100,000 in Northern Ireland (NDSC, 1999).

Demographic Profile

The majority of cases were male (61.1%) and there was a male preponderance in children as well as in adults (Figure 6.9). The distribution of male cases by community care area was similar to all cases. Male/female ratio was 1.57:1 compared to 1.28: 1 for the Republic of Ireland, (NDSC 1999).

Age specific incidence rates were highest

(164.7/100,000 pop) in those under 5 years. This was greater for males than females – 213.6 and 112.2 (Figure 6.10). There was a second peak in young adults, particularly marked in males in the 25-29 year age group at 70.6/100,000.

Geographical Distribution

Over seventy percent (71.8%) resided in Dublin City and county, with 11.3% and 4.4% respectively in Counties Kildare and Wicklow. The notification rates varied from 25/100,000 total population in Community Care Area 10 (County Wicklow) to 60/100,000 in Community

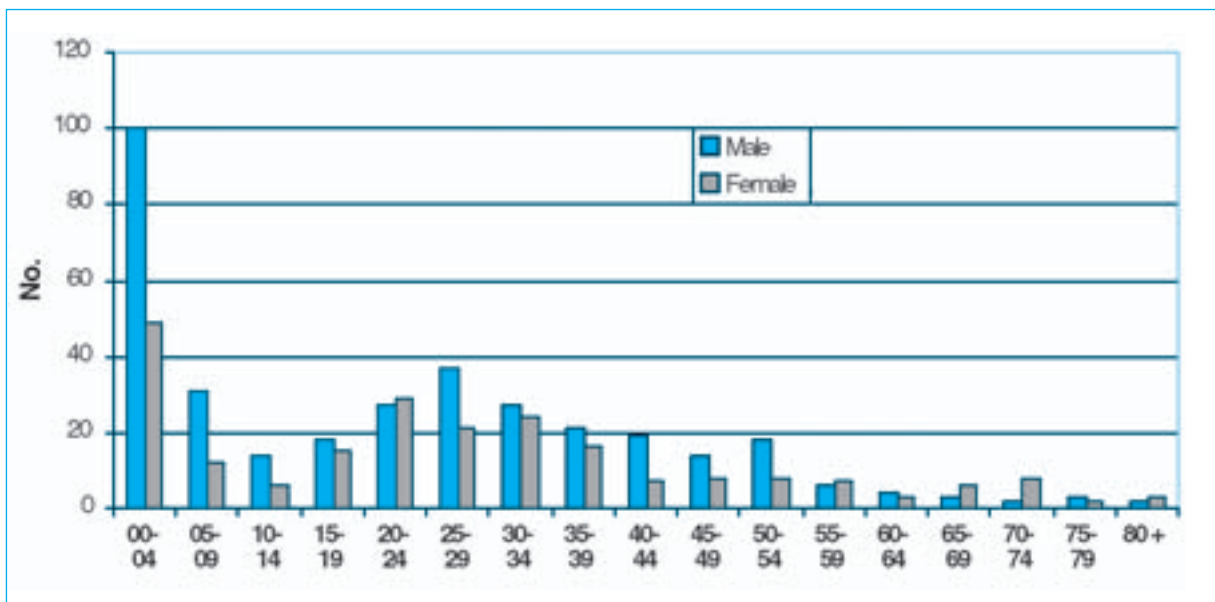


Figure 6.9. Campylobacter Notifications Age Group by Sex, Eastern Region: 1999.

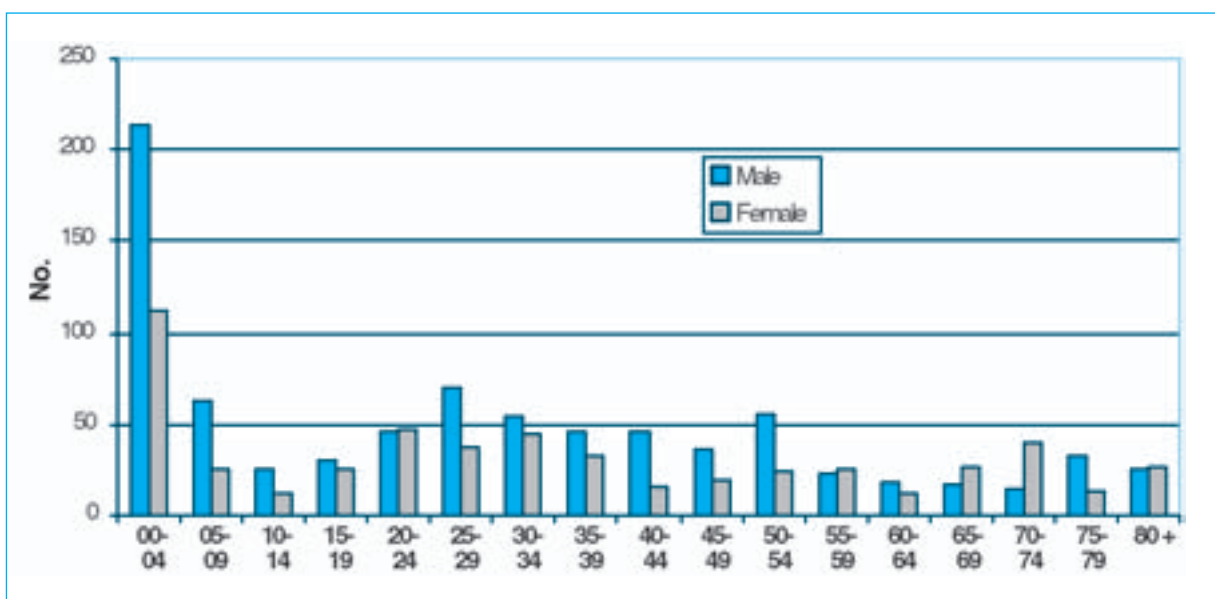


Figure 6.10. Campylobacter spp Age-Specific Incidence Rates /100,000 Population by Sex, Eastern Region: 1999.

Care Area 5, (Table 6.3). In general, Community Care Areas 1, 2 and 3 would be considered to be more affluent than Areas 4, 5, 6, 7 and 8, in which there are areas of relatively deprived persons and large child populations. There were 67 cases in County Kildare and 26 cases in County Wicklow. Both are rural counties but there is a much larger child population in County Kildare. The difference between com-

munity care areas may also be dependent on the submissions to laboratories as well as the geographical location of these laboratories.

Ease of accessibility to laboratories may also be a contributory factor to the number of specimens received. Laboratories in the South-Western Area Board (community care areas 3,4,5 and 9) have reported higher numbers of *Campylobacter*, (58% of reported cases).

Table 6.3 Distribution of *Campylobacter* Cases by Community Care Area

CCA	Number of Cases	%	Rates/100,000 Total Population
1	55	9.3	43
2	48	8.1	37
3	34	5.7	36
4	63	10.6	44
5	68	11.5	60
6	78	13.2	55
7	31	5.2	26
8	48	8.1	25
9	67	11.3	49
10	26	4.4	25
Missing Data	74	12.5	–
Total	592	100%	45

Seasonal Variation

The figures show an increase in the reported incidence of *Campylobacter* in the early summer, which is similar to the distribution reported in other countries. However there was an increase in November also (Figure 6.11).

Community Care Areas

Table 6.3 shows the distribution of cases by Community Care Area.

Conclusions

- There is no statutory obligation to notify *Campylobacter*. Ease of access to laboratories may be a contributory factor to the number of specimens received.
- The majority of cases were under five years of age.
- There is a marked male preponderance especially in those under five years of age

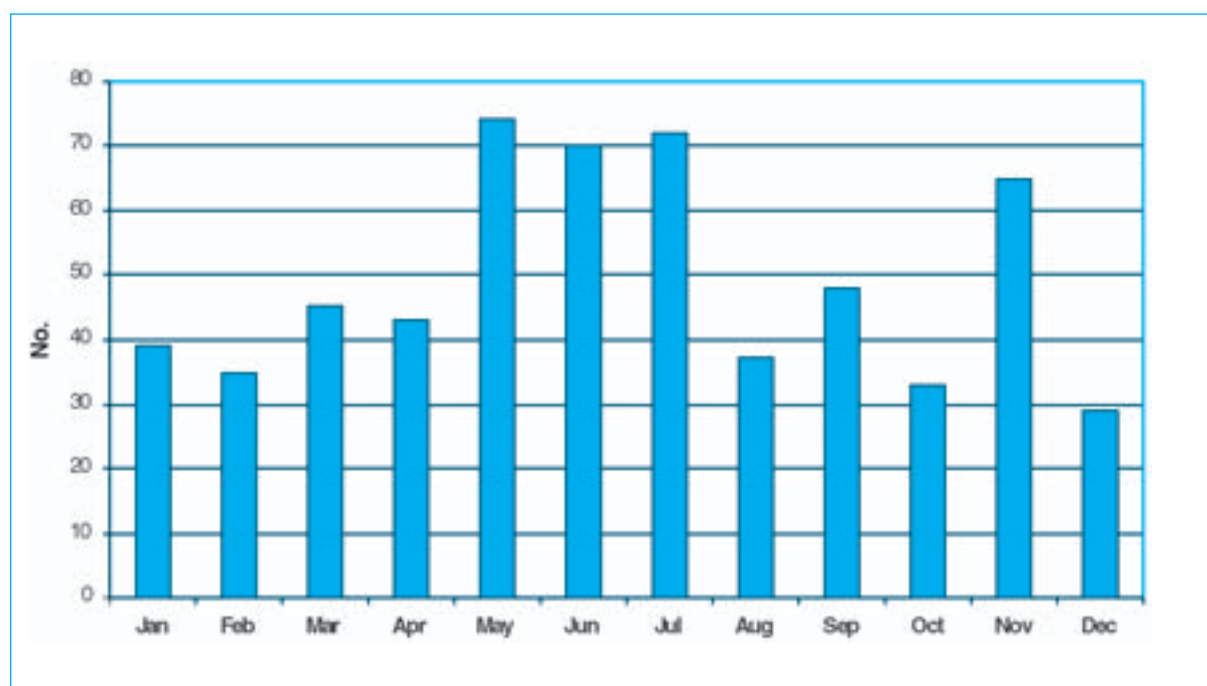


Figure 6.11. *Campylobacter* Cases by Month, Eastern Region: 1999.

as well as young adult males. This is similar to the trend in the rest of Ireland and other countries. This merits further investigation, especially in those under 5 years of age.

- The seasonal increase in early summer is similar to reports in the literature. However, there is also an unexplained increase in November.
- The epidemiology of *Campylobacter* could benefit from further development of easily applied laboratory typing methods that would identify detailed strain characterisation.

Infectious Disease Outbreaks and Other Serious Incidents in 2000

A formal outbreak control team was convened by the Department of Public Health on 22 occasions during the year. Most of the incidents involved gastro-intestinal (GI) illness due to a variety of organisms, including verotoxin producing *E. coli* (VTEC), hepatitis A, rotavirus, salmonella and shigella. In five outbreaks of gastro-enteritis no causative organism was identified. The outbreaks occurred in a variety of settings including long stay units for the elderly/nursing homes, nurseries/crèches, a refugee hostel, an army barracks, a bus tour and a workplace.

There were also outbreaks due to non-gastroenteric illness for which outbreak control teams were convened: measles, meningococcal infection and syphilis. A large outbreak of measles occurred, mostly in the first half of the year, resulting in 1270 cases, more than 100 hospitalisations and two measles-related deaths. A cluster of three, meningococcal group C cases occurred in a defined geographic area over a two-month period in Spring 2000. An outbreak of syphilis occurring in homosexual and bisexual men was notified in November. This outbreak is ongoing. To date (July 2001) in excess of 140 cases have been diagnosed. Similar outbreaks have occurred in a number of European and US cities over the last year or two and experience elsewhere suggests that this outbreak may continue for some time. There is a high rate (20%+) of HIV co-infection.

Several investigations were carried out into illnesses probably contracted abroad, including Legionnaire's disease, amoebiasis, cholera and

leprosy. There were also some cases of health care workers found to be carriers of blood-borne viruses. The management of such cases may be very intensive and time-consuming.

During the year, an outbreak of unexplained illness, fatal in eight cases, occurred among injecting drug users. A multi-agency outbreak control team was convened to manage the outbreak. Investigations revealed that the illness was due to *Clostridium novyii* infection, as in the case of similar outbreaks in the United Kingdom.

Review of services for sexually transmitted infections

Sexually transmitted infections (STIs) are an important cause of morbidity worldwide. Data available in the Eastern region show an increasing incidence of STIs here in the past decade, as seen in other European regions. A review of the STI services was carried out by a multi-disciplinary group with the following terms of reference: to review the current level of service and arrangement for delivery, to examine the needs of the service, to make recommendations for the future delivery of the services and to establish an appropriate surveillance system.

The review found deficiencies in the following areas: management of the services, staffing levels and skill mix, accessibility of services, availability of contact tracing services, definition of the role of GPs, laboratory practices and services, hepatitis B vaccination, screening for chlamydia, surveillance systems, health education programmes, and information on the need for STI services

Recommendations were made in the following areas:

- The STI clinics should be consultant-led. It was recommended that there be two additional consultant posts in genitourinary medicine.
- The appointment of nurse practitioners in the clinics should be considered.
- Accessibility to the services should be improved by the provision of satellite clinics. The demand for extended clinic hours requires further study.

- Best practice guidelines should be agreed between specialists and GPs in relation to prevention, investigation and treatment of STIs.
- A community based contact tracing service to which GPs would have easy referral access should be established.
- Agreed protocols are required for the laboratory investigation of STIs.
- Hepatitis B screening, with vaccination as appropriate, should be offered to all attendees at STI clinics who fall into the specified high risk groups.
- The prevention, control and management of *Chlamydia trachomatis* infection should be clarified as a matter of urgency. A consensus approach is required on which groups should be screened and on appropriate treatment and management strategies, including contact tracing.
- A proposal is outlined for an appropriate surveillance system for STIs in the region.
- All STI clinics should put in place a system of ongoing clinical and administrative audit, and should periodically review users' views of the services.
- The public and professional users should be informed of all local STI services.
- A comprehensive programme of health education and health promotion in relation to STIs should be developed as a matter of urgency.

HIV/AIDS

Relative to most other member states in the EU, Ireland has to date had a low incidence of HIV infection and AIDS cases. However, within the State the incidence has been significantly higher in the Eastern Region than in other regions. Since the first cases of AIDS were identified in Ireland in 1983 to the end of December 2000, there have been a total of 707 cases of AIDS reported in the State. 77% of those cases have been residents in the Eastern Region, where just over one third of the State's population live. This concentration of AIDS cases in the region,

Key Point

The Eastern Region has the highest levels of HIV/AIDS in the country.

and particularly in Dublin City, is related to the modes of transmission of HIV infection that have predominated.

The main mode of transmission of HIV infection in the AIDS cases diagnosed to date has been injecting drug use, a practice which occurs predominantly in Dublin, in the socio-economically deprived inner city areas, although more recently it is also being seen in other cities in the State. Over the last five years or so cases of AIDS related to injecting drug use have gradually reduced as a proportion of the total, so that they now account for approximately 40% of cases in the country, the vast majority of whom (98%) have been living in the Eastern Region. The next most common mode of transmission for AIDS has been homosexual sex, which has accounted for a fairly constant third of cases nationally, 60% of whom have resided in the Eastern Region. Heterosexual transmission, which predominates in the developing world, has been gradually increasing in importance in Ireland and it now accounts for about 15% of AIDS cases nationally.

Key Point

While most cases arise in injecting drug users and homosexuals, the incidence in heterosexuals is rising.

However, looking at data for HIV positive individuals diagnosed more recently in Ireland gives a different picture. The HIV/AIDS data for 2000 show that, while the number of AIDS cases being reported in the country annually has continued to decline, the number of newly diagnosed HIV positive individuals identified in the year has increased significantly compared to the previous year's figures, which were themselves significantly increased on the year before. This is particularly relevant to the Eastern Region where 78% of these newly diagnosed HIV positive individuals resided.

Marked increases were seen in 2000 in the numbers infected by all modes of transmission of HIV infection except in injecting drug users (IDUs) where the numbers seem to have levelled off at the previous year's high level. These increases were most marked in heterosexuals, where the figure had more than doubled on the previous year, and in gay men (men who have sex with men [MSM] and bisexuals), where there was an increase of 80% over the previous year's figure. In relation to

heterosexuals, there is anecdotal evidence that a significant proportion (greater than 50%) arise in:

- Persons coming from abroad
- Irish nationals who have spent some time overseas
- Irish nationals whose partner comes from abroad.

In relation to overseas countries, it is African countries and certain east European countries that are relevant.

This changing pattern of transmission and the increases in the numbers diagnosed has implications for the HIV prevention strategies used in the Eastern Region.

In the last five years or so, the incidence of AIDS cases has fallen as more effective regimes of anti-retroviral medicines have become available, slowing the progression of the disease from HIV infection to the development of AIDS-related conditions. However, the numbers of new cases of HIV infection identified have increased in this time, in keeping with the general increase in the incidence of other sexually transmitted infections seen. There is clearly now a level of complacency among the groups considered to be at high risk but also among the general population, so that many heterosexuals are now at risk. As emphasised in the new National AIDS Strategy²⁸ launched last

year, there is therefore a need for increased efforts in the area of general HIV/AIDS prevention education, particularly focused on school children before they become sexually active and on young people, while continuing the strategies that have been adopted to promote safer behaviours among people engaging in risky practices, such as injecting drug users and men who have sex with men (MSM). Public attention must be refocused on the risks of HIV infection and STIs in general by raising awareness of the issues involved.

Opportunities for Health and Social Gain

- Repeat and reinforce safe sex messages, re-targeting the general population and high-risk groups such as men who have sex with men, female and male commercial sex workers, non-Nationals and members of other mobile population groups, to increase awareness about the risks of HIV infection.
- Appropriate HIV/AIDS prevention education messages should particularly be targeted at school children before they become sexually active and at young adults.
- Continue to promote a harm reduction approach to injecting drug use with needle exchanges and the provision of methadone syrup as an alternative to injecting opiates, particularly targeting the younger, more chaotic IDUs.

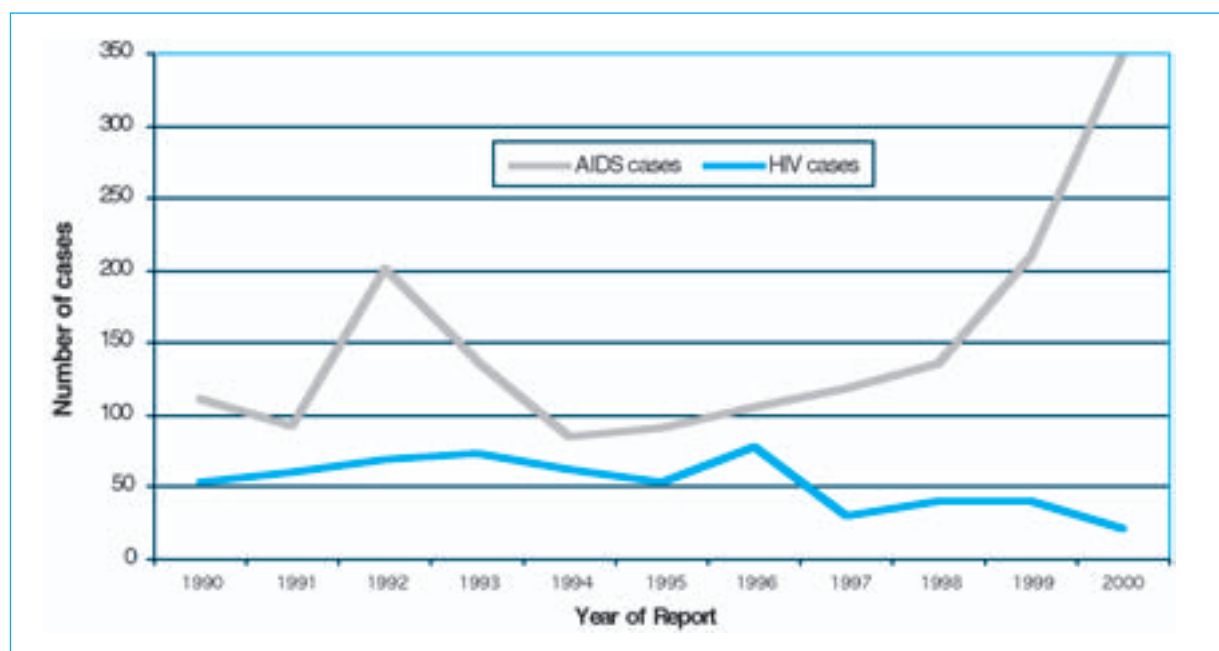


Figure 6.12. Number of AIDS cases and HIV cases reported in Ireland to December 2000*

Table 6.4 AIDS cases by year of reporting, Eastern Region and Ireland

Route of Transmission	Year of Reporting					
	1998		1999		2000	
	Eastern Region	Ireland	Eastern Region	Ireland	Eastern Region	Ireland
IDU	9	11	13	15	4	6
MSM/Bisexual	4	13	7	13	2	9
Heterosexual	6	5	5	11	2	3
Mother to child	2	4	1	1	2	2
Others	2	8	1	1	0	1
Total	23	41	27	41	10	21
Female	7 (30.4%)		8 (29.6%)		3 (30%)	
Male	16 (69.6%)		19 (70.4%)		7 (70%)	

- Promote universal linked antenatal HIV testing to minimise mother-to-child transmission of HIV.
- Support the development of a national HIV case-based reporting system, in addition to the current AIDS case surveillance, to allow for more timely monitoring of changes in the epidemiology of HIV/AIDS in Ireland. The data collected should include information about the country of origin of those diagnosed as HIV positive.
- Continue to advocate that HIV infection and AIDS are normalised and included in the list of diseases, such as other STIs and hepatitis, which are statutorily notifiable in Ireland.

Source of Data

HIV data was provided by the National Virus Reference Laboratory (NVRL).

AIDS data was provided by Regional AIDS Coordinators

Regional Infection Control Advisory Committee

A Regional Infection Control Advisory Committee for the Eastern Region was established and held its first meeting in February 2001. It comprises representatives from the following disciplines:

- ◆ Clinical microbiology
- ◆ Public Health Medicine
- ◆ Infectious Diseases

Table 6.5 HIV positive cases by year of reporting and likely mode of transmission, Ireland

Route of Transmission	Year of Diagnosis			
	1997	1998	1999	2000
IDU	21	26	69	70
MSM/Bisexual	37	37	40	72
Heterosexual	40	47	59	125
Others	21	26	41	75
TOTAL	119	136	209	342

- ◆ Occupational Health
- ◆ Infection Control Nurses
- ◆ Dentists
- ◆ Environmental Health
- ◆ Pharmacy

The major hospitals in the Eastern Region are also represented.

The main objectives of the committee are:

- To recommend strategies for the prevention and control of infection in the health care setting within the Eastern Region.
- To keep informed in relation to developments and best practice concerning control of infection
- To review current reports and recommendations from expert groups and advise on implications for the Eastern Regional

Health Authority and implementation where appropriate.

- To establish links and effective communications with Infection Control Committees at local level.
- To advise on appropriate matters which may be referred to the Committee from time to time.

The committee reports formally to the Director of Public Health.

A subgroup was also set up to outline a three-year strategy for the implementation of The Strategy for Control of Antimicrobial Resistance in Ireland (SARI) in the Eastern Region. This subgroup will identify resources required for its implementation, recommend how resources be distributed and also the need to act promptly once resources are available.

Infection Control Appointment

An infection control nurse (ICN) was appointed in May 2000, a new post within the Department of Public Health to develop and support the infection control service in relation to surveillance of notifiable diseases, outbreak investigation and control, advice, education and research. The ICN works closely with the Public Health Specialists in providing a service, co-ordinating programmes and participating in outbreak management.

The following are examples of infection control activities that were undertaken in 2000:

- Co-ordinating and evaluating the notifiable disease surveillance system
- Review of surveillance data for the Public Health Specialists, the National Disease Surveillance Centre, etc, for investigation and evaluation purposes.
- Production of weekly bulletin on incidences of notifiable disease, highlighting trends in critical diseases and providing information on new and ongoing outbreak investigations. The bulletin is initially designed for in-house use, for wider dissemination at a future date.
- Involvement in outbreak management; *E. Coli* 0157, hepatitis A, rotavirus, small round structured viruses (SRSV).

- Inspection of premises in the investigation of infection and preparation of a report.
- Liaison and collation of information on flu surveillance from the three Area Boards, as part of the national programme being undertaken by the National Disease Surveillance Centre.
- Participation in a programme for vaccination of clients of Centres for the Intellectually Disabled, and developing systems for evaluation of vaccination uptake.
- Involvement in research study on hepatitis A immunity among clients of Centres for the Intellectually Disabled, including design of the research proposal.

Education

Educational information was produced for the public, professionals and institutions on:

- Standard precautions for prevention of infection in nursing homes
- Enteric precautions for nursing homes
- Small structured round viruses (SRSV)
- *E. Coli* 0157 precautions for professionals and day-care centres
- Scabies
- Vancomycin resistant *Enterococcus* (VRE)
- Hepatitis A, general precautions and vaccination programme information
- Hepatitis B, vaccination programme information

Opportunities for Health and Social Gain

Communicable diseases still pose a threat, but are potentially completely preventable. The outbreak of measles demonstrated how important it is to ensure that as high a proportion of susceptible children as possible are protected by vaccination. Outbreaks of foodborne disease cause illness, hospitalisation and occasionally death. They also require precious resources to control and underline the need to prevent as many of these outbreaks as possible.

Environmental Health

Throughout the world, people are conscious of their environment, how it impacts on their quality of life and indeed their health. Similarly in Ireland and indeed in the Eastern Region Authority environmental health issues are of

importance to all. The types of issues that the Department of Public Health has been asked to advise on include:

- Water contamination incidents
- Advice to the local authorities on environ-

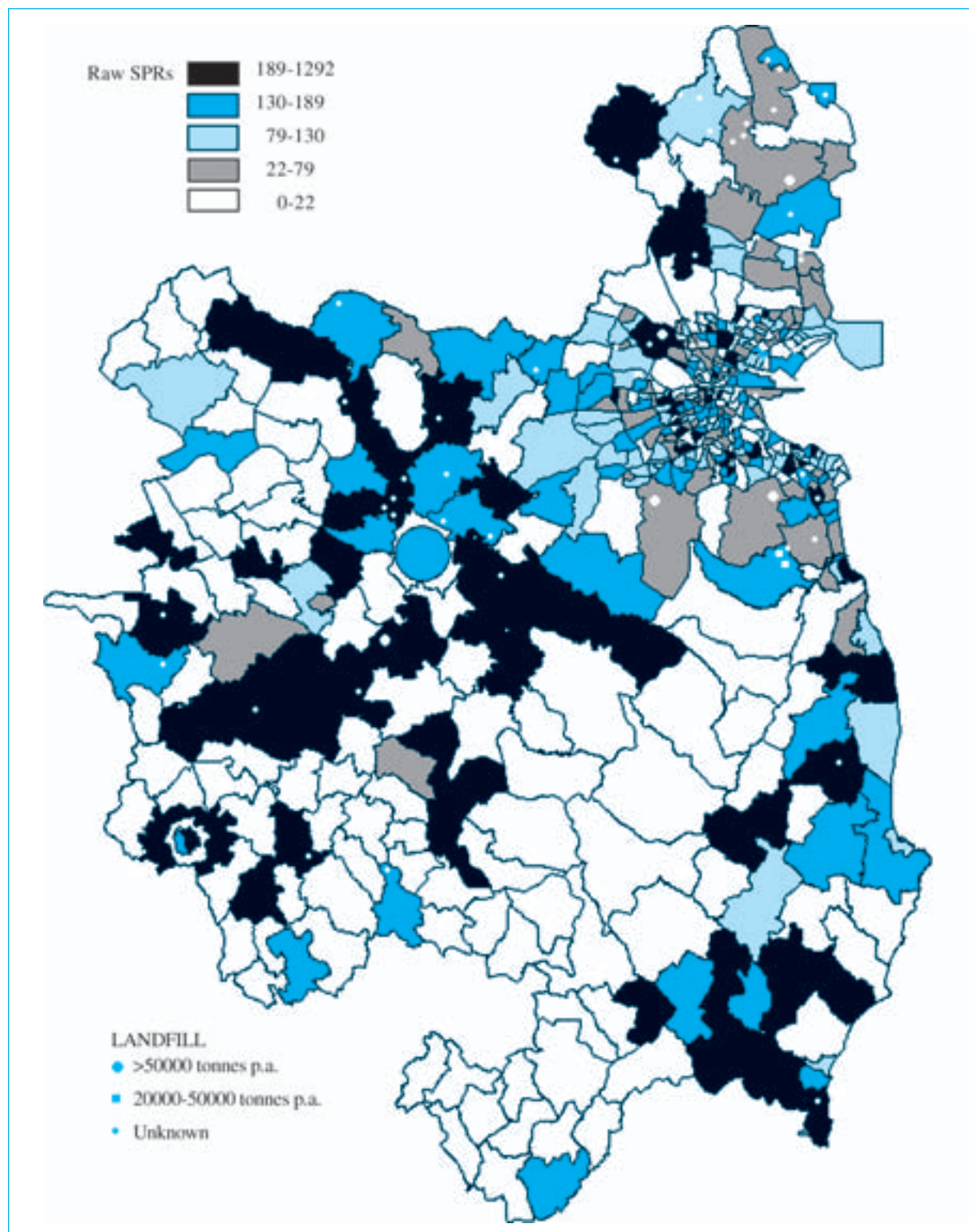


Figure 6.13. Prevalence of Congenital Abnormalities in the Eastern Region in proximity to managed landfill site.

mental issues such as waste management and odours

- Investigation of alleged clusters of specific diseases in given geographical areas
- Discussions with the Environmental

Protection Agency (EPA) on environmental health issues.

In addition to this, cognisance is taken of ongoing research as it comes on stream such as the recent reports in relation to mobile phones technology²⁹ and electromagnetic fields

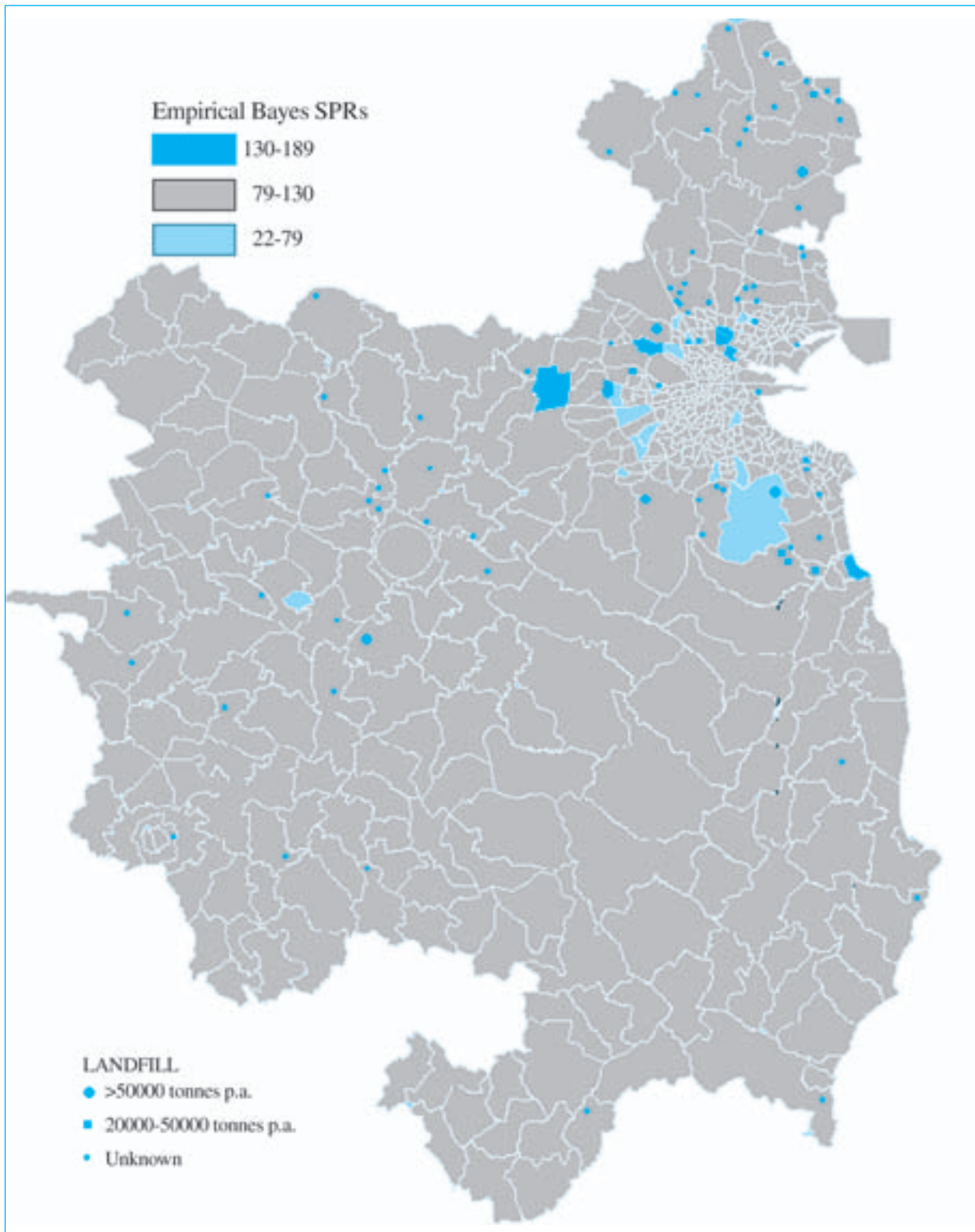


Figure 6.14. Adjusted (Bayesian) prevalence of congenital abnormalities in the Eastern Region in proximity to landfill site.

generated by power lines³⁰.

The Stewart Report “Mobiles Phones and Health: Independent Expert Group on Mobile Phones” stated that the only established health hazard comes from the use of mobile phones while driving.²⁹ The risk of an accident increases with age and is equivalent to a blood alcohol level of 0.05%. The risk is the same when the phone is used “hands free” implying that it is due to the distraction caused by the conversation. Due to the little amount of peer reviewed research on this issue to date, it was concluded that there was not enough evidence to state that they were safe. Thus the report recommended that a precautionary principle is needed to encourage both manufacturers and users to limit microwave exposure until there is more confidence that the use of mobile phones is indubitably safe.

The recent report by an advisory group on non-ionising radiation³⁰ “ELF Electromagnetic Fields and the Risk of Cancer” which examined extremely low frequency (ELF) magnetic fields and the risk of cancer was commissioned by the National Radiological Protection Board (NRPB) in the UK. This substantive report examined comprehensively relevant experimental and epidemiological studies on extremely low frequency (ELF) electromagnetic fields and the risk of cancer. The group concludes, “Laboratory experiments have provided no good evidence that extremely low frequency electromagnetic fields are capable of producing cancer, nor do human epidemiological studies suggest that they cause cancer in general.” The conclusion of the NRPB following this report is that it has provided no additional scientific evidence to require a change in exposure guidelines.

The ever emerging presence of new technologies which are perceived to be affecting health through environmental pathways and the increasing awareness of environmental health issues among the general public means that environmental health issues will continue to be of immense interest into the future. The role of the Department of Public Health is to monitor the health of the public by what ever appropriate means, to keep abreast of current thinking on these issues, provide advice to the relevant authorities when deemed necessary and advise the public. As in other areas of medicine,

surveillance is a tool, which will be very beneficial in this area. Support and training in the area of chemical incidents should the need arise is being obtained by the Department of Public Health from the Chemical Incident Support Unit (CIMSU) in Cardiff.

Despite the concerns of the public with new technologies such as mobile phones, the provision of clean water and air remain as the two staple environmental prerequisites for health.

Congenital Anomalies in Proximity to Municipal Landfill Sites in the Eastern Region

The potential impact of the environment on health has received increased attention in recent times and it is acknowledged that there is need for better information on which to make a risk assessment and so ensure the protection of public health.

An increased prevalence of congenital anomalies in proximity to hazardous waste sites was reported by Geschwind³¹ in 1992 in a study carried out in New York State, USA, and by Dolk et al.^{32,33} in a study of five European countries in 1998.

The objective of this study was to use locally available data to examine the prevalence of congenital anomalies in proximity to municipal (as distinct from hazardous waste) landfill sites in the Eastern Region. The data source was the Dublin EUROCAT Registry for 1986-1989. Proximity to 83 landfill sites in the counties of Dublin, Kildare and Wicklow was examined in two ways. Firstly, data were examined on a small area basis, using district electoral divisions (DEDs). Secondly, point patterns were explored using case-control methods. Mean adjusted standardised prevalence ratios (SPRs) for anomalies were calculated for each DED. Recently developed methods generally known as Empirical Bayes were used for area analysis, where the local and global smoothing techniques take into account the inherent similarity of neighbouring small areas.³⁴

A higher proportion of increased SPRs were found in DEDs with landfills than in DEDs without landfills. Using Bayesian techniques, however this effect was no longer seen. This is illustrated in Figure 6.13, which shows many

DEDs with apparently increased SPRs (basic analysis), whereas in Figure 6.14, the smoothing technique can be seen to have taken away the impression of increased anomaly rates in the vast majority of areas. A comparison of distances of DED centroids to the nearest landfill site with adjusted SPRs showed no significant trend with changing distance. In the case-control study, the relative density varied little between cases and controls. In a further analysis, the mean distance of cases and controls from the nearest landfill site were found to be similar. Cases and controls were examined in relation to the five 'super' landfills (with an annual capacity in excess of 50000 tonnes), and no significant difference in prevalence was found. Landfill sites were not specifically associated with lower socio-economic areas (i.e. it was not a confounding factor).

The small geographical area under study meant that few DEDs were in excess of three kilometres from landfill sites, as moving away from one site meant moving closer to another. Furthermore, DEDs more than three kilometres from a site were often extremely sparsely

populated making meaningful analysis difficult. DEDs that were remote from a landfill site were sometimes close to the edge of the outer boundary of the Eastern Region (edging effect) and this effect was not taken into account as equivalent data were unavailable for these areas. Many DEDs located away from landfill sites also tended to be in the inner city areas of Dublin where alternative sources of pollution may have existed, such as traffic fumes, and would introduce confounding effects. In view of the above considerations, the identification of 'exposed' and 'non-exposed' areas was problematic.

The study highlights the conflicting results that can be produced by adopting different approaches in studying the environment in relation to putative health effects, and the value of proceeding through a number of exploratory stages in the analysis. The overall conclusion of the study was that there was insufficient evidence to suggest that congenital anomalies were any more common in proximity to municipal landfill sites.

Chapter 7 Groups with Special Needs

Introduction

Inequalities in opportunity lead to health and social inequalities. One of the prime functions of Public Health is to identify which groups of people within our population have special health needs, in addition to the needs we all have, and to work to ensure equal opportunities for health for everyone.

Key Point

It is inequalities in opportunity, which lead to health and social inequalities.

This chapter looks at those groups with special needs. Included among these groups are:

- Those with disabilities
- Those who are homeless
- Those who are addicted and
- Travellers

Those with Disabilities

Ireland has a long history of caring for those with disabilities. In 1995, the National Intellectual Disability Database was established

to ensure the information necessary to provide the best services for people with intellectual disability. Figure 7.1 shows the distribution of degree of disability amongst those with intellectual disability, in the Eastern Region and Ireland, in 1999. The Eastern Region has slightly fewer clients with mild disability and slightly more clients with moderate disability than the national average.

Figure 7.2 shows prevalence rates of childhood intellectual disability per 1000 population, in various age categories, in the Eastern Region and Ireland, in 1999. The Eastern Region has lower rates in all age categories and in the 0-9 age group, but slightly higher rates in older children.

Table 7.1 shows the percentage breakdown of service provision for those with disabilities. There are fewer in the Eastern Region receiving day services and slightly more in psychiatric hospitals than in the country as a whole. Considerably fewer in the East are receiving no service.

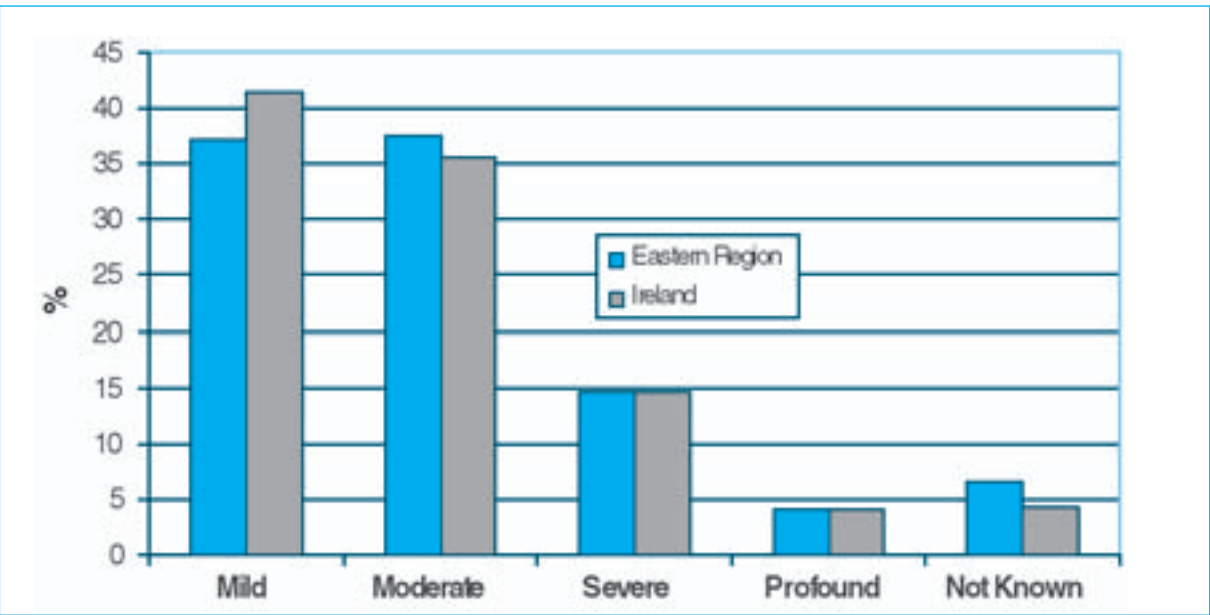


Figure 7.1 Degree of Intellectual Disability, Eastern Region and Ireland: 1999.

Source: The Report of the National Intellectual Disability Database: 1999¹

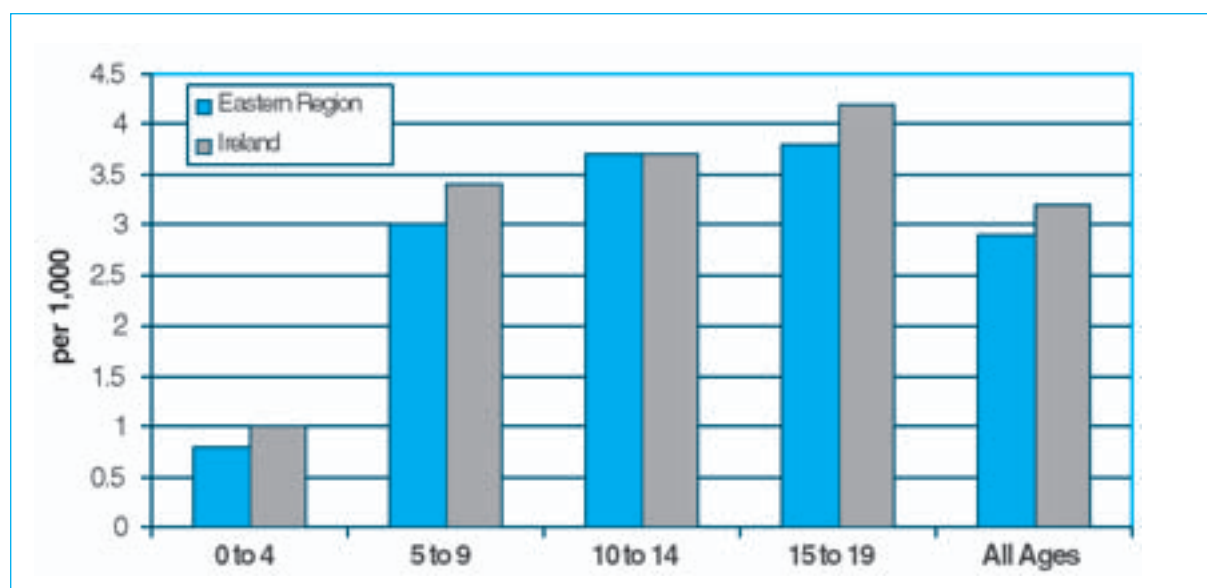


Figure 7.2. Prevalence Rates of Childhood Intellectual Disability per 1000 Population, in Various Age Categories, Eastern Region and Ireland: 1999

Source: The Report of the National Intellectual Disability Database: 1999

Table 7.1 Percentage Breakdown of Service Provision for Those with Disabilities: 1999

	Day services	5 or 7 day residential services	Resident in Psychiatric Hospital	Residential support only	No service	No current service requirements
Eastern Region	52.8	26.3	3.7	0.4	0.8	16
Ireland	59.1	25.6	3.1	0.9	2	9.2

Source: The Report of the National Intellectual Disability Database: 1999.

Development of the National Physical and Sensory Disability Database

The National Physical and Sensory Disability Database development committee was established in December 1998 to prepare detailed proposals for the development of this database. The primary purpose of the database will be for planning service developments, prioritising service needs and assisting in resource allocation at national, regional and local level. Individuals aged 0-65 years who currently receive and/or require

Key Point

The National Physical and Sensory Disability Database will assist in planning, prioritisation and resource allocation.

specialised health and personal services within a 5-year period will be included in the database.

Phase I implementation is taking place in four Community Care Areas nation-wide. One of these areas is the South-Western Area Board. It consists of a number of stages, including the identification of clients and key workers, training of database personnel and key workers and data collection. This Phase I implementation is acting as a pilot for the national implementation of the database and all stages will be evaluated to provide constructive feedback for the final recommendations of the database committee. It is hoped that the final report and recommendations for a National Physical and Sensory Disability Database will be presented to the Department of Health and Children in October 2001. Subsequently, national implementation will commence.

Evaluation of Day Activity Centres for Clients with a Physical Disability in the Eastern Region

Day Activity Centres (DACs) are an essential component of effective community based services for people with a disability.³⁶ These centres cater primarily for those who are permanently excluded, because of the extent of their disability, from the formal employment market. During 1999 and 2000 a review of the DACs in the Eastern Region was undertaken.

DACs are community based centres which cater for people with severe disabilities who are not able to or do not wish to sustain the level of activity involved in open employment, sheltered work, work activation or skill training. The service aims to provide meaningful community based activity, to encourage participation, to facilitate participation in activities, and to provide support and advice to people with disabilities and their families.³⁷

The only previous review of these centres in the region was over a decade ago and that study focused on future requirements for additional centres. The National Health Strategy³⁸ emphasised the development of a consumer oriented health service. Being cognisant of this fact this study obtained the views of people with disabilities and their carers on the service provided.

This study had four separate components as follows: initial qualitative work to inform subsequent questionnaire design, followed by the quantitative component which involved obtaining the views on the DAC service of three key stakeholders on the DAC service: service providers, clients and carers. The satisfaction levels of clients and carers with the service were also estimated. All three groups were invited to make comments on aspects of the service that needed improvement.

Initial work for this study consisted of focus group discussions with disabled clients attending two large DACs in Dublin City. The major recurring themes from these groups were included in the subsequent questionnaires. The author using specifically designed questionnaires

then interviewed thirteen service providers in the region and obtained information on the centres' operational characteristics, services and activities available, the number of clients attending the centres and their medical diagnoses.

Subsequently from a total of 745 clients attending the centres a random sample of 156 was selected for interview. The author using specifically designed questionnaires interviewed all clients selected. From this component of the study information was obtained on clients' demographic characteristics, medical diagnosis, access to the service, activities undertaken at the centre, relationship with staff, outcome of attendance at, and satisfaction with the DAC.

The carer's component of the study involved the administration of a postal questionnaire to 82 eligible carers. This questionnaire obtained information on carers' demography, employment details, finances, health, and the perceived benefit of the DACs for both carer and the disabled person they cared for. The majority of this questionnaire was designed specifically for the study.

The findings of the service providers component of the study highlighted the fact that although all 13 managers interviewed felt that the centres were achieving their objectives, most were of the opinion that there were deficiencies in the current service. These perceived inadequacies were principally inadequate numbers of trained permanent staff and lack of ancillary services. The major barriers to improvement of these services were insufficient financial resources and the perceived low political priority of people with disabilities.

The findings of the clients' component of the study showed that for the vast majority of clients attendance at DACs was a positive experience. There was a high degree of satisfaction with all aspects of the day centres especially the level of care provided to each client and the relationship between clients and staff. Some elements of the DACs scored less well, for example being involved in decision making in the centre and the educational opportunities available there.

The findings of the carers' study also

Key Point

Day Activity Centres are an essential component of effective community based services for people with a disability.

documented the fact that attendance at the DACs had a beneficial effect of both carer and the person with a disability. Carers reported a high degree of satisfaction with the DACs. However, potential areas for improvement included greater access for clients to the centres and increase in the amount of therapy available at the centres.

Although there was a positive response from all respondent groups, this study highlighted areas relevant to service providers, clients and carers which need to be addressed to improve the service provided by the DACs. These included: staffing arrangements, funding procedures and relationship with the funding authorities, premises and the amount of therapies available at the centres.

The information that was gathered from all components of the study was used to make recommendations for the improvement of the DAC service in the region. The principal recommendation were as follows:

- All centres should employ an adequate number of permanent staff trained to work with clients with a physical disability.
- The employment conditions of all care staff should be reviewed in terms of employment conditions, salary and pensions to enable the management of DACs recruit and retain staff on a long-term basis.
- All DACs should have adequate, secure, long-term financial arrangements with the funding authorities to enable staff to concentrate their work on clients' needs and not have to undertake fundraising.
- Regular meetings should be established between the Health Authority and management from the DACs.
- The issues of poor communication and inadequate support as perceived by the managers of the DACs should be addressed at this forum.

Homelessness

Background

In spite of our ongoing economic prosperity, homelessness continues to be a major societal

issue in Ireland. Homelessness is of particular concern to public health because of the poor health status of homeless people, which has been identified in several recent research studies.^{39,40,41} The poor health status of homeless people is not surprising given the social, economic and environmental factors, which influence their health and social well-being.

The Homeless Population

Three quarters of the homeless Irish population are located in the Eastern Region, and are mainly concentrated in the inner city area. The 1999 assessment of homelessness in counties Dublin, Kildare and Wicklow found 2900 adults homeless over a one-week period.⁴² There were 990 dependant children associated with the adults. The age/sex breakdown is given in Table 7.2.

Key Point

In 1999, 2900 adults were homeless in the Eastern Region – 336 of these people were under 21 years of age.

Table 7.2 Age/sex distribution of homeless people in the Eastern Region (1999)

Age	Male (%)	Female(%)
20 years or less	140 (7.6%)	196 (18.7%)
21 – 25 years	230 (12.4%)	263 (25.0%)
26 – 35 years	455 (24.6%)	290 (27.6%)
36 – 45 years	418 (22.6%)	134 (12.8%)
46 –64 years	492 (26.6%)	116 (11.0%)
65 years +	115 (6.2%)	51 (4.9%)
Total	1850	1050

Homeless people are a heterogeneous group of people and have multiple health and social needs. In considering the needs of homeless people, three subgroups are identified:

- young homeless people (less than 20 years old),
- homeless single adults and
- homeless families (one or two parents). In each of the three groups, the needs of women differ considerably to those of men.

Tackling Homelessness

Tackling the complex issue of homelessness requires a comprehensive, multi-sectoral and integrated approach. Two key aspects of policy, from a public health perspective, are the prevention of homelessness itself, and the prevention of ill-health and promotion of health among those who are homeless. The government policy document on homelessness, *Homelessness-an Integrated Strategy*, launched in May 2000, sets out an objective approach to provide an integrated response from all the statutory and voluntary agencies providing services to homeless people.⁴³ For the first time, the strategy clarifies the roles to be played by local authorities and health boards. Local authorities will now be responsible for the provision of accommodation and health boards will be responsible for the health and in-house care needs of homeless people. The importance of local authorities, health boards and voluntary agencies working together in a co-ordinated manner is emphasised. With regard to health care, the strategy supports the recommendations of the Report of a Multidisciplinary Group of the former Eastern Health Board.⁴⁴ One of the principal recommendations of this Group was the setting up of two multidisciplinary primary care teams to improve access to health services by homeless people in the inner city.

The government strategy proposed that 3-Year Action Plans be drawn up by local authorities and health boards at city and county level on how accommodation, health, settlement and welfare services would be provided to homeless persons by all of the agencies involved in providing these services. The Action Plan for the Dublin area has recently been completed, under the auspices of the Homeless Initiative, and offers a comprehensive, operational framework setting out how quality services are to be delivered to homeless people in the region and how homelessness itself can be prevented. The vision of the plan is that by 2010, long term homelessness and the need for people to sleep rough in Dublin will be eliminated. A new homeless agency, charged with the task of managing and co-ordinating the delivery of services to people who are homeless in the Dublin area, is to be established.

Principal Issues

The principal issues now facing all those involved in providing care to homeless people are:

- 1) Ensuring a co-ordinated approach from all the statutory and voluntary agencies involved in delivering services to homeless people.
- 2) Implementation of the 3-Year Action Plan, which has recently been completed.
- 3) The principal issues in relation to health are:
 - The development of the north and south-side multidisciplinary primary care teams,
 - The development of a health promotion policy specifically targeted at homeless people, and
 - Consideration should be given to the introduction of voluntary screening for Hepatitis A, B and C among homeless people. Vaccination against Hepatitis A and B should be offered to those found to be non-immune.

Opportunities for Health and Social Gain

The Eastern Regional Health Authority has a vital role to play, at a strategic level, in ensuring that the needs of homeless people in the region are being met and also in ensuring that strategies to prevent people becoming homeless in the first instance are implemented. Key policy requirements are:

- The Eastern Region should continue to develop its strategic role in planning services to meet the needs of homeless people. An evidence-based approach, based on research findings and evidence gathered from the monitoring and evaluation of services to homeless people should inform the planning process.
- Provide resources so that the Action Plan, as it applies to health and welfare services for the homeless can be successfully implemented.
- The Action Plan identifies action points and performance indicators for its objectives. Eastern Region has a key role to play in ensuring that progress towards these objectives is monitored.

- Selected services to homeless should be evaluated to ensure that the highest quality service is delivered to homeless people.
- Ensure that health care institutions in the region implement effective measures so that people are not discharged to a homeless state, and that if they are in danger of becoming homeless, the multi-disciplinary primary care teams should be informed at the earliest possible stage.
- Close collaboration with the new homeless agency will be an essential pre-requisite so that Area Health Boards in the Region can successfully carry out the functions in relation to the care of homeless people.
- Continue to support research into the health status and health needs of homeless people so that appropriate service responses can be made towards increasing health and social gain for homeless people.

Drug Addiction

Drug Related Deaths

Efforts are being made at European level to standardise data collection in respect of drug related deaths. As a contribution to this process a survey was undertaken, based on a retrospective review of all coroners' inquest files, in Dublin City and County during 1999. The objective of the survey was to determine the number of opioid related deaths in Dublin City and County, to establish the number of methadone related deaths and to determine the proportion of those deaths associated with methadone prescribed according to guidelines. In all there were 84 opioid related deaths, 78 (92.9%) male. Seventy-three (86.9%) had two or more drugs identified toxicologically. There were 45 methadone related deaths, of which 15 (33.3%) were receiving methadone prescribed according to guidelines. In only one case was methadone the only substance found.

Key Point

Male drug users ages 25-34 are at greatest risk of opioid related death.

Opioid related deaths occur primarily in males in the 25–34 year age group and in most cases are associated with ingestion of many substances. Diverted methadone accounted for the majority of deaths involving methadone. Some

of these deaths occurred before the new regulations in relation to methadone prescribing were introduced. The presence of diverted methadone after the new regulations points out the need for strict enforcement of the regulations.

Approximately one quarter of the GPs in the Eastern Region area have been trained to prescribe methadone. While this is a considerable improvement on the situation that pertained 3 years ago it is still a matter of regret that the majority of GPs do not participate in this scheme. More widespread participation offers the best prospect of providing high quality primary medical care to the greatest number of heroin takers.

Prisons

A prevalence survey of hepatitis B, hepatitis C and HIV in Irish committal prisoners was completed in 2000.⁴⁵ There were 607 respondents. The prevalence of Hepatitis C was 22%, of Hepatitis B 6% and HIV 2%. Among drug users the prevalences were; Hepatitis C 72% Hepatitis B 18% and HIV 4%. The findings add weight to the census survey on the prison population and highlight that drug misuse and blood borne viral infections, particularly Hepatitis C, are endemic in Irish prisoners. These results are consistent with findings in other countries.

The prison environment is populated by mostly young adult males from relatively deprived backgrounds. These prisoners have many health needs on committal to prison. It is important that the level of healthcare provision equates with what is available outside prison. By nature prisoners lose their autonomy. This does not mean that medical confidentiality needs to be lost. The two prison survey reports mention confidentiality as a problem and it is recommended that multidisciplinary health care be put in place in the prison service that is independent of the prison authorities. The planning and commissioning of prison health care in the Region should be the responsibility of the Health Authority and be carried out under the auspices of the appropriate Area Health Board.

Outbreak of Heroin Related Deaths.

In June 2000 there was an outbreak of severe unexplained illness in the injecting drug using community. The outbreak occurred mostly in

the South West Area Board, in Dublin 8 and Dublin 12. Twenty-two persons became ill, of whom eight died. A simultaneous and very similar outbreak occurred in Glasgow.

The outbreak occurred in older injectors. Most of them reported injecting into muscle as opposed to into a vein. Confirmation of involvement of *Clostridium novyi* type A, an anaerobic gram negative bacterium, was found in two of the Irish cases. This very unusual and rare bacterium was also found in cases in Scotland and the outbreak in both cities is attributed to this bacterium.

The outbreak highlighted the need to have a formalised liaison arrangement between the A&E departments in Dublin and the drug services of the Area Health Boards. This is being put into effect. The outbreak has also led to the development of protocols for the examination of specimens from suspected cases. It is possible that sporadic cases of this phenomenon will occur in the future and health promotion advice in relation to not injecting into muscles continues to be given to the drug using community.

Travellers

The Psychological Health of Irish Traveller Mothers

In 1987 a Vital Statistics Report on Irish travellers was carried out. In that study 137 traveller mothers were identified who gave birth in 1987 and were at that time resident in the Eastern Health Board. By 1998 a large number of these mothers (84) were not living in the Eastern Health Board area but 53 were. Of these fifty-three, 47 agreed to take part in a follow-up study. Using a combination of both qualitative and quantitative methods the study aimed to capture traveller women's own views on their health problems and to provide data on their current psychological health. Information was gathered using a semi-structured interview schedule designed for the purpose of the study; this included the general health questionnaire (GHQ-12). The interview schedule was formulated using focus group results conducted for the purpose of the present study.

Results

Fifty eight percent of the mothers stated that they were unhappy with their accommodation status. At the time of the interview 70% of those not currently in housing had applied to be housed; 13% of the mothers lived in settled housing estates, 30% lived on official halting sites and 23% in group housing schemes. The reasons why the mothers were unhappy with their accommodation status included problems with sewage and closeness to electricity pylons and dangerous roadways.

General health questionnaire analysis: 46% of the traveller women interviewed exceeded the cut off for 'psychiatric caseness'. Women who scored low on living in good environmental conditions had higher levels of psychological distress. There was no correlation between family size and being psychologically distressed and there was a correlation between experiencing psychological distress and not engaging in good health practices. Good health practices were measured in the study using the Good Health Index Profile.

Recommendations

The study findings support other findings that have recommended that sub-standard living conditions of unhoused travellers be remedied as soon as possible. The poor psychological health profile found in the study points to the need for traveller organisations and health care workers to work together, to ensure that traveller women have social and psychological supports. This could be effected by primary health care initiatives such as the Community Mother's scheme and other such initiatives. The views of health professionals must also be obtained to elicit their views on how problems on providing adequate health care for travellers can be overcome. Another area for future research is to carry out a similar type of assessment of traveller men.

Key Point

The sub-standard housing conditions in which many Traveller women live adversely affects their health and well-being.

Opportunities for Health and Social Gain

Identification of those groups of people within our society who have special health needs, in order that they can be offered suitable services and in a way which is most appropriate to them, will be one of the biggest challenges facing health services in this century. Development of closer, formal links between statutory agencies and the voluntary sector, ensuring that service users are given the opportunity to shape the

services they will require in the future and maintaining and protecting the funding for such groups will be necessary steps in achieving this goal.

Key Point

People with special needs should be offered services that are suitable and appropriate to their needs.

Chapter 8 Service Evaluation

Introduction

An important part of the work of public health is advising and assisting in the planning and evaluation of health services and health interventions. Although many of the determinants of health lie outside the direct influences of the health sector, health services continue to play an important part in maintaining the health status of our population, particularly older people. Below are some of the evaluations of service, which have been undertaken over the past year or so.

Bed Capacity Review

A review of acute hospital bed capacity and a forecast of the number of acute beds needed up to 2011 was undertaken in 2000.

Main findings and conclusions

1. Over the 30 year period, 1981 - 2011, the population in the Eastern Region will increase by up to 33% to 1.6 million compared with 22% nationally. The main increase will be in older people. The current “bulge” in the 15-44 age group cushions demand at present on hospital activity.
2. Major changes in hospital activity, bed supply and demand occurred in the Eastern Region in the last 20 - 30 years. These are linked to demographics, changes in bed use, medical practice and technology and bed closures.
3. Hospital activity has become more efficient, accommodating an increasing population above national growth, and greater activity with significantly fewer beds in real terms and by national and international ratios. Medical practice has substantially altered with reduced length of stay and increasing proportions of day cases:
 - a 31% reduction in acute hospital beds in the Region occurred since 1980

- 20% of hospital admissions and day cases are for patients who live outside the region
 - bed occupancy in large hospitals ranges from 87.9% - 94.5%. The national average is 84%. In general medicine, occupancy is over 93% in all hospitals. Occupancy above 85% does not allow flexibility for peaks in demand, for example, winter pressures.
 - overall activity in the Region increased by 11% between 1994 and 1998. Inpatient discharges reduced by 15% since 1980 and by 5.4% since 1994. Day cases increased by 54% since 1992 and by 45% since 1994.
4. The average length of stay in the Region is 8.49 compared to 5.91 nationally. This reflects the tertiary specialties and that half of bed days are occupied by patients over 65. There are unexplained variances between hospitals for high volume procedures.
 5. Demand is exacerbated by increasing emergency admissions, winter pressures in respiratory conditions, high occupancy levels, a decline in elective admissions, persistently high waiting lists, and a high level of inappropriate bed days / length of stay for elderly patients.
 6. “Obstacles” in the system include:
 - Discharge facilities for older persons, especially insufficient rehabilitation and convalescent care, nursing home and home care
 - Waiting list management
 - Theatre use, theatre capacity and management;
 - Winter pressure management

Key Point

Bed demand is exacerbated by increasing emergency admissions.

- Variations in length of stay and day case use among hospitals for similar procedures;
- Distribution of specialties among hospitals
- High inflow of residents from other health boards for elective activity

Forecast of bed requirements to 2011

Three scenarios of bed need were forecast:

Scenario 1 a (Standstill) assumes there is no change in hospital performance over 1998 levels. Population growth is factored in. This scenario indicates that 1,269 acute beds will be required by 2011.

Scenario 1 b (Standstill) is similar to scenario 1 a but it includes additional beds needed for waiting list demands. This scenario indicates that 2,146 beds will be required by 2011.

Scenario 2 (Desirable and realistic) assumes a 10% improved performance by hospitals. It includes waiting list demands. This scenario indicates that 1,276 beds will be required by 2011.

Specialities with highest bed increases are general medicine, general surgery, cardiology, oncology and orthopaedics.

Specialities with the smallest changes in bed numbers are gynaecology, ophthalmology, plastic surgery, neurology, neurosurgery, and urology.

Recommendations

1. An additional 1,276 - 2,146 acute beds are required in the Eastern Region up to 2011. The actual required number is influenced by performance improvements in hospitals. For planning purposes the target should be 1,276 to provide the impetus for improving hospital performance.
2. Planned expansion of discharge resources for the care of older persons should occur.
3. Developments in acute day facilities are needed as many patients can be managed as

Key Point

The Eastern Region is likely to need between 1,000 and 2,000 additional hospital beds over the next 10 years.

a day case. Dedicated acute day facilities should be considered.

4. Variances in length of stay and day case rates for some high volume procedures requires improvement as does the discharge planning function.
5. Strategies are needed to protect elective admissions from deferral due to the increasing level of A&E admissions.
6. The distribution of specialties in hospitals requires review. In some specialties with long waiting lists for selected procedures, it was found that one of the main hospitals appears to be the predominant provider as it had the highest activity and highest waiting list. Issues of quality of care, maintenance of expertise, efficiency, and the possibility of low volume contributing to higher lengths of stay need to be considered in these cases.
7. Waiting list management at regional level, rather than at hospital – specific level, should be concerned.
8. The loss of theatre time contributes to waiting lists and length of stay variances. Planning and allocation of theatre time should be a core management task. Discrete day care theatres should be established.
9. The inflow of residents from other health boards for routine elective procedures requires a management strategy.

Key Point

Strategies are needed to protect elective admissions from deferral due to the increasing level of A&E admissions.

Key Point

The inflow of residents from other health boards for routine elective procedures requires a management strategy.

Future Bed Needs at James Connolly Memorial Hospital

Introduction

In April 1999, a hospital group at James Connolly Memorial Hospital (JCMH) was convened to discuss and study the future bed needs at the hospital. The reasons for this review were due to concerns of a) high

occupancy, b) increasing emergency admissions and the knock-on effect on elective work, c) catchment area growth without matching resources and d) the possible change in referral patterns of GPs in favour of JCMH after the new hospital is opened in 2003 and the need for appropriate apportionment of resources. The review was completed in August 2000.

Methods

The efficiency of the hospital was scrutinised by (1) study of bed utilisation and a (2) study of trends in bed use over time and compared with National data. Then, it was agreed to establish the inpatient catchment area and so conduct a population projection exercise. Lastly, an estimate of the future bed need for JCMH was carried out following a bed modelling exercise.

Results

Bed Utilisation at JCMH

This study showed that the rate of inappropriateness of admission is very low at 2.5% and has changed considerably in the past five years from 28.5%.⁴⁶ The rate of inappropriateness of days of care, however, was high at 37.2% and appears to have increased from 28.2% in the same five year period.

The main reasons for inappropriate days of care remain the same as in previous studies in Dublin and JCMH.^{46,47,48} First, most inappropriate days were due to the patient not needing an acute facility. Further, the biggest barrier to discharge for these patients was an environmental one with 75% of these problems being due to either the a) unavailability of an alternative facility or b) to an unsuitable home environment following illness. A second and more minor feature was the hospital/physician barrier – an area that may produce most gain in this category is that of establishing a system of rapid follow up in OPD and related issues of elective readmission.

Other important findings from this study were:

- There is little elective surgical treatment (7.9%) carried out at JCMH.
- Most admissions are emergency admissions (88.8%).
- The overwhelming majority of admissions (81.4 %) come through A&E and this is a shift from five years ago (68%).

- JCMH serves the local population i.e. admissions are from north/north west Dublin, south Co. Meath and Co Kildare.
- Injury / poisoning (22%) is the most common category of admission (ICD9 800-999)

Defining the catchment area, conducting population projections and estimation of number of beds needed

The ambulance catchment area for the hospital was mapped and studied by the hospital group. However, this catchment area only reflected a minority of the admissions to the hospital and so it was agreed that the residence of inpatients would give a more realistic picture of the true catchment. Having established the inpatient catchment area Dr A Kelly and Dr H Sinclair, SAHRU unit, TCD conducted the following exercises:

1. Population Projections

Population projections were carried out using standard cohort technique but employing modifications used in the Strategic Planning Guidelines for the Greater Dublin Area.⁴⁹

Table 8.1 summarises the findings. Some features of note are:

- Population in the original ambulance catchment area was 205,418 in 53 DEDs (based on 1996 Census) and in the new inpatient catchment was 237,642 in 66 DEDs.
- Looking retrospectively at the inpatient catchment area, it is clear that the population increased from 1991 to 1996 (Census data) by 9.8%. The most significant increase was seen in the age group 45-54 years with an increase in excess of 30%. Also the population over 80 years of age increased by 25% in the same period.
- Looking at projections forward to the year 2011, the inpatient catchment area is projected to increase from a minimum of 16.5% on 1996 figures to a maximum of 24.6% (Table 8.1).
- The inpatient catchment area confirms that James Connolly Memorial Hospital offers a service to the local population of North West Dublin, South Meath and North Kildare with only 4% of inpatients referred from outside these three counties.

Table 8.1 Population Projections for JCMH catchment area by year 2011

Scenario	Population	% increase from 1996
Low population growth	276,737	16.5%
Medium population growth	287,806	21.1%
High population growth	296,108	24.6%

2. Estimating bed need

The purpose was to estimate the bed need for the previously defined inpatient catchment area of the hospital for three periods (year 2001, 2006, 2011) and for three population growth scenarios. Finally, to clarify bed need in a situation of 85% occupancy. The results of this work are as follows:

The number of inpatient beds for the inpatient catchment area of the hospital at a normal occupancy of 85% is shown in Table 8.2.

Table 8.2 Estimated inpatient bed numbers for JCMH catchment

Year	In patient bed numbers for JCMH catchment	Minimum/Maximum additional bed numbers at JCMH
2001	204-212	28-36
2006	211-232	35-56
2006	231-246	55-70

It is important to point out that these projections are for the inpatient catchment area as a whole, some patients will not go to James Connolly Memorial Hospital because no service is offered such as obstetrics and neonatal conditions, some patients may be referred elsewhere or to go to a traditional place of care rather than the nearest hospital. However, James Connolly Memorial Hospital is largely a local hospital and would expect to increasingly serve this expanding population.

These projections are built on assumptions that conditions pertaining today will continue to pertain in the projected years.

Conclusions and Recommendations

Bed numbers

James Connolly Memorial Hospital needs more beds as set out in Table 8.2. The minimum estimate for the catchment area is 28 more beds to address the immediate future needs and to reduce occupancy to 85%. Further expansion in bed numbers up to 70 additional beds will be needed during the following ten years.

James Connolly Memorial Hospital is likely to need up to 70 extra beds over the next 10 years.

Ensuring elective work

Trends in Dublin hospitals show a 65% emergency admission rate compared with 89% at JCMH in this study. The increase in bed numbers will need to be structured to redress elective/emergency imbalance.

Recommendation:

An implementation plan to achieve this should be drawn up for discussion with Northern Area Health Board.

Efficiency

Opportunities to achieve greater efficiency at JCMH have been explored. However, it must be stressed that the main solution, i.e. reducing bed blocking, is not within the capacity of the hospital. Furthermore, it is unlikely that solutions will be expedited within the short term.

Day case activity needs to be studied further to establish if there is room for further efficiencies here. The data available gives an unclear picture.

Efficiency due to reductions in average length of stay is a controversial point as the trend in average length of stay has reversed internationally.

Recommendation:

Discuss the need for step down facilities with the Northern Area Health Board.

Study day case activity further with the aim of maximising this form of care.

Reduce inappropriate days of care due to hospital and physician barriers such as discharge arrangements, rapid review appoint-

ments in OPD, improving on-site diagnostics etc.

Occupancy

It is important to stress that an occupancy of 95-100% is not an acceptable or safe position and a move to an occupancy of 85% should be an important short term goal.

Projections

Because projecting future populations and their needs has a number of limitations, it will be important to repeat projections in two to three years time.

National Maternity Hospital – Development Needs

A needs assessment for the National Maternity Hospital (NMH) was undertaken during 2000 in relation to beds, theatres and the laboratory to assist the planning process. SAHRU birth projections for Eastern Region predict an increase in births from the current level of 22813 births in 2000 to continue until 2004 (24,162 births, medium projections). The decline thereafter will be unlikely to fall below the current level prior to 2011. The maternity hospitals do not individually have a defined catchment area. The medium birth projections are used in this report for planning purposes.

Main Findings and Conclusions

Obstetrics

Births increased by 600 in the four Dublin Hospitals during 2000. The medium projections for NMH indicate a high of 8531 births by 2004, which is an increase of 700 births. In 2000 the NMH operated a policy of not taking new patients from outside Eastern Region and Meath County, and so had to refuse some patients.

Key Point

Births in the National Maternity Hospital are likely to increase by 700 births to over 8,500 births by 2004.

To cope with the demands of its population, a hospital must have sufficient capacity to deal with the peaks in demand. A bed occupancy rate of 75% has been recommended for maternity and neonatal beds.⁵⁰

The average length of stay of 2.9 days in NMH (caesarean section 5 days) is unlikely to be reduced further without a significant increase in mid-wife resources to visit early discharges. The current complement of post-natal beds (85) is inadequate. Inpatient antenatal beds are currently 24 and some increase is envisaged. NMH is a national referral centre for Foetal Medicine.

Increasingly antenatal patients are managed as far as possible at OPD and in day beds. Foetal assessment beds are currently 6 in number and it is proposed to increase to 8.

Gynaecology

Gynaecology beds are mainly 5 day with 86% of admissions Mon-Fri and 14% at weekends. Bed occupancy for all admissions to gynaecology beds for 2000 ranged from 75%-89%. The vast majority of gynaecology within the East Coast Area Board is performed in NMH.

Hospital Inpatient Enquiry System analysis of gynaecology services indicates that the average length of stay (LOS) is less in NMH when compared to St Vincent's Hospital.

On occasion, the hospital has had to cancel elective gynaecology in favour of its obstetrical workload due to insufficient accommodation coupled with staff shortages.

The increasing move from major to intermediate surgery, to minor and day case surgery will result in an even greater throughput of procedures.

1. Demand for gynaecology services is likely to increase in the future because the number of postmenopausal women will increase
2. The increase in births will also increase the demands on acute gynaecological services for example endoscopic retrograde pancreatogram, tubal pregnancies.
3. Increasing public education and expectations

Neonatal Department

Currently special care baby unit cots are 32 in number and it is proposed to increase the capacity to 47-50, this is in keeping with recommendations of the Clinical Standards Advisory Group.⁵¹ While it must be acknowledged that the Dublin Maternity hospitals neonatal departments have considerable

expertise there would appear to be also a need to develop a policy around paediatric service development for non Eastern regions and the country as a whole. Increasing cot numbers in the Dublin Hospitals will also have implications for increases in hospital staffing, in particular nursing staff where there are already shortages.

As well as being a tertiary referral centre, there are likely to be increasing demands made on the special care baby unit in NMH for the following reasons:

- Increased survival of very low birth weight infants;
- Best practice would indicate the need for a transitional care area as well as isolation beds
- Increased number of asylum seekers:
- The performance of surgery in the neonatal unit is possible in the future.

Recommendations

- Additional beds are required to address the predicted increase in births in this hospital

Postnatal beds	103
Antenatal/postnatal beds	24+
Foetal assessment	8
Gynaecology beds	26 Inpatient + 8 day beds
Oncology	4
Neonatal cots	47-50
- There is a need for a national policy regarding paediatric service development.
- Gynaecology services should continue to be further developed especially in the area of day surgery.
- With regard to the collection of data on day cases and OPD attendance there is a need to standardise definitions between the three maternity hospitals. Information on case mix needs to be developed in the maternity hospitals.

Development of Ophthalmic Services for Children

The school vision-screening programme and the ophthalmic assessment and treatment services have been sources of debate for some time. The

areas of discussion have included apparently wide variations in screening procedures, the appropriateness of referral, and long waiting times for ophthalmic assessments. A review of the school vision screening service and the associated specialist services in the region was carried out in the summer/autumn of 1999.

School vision screening – the evidence base

A number of working parties internationally have produced guidelines on school vision screening. The recommendations are quite similar in many respects – to screen at the beginning, middle and end of primary school, the referral criteria, the importance of staff training, the need for ongoing audit of the service, the use of proper equipment and facilities, and the necessity of good communication between parents, teachers and health professionals. However, there are also notable variations – the choice of screening test, screening ages, and the value of colour vision screening. The lack of uniformity reflects the absence of a solid evidence base in determining the value of vision screening and the effectiveness of interventions. Hence, the working parties were forced to adopt a consensus approach in reaching many of their conclusions and the thinking has evolved over time to include the following:

- Standardisation of the vision screening programme.
- Use of detailed best practice guidelines.
- Use of age-appropriate tests (e.g. illuminated Snellen at 6m, the Sonksen-Silver at 3 or 6 m).
- Standardised referral criteria (e.g. acuity 6/12 or worse in either eye).
- Training of staff providing the screening service.
- Short waiting times for specialist assessment.
- Ongoing quality review of the service.

School vision screening in the Area Health Boards

The legislative basis for the “health examination and treatment service” for national schools in this country, enshrined in the Health Act 1970, is not prescriptive. Over time the approach to

vision screening came to vary significantly between and within health boards. To review the school vision screening programme in the region, all Public Health Nurses and Area Medical Officers providing the service were invited to participate in a detailed questionnaire survey.

Key findings

- Vision screening was not standardised.
- Comprehensive and up-to-date clinical guidelines were not available.
- Target classes for screening varied widely: most staff screen 1st and 5th class; in nine community care areas children were screened twice; and in one area children were screened on three occasions.
- Most Public Health Nurses carried out vision screening to a greater or lesser extent.
- Vision was generally assessed using the illuminated Snellen test, but there was wide variation in how the test was used and interpreted. Other tests were used that are no longer considered appropriate (such as single letter tests). The Sonksen-Silver test was not used as an alternative test in any area.
- Screening was often carried out in the classroom or school corridor with other children present.
- Eye covering techniques may allow the child to “peep” so that poor visual acuity can be missed.
- Acuity of 6/12 or worse in either eye was the usual cut-off point for referral, but children with essentially ‘normal’ vision (i.e. 6/9 in either eye) or those already under the care of an ophthalmologist continued to be screened and referred.
- Significant delays in the referral process existed e.g. between screening by the Public Health Nurse and referral by the Area Medical Officer, followed by long waiting times for specialist assessment.
- Training of screening staff was limited, and was generally provided by peers.
- No system was in place to permit ongoing quality review of the service.
- Communication and feedback between the service providers, parents, and schools was limited.

Conclusions

The Area Boards devote significant resources to the school vision-screening programme. The programme is generally being carried out along traditional lines, and because of this its full potential may not be fully achieved. Parents may have unrealistic expectations about the service, which may be further compounded by the length of waiting times for specialist ophthalmic assessment.

Key recommendations:

1. The school vision screening programme should be standardised across the Area Health Boards and include:
 - Development of best practice guidelines.
 - Vision screening at the beginning, middle and end of primary school.
 - Only an illuminated Snellen test (at 6 metres) or, if indicated, the Sonksen-Silver test (at 6 or 3 metres) should be used
 - Use of eye patches.
 - Referral at Snellen 6/12 acuity (or Sonksen-Silver 6/12 or 3/6) or worse in either eye.
2. Screening staff should refer directly to the specialist ophthalmic service.
3. All screening staff should undergo theoretical and practical training, and be accredited as agreed between the service providers and the relevant professional groups.
4. Vision screening should be carried out by only a small number of Public Health Nurses, whose continuing professional training should be facilitated.
5. Standardised parental consent and referral forms should be used.
6. Quality review of the programme should be ongoing.

Specialist Ophthalmic Services

Ophthalmic services at varying levels of complexity are provided at 11 hospitals in the region and children are seen at eight of these

hospitals. Discussions were held with the service providers, and surveys of ophthalmic outpatient clinics and waiting lists were carried out.

Key findings

- There was a broad consensus amongst the hospital staff that most of the children could be more effectively and efficiently managed in the community by a community ophthalmic physician working directly with an orthoptist.
- There was a broad consensus that the age of the initial school vision screening should be moved closer to school entry rather than in the third school year.
- Outpatient clinics:
 - The majority of children were assessed at the paediatric hospitals, but children also accounted for up to 20% of outpatient attendances at ophthalmic clinics at the general hospitals.
 - Most children were referred by Area Health Board staff.
 - Squint and refractive errors accounted for the majority of diagnoses.
 - Most children were recalled for a review visit and relatively few were listed for surgery.
 - The majority of children required the services of an orthoptist.
 - There were a large number of non-attenders, attributed largely to the lengthy waiting times, and most clinics were overbooked to compensate.
 - Children and adults were generally seen in combined clinics
- Outpatient assessment waiting lists:
 - The waiting time for outpatient assessment was generally well in excess of three months and over 12 months at some clinics.
 - There were approximately 1,500 children awaiting a first ophthalmic outpatient consultation.
 - Eastern Region staff accounted for 73% of the referrals, and general practitioners for 17%.
 - Approximately 50% of children were of pre-school age and 50% of school age.
 - Almost 50% of referrals were for suspected squint and 50% for “defective vision”.
- Information systems were generally poor or non-existent.
- Feedback to the referring source was limited, and was largely attributed to a lack of clerical support.
- There was uncertainty regarding the local administration of the Children’s Optical Scheme and the process was considered overly complex.
- In Kildare and Wicklow, a Community Ophthalmic Physician service was provided on a sessional basis. Public Health Nurses generally referred directly to this service. The clinics tended to lack the full range of specialist equipment, the orthoptist may not be present at the same time as the Community Ophthalmic Physician, and clerical and nursing support was limited.

Conclusions

Within the region, a wide range of specialist ophthalmic services are provided, and are primarily hospital based. Children account for a significant proportion of the patients seen and are mainly referred by the preschool and school health service of the Area Health Boards. Long waiting lists and lack of a child-focused and community based specialist ophthalmic service pose challenges in the provision of optimum care.

Key recommendations:

1. An integrated Community Ophthalmic Physician service should be developed in the region, initially employing an additional 3 Community Ophthalmic Physicians, 3 orthoptists, 3 clerical staff, and appropriate nursing staff.
2. The community ophthalmic service should be provided in well-equipped and staffed clinics that are geographically situated to provide access to the community.
3. The community ophthalmic service should have a special association with the hospital ophthalmic services as agreed between the Area Health Boards and the hospital(s).

4. Waiting times for routine initial specialist ophthalmic assessment should be less than three months, and ideally should take place within the same school term.
5. The administration of the Children's Optical Scheme should be standardised and simplified, and a leaflet should be available for parents and service providers that fully describes the entitlements and procedures under the scheme.
6. Quality review of the service should be ongoing.
7. An Ophthalmic Services Forum should be established to promote the quality of service and research in ophthalmology.

Mental Health

It is increasingly recognised that mental well-being and contentment are powerful determinants of health. In the past, much of the attention of health services has been directed at the care and treatment of those with psychiatric illnesses. Today, there is increasing recognition of the importance of promoting good mental health and developing structures for mental health promotion.

Psychiatric Services Profile

Over the last 35 years, first time admission rates

for psychiatric conditions have remained virtually constant, whereas total admission rates have increased by almost 50%.

Over the recent past, however, average numbers of total admissions for Ireland have fallen, from a peak of 30,000 per annum in 1985 to approximately 25,062 in 1999. Over the same period, inpatient lengths of stay have fallen steadily.⁷ In the Eastern Region in 1999, there were 9,386 total psychiatric admissions.

Figure 8.1 shows the total and first psychiatric admission rates per 100,000 population for the Eastern Region and Ireland in 1999. Total and first admission rates are slightly above the national average; the Eastern Region has the fourth and fifth highest rates of first and total admissions in the country.

Table 8.3 shows the percentage breakdown of the principal diagnostic categories for total admissions, in the Eastern Region and Ireland, in 1999. The picture in the Eastern Region is broadly similar to that in the rest of the country, with certain differences. Organic psychoses, schizophrenia, personality disorders and drug dependence are slightly more common reasons for admission in the Eastern Region, while depressive and alcoholic disorders are more common reasons for admissions in the country as a whole.

Key Point

Total admissions have fallen over the last 15 years.

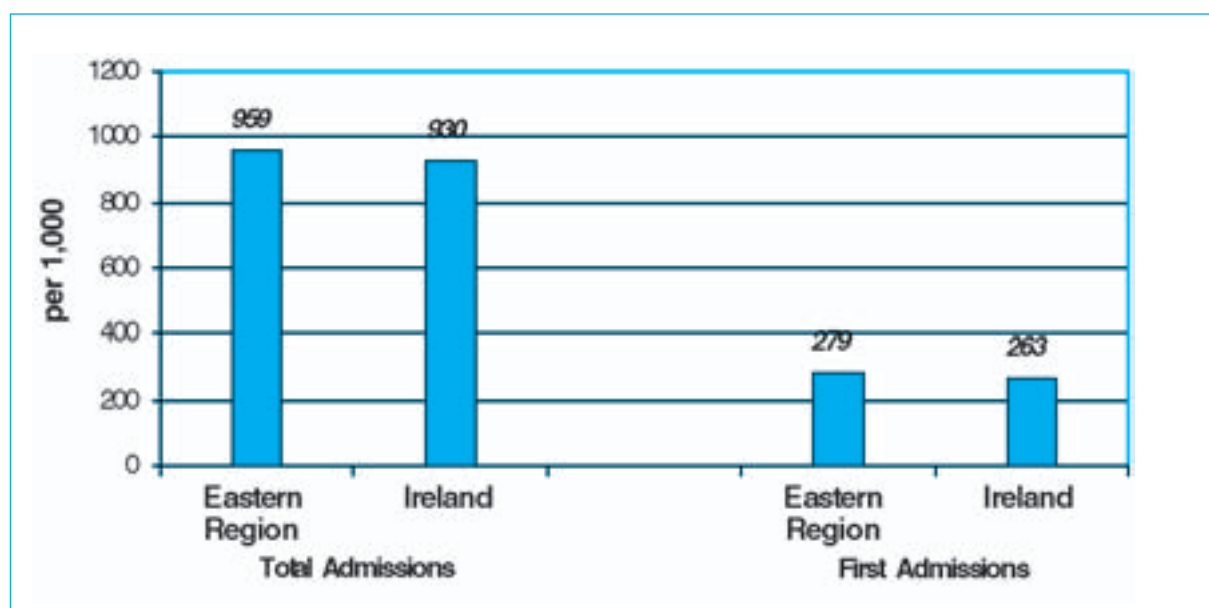


Figure 8.1. Total and First Psychiatric Admission Rates per 100,000 Population, Eastern Region and Ireland: 1999.

Source: Irish Psychiatric Services, Activities 1999⁵²

Table 8.3 Diagnostic Categories, Total Admissions, Eastern Region and Ireland: 1999

	Eastern Region (%)	Ireland (%)
Organic Psychosis	4.7	2.8
Schizophrenia	21.0	19.5
Depressive Disorders	27.0	29.2
Mania	10.0	10.4
Neuroses	6.0	6.0
Personality Disorder	5.8	5.3
Alcoholic Disorders	15.0	19.4
Drug Dependence	3.2	2.8
Others	7.3	4.6
TOTAL	100	100

Adapted from Irish Psychiatric Services, Activities 1999⁵²

As with all illness, there is a socio-economic gradient in psychiatric disease. Rates of admissions increase with falling socio-economic status. Figure 8.2 shows the trends in admissions rates for all causes of psychiatric conditions in the Eastern Region and Ireland across socio-economic groups. The lowest rates are found in employers and managers. Farmers, professionals and skilled manual workers have the next lowest rates while non-skilled come off very poorly. Not shown in this figure, as it distorts the appearance of the graph to too great an extent, is the 'unspecified' group that would include the unemployed, accounting for almost 50% of all admissions. Their rates of admission

are in the region of 4,000 per 100,000 population in both the Eastern Region and Nationally. This figure is 20 times higher than that for employers and managers.

Promoting Healthy Public Policy – Making the Difference in Mental Health

The main concern of the 19th century providers of care for the mentally ill was to ensure that every mentally ill person should be behind walls. The aim was to protect both patient and society. There was little concern for, or even awareness of, the need to provide care for the mentally ill outside of hospital.

The 1945 Mental Treatment Act made the first gesture towards an alternative to inpatient care in this county and marked an important legislative advance. In addition to allowing for the treatment of mentally ill persons outside the hospital, it also introduced voluntary admission to a psychiatric hospital. This was an important step in removing the barrier between the community and the hospital, which had existed up to then. The Report of the Commission of Inquiry on Mental Illness in 1966 was a major step forward in planning services. The Commission, in proposing to change the image of psychiatric hospitals as the sole centres of care said:

“the improvement of services and their extension into the community should make the greatest impact. Community care is undoubtedly desirable but its success depends upon the development of a number of specialist facilities within the community”.



Figure 8.2. Rates (per 100,000 population) of Total Psychiatric Admissions by Socio-Economic Group, Eastern Region and Ireland: 1999.

Source: Irish Psychiatric Services, Activities 1999

It is worth remarking that the 1966 Commission envisaged a substantial role for the primary health care services in the treatment of mental illness and commented if community care of the mentally ill is to be effective the general practitioner has a vital part to play. In 1984, the Government published a report of a study group, *Psychiatric Services – Planning for the Future* (December 1984). The report contains an analysis of our psychiatric service and provides guidelines for its future development as a community based service meeting, in the most effective way, the psychiatric needs of the population. Its conclusions, very much in the same spirit as the recommendations of the Commission almost 20 years earlier, stated that the psychiatric needs of the community should be met by a comprehensive and integrated service made up of a number of treatment components and largely located in the community.

Sixteen years on, the 1984 report still represents the standard for the psychiatric services to aspire to. One of the most important critiques of the policy achievements to date within our psychiatric services is the Report of the Inspector of Mental Hospitals, published annually. The implementation of its annual recommendations are the minimal requirements for an acceptable psychiatric service.

Commenting on our psychiatric services in April 1999 following the most recent report from the Inspector (1998) the Jesuit Centre for Faith and Justice stated:

“In a liberal democracy like Ireland the most powerful factor in bringing about change of any kind is public opinion. People may choose to blame politicians for various shortcomings of our society, but politicians have a vested interest in keeping their ears fairly closely to the ground and are unlikely to completely misread the public mood ... there are many deficiencies in the system (psychiatric). Most are due ultimately to a failure of public opinion to galvanise politicians sufficiently to put the necessary resources into mental healthcare”.

If health professionals are to effectively galvanise public opinion towards better mental health services, a radically improved information infrastructure on current services is

necessary. The lack of nationally comparable data on service outputs, costs, quality and outcomes places major limitations on the extent to which a national mental health strategy could identify its targets and achieve objectives in relation to severe mental illness and non-psychiatric disorders. Psychiatric services largely remain funded on a historical basis and are yet to embrace models where they fund on the basis of outcomes. A funding policy will drive change but only if tools are developed that fit the requirements of the mental health services, which both reward efficiency and quality, as well as emphasising continuity of care across hospital and community boundaries.

Available information is contained in the annual reports on the Activities of Irish Psychiatric Services, which present information on in-patient and community psychiatric services. These reports, published by the Health Research Board, are a good source of information relative to other countries. However this information represents only those that reach the service with conspicuous morbidity, i.e. detected mental illness only represents a proportion of the spectrum of people with a clinically significant mental health problem. Also much of our information collected is based on episodes of care and does not note, in the main, the recurrent episodes by the same individual. This lack of detail on the individual usage of services, while providing accurate information on the activity, does not allow us to focus on why, for example, 10 of those 50 admissions might have been one person or to attempt to apply some to it.

Primary care of psychiatric patients, as identified by *Planning for the Future* is care provided by general practitioners and associated community based personnel.

The British White paper, “*Better Services for the Mentally ill*”, states:

“General Practitioners working with other primary care staff at present undertake the medical treatment of nearly 90% of diagnosed mental illness and it seems unlikely that this pattern of care will change significantly”.

Information is lacking about the nature of mental illness treated by general practitioners and the methods of treatment used in this

country. It has been found however that serious psychiatric illnesses comprise only a small fraction of the total.

It appears that the great bulk of the general practitioner's psychiatric work-load consists of mixed anxiety/depressive states, which require treatment using psychotherapy and counselling. The extent to which these services are available to support the primary care provider is also unknown. Reliable estimates of psychiatric morbidity in the community are urgently required if we are to plan appropriate responses to established mental health need. We need surveys in Ireland such as those commissioned by the Department of Health in the UK which attempt to give a national picture of the prevalence, severity and duration of mental ill health and accompanying disability, associated risk factors, and the extent to which health and social care needs are met by services.

In 1999 our Minister for Health and Children launched the results from SLÁN (Survey of Lifestyle, Attitudes and Nutrition) and HBSC (Health Behaviour in School Aged Children) at which he stated; "This body of work will aid greatly in policy and programme planning in the health services. Over the years this survey will allow us to determine trends in our own pattern of health related behaviour".

I reference this report for three reasons:

1. People of all social class and age groups, identified less stress as one of the top five ranked requirements for better health. While not attempting to link this in any way with psychological need, it is of interest to note the consistent priority given to the issues as a requirement for better health.
2. A similar survey should be considered to explore aspects of mental health and well-being to assist in our planning of services.
3. Based on a National Survey of Mental Health and Well-Being in 1997 in Australia, there was substantial evidence that the burden of mental illness in society is growing. They found that almost one in five Australians aged 18 years or more met criteria for a mental disorder, but only 38% of those people has used a health service. This suggests a large unmet need for mental health services.

Clearly one of the major problems for the developments of a mental health policy in countries around the world is the lack of complete and accurate data on which to base decisions. What is also clear is that mental health problems are one of the major public health problems facing countries.

It is important here to reaffirm the principle of equity in relation to service provision; that priority must continue to be accorded to services and support for people with the most serious needs. However information must be provided to mobilise support for extra resource allocation to improve treatment and care for a broader range of people with high level needs while continuing service reform for existing user groups. We can only at our peril ignore what the World Health Organisation and the World Bank have identified – that the burden of mental illness, while responsible for little more than 1% of all deaths, accounts for almost 11% of the disease burden worldwide.

Chapter 9 Information for Health and Health Mapping

Introduction

The term “health information” can be open to variety of interpretations, depending upon one’s background and area of interest and responsibility. “Information for health” better captures the idea that information is of little intrinsic value unless it is used for some kind of action. To fully understand the scope and importance of the term, a broad interpretation of the concept should be adopted. The key component is that it is information that can be used to underpin decision making within the health arena, as outlined below:

Key Point

Access to “good” information is a prerequisite for evidence based decision-making, ranging from the care of patients to the formulation of policy.

- Information about health and the health services for consumers.
- Information to support clinical decision making by health professionals in providing quality care (including knowledge management, access to best practice and library services, electronic records, telemedicine/telecare).
- Information to support the development, monitoring and evaluation of health services.
- Information to support the development and implementation of policies to promote, protect and restore the health of individuals, special need groups and the population.
- Information to support health research.
- Information on health status and health determinants of at the local, regional or national level.

Information for health should be geared towards fulfilling a wide spectrum of information ‘needs’ of the following stakeholders:

- Patients
- Health professionals

- Managers
- Policy makers
- Researchers

Access to “good” information is a prerequisite for evidence based decision-making, ranging from the care of patients to the formulation of policy. Given that the information is generally gathered at great effort and expense (see below), it is also considered essential that available information is used for legitimate purposes and to its fullest extent.

In light of the above, the Health Information Unit, Department of Public Health, Eastern Regional Health Authority, has developed an expertise in analysing and utilising information in novel ways to support the needs of the above stakeholders.

The Health Information Unit focuses on giving “added value” to existing data or information. A core concept in many of these initiatives is the development over many years of the electronic street index for the Eastern Region, and its ongoing maintenance. The index is linked to a range of databases, and in turn these can be coupled with a geographical information system. The value and power of using information in this way is illustrated below:

- Providing detailed population census data and maps for Area Health Boards and small local areas to assist the service planning and evaluation processes.
- Identifying small geographical areas with higher than expected disease rates (such as heart disease or lung cancer) for targeting health promotion activities.
- Assistance in the investigation of locally perceived clusters of disease (such as cancers, birth defects close to landfill sites).
- To illustrate the spread of infectious diseases across the region (such as meningococcal disease and measles).



increased use of modern therapies in the treatment and cure of duodenal ulcers).

Health Mapping

Diseases are easier to understand and control if their distribution can be visualised. As a result, graphs show how outbreaks happen over time and the effects (if any) of control measures. In

the same way, medical geographers and epidemiologists have used maps for many years to show the distribution of disease and the distribution of the causes of disease. Recent advances using geographical mapping have made the understanding of certain diseases easier, particularly when compared to the distribution of possible causes of these diseases.

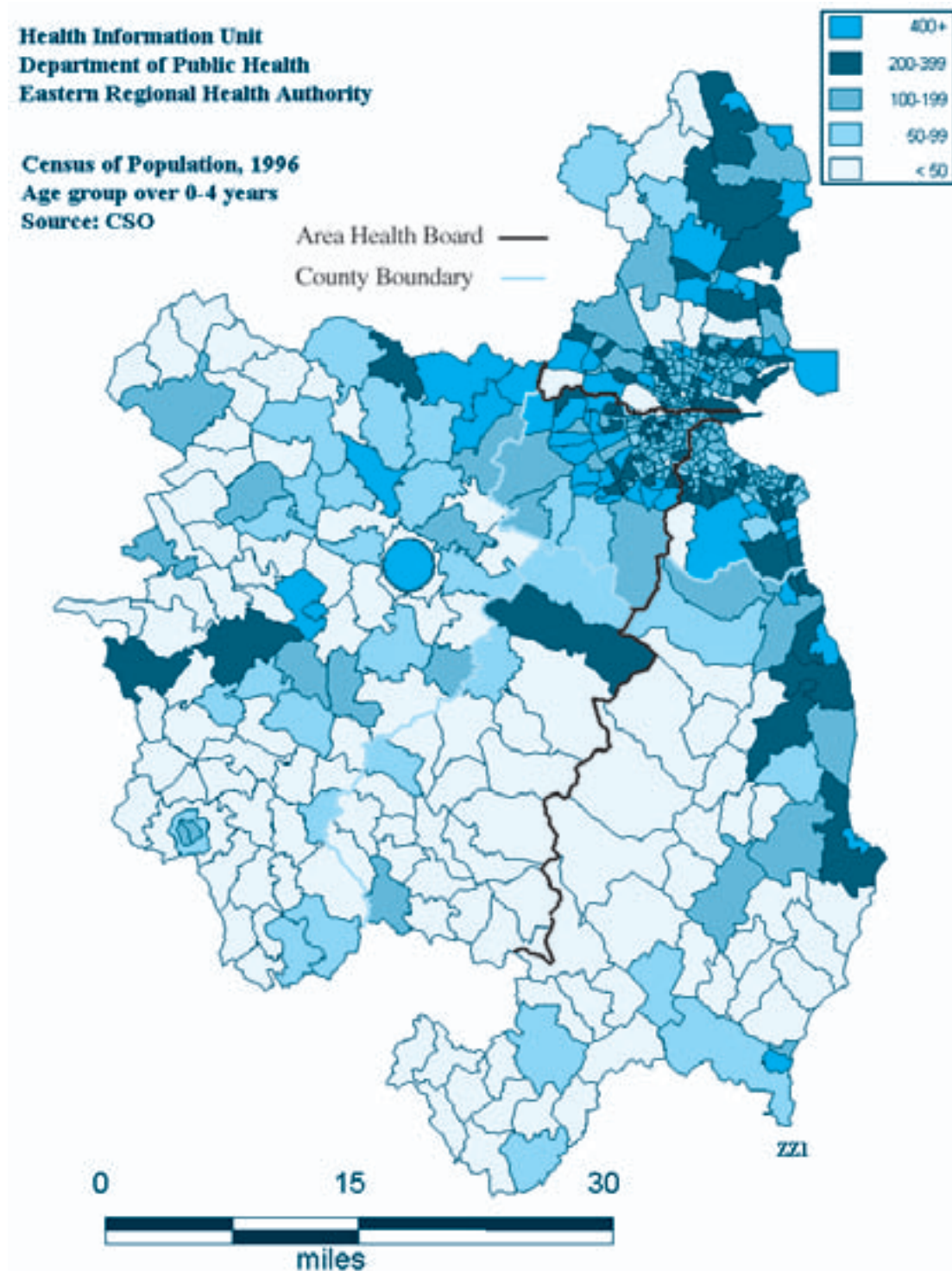


Figure 9.2. Numbers of Children in each DED, Eastern Region, aged 0-4 years.

Figure 9.1 is a map of localities in counties Dublin, Kildare and Wicklow. The smallest unit shown on the map is the **District Electoral Division** (DED), a subsection of an electoral ward. DEDs have quite small populations (sometimes less than one thousand people) and if the characteristics of the people living in these small areas are mapped, it can give very useful

and important information about their health.

Figures 9.2 and 9.3 show the numbers of people in each DED aged 0-4 years and over 75 years respectively. Large numbers of small children are located in the new housing estates, particularly to the north, south and west of Dublin.

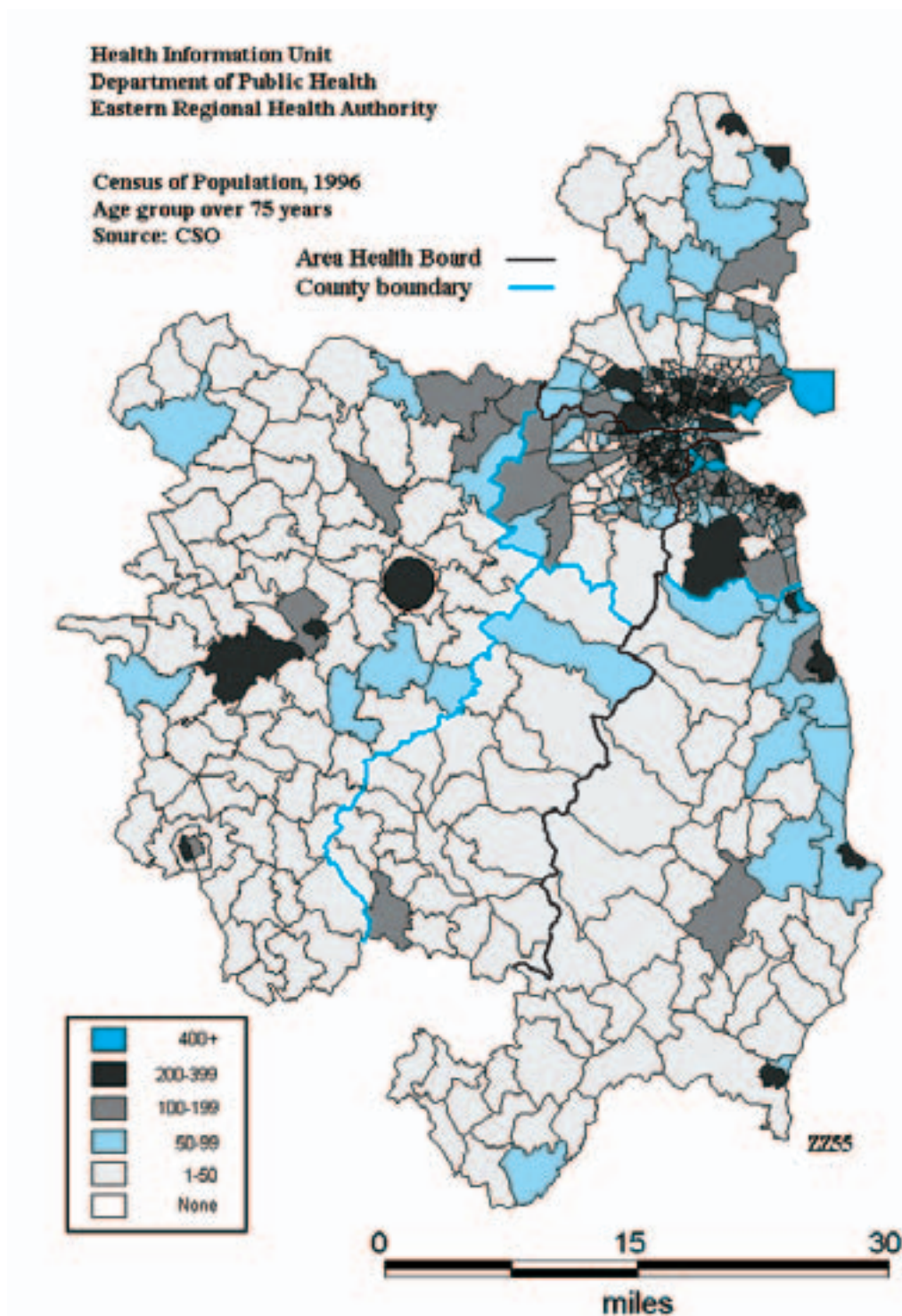


Figure 9.3. Numbers of People in each DED, Eastern Region, aged over 75 years.

By contrast, those aged over 75 (Figure 9.3) are more likely to be found in the inner part of Dublin and along the coastal strip to the north and south of the city.

Figures 9.4 and 9.5 show the distribution of the most deprived areas in the Eastern Region and Dublin. They are calculated using the 5 point SAHRU Deprivation scale (Small Area Health

Research Unit, Department of Community Health and General Practice in Trinity College, Dublin). The north, west and south inner city, the south west of the city and rural and semi-rural pockets around the region are the most deprived areas.

When the distribution of serious diseases is mapped, there is generally close correlation

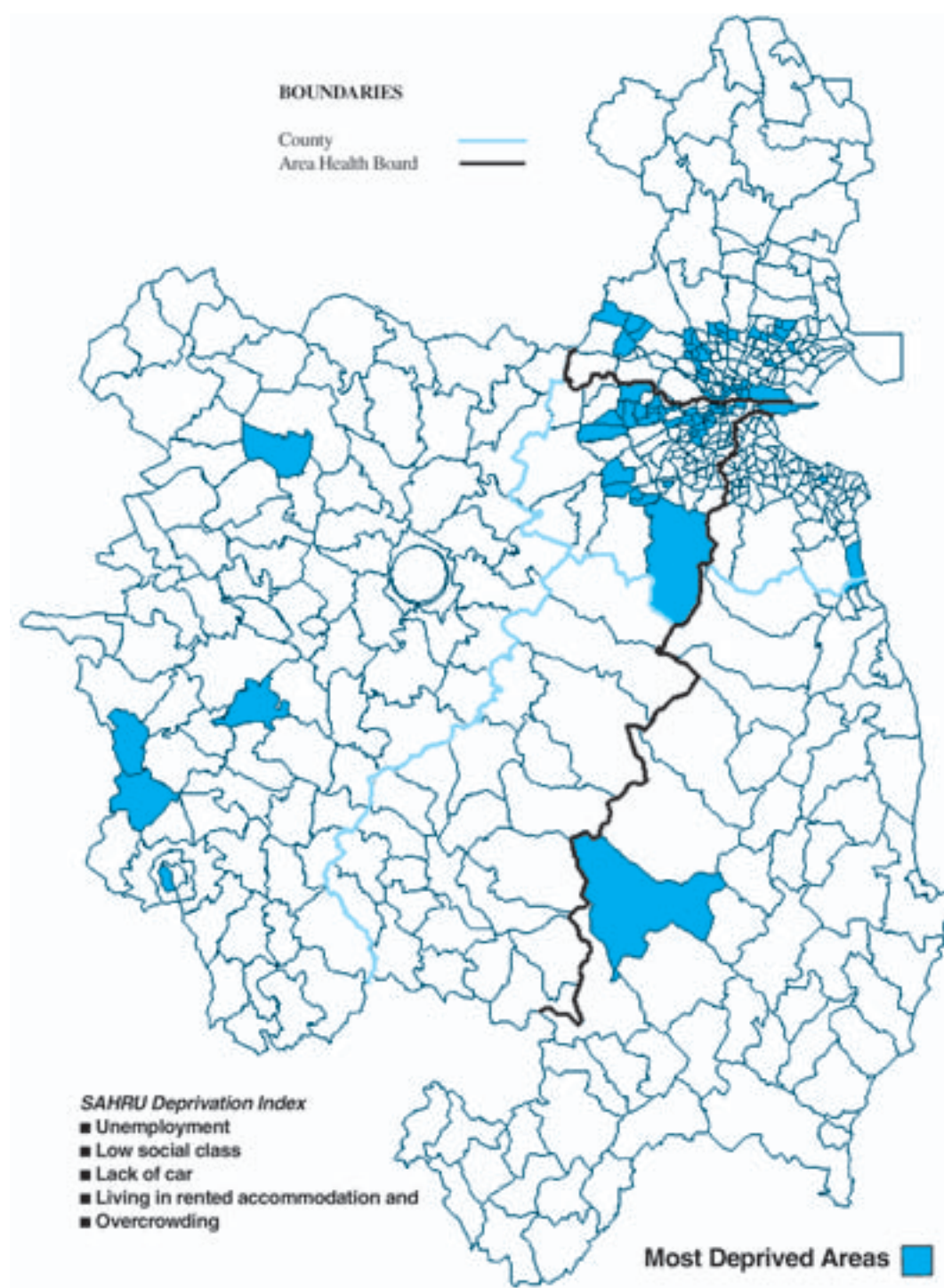


Figure 9.4. Deprivation by DED, Eastern Region showing the more deprived areas (levels 4 & 5 combined)

between those areas with highest levels of disease and greatest deprivation. Figure 9.6 shows the distribution of death from heart disease in Dublin. Large parts of the north and south inner city have high levels of deprivation and heart disease.

Similarly, there is quite a close correlation between areas having highest levels of lung

cancer and greatest deprivation, particularly in the eastern and western inner city.

Opportunities for Health and Social Gain

Maps have the potential to allow diseases and their causes to be more easily visualised. In recent years there has been a dramatic growth in the use of geographical imaging systems in



Figure 9.5. Deprivation by DED, Dublin showing the more deprived areas (levels 4 & 5 combined)

disease epidemiology. As data collection has become increasingly automated, geographical mapping applications have developed which will allow very subtle changes in disease distribution to be demonstrated (see Figure 7.4 showing MMR vaccine uptake map). With timely accurate information providing the raw material for such maps, there will be much

greater potential for use of mapping as a surveillance tool, particularly in 'early warning' systems.

In the past, health resources (money, staff, time) have been allocated on a per capita basis, regardless of the need of different groups within society. As a result, those, whose need was greatest, may not have received the care that

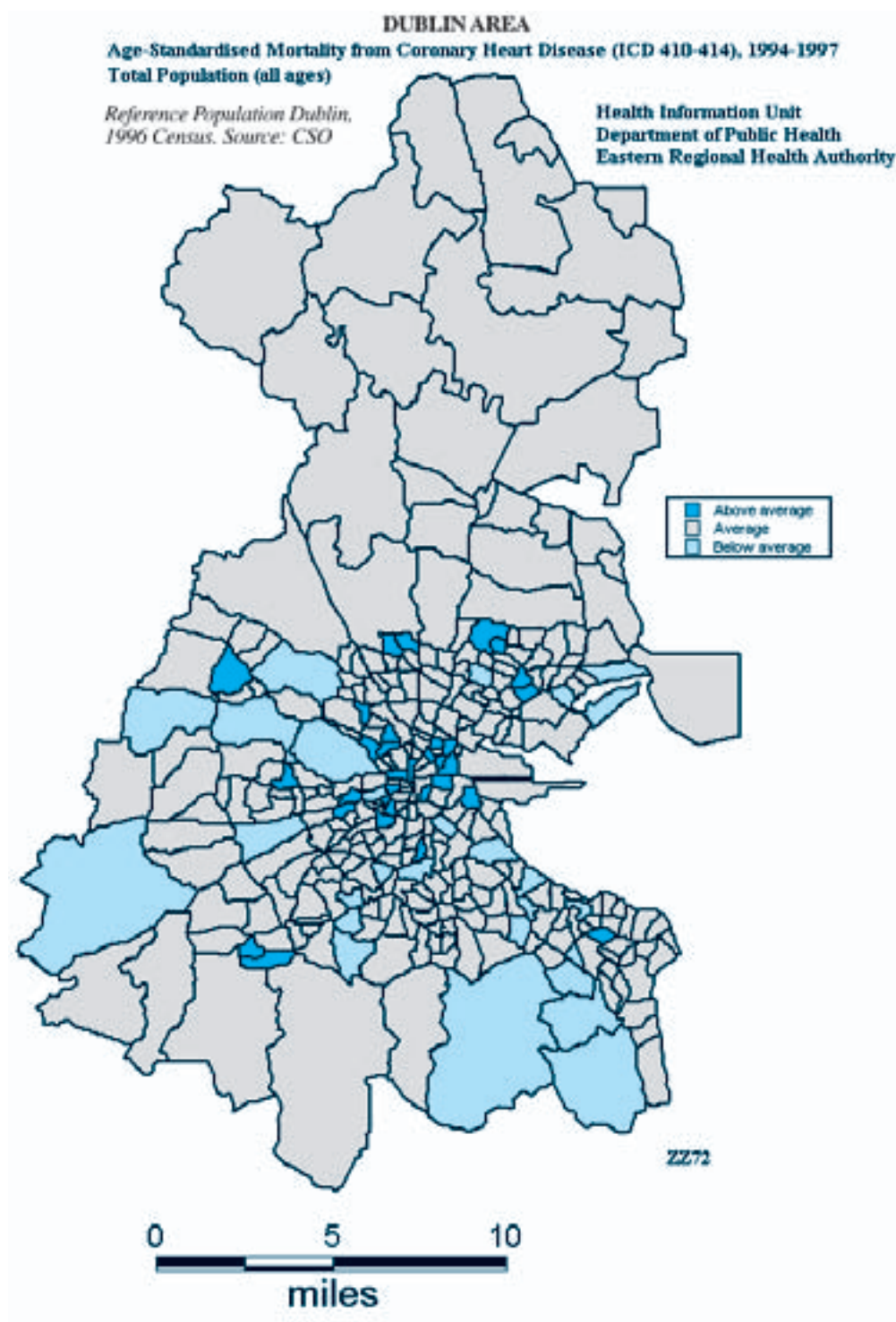


Figure 9.6. Distribution of Deaths due to Ischaemic Heart Disease, Dublin, 1994-1997.

they needed. In order to tackle poor health effectively, it is necessary to assess need and to allocate resources in proportion to that need. Using geographical mapping, it becomes

possible to more accurately identify areas of deprivation or poor health (and hence deprived or unhealthy people) and to target these areas for greatest intervention.

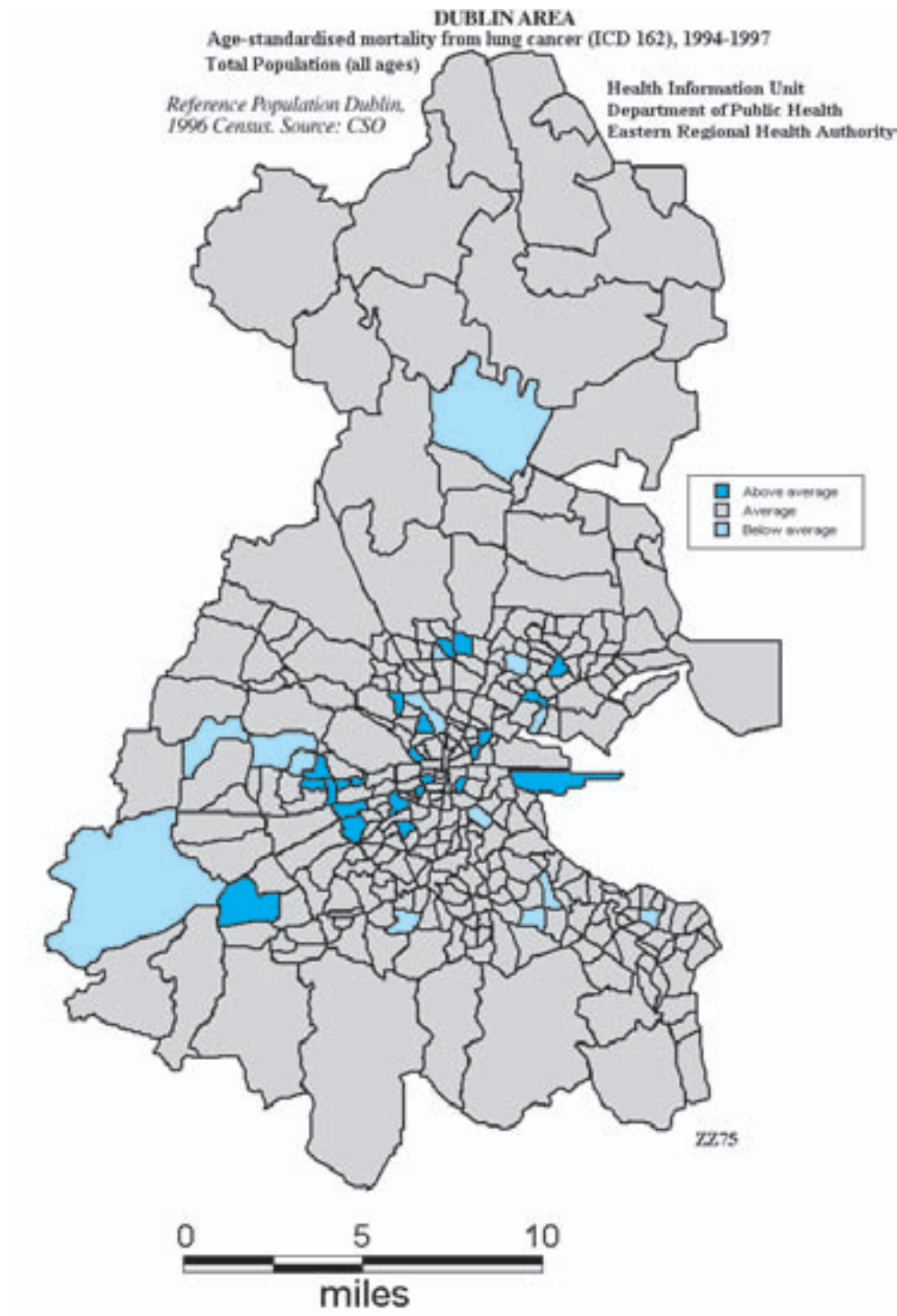


Figure 9.7. Distribution of Deaths due to Lung Cancer, Dublin, 1994-1997.

Chapter 10 Future Directions

Public Health is concerned with helping to create the conditions in which people can be healthy and is becoming increasingly concerned with identifying what assists society and individuals in being healthy.

There is increasing recognition that health depends on many factors, most of which lie outside the influence of the health services.⁵³ There is a clear and explicit recognition that socio-economic conditions and the social and physical environment in which people live are crucial determinants of their health and wellbeing. Population health is an approach to health that aims to improve the health of entire populations, or sub-groups within the population, and to reduce health inequities among population groups. This is necessary, because human beings are gregarious, social animals and live as part of a community rather than solitary individuals.

Key Point

Public Health is concerned with helping to create the conditions in which people can be healthy.

They develop patterns leading to better or worse health in a collective setting.

The Eastern Region has been undergoing unprecedented growth for several years and this is certain to continue. The population of the Region is likely to rise to 1.6 million people over the next 10 years. Much of this will come about through migration – immigration and internal migration. This will mean that by 2011, 2 out of every 5 Irish citizens are likely to live in Greater Dublin. The demand for services will increase in line with the population implying a greater need for health and social services. This pattern of growth will also put pressure on those services that have important implications for people's health such as:

- education,
- social support,
- housing and employment,

- transport.

Urbanisation and social marginalisation go hand in hand. Unless we start planning now, we will be unable to address the needs of our population. The resource allocation in the Eastern Region needs to be at least proportional to the growing population over the coming years.

In line with many other urban areas in the developed world, the Eastern Region is facing changes in the fabric of society that will have important health and social implications. As well as increasing urbanisation, the Region will become older. There has been a 10% increase in the population of the Eastern Region aged over 64 in the last 10 years. Much of our population is of working age. Within 15 or 20 years this 'bulge' in the population will have become elderly and will have much greater requirements for health services.

It is important to ensure that the more vulnerable in the Region do not become any more marginalised than currently. Identifying such groups and ensuring that they are receiving services proportional to their need will be a significant challenge in the coming years.

Key Point

The resource allocation in the Eastern Region needs to be at least proportional to the growing population over the coming years.

In order, however, to be able to afford increasingly expensive housing, it is becoming necessary that both partners in a marriage or relationship work outside the home and delegate the care of their children to a third party carer for the time that they are at work. This changing family profile has potential to affect health and wellbeing.

Educational opportunities are not equally spread across all sectors of society, and as a result, there is not equality of opportunity for many of the population of the Eastern Region. This too has significant health implications.

The health of the people of the Eastern Region has never been better. Our health compares very favourably with that of the country as a whole. The Eastern Region has the lowest rate of cardiovascular mortality and mortality from unintentional injury in the country. We have average levels of mortality due to breast and colorectal cancer. And the trend in mortality is downward – particularly in such key areas as premature ischaemic heart disease.

While our mortality due to cardiovascular mortality might be the lowest in the country, there is no room for complacency. Ireland has one of the worst cardiovascular disease records in the EU. Ireland has also one of the worst records of cancer in the EU. Levels of lung cancer in the Eastern Region are well above those of the rest of the country and are as high as lung cancer levels in Denmark, the EU country with the highest mortality levels from lung cancer. And while there has been some improvement in the rate of lung cancer in men, there has been no improvement, whatsoever, in women over the last 10 years. Reduction in the number of smokers has the potential to dramatically reduce the levels of lung cancer in the region.

Levels of mortality due to breast cancer have fallen over the last 10 years. Over this time the Eastern Region has gone from having the highest mortality from breast cancer to having dropped below the national average. Between 1994 and 2015, however, the numbers of newly diagnosed cases of all cancer is expected to rise by 57%.

National Strategies to combat cardiovascular disease and cancer are already in place and are in the process of being implemented in the Eastern Region. A National Strategy to combat unintentional injury needs to be developed. Implementation of these welcome national initiatives will have significant service and health implications for the Region.

More people are being treated than ever before, and people living in the Eastern Region have rates of hospital admission quite close to the national average. These figures have increased considerably over the last 10 years, and this increase is likely to continue. The Eastern Region is likely to need between 1,000 and 2,000 additional hospital beds over the next 10 years. The challenge for the future will be to ensure that those people who require treatment and health service interventions receive quality service in an equitable, appropriate and timely way and in accordance with evidenced based approaches.

Communicable disease remains a worrying cause of preventable illness and illness. Tuberculosis rates have shown a rise in the Eastern Region in recent times. An outbreak of measles in the Eastern Region affected over 1,000 children and led to the deaths of 2 infants. Foodborne outbreaks are a feature every summer and for much of the rest of the year.

HIV infection is becoming increasingly common in non drug-using heterosexuals. HIV and *E. Coli* O157 are not statutorily notifiable infectious diseases. Since notification of infectious disease has been shown to be an affective adjunct in their control, consideration should be given to rectifying this situation. There is a need for ongoing vigilance in relation to the uptake rates for childhood vaccination.

In summary, the health profile of the Eastern Region is rather good when compared with Ireland as a whole. There is room for significant improvement when we compare ourselves with Europe. Consequently, it will be important to ensure that we maintain the reductions in mortality that we have enjoyed for the last ten years. But there are important challenges to be addressed now and these are likely to become greater over the next 10 to 20 years.

References

1. Zöllner H, Lessof S. *Population Health – Putting Concepts into Action. Final Report.* World Health Organisation, Europe Region. Copenhagen: 1998.
2. Central Statistics Office. *Population Projections.* Central Statistics Office, Cork: 2000.
3. Department of Health and Children. *Health Statistics, 1999.* Stationary Office, Dublin: 1999.
4. Department of Health and Children. *Annual Report of the Chief Medical Officer: 1999.* Department of Health and Children, Dublin: 1999.
5. Department of Health and Children. *Cancer Services in Ireland: A National Strategy.* Department of Health and Children. Dublin: 1996.
6. The Cardiovascular Health Strategy Group. *Building Healthier Hearts: Report of the Cardiovascular Health Strategy Group.* Stationary Office, Dublin: 1999.
7. Central Statistics Office. *Census of Ireland, 1996.* Central Statistics Office, Cork: 1996.
8. Central Statistics Office. *Quarterly National Household Survey.* Feb 2001. Central Statistics Office, Cork: 2001.
9. Codd M. 50 years of Heart Disease in Ireland: Mortality, Morbidity and Health Services Implication. Irish Heart Foundation, Council for Heart Disease in Women. Dublin:2001
10. Balanda K, Wilde J. *Inequalities in Mortality 1989-1998: A report on All-Ireland mortality data.* The Institute of Public Health in Ireland. Dublin: 2001.
11. Johnson Z. *Mortality patterns in Dublin 1986-87,* Dept of Public Health, Eastern Heath Board, Dublin.
12. Friel S, Nic Gabhainn S, Kelleher C. *The National Health & Lifestyle Surveys,* Feb 1999. Health Promotion Unit, Department of Health and Children, Dublin.
13. Public Health Information System, Version 4. Information Management Unit, Department of Health and Children
14. Johnson Z, Dack P. *Small area mortality patterns.* *Ir Med J*, 1989; **82(3)**:105-8.
15. Ronald M Davis. *Passive smoking: history repeats itself* [editorial]. *British Medical Journal*, 1997; 315:961
16. Law MR, Morris JK, Wald NJ. *Environmental tobacco smoke exposure and ischaemic heart disease: an evaluation of the evidence.* *British Medical Journal*, 1997; 315: 973-980.
17. Hackshaw AK, Law MR, Wald NJ. *The accumulated evidence on lung cancer and environmental tobacco smoke.* *British Medical Journal*, 1997: 980-988.
18. US Environmental Protection Agency. *Respiratory health effects of passive smoking: lung cancer and other disorders.* Washington DC: Environmental Protection Agency; 1992.
19. World Health Organisation. *World Health Report: 2000.* World Health Organisation, Geneva: 2001.
20. Heymann DL. *The Urgency of a Massive Effort against Infectious Diseases.* Statement before House Committee on International Relations. Senate House Committee Briefings, Washington: 2000.
21. National Disease Surveillance Centre. *First Report of the National Disease Surveillance Centre: 1999.* National Disease Surveillance Centre, Dublin: 2000.
22. Klevens RM, Luman ET. *U.S. children living in and near poverty (2). Risk of vaccine-preventable diseases.* *Am J Prev Med* 2001; **20** (4 Suppl):41-6.
23. National Disease Surveillance Centre. *Immunisation Uptake Statistics for Ireland, Quarter 4, 2000.* National Disease Surveillance Centre, Dublin: 2000.
24. CDR 1994: Vol 4. Review No 12; Ramsay et al: *The epidemiology of measles in England and Wales: rationale for the 1994 National vaccination campaign*
25. MMWR 1998: 47 (RR-8); 1-57 *Measles, Mumps and Rubella-Vaccine use and control strategies for elimination of measles, rubella and congenital rubella syndrome and control of mumps: Recommendations of the Advisory Committee on Immunisation Practices (ACIP)*
26. Fitzgerald M, O’Flanagan D. *Bacterial Meningitis in Ireland – Provisional Figures for 2000.* A report by the National Disease Surveillance Centre. Dublin 2001.

27. National Disease Surveillance Centre. *Report on the Epidemiology of Tuberculosis in Ireland: 1998*. National Disease Surveillance Centre, Dublin: 2000.
28. Department of Health and Children. *AIDS Strategy 2000: Report of the National AIDS Strategy Committee*. Stationery Office, Dublin: 2000.
29. Stewart W. *Mobile phones and Health: Independent Expert Group on Mobile Phones*. HMSO, London: 2000.
30. National Radiological Protection Board. ELF Electromagnetic Fields and the Risk of Cancer. Report of an Advisory Group on Non-ionising radiation. March 2001.
31. Geschwind SA., Stolwijk JA. J., Bracken M, Fitzgerald E, Stark A, Olsen C, Melius J. Risk of congenital malformations associated with proximity to hazardous waste sites. *Am J Epid* 1992; **135**.
32. Dolk H., Vrijheid M., Armstrong B., Abramsky L, Bianchi F, Garne E., Nelen V., Robert E., Scott JES, Stone D., Tenconi R. Risk of congenital anomalies near hazardous-waste landfill sites in Europe: the Eurohazcon study. *Lancet* 1998; **352**.
33. Dolk H. Landfill sites and congenital abnormalities [Correspondence] *Lancet* 1998; **352**:1705.
34. Bailey T C., Gatrell AC. Interactive Spatial Data Analysis. Longman Scientific and Technical accompanied by INFOMAP (Claymore Services Limited), 1996.
35. Mulvaney F. *Annual Report of the National Intellectual Disability Database Committee. 1998/1999*. Health Research Board, Dublin: 2000.
36. Department of Health. Report of the Review Group on the Health and Social Services for People with Physical and Sensory Disabilities. Dublin: Stationery Office: 1996.
37. Murray B, Gallagher AM. Day Centres for People with Physical Disability-Current Provision and Service Requirements in Eastern Health Board Area. Dublin, National Rehabilitation Board 1991.
38. Department of Health, Shaping a Healthier Future – A Strategy for effective healthcare in the 90's. Stationery Office, Dublin: 1995.
39. Condon M, O'Neill C, Holohan T, Hyland C, Harrington P, O'Brien L (2001). Health and dental needs of the homeless in Dublin. (In press).
40. Holohan T. *Health Status, Health Service Utilisation and Barriers to Health Service Utilisation among the Adult Homeless Population of Dublin*. [Thesis submitted for Part II of the Membership of the Faculty of Public Health Medicine of Ireland, March 1998]. Royal College of Physicians in Ireland, Dublin: 1998.
41. Feeney A, McGee HM, Holohan T, Shannon W. Health of Hostel-dwelling men in Dublin. Dublin: Royal College of Surgeons in Ireland. Dublin: 2000.
42. Williams J, O'Connor M. *Counted In: The 1999 assessment of homelessness in counties Dublin, Kildare and Wicklow*.: Economic and Social Research Board / Homeless Initiative. Dublin: 1999.
43. Department of the Environment and Local Government. *Homelessness – An Integrated Strategy*. Stationery Office. Dublin: 2000.
44. Eastern Health Board. Homelessness: Report of a multidisciplinary group.: Eastern Health Board. Dublin: 1999.
45. Allwright S, Barry J, Bradley F, Long J, Thornton L. Hepatitis B, Hepatitis C and HIV in Irish Prisoner: Prevalence and Risk. A Report prepared for the Department of Justice, Equality and Law Reform. The Stationary Office, Dublin: 2000.
46. Igoe D, Connolly E, Hynes M. Hospital utilisation review. Dept of Public Health, Eastern Health Board, 1996.
47. O'Herlihy B, Hynes M, Laffoy M, Hayes C. Patients 21 days or more in an acute hospital bed. Appropriateness of care. Dept of Public Health, Eastern Health Board, 1996.
48. O'Flanagan D, Leonard C. A study of bed utilisation in St James's Hospital, Dublin.
49. Strategic Planning guidelines for the Greater Dublin Area. Directions for land use and transportation in Dublin and Mid East regions for the new millenium.
50. Maternity Department Health Building Note, Scottish Hospital Planning Note 21. NHS Estates. HMSO.
51. Clinical Standards Advisory Group. Neonatal Intensive Care: Access and availability of specialist services. HMSO, London: 1993.
52. Daly A, Walsh D. *Activities of Irish Psychiatric Services: 1999*. Health Research Board, Dublin: 2000.
53. Marmot MG. Social Inequalities in Mortality: The Social Environment. In *Class and Health: Research and Longitudinal Data* (Ed. Wilkinson RG). Tavistock, London: 1986.

