Report *of* the Director *of* Public Health *of* the Eastern Regional Health Authority

PROTECTING OUR HEALTH

APRIL 2004

Protecting our Health

REPORT OF THE DIRECTOR OF PUBLIC HEALTH OF
THE EASTERN REGIONAL HEALTH AUTHORITY

2004

Contents

Foreword

Mr. Michael Lyons

I welcome the publication of this fourth Report of the Department of Public Health of the Eastern Regional Health Authority. Since the Department of Public Health was set up in 1995 many changes have taken place in the Region. The population increased by over 8% between 1996 and 2002. The number of elderly people increased significantly during the same time period with a particular increase in those aged 85 years and over. The number of births to mothers resident in the Eastern Region has risen continually during the past ten years with births in 2002 at their highest in almost 20 years. The percentage of births to non-national mothers has also increased dramatically in recent years. It is important for the health and social services to have the capacity to adapt to meet the needs of this changing population. This Public Health Report provides us with useful information for action in this regard.

It is encouraging to note that although cancer and cardiovascular disease remain the leading causes of death in the Eastern Region, improvements can be reported in both of these areas. Both lung cancer incidence and mortality are decreasing in males. Indeed the reduction in lung cancer mortality in the region has exceeded corresponding national and European Union decreases. Breast cancer mortality is also decreasing among females with increasing hospitalisation rates as more treatment options become available. Much success has also been achieved in the area of cardiovascular disease. Deaths from heart disease are declining in the Eastern Region at a faster rate than corresponding European Union figures.

Inequalities in health which exist in the region and have been highlighted in this report must be tackled. Although immunisation rates have increased in recent times there is still much room for improvement and targeting immunisation remains a public health priority in the Region. Other important issues of public health concern which must be addressed include alcohol dependence and obesity. Although road traffic injuries have decreased in the Region in recent years they still account for a considerable amount of preventable morbidity and mortality.

Emerging infectious diseases represent a constant threat to public health. The last twelve months, for example, has seen the emergence of Severe Acute Respiratory Syndrome (SARS), a severe respiratory disease which is associated with high mortality. The Department of Public Health has the expertise to deal with these and other emerging public health threats.

The Department of Public Health has recently developed a Health Atlas. The core purpose of the Health Atlas is to present health information in a user-friendly way to ensure that it is available to all the stakeholder groups.

I would like to commend Dr Marie Laffoy and her staff for producing this excellent report. As we enter a time of change with the current health service reform programme upon us, this report has identified a significant number of specific priorities for action which will guide us in service planning for the future.

Michael Lyons

Mr. Michael Lyons
Regional Chief Executive
Eastern Regional Health Authority

Staff of the Department of Public Health

Director of Public Health

Dr Marie Laffoy

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incorporating

- **Communicable disease control**
- **Environmental health**
- **Emergency planning**
- **Immunisation**
- **Biological threats**

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- **Health Impact Assessment**
- **Cancer**
- **Cardiovascular disease**
- **Health intelligence**
- **Primary care**
- **Hospital services**

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Ms Sharon O'Donnell, doctoral student, TCD ('door to needle time' study)

Staff of Department of Public Health

Key Health Indicators

Indicator	Eastern Region		Ireland	
	No.	%	No.	%
Population (Census 2002, CSO)				
Total population	1,401,441	100	3,917,203	100
Children 0-14 years	279,927	20.0	827,428	21.1
Total persons aged 65 years and over	136,329	9.7	436,001	11.1
Total persons aged 75 years and over	56,949	4.1	190,398	4.9
Births* (CSO, 2002)				
Total births	22,671		60,521	
Crude birth rate/1000	16.2		15.5	
Teenage births	1,227	5.4	2,978	4.9
Births outside marriage (%)	7,976	35.2	18,891	31.2
** provisional data*				
Morbidity (PHIS, 2001)				
Hospital discharges				
All causes of hospitalisation	263,900	100	833,756	100
Circulatory system diseases	21,499	8.1	72,537	8.7
Injuries and poisoning	19,263	7.3	63,316	7.6
Respiratory diseases	16,612	6.3	58,074	7.0
Malignant neoplasms	17,630	6.7	46,865	5.6
Digestive system diseases	29,617	11.2	102,638	12.4
Bed days used				
Total bed days	1,204,541	100	3,370,787	100
Circulatory system diseases	215,903	17.9	571,690	17.0
Respiratory diseases	128,015	10.6	354,865	10.5
Injuries and poisoning	103,953	8.6	298,403	8.9
Malignant neoplasms	106,813	8.9	317,829	9.4
Digestive system diseases	99,641	8.3	312,191	9.3
Day cases				
Total day cases	107,476	100	305,365	100
Circulatory system diseases	4,917	4.6	16,233	5.3
Respiratory diseases	1,064	1.0	2,938	1.0
Injuries and poisoning	1,197	1.1	2,589	0.8
Malignant neoplasms	9,840	9.2	21,762	7.1
Digestive system diseases	16,137	15.0	50,713	16.6

	Eastern Region		Ireland	
	No.	%	No.	%
Morbidity				
Percentage of cases which are managed as day cases				
All causes of hospitalisation		40.7		36.6
Circulatory system diseases		22.9		22.4
Injuries and poisoning		6.2		4.1
Respiratory diseases		6.4		5.1
Malignant neoplasms		55.8		46.4
Digestive system diseases		54.5		49.4
Average length of stay (days)				
All causes of hospitalisation	7.7		6.4	
Circulatory system diseases	13.0		10.2	
Injuries and poisoning	5.8		4.9	
Respiratory diseases	8.2		6.4	
Malignant neoplasms	13.7		12.7	
Digestive system diseases	7.4		6.0	
Mortality				
Number of deaths, all ages (PHIS 2001)				
All causes	9,079	100	29,812	100
Circulatory system diseases	3,458	38.1	11,914	40.0
Malignant neoplasms	2,495	27.5	7,577	25.4
Respiratory diseases	1,224	13.5	4,412	14.8
Injuries and poisoning	389	4.3	1,456	4.9
(of which road traffic injuries)	93	1.0	366	1.2
(of which suicide/self-inflicted injury)	122	1.3	448	1.5
Directly standardised death rates/100,000 population				
All causes	791.3		800.3	
Circulatory system diseases	311.8		323.5	
Malignant neoplasms	218.2		203.9	
Respiratory diseases	106.1		117.8	
Injuries and poisoning	33.8		40.1	
Average years of potential life lost as a result of premature mortality (ages 0 - 64) 2001				
All causes	43,553	100	119,656	100
Injuries and poisoning	9,093	20.9	31,987	26.7
Malignant neoplasms	9,203	21.1	25,894	21.6
Circulatory system diseases	5,550	12.7	16,984	14.2
Respiratory diseases	2,153	4.9	4,942	4.1

Glossary of terms

Age specific rate: The rate of occurrence of a particular event in a specified age group

Age standardised rate: A rate which has had the effect of differences in age between populations removed by the application of a statistical process

Dependency ratio: The ratio of the population aged under 15 years and aged 65 years and over, expressed as a proportion of the population of working age (aged 15 to 64 years)

Elective treatment: A planned or non-emergency admission or procedure that has been arranged in advance

Epidemiology: The study of the distribution and determinants of health-related states or events in specified populations and the application of this study to the control of health problems

Hospital In-Patient Enquiry: A health information system that collates information about in-patient and day case hospital discharges, including information on diagnosis, treatment and length of stay

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: 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 health. It is the combination of sciences, skills and beliefs that is directed at 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

Surveillance: The process of continuous collection, collation and analysis of data and its subsequent dissemination to those who need to know

Years of potential life lost (YPLL): One of the most commonly used measures of premature mortality used. The concept of YPLL involves estimating the average time a person would have lived had he or she not died prematurely.

Abbreviations

AIDS:	Acquired Immunodeficiency Syndrome
AMI:	Acute myocardial infarction
ASR:	Age standardised rate
BMI:	Body mass index
CCA:	Community Care Area
CHIS:	Child Health Information System
CSO:	Central Statistics Office
DATHs:	Dublin Academic Teaching Hospitals
DED:	District Electoral Division
EASR:	European Age Standardised Rate
ECAHB:	East Coast Area Health Board
EHO:	Environmental Health Officer
ESRI:	Economic and Social Research Institute
ETS:	Environmental Tobacco Smoke
EU:	European Union
GMS:	General Medical Services
HBSC:	Health Behaviour of School-aged Children
HIA:	Health Impact Assessment
HIPE:	Hospital In-patient Enquiry
ICD:	International Classification of Diseases
ICT:	Information and communications technology
IHD:	Ischaemic heart disease
NAHB:	Northern Area Health Board
NDSC:	National Disease Surveillance Centre
NPRS:	National Perinatal Reporting System
NTD:	Neural tube defect
PHIS:	Public Health Information System
PTCA:	Percutaneous transluminal coronary angiography
RTA:	Road traffic accident
SARS:	Severe Acute Respiratory Syndrome
SDR:	Standardised death rate
SLAN:	Survey of Lifestyle and Nutrition
SPHE:	Social and Personal Health Education Programme
SRSV:	Small round structured virus
STI:	Sexually transmitted infection
SWAHB:	South Western Area Health Board
TFR:	Total fertility rate
VTEC:	Verotoxin producing Escherichia Coli
WHO:	World Health Organisation

Acknowledgements

In the compilation of this report, thanks are due to the staff members of the Department of Public Health who contributed to the report.

Sincere appreciation must be recorded for the work undertaken by Dr Emer Feely, who took the lead role in the production of this report.

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Dr Brian P. O'Herlihy
Dr Emer Feely
Ms Deirdre Carey
Dr Bob McDonnell
Ms Maeve Raeside
Dr Anna Clarke.

Introduction

Dr. Marie Laffoy

Good health is the key to a good life.

The health of people living in the East has greatly improved over the past 20 years. We are living longer. Death rates from heart disease and cancer have dropped dramatically.

Maintaining and improving health is essential but this aim should not be seen as solely a duty of the health service. It is everyone's business. Many of the causes of ill health, for example, smoking, alcohol, injury and unhealthy diets require societal solutions. We need a collective responsibility by public and private organisations and government to work together to achieve a healthy public policy.

In buying into a healthy public policy we give a commitment to reduce health inequalities especially among poorer people. This means that health improvement must be foremost on the agenda of all public and private institutions.

We still have a number of significant threats to our health and these need to be addressed by many sectors in society:

- The increasing use of alcohol, especially binge drinking in young people, is alarming. As a result many young people are storing up serious physical, psychological and social health problems.
- The growing threat of obesity requires attention. While we need to encourage sensible eating, especially in children, there is an onus on the food industry to promote good health.
- In relation to acute hospitals one of the greatest requirements is enhanced provision of a wide range of services for post-acute care. Such an action will have a ripple effect on many acute hospital services including improved patient throughput, release of acute beds, reduction in waiting lists, provision of care in a more timely manner and greater cost-effectiveness.
- Infectious diseases continue to have a serious impact on our health. The growth of antibiotic resistance, the threat of hospital acquired infection and disruption caused by norovirus (winter vomiting bug), show that our hospitals are a priority for infection control efforts.
- The recent global outbreak of SARS serves as a reminder of the destructive potential of infectious diseases. SARS was the first new infectious disease of the 21st century. While it infected far fewer people than TB, measles or HIV it had a disproportionate economic impact. It spread in areas with broad commercial links and it received intense media interest.
- Injury, especially falls in older people and road crashes, cause unnecessary suffering as most can be prevented. Together we need to do a lot more to reduce these. In the case of road injury, law enforcement has the greatest impact and this must receive priority.

I hope that you enjoy reading this report and that you see your own individual role in enhancing health.

Dr. Marie Laffoy
Director of Public Health
Eastern Regional Health Authority

PROTECTING OUR **HEALTH**

APRIL 2004

Chapter 1

Population Health

Introduction

Population health is an approach to health that aims to improve the health of the entire population and to reduce health inequalities among population groups. To attain these objectives it examines and acts upon a broad range of 'determinants of health' such as income and social factors, education, employment, working and living conditions, physical environments, social environments, genetics, personal health practices, coping skills, gender and culture. These determinants do not act in isolation of each other but interact to have an even more profound impact on health.

A population health approach focuses on improving the health status of the population by addressing the whole range of factors that determine health, rather than focusing on risks and clinical factors related to particular diseases. Action is directed at the health of the entire population or sub-population rather than on ill or high-risk individuals.

The Population Health approach, as outlined in the National Health Strategy, ***Quality and Fairness*** has four main objectives:

1. The health of the population is at the centre of public policy
2. Promotion of health and well-being is intensified
3. Health inequalities are reduced
4. Specific quality of life issues are targeted.

It is increasingly recognised that although considerable strides towards health improvement have been made in Ireland in recent years, we still lag behind our European neighbours in terms of life expectancy, cardiovascular and cancer deaths and lifestyle indicators such as smoking and alcohol intake. In addition, the Institute of Public Health (2001) has demonstrated that there was more than a three fold difference in age standardised death rates between men in the highest and lowest socio-economic groupings during the period 1989-1998. The need to take more deliberate and assertive action in addressing health inequalities, highlighted in "Quality and Fairness" (2001), and addressing quality of life issues are key objectives.

Key point

- There was a three fold difference in age standardised death rates between men in the highest and lowest socio-economic groupings during the period 1989-1998.

Health Status in the Eastern Region

Demography

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 over 1.4 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 Dublin Academic Teaching Hospitals, the three area health boards and other agencies provide health services for the population of the Eastern Region.

The number of people in the Region, their age distribution, employment status, education, income and access to services largely determine 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. As far as is possible, 2002 census data are used in this report.

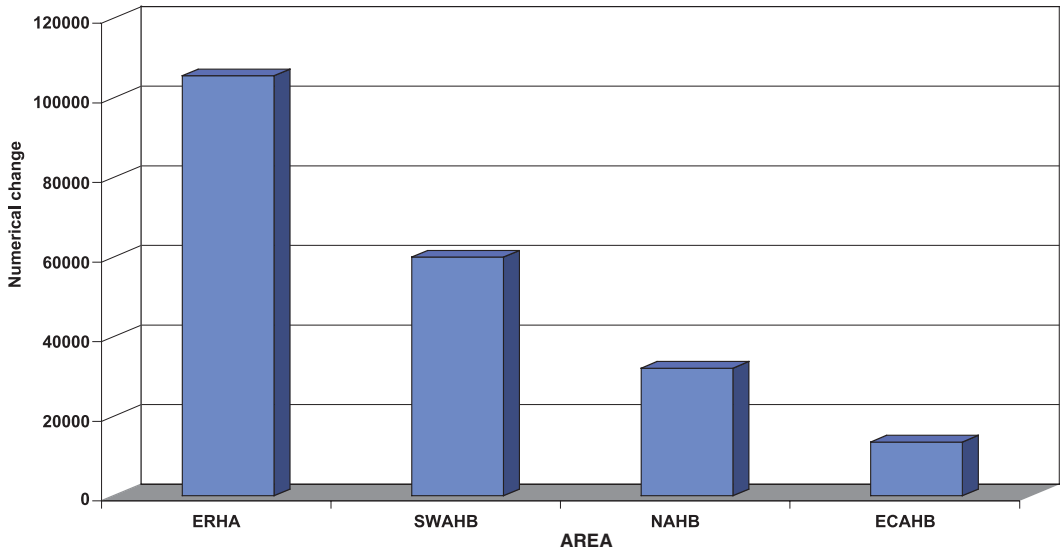
Population size

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 most recent census undertaken in 2002 showed that the population of the State increased by 291,116 (8%) from 3,626,087 in 1996 to 3,917,203 in 2002. Thirty six percent of this population growth occurred in the Eastern Region. By 2002, the population of the region was 1,401,441 having increased by 105,502 (8.1%) since 1996. The largest change occurred in County Dublin with an increase of 64,577. The total population of County Kildare increased by 28,952 and Wicklow by 11,993. In percentage terms, the population change from 1996-2002 was as follows: Dublin (+6.1%), Kildare (+21.4%) and Wicklow (+11.7%). Figure 1.1 shows that within the catchment areas of the Area Health Boards, the largest rise occurred in the South Western area, with an increase of 59,965 (+11.5%); the population of the Northern area increased by 32,035 (7.0%) and the East Coast area by 13,502 (4.2%).

FIGURE 1.1:

Population change by Area Health Board in the Eastern Region, 1996 to 2002



Data source: CSO

Health services provided within the Eastern Region are also influenced by changes in adjacent counties. A number of acute and specialist secondary/tertiary services may be geographically convenient for some people compared to services within their own health board region. In addition, an increasing number of people in adjacent counties commute to work on a daily basis to the Dublin area, and may have originally lived in the Eastern Region. Table 1.1 shows that the population of the five counties neighbouring the region increased by 51,271 between 1996 and 2002. This represented an increase of 14.0%, higher than both the national and Eastern Region percentage increases. The rise in the population of Meath is particularly striking.

Key point

- The Eastern Region has the largest and most densely concentrated population in the country.

Table 1.1: Population change in counties adjacent to the Eastern Region, 1996-2002

County	1996 No.	2002 No.	Change No.	Change %
Wexford	104,371	116,596	12,225	11.7
Meath	109,732	134,005	24,273	22.1
Offaly	59,117	63,663	4,546	7.7
Carlow	41,616	46,014	4,398	10.6
Laois	52,945	58,774	5,829	11.0
Total	**367,781**	**419,052**	**51,271**	**13.9**

Age profile in the Eastern Region

The age profile of people in the Eastern Region is different from other health boards in the country (Table 1.2). Seventy percent of people in the Eastern Region are under the age of 45 years, which is higher than any other health board region, mostly accounted for by the large number of people in the 25-44 year age group. In contrast, 9.7% of the population are over 65 years of age. Although this percentage is lower than the other health boards, the region has by far the largest number of elderly people (Figure 1.2). There are more males than females in each age group under the age of 19 years; however, in each subsequent age group the numbers of females surpass males, with the gap widening as age increases.

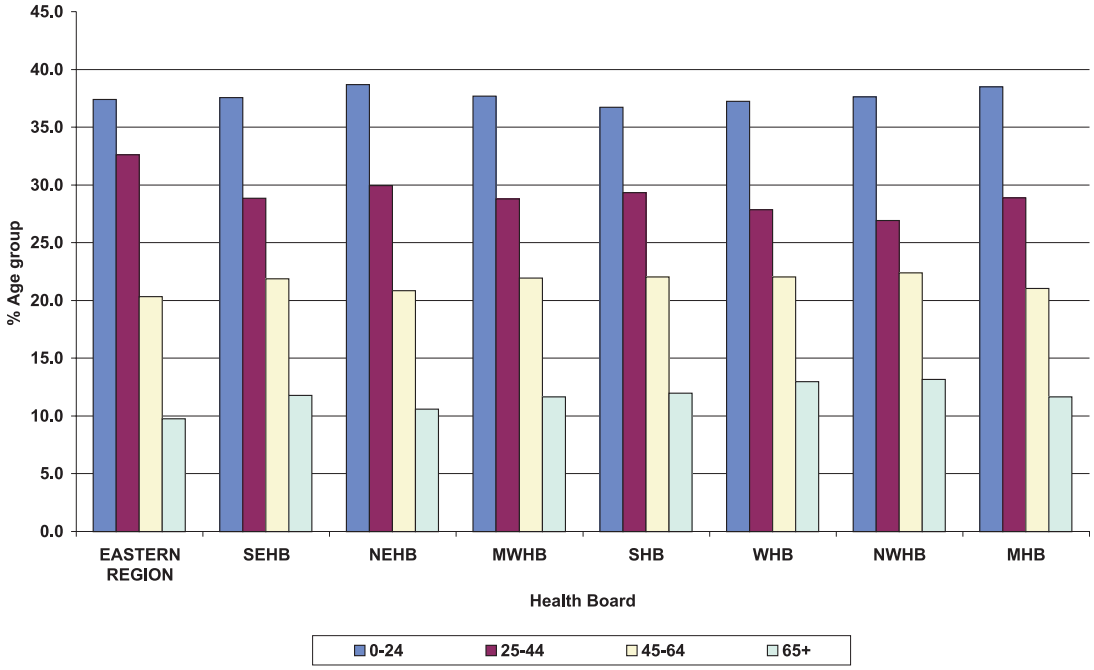
The population of the Eastern Region is younger than the average population in the European Union. In the EU 17.0% of the population fall into the 0-14 year age group compared to 20.0% in the Eastern Region. 16.1% of the population in the EU are aged 65 years and over compared to 9.7% in the Eastern Region.

Table 1.2: Age profile of residents of the Eastern Region ,2002

	0-4	5-9	10-14	15-24	25-44	45-64	65+	TOTAL
ECAHB	20,921	20,616	22,272	54,512	102,362	73,291	39,899	**333,873**
NAHB	33,211	30,471	32,289	85,450	159,797	97,321	48,395	**486,934**
SWAHB	42,703	37,685	39,759	103,990	194,467	113,995	48,035	**580,634**
TOTAL ERHA	**96,835**	**88,772**	**94,320**	**243,952**	**456,626**	**284,607**	**136,329**	**1,401,441**

FIGURE 1.2:

Proportions of the population of different ages in health boards

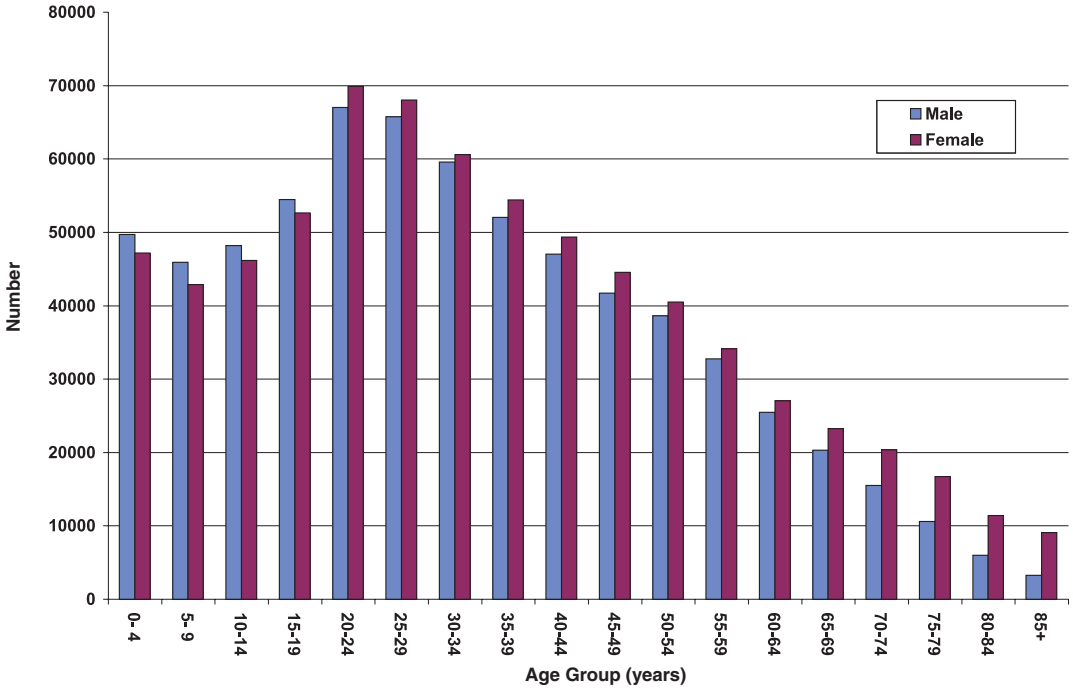


Data source: CSO

Figure 1.3 shows the population of the Eastern Region by 5-year age groups in 2002. Although the distribution in Census 1996 was similar, the peak in 2002 was in the 20-34 year age groups, whereas in 1996, the peak was in the 15-29 year age groups.

FIGURE 1.3:

Population pyramid in the Eastern Region, 2002



Data source: CSO

Population aged 65 years and over

The number of people aged 65 years or over in the Eastern Region increased by 11,058 between 1996-2002. As the population as a whole increased during the same period, the percentage of elderly (65+ years) in the region remained the same (9.7%) in 2002 as in 1996. However, there was a shift within the 65+ year age group as a whole towards the more elderly age groups, particularly to those aged 85 years and over (Table 1.3).

Key point

- The increase in the number of elderly people in the region, particularly the over 85s has clear implications for the planning of services for this group which need to be addressed now.

Table 1.3: Change in population aged 65 years or more in the Eastern Region by age group

Age Group	Number	Change 96-02	% Change 96-02
65-69	43,539	2,654	6.5
70-74	35,841	1,818	5.3
75-79	27,283	3,147	13.0
80-84	17,371	1,702	10.9
85+	12,295	1,737	16.5

In 2002, more than 88,000 people (33.2%) aged 70 or more were living alone in private households nationally (Table 1.4). However, the percentage of males living alone was lower in the Eastern Region at 20.8% than in any of the other health board areas. In contrast, the percentage of females living alone in private households was higher in the Eastern Region at 41% than in any of the other health board regions.

Table 1.4: People aged 70 years or over living in private households

	Total 70+	Total 70+ Alone	Total 70+ % Alone	Male 70+ % Alone	Female 70+ % Alone
Eastern Region	81,464	26,918	33.0	20.8	41.0
SEHB	30,126	9,772	32.4	24.0	39.1
NEHB	23,017	7,723	33.6	25.0	39.9
MWHB	24,063	8,008	33.3	25.3	39.4
SHB	41,848	13,892	33.2	24.1	39.9
WHB	30,776	10,161	33.0	27.4	37.5
NWHB	18,694	6,434	34.4	27.8	39.7
MHB	16,234	5,503	33.9	26.0	40.2
Total	266,222	88,411	33.2	24.1	39.9

Dependency ratio

The dependency ratio is the ratio of the population aged under 15 years and aged 65 years and over, expressed as a proportion of the population of working age (aged 15 to 64 years). 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. In 2002, the Eastern Region had the lowest dependency rate (0.42) of all the health board regions (Table 1.5). The dependency ratio in the region has fallen from 1996 (0.48). This was due to an increase in the 15-64 age group in the population and a fall in the 0-14 age group. Although the number of people aged 65 years or over increased between 1996-2002, their relative proportion within the population did not change and therefore did not impact on the dependency ratio. Within the Eastern Region, the dependency ratio values for the three Area Health Boards were: 0.41 (SWAHB), 0.42 (NAHB) and 0.45 (ECAHB).

Table 1.5: Dependency ratio in health board regions

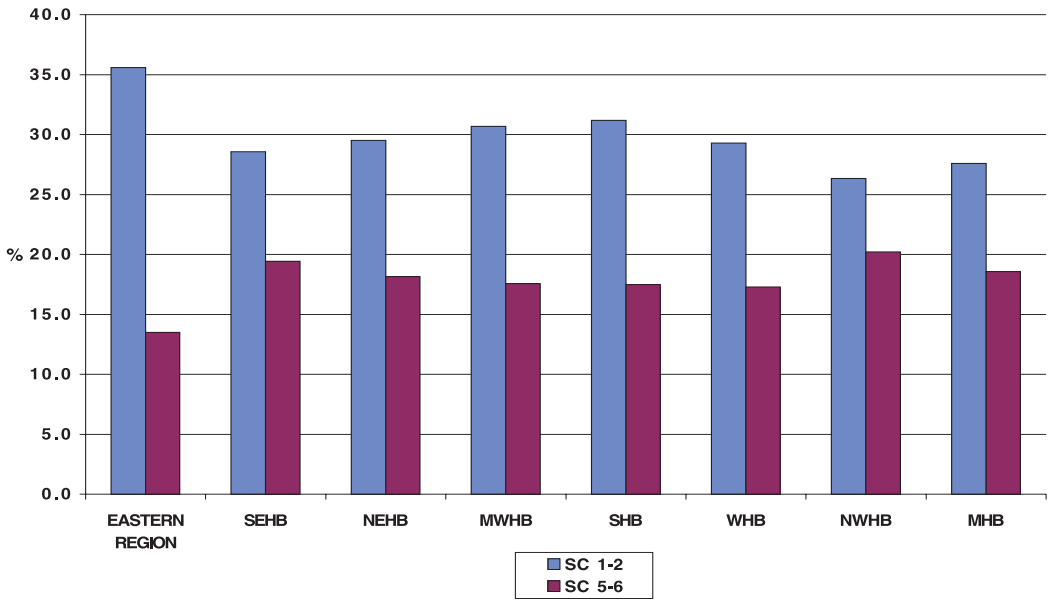
Region	Dependency ratio	Region	Dependency ratio
Eastern Region	0.42	SHB	0.49
SEHB	0.51	WHB	0.52
NEHB	0.51	NWHB	0.55
MWHB	0.49	MHB	0.53
		IRELAND	**0.48**

Social Class

The social class distribution within the population from Census 2002 shows that 36% of the population in the Region were from Social Class 1-2, higher than all the other health board regions (Figure 1.4). The percentage in Social Class 5-6 was lower than in other regions.

FIGURE 1.4:

Social Class distribution in the Eastern Region and other health board regions



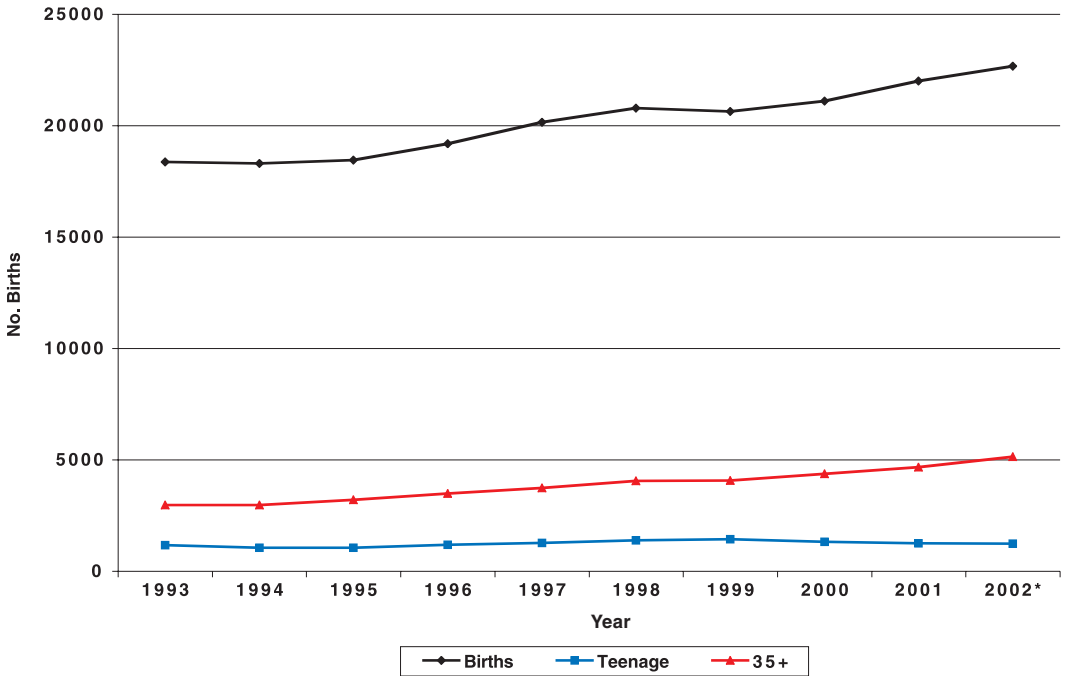
Data source: CSO

Births

The number of births to mothers resident in the Eastern Region has risen continually during the past ten years from 18,373 in 1993 to 22,671 in 2002. This represented an overall increase of 23% (Figure 1.5) with births in 2002 at their highest in almost 20 years. With the influx of refugees in recent years it is estimated that over 20% of births in the Eastern Region are to non-nationals. Not infrequently, women from this group arrive in the region in an advanced state of pregnancy with consequent increased risk of birth complications. Although the percentage of births to teenagers has remained stable at approximately 6%, the percentage of births to mothers aged 35 years or more has risen by 58%, from 1,963 in 1993 to 4,675 in 2001. These changes reflect trends in maternal demographics seen elsewhere in Europe, with a tendency to childbirth at a later age due to social and career reasons, in addition to the recent trend towards a reduction in family size. Overall, approximately one third of births are to single mothers.

FIGURE 1.5:

Number of births, percentage of births to teenagers and mothers aged 35 years or more, 1993-2002



Source: PHIS, version 6 **= provisional data*

Perinatal statistics in the Eastern Region – 1999

The principal aim of the National Perinatal Reporting Scheme (NPRS) is the provision of national statistics on perinatal events. In the Economic and Social Research Institute (ESRI) Report on Perinatal Statistics for 1999, data on pregnancy outcomes, with particular reference to perinatal mortality and important aspects of perinatal care, are presented. In addition, descriptive social and biological characteristics of mothers giving birth and babies born in 1999 are recorded.

This section summarises some of the key data for those resident in the Eastern Region (Table 1.6). As well as providing some summary data for comparison with the corresponding national figures some of the key differences will be discussed. It should be noted however that the data relate to one year only.

Table 1.6: Key perinatal statistics - 1999

		ERHA	Ireland
Average age of mother in years		29.3	30.1
Average maternal parity		1.0	1.1
Average weight of baby in grams	*Singleton births*	3,495	3,505
	Multiple births	2,502	2,497
	Total births	3,468	3,477
Low birthweight <2,500 grams %	*Singleton births*	4.0	3.8
	Multiple births	42.8	47.7
	Total births	5.0	5.0
Average gestational age at delivery (weeks)		39.6	39.5
Perinatal care			
Hospital and GP combined antenatal care %		50.1	72.3
Average gestational age at time of first visit to doctor in weeks		15.8	15.5
Mother's average length of hospital stay in days		4.2	4.7
Immunity to rubella		96.9	89.6
Method of delivery %			
– Singleton births	*Spontaneous*	68.1	65.4
	Caesarean	17.2	19.7
	Forceps	5.4	4.3
– Multiple births	*Spontaneous*	32.6	32.3
	Caesarean	45.2	47.2
	Forceps	2.3	3.1
– Total births	*Spontaneous*	67.2	64.5
	Caesarean	17.9	20.4
	Forceps	5.3	4.2
Breastfeeding mothers %		40.5	36.2
Perinatal outcomes			
Infant's average length of hospital stay in days	*Singleton births*	4.1	4.2
	Multiple births	10.1	10.7
	Total births	4.3	4.3

Data source: HIPE and NPRS Unit, ESRI

In 1999, 20,663 live births to women resident in the Eastern Region were notified to the National Perinatal Reporting System.

- 113 stillbirths were recorded giving a Stillbirth Rate of 5.4 per 1,000 live and still births for 1999.
- There were 53 early neonatal deaths resulting in an Early Neonatal Death Rate of 2.6 per 1,000 live births for the same year.

- The perinatal mortality rate was 8.0 per 1,000 live and still births in 1999.

Ireland has perinatal and infant mortality rates considerably higher than the EU average. The perinatal mortality rate in the Eastern Region is 8.0 deaths per 1000 live and still births and is amongst the lowest in the country. The corresponding EU figure for 1999 was 6.23. Caution needs to be exercised however in making comparisons between perinatal mortality rates in Ireland and in countries where termination is permissible. The percentage of births outside marriage has increased in recent years in the Eastern Region and Ireland with a slight decrease in 2001 (Table 1.7).

Key points

- Just over half of all mothers (50.1%) availed of combined antenatal care (hospital and GP) in the Eastern Region compared to 72.3% nationally.
- The Caesarean Section rate in the Eastern Region was lower than the national rate (17.9 versus 20.4%).
- Breastfeeding initiation rates were higher in the Eastern Region at 40.5% when compared to the national figure of 36.2%.
- 5.4% of live births were to teenage mothers in the Eastern Region compared to 4.9% nationally.
- 35.2% of all live births were to single mothers in the Eastern Region compared to 31.2% in Ireland.

Table 1.7: Total fertility rate and percentage of births outside marriage in Eastern Region and Ireland, 1997 to 2001

Year	Total Fertility Rate		Births outside marriage (%)	
	ERHA	Ireland	ERHA	Ireland
1997	1.82	1.92	32.67	26.56
1998	1.85	1.94	34.28	28.71
1999	1.81	1.90	36.74	31.14
2000	1.79	1.88	37.12	31.78
2001	1.88	1.97	35.05	31.18

The infant mortality rate for the Eastern Region and Ireland from 1999 to 2001 is shown in Table 1.8. The rate in the Eastern Region is marginally higher than the national rate.

Table 1.8: Infant mortality numbers and rates in Eastern Region and Ireland, 1999 to 2001

Year	No. ERHA	IMR ERHA	No. Ireland	IMR Ireland
1999	122	5.91	317	5.88
2000	142	6.84	338	6.23
2001	134	6.02	337	5.82

Teenage Pregnancy

Teenage pregnancy is a public health priority and a challenging issue, which requires an integrated and co-ordinated response at statutory, voluntary and community level.

It is important to acknowledge that for many teenage parents pregnancy and parenthood are positive experiences without any long-term consequences. However while some teenage parents and their children have good lives and are happy with their circumstances, for those that have little or no family or financial support it can cause considerable difficulties. Teenage mothers and their children can suffer adverse health, social and economic consequences although this can be both cause and consequence of teenage parenthood. For society also, unintended early pregnancy can have serious financial and social costs.

Ireland, in 1998, had the third highest rate of teenage births in Europe (Table 1.9).The United Kingdom (UK) has a higher rate of teenage conceptions and teenage births than any other Western European country.

Table 1.9: Teenage Births in the Eastern Region, 1993-2001

Year	Number of teenage births in ERHA (19yrs and under)	Rates of Teenage birth (/1,000 females teenagers)
1993	1,163	20.11
1994	1,050	18.22
1995	1,042	18.01
1996	1,179	20.32
1997	1,244	21.20
1998	1,391	23.46
1999	1,441	24.64
2000	1,323	23.26
2001	1,280	23.03

Trends from UNICEF based on 1998 data show that 41% of teenage mothers in Ireland were in households with income in the lowest fifth. These data also show that 73% of Irish teen mothers had less than secondary education and 69% were not in active employment. Of these teenage mothers 42% were without a partner.

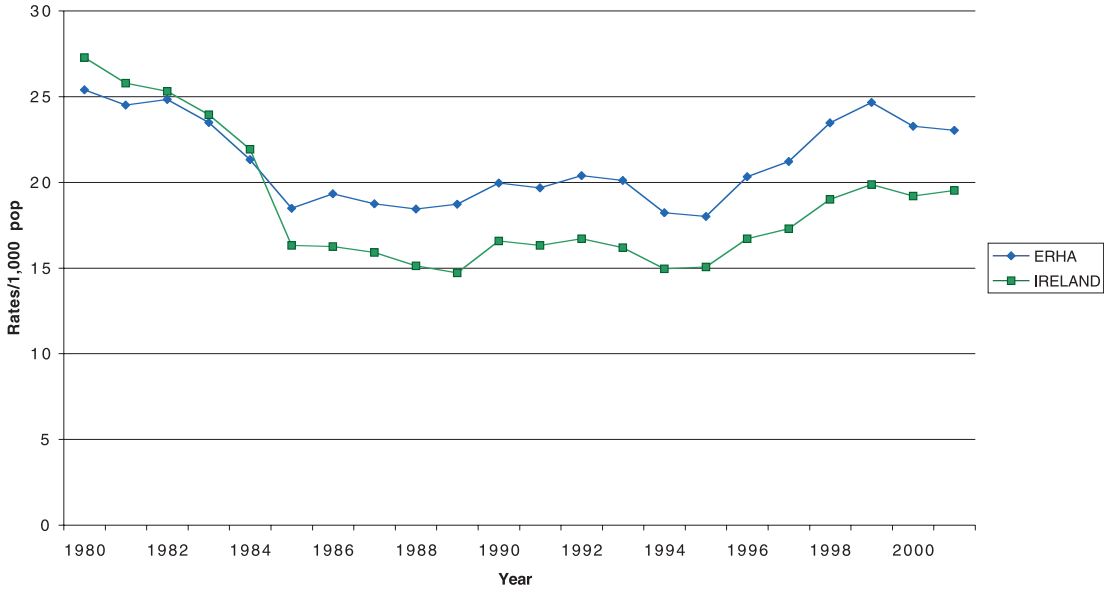
Teenage pregnancy is a health concern because teenage parents tend to have poorer antenatal health, lower birth weight babies and higher infant mortality rates.

Key point

- For society, unintended early pregnancy can have serious financial and social costs.

FIGURE 1.6:

Teenage pregnancies (15 - 19 years) in Ireland 1980-2001



Data source: PHIS, version 6

Mortality

Table 1.10 shows the numbers of deaths and premature deaths in the Eastern Region in the five years 1997 to 2001. Overall, there were 47,952 deaths from all causes, one quarter of which were premature (less than 65 years of age). Nearly a third of all cancer deaths and half of those from breast cancer were premature. In addition, almost three quarters of deaths from injuries and poisonings were premature. Trends in deaths from various causes usually develop over a number of years as the effects of major initiatives aimed at reducing deaths e.g. cancer and cardiovascular strategies, usually need a number of years to show their full impact.

Table 1.10: Deaths in the Eastern Region from major causes 1997-2001

	Number of deaths	% of All Deaths	Number of Premature deaths (<65 yrs)	Premature deaths (<65 years) as % of All Deaths
All Causes (All Deaths)	47,952	100 %	11,816	24.6 %
All Circulatory Disease	18,933	39.5 %	2,922	15.4 %
Ischaemic Heart Disease	9,671	20.2 %	1,759	18.2 %
All Cancer	12,670	26.4 %	3,945	31.1 %
Lung	2,911	6.1 %	770	26.5 %
Colon	1,078	2.2 %	280	26.0 %
Breast (female)	1,067	2.2 %	532	49.9 %
Prostate	672	1.4 %	69	10.3 %
All Respiratory Disease	6,570	13.7 %	607	9.2 %
Injuries and Poisoning	2,282	4.8 %	1,672	73.3 %

Data source: CSO

Key point

- Nearly a third of all cancer deaths and half of those from breast cancer were premature, i.e. occurred in those aged under 65 years.

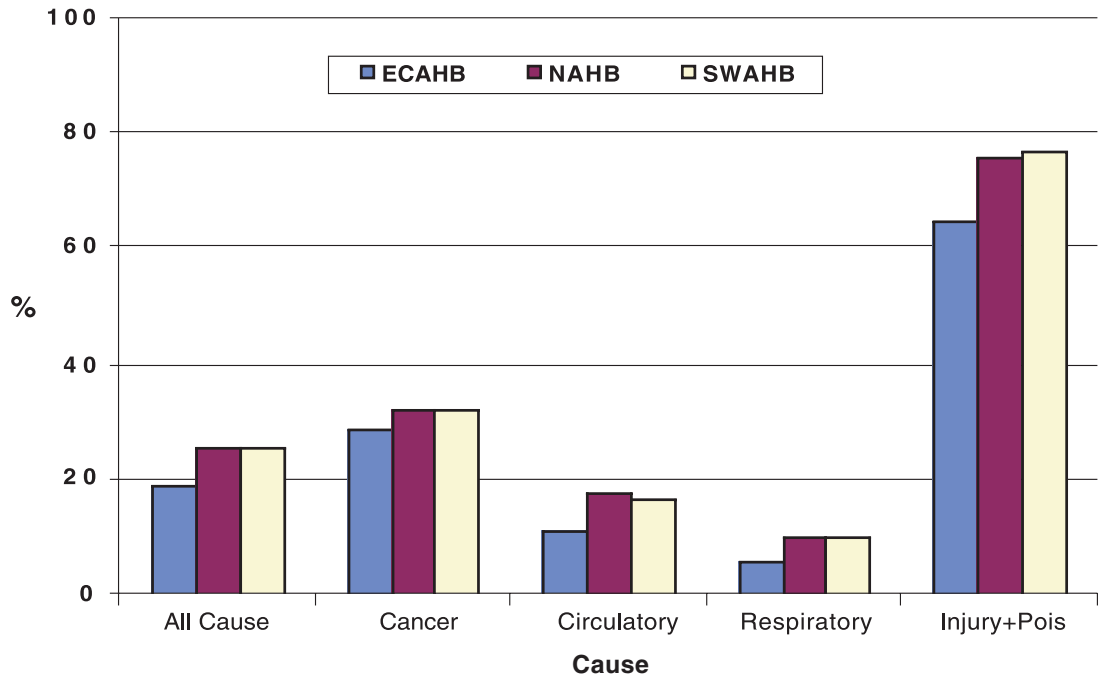
The Eastern Region has slightly lower rates of death than the rest of the country in all categories except cancer.

Premature Mortality by Area Health Board

Data on mortality within the three Area Health Boards in the region collated as part of a specific study are shown in Figure 1.7. Although these data relate to 1994-1998, it is unlikely that any significant changes would have occurred to date. The ECAHB has a lower percentage premature mortality from all the main causes of death, whereas the NAHB and SWAHB are similar in terms of the proportions of their residents who die prematurely.

FIGURE 1.7:

Premature deaths in Area Health Boards from major causes 1994-1998



Data source: CSO

Mortality study – Highlighting inequalities

Mortality is a prime indicator of health status nationally and internationally. International and regional research has found that less affluent areas tend to suffer higher mortality than more affluent ones. A study was carried out by the Department of Public Health in 2003 which looked at mortality in the region for the following five main causes of death for the five year period 1994 to 1998 :

- All Causes,
- All Cancers,
- All Diseases of the Circulatory System,

- All Diseases of the Respiratory System,
- Injuries and Poisonings.

The main findings of this report are summarised below and illustrated graphically in Figure 1.8.

- For all cause mortality, the Northern area and the South Western area differ from the region as a whole by having significantly higher mortality. Conversely, the East Coast area has significantly lower mortality.
- In terms of specific causes of death, the East Coast area has lower mortality than the region as a whole for all categories of disease.
- In the Northern area the all cancer category shows significantly higher mortality than the other areas. This is mainly due to lung cancer in females. Ischaemic heart disease mortality in males is significantly higher and cerebrovascular disease mortality in females significantly lower than in the other areas.
- The South Western area has significantly higher mortality than the region as a whole for all major disease categories except injuries and poisonings.

This report presents mortality differentials across the region by Area Health Boards. Social inequalities have been shown to account for much of the variation in other studies. A considerable variation in social class exists between the three Area Health Boards. The way that social inequalities bring about variation in mortality is unclear. From a practical point of view, issues for consideration by managers and researchers alike are access to services, lifestyle factors and economic factors.

For all causes of mortality, and for three of the major causes of death - circulatory diseases, respiratory diseases and injuries and poisonings - the Eastern Region had significantly lower mortality compared with the national picture. Conversely, cancer mortality in the Eastern Region was significantly higher than the national average and this was mainly due to lung cancer.

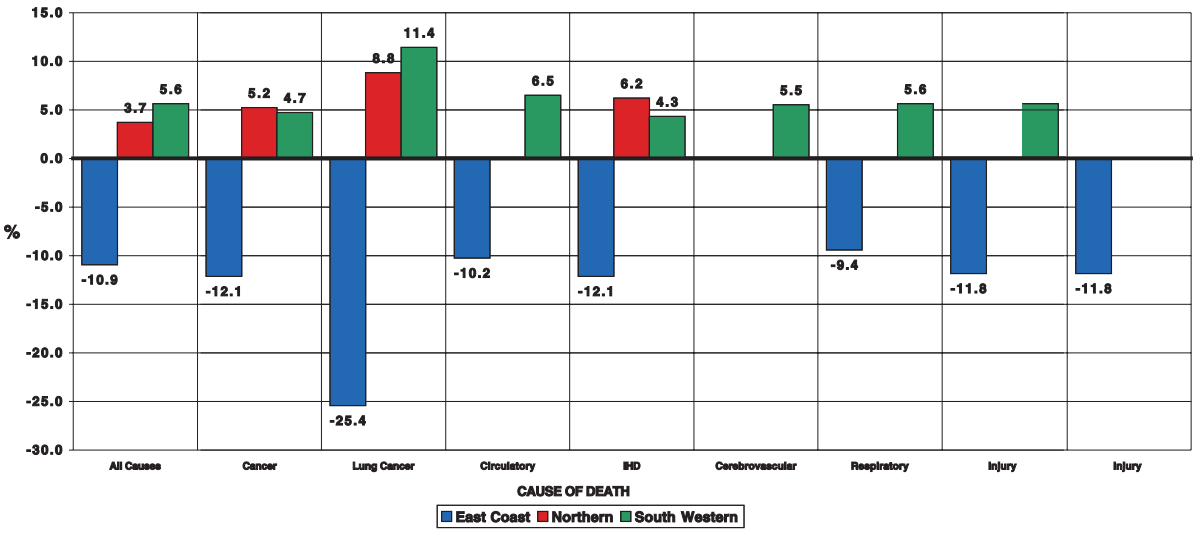
Key points

- International and regional research has found that less affluent areas tend to suffer higher mortality than more affluent ones.
- The way that social inequalities bring about variation in mortality is unclear.

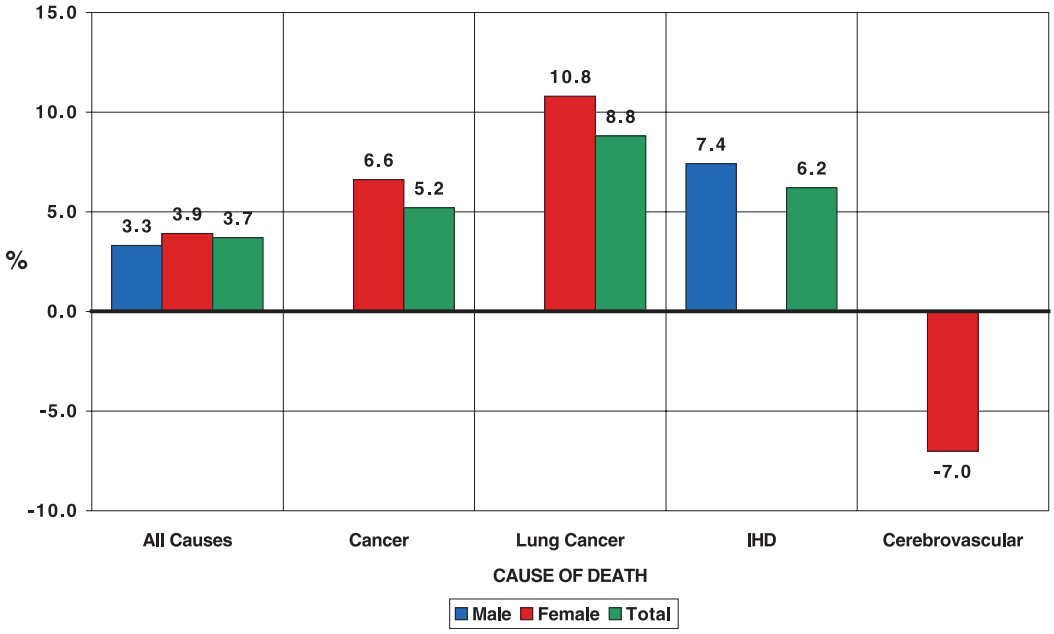
FIGURE 1.8:

Summary graphs – Mortality in the Eastern Region

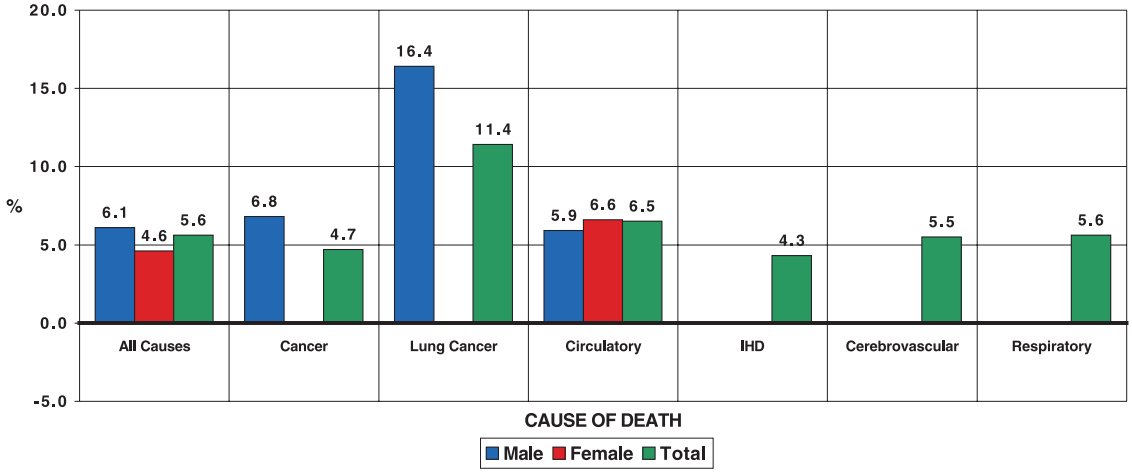
(a) Statistically Significant Excess Mortality (%) by Cause of Death and Area



(b) Northern Area - Statistically Significant Excess Mortality (%) by Cause of Death and Gender



(c) South Western Area Statistically Significant Excess Mortality (%) by Cause of Death and Gender



Data source: CSO

Morbidity

In 2001 there were 263,900 hospital discharges in the region. The principal reasons for discharge were circulatory diseases, injuries/poisonings and neoplasms (Table 1.11).

Table 1.11: Hospital discharges, 2001

	ERHA		Ireland	
Diagnosis	**No.**	**%**	**No.**	**%**
Circulatory system diseases	21,499	8.1	72,537	8.7
Injuries and poisoning	19,263	7.3	63,316	7.6
Respiratory diseases	16,612	6.3	58,074	7.0
Malignant neoplasms	17,630	6.7	46,865	5.6

Source: PHIS, version 6

Table 1.12 shows the hospital bed days for the region and for Ireland for 2001.

Table 1.12: Hospital bed days for the region and for Ireland, 2001

	ERHA		Ireland	
Bed days used	**No.**	**%**	**No.**	**%**
Total bed days	1,204,541	100	3,370,787	100
Circulatory system diseases	215,903	17.9	571,690	17.0
Respiratory diseases	128,015	10.6	354,865	10.5
Injuries and poisoning	103,953	8.6	298,403	8.9
Malignant neoplasms	106,813	8.9	317,829	9.4

Source: PHIS, version 6

Suicide

The number of suicides is an important outcome measure of the effectiveness of mental health services. Nationally 448 suicides were reported in 2001 and 141 (32%) of these were in the Eastern Region. Although the region has lower suicide rates than other parts of the country, suicide is a major concern and a significant and avoidable cause of premature mortality. Table 1.13 shows a continuous rise in the number of deaths from suicide throughout the 1990s and remaining high in 2000. Although there is an apparent decline in 2002, the data for this year are incomplete. The trend observed in the Eastern Region is a reflection of a similar rising trend throughout the country during the same period.

Table 1.13: Number of suicides in the Eastern Region, 1981 to 2002

Year	No.	Year	No.	Year	No.	Year	No.
1981	77	1987	69	1992	95	1998	148
1982	71	1988	78	1993	91	1999	145
1983	89	1989	73	1994	123	2000	144
1984	67	1990	95	1995	113	2001	141
1985	65	1991	100	1996	121	2002*	122
1986	62			1997	138		

Data source: CSO ** provisional data*

Foreign Nationals

The 2002 census was the first to ask a question on nationality rather than on place of birth which had previously been asked. Using this comparison 400,000 (10.4%) foreign-born persons were usual residents in the State in April 2002 compared with 250,000 (7%) six years earlier. The Dublin maternity hospitals announced that the number of births to non-nationals in 2002 was approximately 4,500. This figure does not differentiate asylum seekers from other non-nationals but does highlight the pressure on the maternity services.

With regard to organised public health screening of non-nationals, in 2002 6,343 non nationals were invited to attend three screening centres in the Eastern Region. During 2002 there were 4,312 new attenders at these clinics and 1,350 patients were reviewed.

There is considerable confusion between the definition of various terms such as foreign nationals, non-nationals, asylum seekers, refugees, migrants etc. From a public health point of view there is very little information available regarding asylum seekers. This group have particular health and social needs which should be identified and addressed as well as predicting their need for future services.

Key points

- 400,000 foreign-born persons were usual residents in the State in April 2002 compared with 250,000 six years earlier.
- Formal systems for collecting data on asylum seekers and refugees should be introduced.

Life Expectancy

Table 1.14 shows life expectancy at birth in Ireland for selected time periods from 1950 to 1997. It can be seen that life expectancy in Ireland for males aged 65 years only increased by 1.7 years during this time period. More up to date life expectancy figures for Ireland will be produced by the Central Statistics Office later in 2004.

Table 1.14: Life expectancy at birth and at 65 years, 1950 to 1997, Ireland

Life Expectancy in years	Birth	65 years
Females		
1950-2	67.1	13.3
1960-2	71.9	14.4
1970-2	73.5	15.0
1980-2	75.6	15.7
1990-2	77.9	17.1
1995-7	78.5	17.4
Males		
1950-2	64.5	12.1
1960-2	68.1	12.6
1970-2	68.8	12.4
1980-2	70.1	12.6
1990-2	72.3	13.4
1995-7	73.0	13.8

Source: Health Statistics, 2002

Life expectancy in Ireland remains below the EU average. In 1998 the average EU life expectancy at birth was 75.0 years for males and 81.3 years for females. The EU rates at age 65 years were 15.8 years for males and 19.8 years for females.

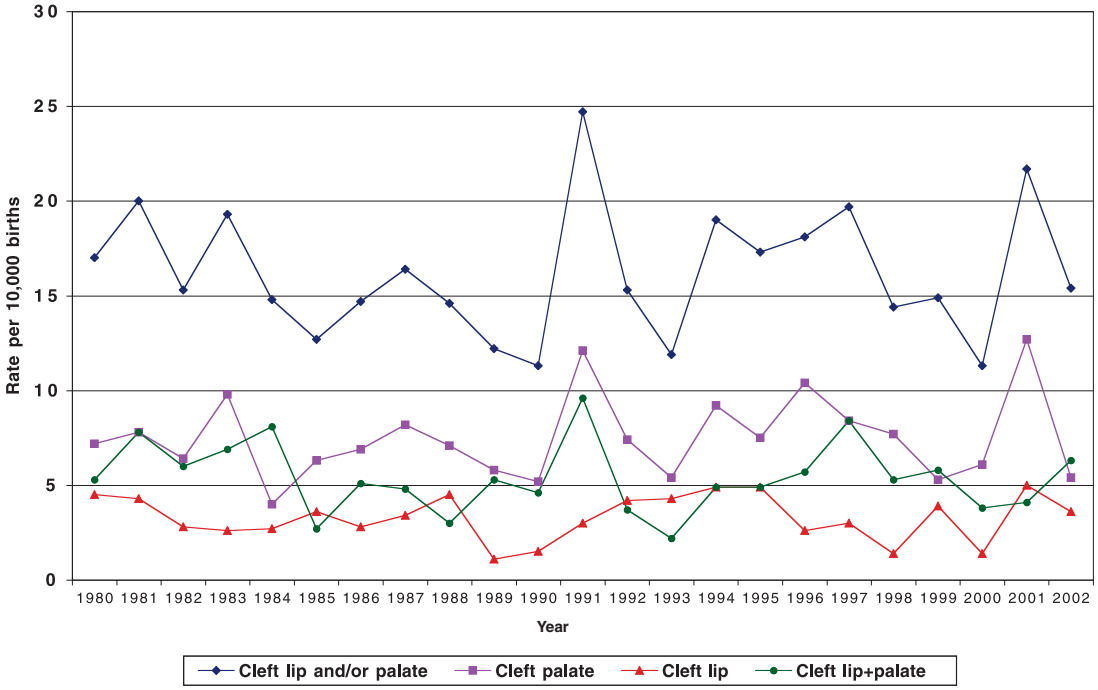
Surveillance of Congenital Anomalies

Surveillance of congenital anomalies (birth defects) in the Eastern Region is undertaken by the Dublin EUROCAT Registry (ERHA Registry of Congenital Anomalies) which is located in the Department of Public Health. The Registry monitors trends in congenital anomalies for counties Dublin, Wicklow and Kildare. The registry is part of a European network (EUROCAT) of similar Registries, and also an international network, the International Clearinghouse of Birth Defect Monitoring Systems. Collaborative research is undertaken with these networks including the prevention of neural tube defects with folic acid, cleft palate and abdominal wall defects.

In recent years, the registry has observed a number of changing trends, including fluctuation in the birth prevalence rate of facial cleft anomalies (Fig. 1.9), with a peak in the rate of isolated cleft palate (CP) in 2001. The reason for the trend is unclear at this stage, although improved ascertainment may account for some of the rise. The rate for cleft lip is showing signs of an upward trend from 1998 onwards, following a fall from 1995-1997. A similar peak was observed in 1991.

FIGURE1.9:

Trend in facial cleft anomalies in the Eastern Region, 1980 to 2002

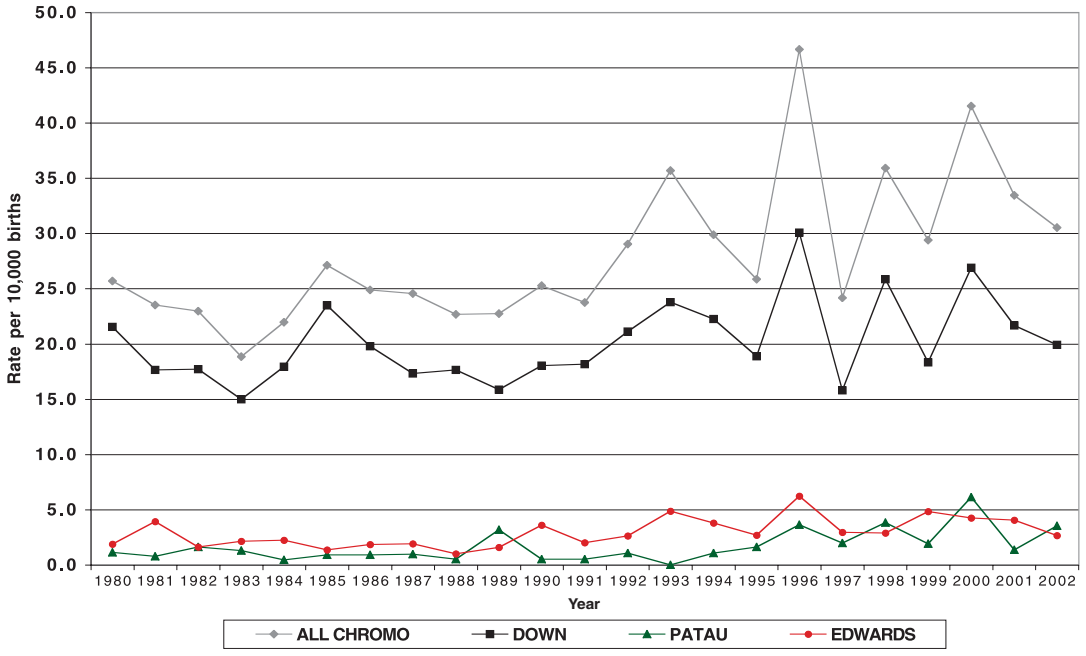


Data source: Eurocat

The upward trend in chromosomal anomalies in recent years has continued (Figure 1.10), again with fluctuations from year to year. The birth prevalence rate in 2002 has shown a decline although data for 2002 are not yet complete. An increase in the number of children born with chromosomal anomalies is inevitably associated with a concomitant rise in associated anomalies, particularly congenital heart defects (Trisomy 21 / Down Syndrome) and holoprosencephaly (Trisomy 13 / Patau Syndrome) with resultant implications for specialist paediatric service provision.

FIGURE 1.10:

Birth prevalence rate of chromosomal anomalies in the Eastern Region, 1980-2002



Data source: Eurocat

Health Impact Assessment

Introducing Health Impact Assessment in the Eastern Region

Health Impact Assessment (HIA) has been described as a developing process that uses a range of methods and approaches to help identify and consider the potential health and equity impacts of a proposal on a given population. Its primary output is a set of evidence-based recommendations geared to informing the decision-making process. These recommendations aim to highlight practical ways to enhance the positive impacts of a proposal, and to remove or minimise any negative impacts on health, well-being and health inequalities that might arise or exist.

Its importance has been specifically highlighted in the National Health Strategy, and the recent partnership document "Sustaining Progress". It is recognised by Article 152 of the Amsterdam Treaty, which calls for the European Union to examine the possible impact of major policies on health.

The ultimate purpose of carrying out HIA is to inform and influence subsequent decision making. Health impact assessment provides a useful, flexible approach to helping those developing and delivering proposals to consider their potential impact on people's health and well-being and on health inequalities, and to identify practical ways to improve and enhance the proposal. While HIA is still a relatively new, developing approach, it draws on experience and skills in existing areas, and is something to which everyone can potentially contribute.

It is now widely recognised that many factors can influence health and health inequalities – including income/poverty, housing, employment, the environment, transport, education, and access to services. For example messages to limit alcohol intake may have a limited effect, unless they are combined with efforts to improve living and working conditions, which lie outside the remit of the health sector. It is increasingly recognised that local authorities, the voluntary sector and community groups, businesses and commercial firms all have important contributions to make. Health Impact Assessment provides a practical way to consider what these contributions are, and engages a range of people in identifying ways to improve proposals. It is more likely to be effective if decision-makers can be involved at the earliest stages. By using HIA in organisations, health considerations can be introduced into the planning and implementation process in a structured and focused way. This means they can be systematically reviewed alongside other priorities.

Health Impact Assessment draws on a range of methods, techniques and skills that can be adapted and tailored to individual circumstances. It draws on elements of project management, needs assessment and research and evaluation, as well as experience and expertise from other forms of impact assessment, such as environmental impact assessment, economic impact assessment, social impact assessment and regulatory impact assessment. Where other impact assessments are required, there is the option to consider whether a separate HIA would be useful, or whether it should be integrated with the other assessments such as environmental impact assessments.

There are a number of key issues relating to what needs to be done to develop Health Impact Assessment

1. Efforts to increase the awareness of Health Impact Assessment, its role and function.

2. Developing capacity to carry out Health Impact Assessment in the health boards, local authorities and in the voluntary/community sectors.

The Local Authorities would appear to be the main route at present for development of health impact assessment. As health issues are incorporated as part of the County/City Development plans, health impact assessment is potentially a major contributor to this agenda if not on its own as an integrated impact assessment the other components of which would be environment and equity impacts. Joint awareness raising days between the health boards and local authorities would be an important initial first step.

Health Impact Assessment Partnership - Ballyfermot

European funding has been obtained by the Department of Public Health through the URBAN II Community Initiative Programme to carry out a HIA of recent transport initatives in Ballyfermot. This represents a partnership between ERHA (Department of Public Heath), SWAHB, Dublin City Council (DCC) and URBAN II and the all Ireland Institute of Public Health.

The objective of the HIA is to assess the health impacts of the traffic elements of the Ballyfermot Village Plan and the health impacts of the transport infrastructure support under the National Development Plan. Field work for the project commenced in autumn 2003. It is expected to produce a set of evidence-based recommendations which will:

- inform the development of future transport initiatives in the Ballyfermot area and the review of the DCC Road Safety Plan,
- maximise the positive health impacts of transport policy e.g. efforts to increase physical activity and to minimise the negative health impacts e.g. air pollution,
- inform the development of a population health strand to the URBAN II Community Initiative Programme.

It is expected that the process will:

- result in a means of proactively engaging the community to participate in decision-making and to develop an effective partnership for conjoint working between the community, statutory and voluntary sectors
- promote inter-sectoral understanding of the relationship between transport and population health and coordination around initiatives which promote healthy transport activity e.g. the use of recreation facilities to promote exercise
- promote learning around the practice of HIA in the Ballyfermot area, Dublin City area, the Republic of Ireland and across the EU.

Health Inequalities[1]

Health inequalities are defined as: *differences in health status or in the distribution of health determinants between different groups e.g. differences in mortality between different social groups.*

People who are poor, who suffer disadvantage or who are socially excluded have poorer health than others e.g. higher rates of mortality, disability and morbidity. Socio-economic status, income and wealth have a strong relationship with health.

When compared with the EU average, the health of the Irish is poor. We have higher rates of heart disease, cancer and smoking related illness. In Ireland the life expectancy for men is 73.0 years and 78.5 for females. The life expectancy for males at the age of 40 is the 4th lowest in the EU and the lowest of EU countries at the age of 65 years.

1. The Institute of Public Health must be acknowledged for these data.

There are differences in health status in different regions and among different groups in Ireland:

- There was a three-fold difference in death rates between men in the highest and lowest socio-economic groupings between 1989 and 1998 in Ireland (Institute of Public Health, 2001).
- In the Eastern Region people living in lower social class areas suffer more premature mortality.

Examples of health inequalities include:

1. **Men:**
   - Men have higher death rates at all ages and for all the leading causes than women. Their main causes of death are circulatory (40%), cancer (27%) and respiratory (13%).
   - Differences in mortality for men and women are particularly pronounced in relation to road traffic injury and suicide.
   - Those in unskilled jobs have higher death rates than their professional counterparts.
   - The SLAN survey found that those with less education were more likely to smoke, drink more alcohol than recommended, eat less fruit and vegetables and exercise less.
   - Men have limited contact with their GP compared with women and they often present late in the course of an illness.
2. **Children:**
   - Children who live in poverty are more likely to experience ill health.
   - In 2000 8% of Irish children were living in consistent poverty and 24% were living in relative poverty. The percentage of children in consistent poverty has remained comparatively stable since 1987. The degree of relative poverty experienced by children appears to have increased.
   - Children in lone parent households and those of traveller and asylum seeking families are particularly at risk of poverty and ill health.
   - Perinatal and infant mortality rates are higher in lower socio-economic families and communities. Sudden Infant Death Syndrome (SIDS) remains a leading cause of death in babies. Parental smoking is associated with the risk of SIDS.
   - Adequate income, equal and affordable access to health care, decent accommodation and access to education are important in improving the health status of children who experience poverty, social exclusion and disability. This requires ongoing investment in family and parent support initiatives and policies that improve standards of living for all families with children.
3. **Older people:**
   - 38% of pensioners live in the lowest fifth of households in terms of income.
   - Income levels greatly impact on the health of older people.
   - The proportion of older people is expected to increase by 13% over the next 15 years.

4. **Travellers:**

- Members of the travelling community live ten years less than settled people.
- Poor accommodation and living conditions contribute to poor health status.
- Compared with the national average, travellers suffer greater rates of infant mortality.
- Only 3% of all travellers are aged 65 years or more, compared with 10% of the population of the Eastern Region.

5. **Homeless people:**

- Homeless people are at greater risk of preventable diseases and mental health problems.
- They are more likely to have poor physical health, higher rates of hepatitis, HIV, TB, poor nutrition and alcohol and drug addiction.

Action Areas to Target Health Inequalities

The Department of Public Health is responsible for measuring and monitoring health status. The evidence suggests that there are a number of specific interventions among disadvantaged groups which are most likely to have an impact on their health status. Key interventions that would contribute towards meeting targets to reduce inequalities in mortality and life expectancy include:

- reducing smoking in manual workers
- preventing and managing other risk factors for coronary heart disease and cancer such as poor diet and obesity, physical inactivity and hypertension through effective primary care and public health interventions especially targeting those aged over 50 years
- improving housing quality by tackling cold and dampness and
- reducing injuries at home and on the road.

To close the gap in infant mortality effective measures involve supporting families, mothers and children to ensure the best possible start in life and to break the inter-generational cycle of ill health. Key short-term interventions include:

- improving the quality and accessibility of antenatal care and early years support in disadvantaged areas
- reducing smoking and improving nutrition in pregnancy and early years
- supporting teenage parents and reducing teenage pregnancy rates.

In relation to reducing teenage pregnancy the Department of Public Health has taken the lead in developing a sexual health strategy for the region through multidisciplinary and intersectoral working.

In relation to reducing smoking in pregnancy and the early years plans are underway to conduct a randomised controlled trial to reduce smoking prevalence in pregnancy and to prevent relapse in the post-partum period. This project is a partnership between the

Department of Public Health, ERHA, Rotunda Hospital and NAHB (smoking cessation services, Public Health Nurse service).

The objectives of the study are to:

- reduce smoking in pregnancy using midwives trained in smoking cessation,
- decrease relapse post-partum using public health nurses trained in smoking cessation,
- support parents who gave up smoking during pregnancy to remain smoke free and to
- prevent new parents smoking in the presence of children.

New Developments: Eastern Region Health Atlas

The day-to-day work of the Department of Public Health is heavily dependent upon the ready availability of an extensive range of health information from within and outside the health sector. The information requirements are primarily determined within the context of *Quality and Fairness: A Health System for You*, and will be further developed in light of the forthcoming National Health Information Strategy.

A very wide range of health information is required to underpin population health and service planning and implementation functions. The vision of the Department of Public Health is to create a trusted, valued and accessible health information system that integrates information from a range of sources and supports the core functions of the Department. To capture the concept of providing general access to a global and integrated range of health information that includes demography, mortality, morbidity, health status indicators, service activity etc. on a regional and sub-regional basis, the system is referred to as the **Health Atlas.**

The Atlas will be harmonised with the national Public Health Information System (PHIS) developed by the Department of Health and Children. It will allow drill-down through a user-friendly Windows environment onto a range of health indicators by small area within the region. The key to this functionality is that the major datasets are being accurately geo-coded by district electoral division (DED) of which there are almost 500 in the Region using the Electronic Eastern Regional Street Index. Such data can be combined as required to give data for any sub-regional administrative areas. It will provide for different levels of access to the data in light of information governance requirements.

The Atlas is being developed in-house as a collaborative project involving the Department of Public Health and the Department of Health and Children. Access to it will be primarily over the regional network, but CD-ROM and web-enabled access are also envisaged. Information will be presented in tables, charts and map formats. The prototype was developed during 2003, and initially includes demographic, mortality and cancer incidence data. Subsequently, births, congenital anomalies, infectious diseases, HIPE, GMS prescribing data etc. will be added as the datasets are geo-coded and are prepared in the required formats.

The Atlas will provide health information by:

- District electoral division (DED)
- Area health boards
- Hospital ambulance or other service catchment areas
- Community care areas

- Local authority areas
- Other administrative areas based on combinations of DEDs.

Where data are unavailable by DED (e.g. due to the quality of the recorded addresses) or where it is undesirable to present data by DED (e.g. where the potential to identify individuals could arise in the case of rare diseases), it will be provided by county and Area Health Board.

The core purpose of the Health Atlas is to enable that best use can be made of available health information by improving access to a range of information that will be of everyday use to the stakeholder groups.

Priorities for action

- Inequalities in health status exist in the Eastern Region. It is a priority for the health service to identify, quantify and address specific health inequalities.
- Information systems relating to the use of health services must be developed especially for key groups that can suffer inequalities such as asylum seekers.
- Increased use of Health Impact Assessment as a tool for identifying health need is required.
- Greater collaborative work between the health service and other agencies, especially local authorities and the education sector, is urgently needed. Such approaches will lead to added value for each agency but particularly for people who currently suffer inequalities in health.
- The availability of health information that is easily accessible and user friendly is a priority.

Chapter 2

Cancer

Introduction

Cancer kills approximately 2,500 people in the Eastern Region every year. It is the second most common cause of death after cardiovascular disease and is the most common cause of death in people under the age of 65. One in three people will get cancer in their lifetime and one in four will die from it.

The aim of our National Cancer Strategy (1996) was:

> *'To achieve a 15% reduction in cancer mortality in people under the age of 65 in the 10 year period to 2004'*

This aim was achieved in the Eastern Region in 1999 but there is still no room for complacency. As mortality in Ireland exceeds many EU countries we must continue to:

- Reduce the incidence of preventable cancers
- Ensure that people with cancer get the right professional support, at the right time, in the right place and the best available treatment

Key points: Priorities

- Improve survival.
- Reduce the incidence of preventable cancers.
- Provide fair access to the right professional treatment, at the right time, in the right place.
- Provide the best available treatment for all patients.

For the purposes of this report, cancer is defined as all malignant neoplasms with the exception of non-melanoma skin cancer (ICD-10 C00-C96, excluding ICD-10 C44). This particular type of skin cancer is excluded so as to remove any bias in the data caused by the fact that deaths from it are rare, it affects large numbers in the older age groups and it tends to be under-reported. Multiple tumours are also excluded.

Population denominator data for rating purposes were compiled from the 1991, 1996 and 2002 Censuses of Population. The actual 1996 census figures were used along with estimates, by means of linear interpolation, for the intercensal years, 1994-1995 and 1997-2000.

Key points: Early detection

- Early detection is the key to survival.
- Patients need good information on symptoms that may indicate cancer.
- Patients should seek early medical help if concerned about symptoms.
- Late presentation for treatment will adversely affect disease outcome.

Main Findings

There were 29,981 new cases of cancer, excluding non-melanoma skin cancer, in the Eastern Region for the years 1994 to 2000 inclusive i.e. an annual average of 4,283, (Table 2.1). With an ageing population, further increases are expected. By 2015 it is estimated that there will be a 40% increase in cancer cases compared with the period 1994-1998.

Table 2.1: Cancer in the Eastern Region, 1994 to 2000. Numbers of new cases by year of diagnosis

Year	Number
1994	4,137
1995	4,045
1996	4,105
1997	4,313
1998	4,388
1999	4,410
2000	4,583
Total	**29,981**

Data source: National Cancer Registry

Table 2.2 shows that over the seven year period, 1994-2000:

- More female than male cancers were registered
- Childhood cancers accounted for 0.8% of all cancers
- 56% of cancers were recorded for persons aged 65 years or older
- From the age of 15 years, the number of cancers increased until they peaked in the 70-74 year age group and thereafter declined
- Between the ages of 20 – 59 years female registrations dominated whereas for ages 60 – 79 years a greater number of male cancers were registered.

Table 2.2: Cancer in the Eastern Region, 1994 to 2000. Numbers of new cases by age group and gender

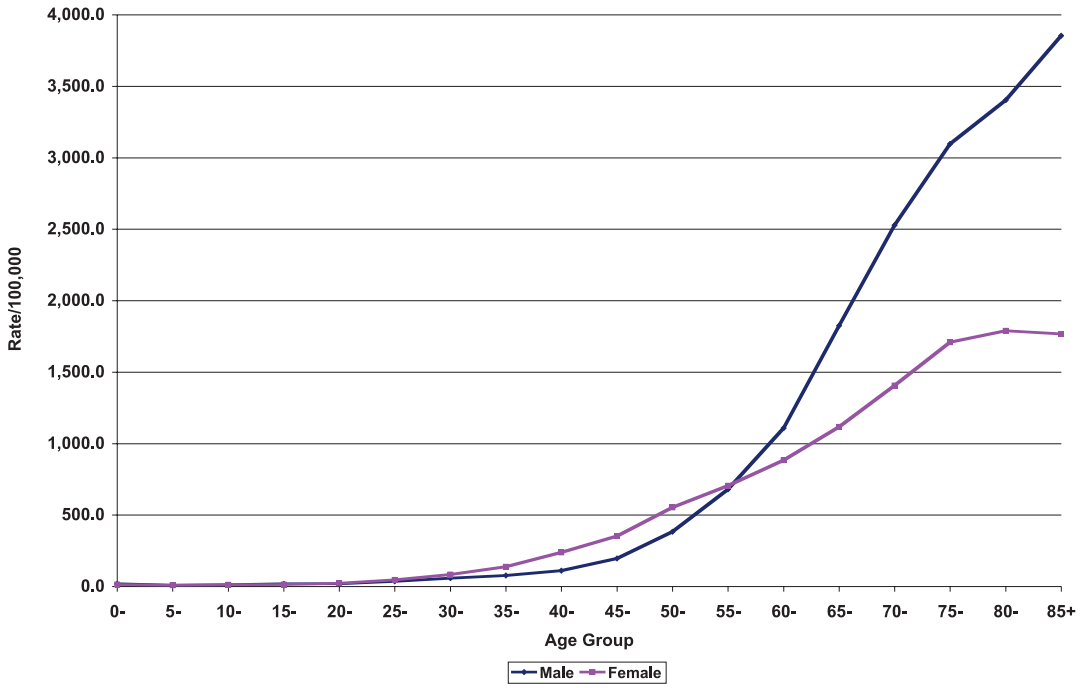
Age group	Male (no.)	Female (no.)	Total (no.)	Age group	Male (no.)	Female (no.)	Total
0-4	60	44	104	50-54	894	1,346	2,240
5-9	31	30	61	55-59	1,311	1,444	2,755
10-14	43	45	88	60-64	1,769	1,551	3,320
15-19	79	53	132	65-69	2,384	1,781	4,165
20-24	82	100	182	70-74	2,535	1,956	4,491
25-29	138	187	325	75-79	2,041	1,842	3,883
30-34	206	324	530	80-84	1,250	1,340	2,590
35-39	250	481	731	85+	744	999	1,743
40-44	328	756	1,084	Not known	5	1	6
45-49	536	1,015	1,551	All Ages	14,686	15,295	29,981

Data source: National Cancer Registry

Figure 2.1 shows the age specific cancer incidence rates in the Eastern Region between 1994 and 2000. With the exception of females aged 85 years and older, adult age-specific rates increased with age for both genders. Higher female rates were observed for ages 20 to 59 years inclusive. The gap between genders widened thereafter with male rates dominating.

FIGURE 2.1:

Age specific cancer incidence rates per 100,000 by gender in the Eastern Region, 1994 to 2000



Data source: National Cancer Registry

Key points: Trends

- It is estimated that there will be a 40% increase in cancer cases by 2015.
- Over one half of cancers occurred in people aged over 65 years.
- The risk of developing cancer increases with age and peaks in the 70-74 age group.
- In the 20-59 year age group there are more cancers in females than in males.

Cancer in males

Table 2.3A provides data on the different types of cancer, in descending order of frequency, in males. The three commonest cancer sites in men of all ages were:

- Prostate: 2,676 cases (18.2%)
- Lung: 2,605 cases (17.7%)
- Colorectal: 2,229 cases (15.2%)

Table 2.3A: Cancer in the Eastern Region, 1994 to 2000. Males: Numbers and percentages of new cases by site

	All ages		Under 65 years		Cases aged under 65 years as % of all ages
	Number	%	Number	%	
Prostate	2,676	18.2	605	10.6	22.6
Lung	2,605	17.7	827	14.4	31.7
Colorectal	2,229	15.2	811	14.2	36.4
Bladder	801	5.5	258	4.5	32.2
Stomach	733	5.0	259	4.5	35.3
Lymphoma	640	4.4	430	7.5	67.2
Mouth and pharynx	463	3.2	257	4.5	55.5
Leukaemia	397	2.7	211	3.7	53.1
Oesophagus	396	2.7	146	2.5	36.9
Kidney	391	2.7	202	3.5	51.7
Melanoma	387	2.6	247	4.3	63.8
Brain	343	2.3	244	4.3	71.1
Pancreas	298	2.0	99	1.7	33.2
Testis	246	1.7	243	4.2	98.8
Larynx	241	1.6	123	2.1	51.0
Multiple myeloma	198	1.3	79	1.4	39.9
Other	859	5.8	430	7.5	50.1
Not known	783	5.3	256	4.5	32.7
All sites	14,686	100.0	5,727	100.0	39.0

Data source: National Cancer Registry

These three cancers accounted for 51% of all cancers in males. At the time of diagnosis, 39% of male cancers were aged less than 65 years i.e. 5,727 cases. The three most common sites in men aged under 65 years were:

- Lung: 827 cases (14.4%)
- Colorectal: 811 cases (14.2%)
- Prostate: 605 cases (10.6%)

Almost all (99%) testicular cancers were registered in the under 65 age group whereas prostate cancer, which tends to affect older men, had 23% of cases diagnosed in those aged less than 65 years.

Table 2.3B: Cancer in the Eastern Region, 1994 to 2000. Females: Numbers and percentages of new cases by site

	All ages		Under 65 years		Cases aged under 65 years as % of all ages
	Number	%	Number	%	
Breast	4,411	28.8	2,869	38.9	65.0
Colorectal	1,826	11.9	576	7.8	31.5
Lung	1,645	10.8	464	6.3	28.2
Ovary	762	5.0	454	6.2	59.6
Melanoma	621	4.1	391	5.3	63.0
Lymphoma	608	4.0	333	4.5	54.8
Corpus uteri	486	3.2	273	3.7	56.2
Stomach	484	3.2	122	1.7	25.2
Cervix	484	3.2	400	5.4	82.6
Pancreas	360	2.4	70	0.9	19.4
Bladder	347	2.3	107	1.5	30.8
Leukaemia	324	2.1	158	2.1	48.8
Oesophagus	312	2.0	75	1.0	24.0
Brain	260	1.7	170	2.3	65.4
Kidney	223	1.5	109	1.5	48.9
Mouth	190	1.2	79	1.1	41.6
Multiple myeloma	151	1.0	42	0.6	27.8
Larynx	58	0.4	27	0.4	46.6
Other	909	5.9	431	5.8	47.4
Not known	834	5.5	226	3.1	27.1
All sites	15,295	100.0	7,376	100.0	48.2

Data source: National Cancer Registry

Cancer in females

Table 2.3B provides data on the different types of cancer, in descending order of frequency, in females. The three most common sites of disease in females (all ages) were:

- Breast: 4,411 cases (29%)
- Colorectal: 1,826 cases (12%)
- Lung: 1,645 cases (11%)

These three cancers accounted for 52% of all cases diagnosed in females. Breast cancer is, by far, the most common form of cancer in women.

At the time of diagnosis, 48% of female cancers were aged less than 65 years i.e. 7,376 cases. The three most common sites in women under 65 years were:

- Breast: 2,869 cases (39%)
- Colorectal: 576 cases (8%)
- Lung: 464 cases (6%)

In women aged under 65 years, nearly two out of every five cancers diagnosed were sited in the breast (39%). Gender-specific cancers, i.e. breast, ovary, cervix and corpus uteri had the majority of their cases diagnosed in the under 65 age group. This proportion was highest for cervical cancer with 400 of the 484 cases (83%) aged under 65 years.

Gender differences in the proportion of cancers diagnosed in those aged less than 65 years are statistically significantly - 48% of females versus 39% of males ($p<0.01$).

Key points: Common cancers

- Prostate cancer is the most common cancer in males.
- Breast cancer is the most common cancer in females.
- 48% of female cancers occurred under the age of 65 compared with 39% of male cancers.

Age Group at Time of Diagnosis

Table 2.4 shows the most frequently diagnosed cancers by age group for each gender:

- Malignant brain tumours and leukaemia dominated in children
- For young adult males, testicular cancer was the most common cancer
- From 45 to 74 years lung cancer dominated and prostate cancer gradually increased its ranking from third place in the 45-64 year age group to first in the oldest age group.
- Breast cancer had the leading position in all adult female age groups but colorectal cancer came a very close second in the 75+ year age group.
- Thirty-nine percent (39%) of breast cancer cases were diagnosed in the designated screening population i.e. the 50-64 year age group.

Table 2.4: Cancer in the Eastern Region 1994 to 2000. Numbers and percentages of the most common cancers by gender and age group.

MALES	No	%	FEMALES	No	%
Under 15			*Under 15*		
Leukaemia	36	26.9	Leukaemia	37	31.1
Brain	31	23.1	Brain	24	20.2
Lymphoma	23	17.2	Lymphoma	13	10.9
15-44			*15-44*		
Testis	207	19.1	Breast	659	34.7
Lymphoma	172	15.9	Cervix	251	13.2
Melanoma	109	10.1	Melanoma	177	9.3
Brain	81	7.5	Lymphoma	147	7.7
Colorectal	68	6.3	Ovary	142	7.5
Leukaemia	64	5.9	Colorectal	72	3.8
45-64			*45-64*		
Lung	782	17.3	Breast	2,210	41.3
Colorectal	743	16.5	Colorectal	504	9.4
Prostate	598	13.3	Lung	451	7.7
Lymphoma	235	5.2	Ovary	310	5.8
Stomach	228	5.1	Corpus Uteri	242	4.5
65-74			*65-74*		
Lung	1,063	21.6	Breast	839	22.5
Prostate	1,059	21.5	Lung	607	16.2
Colorectal	795	16.2	Colorectal	548	14.7
Stomach	270	5.5	Stomach	157	4.2
Bladder	259	5.3	Ovary	155	4.1
75+			*75+*		
Prostate	1,011	25.1	Breast	703	16.8
Lung	714	17.7	Colorectal	702	16.8
Colorectal	623	15.4	Lung	574	13.7
Bladder	284	7.0	Stomach	205	4.9
Stomach	204	5.1	Pancreas	180	4.3

Data source: National Cancer Registry

Specific cancers including time trend analysis*

This section examines trends for major cancers in the Eastern Region:

- Lung
- Breast
- Prostate

It also examines emerging trends in other important cancers:

- Melanoma
- Lymphoma
- Testis

* Time trend analysis was carried out by applying a linear model to a logarithmic transformation of the data.

For each major cancer, time trend analysis is performed and information is presented on incidence, mortality and hospitalisation. Comparisons are made where possible with both national and EU rates. Data are provided for all age groups together, the under 65 year age group and by gender. Information on smoking status is also presented where relevant.

Lung Cancer. Males: All ages

Key point:

- Lung cancer incidence, mortality and hospitalisation rates for males of all ages are all decreasing significantly in the Eastern Region.

Incidence:

The numbers and age standardised rates of new male lung cancer cases diagnosed each year are shown in Table 2.5. Regionally, the numbers decreased from 410 in 1994 to 327 in 2000.

Table 2.5: Male lung cancer in the Eastern Region, 1994 to 2000. Numbers and age standardised rates (ASRs) of new cases by year and area

	East Coast Area		Northern Area		South Western Area		Eastern Region	
	N	ASR	N	ASR	N	ASR	N	ASR
1994	77	63.9	153	100.4	178	112.8	410	95.1
1995	82	65.8	134	85.9	172	107.7	388	87.7
1996	60	47.2	147	89.8	155	95.0	362	79.5
1997	58	44.1	136	83.2	163	96.9	357	77.0
1998	77	57.9	150	88.6	152	88.9	380	80.1
1999	76	56.3	159	93.7	145	83.5	381	79.5
2000	53	37.7	150	86.6	124	68.9	327	66.1

Data source: National Cancer Registry

Regional age standardised rates decreased significantly, by 4.6% annually, (Figure 2.2). The downward trend in the South Western area was significant with rates decreasing by 7.3% annually.

Mortality:

Mortality rates for male lung cancer from 1980 to 2001 for the region, for Ireland and for the EU show significant downward time trends for all three areas (Figure 2.3). The regional mortality level fell by 2.0% annually while the national and EU levels fell at the slower rates of 1.2% and 0.8% respectively. Should these rates of change be maintained, it is expected that the regional rate will be below the EU rate before the year 2010.

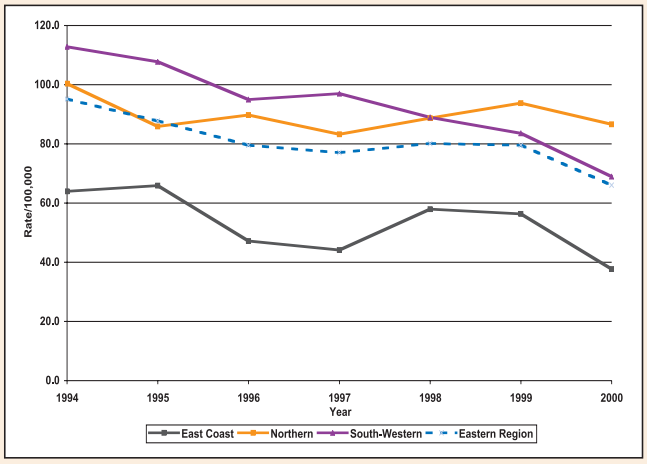
Hospitalisation:

Age standardised rates of hospitalisation for lung cancer in male residents of the Eastern Region and of Ireland for the years 1994 to 2001 inclusive show significant downward time

ALL AGES

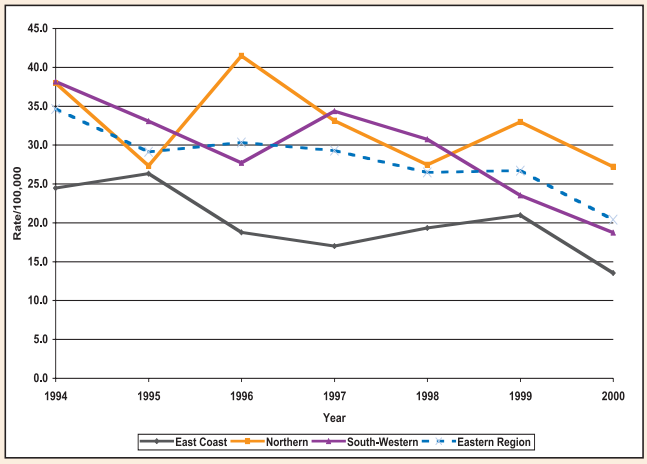
FIGURE 2.2:

Age standardised rates per 100,000 for male lung cancer incidence by area, 1994 to 2000.



0-64 YEARS

FIGURE 2.5:



Data source: National Cancer Registry

FIGURE 2.3:

Age standardised rates per 100,000 for male lung cancer mortality, Eastern Region, Ireland and EU, 1980 to 2001

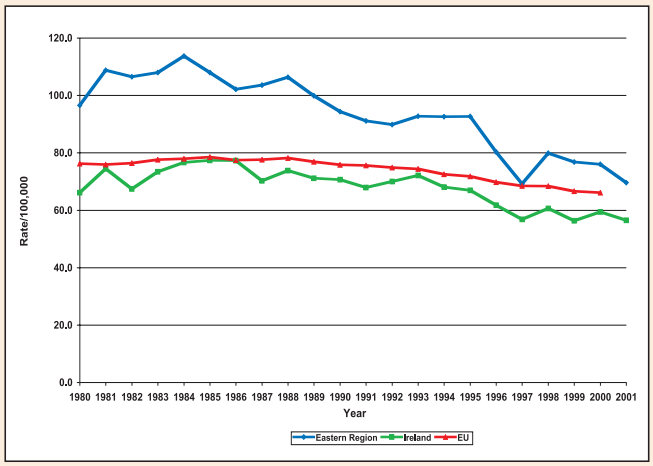
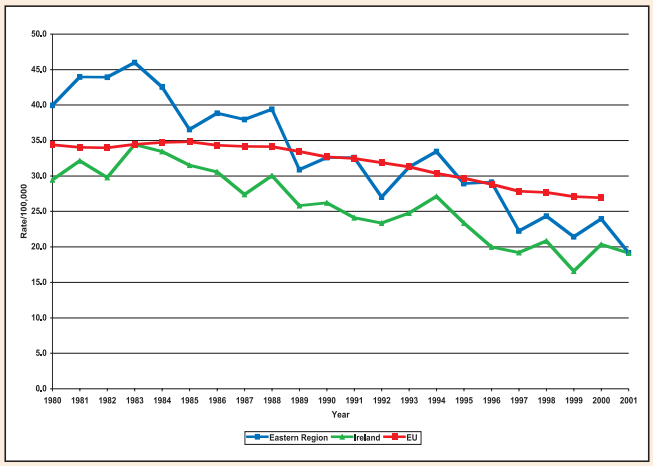


FIGURE 2.6:



Data source: PHIS, version 6; WHO HFA database, 2003

FIGURE 2.4:

Age standardised hospitalisation rates per 100,000 for male lung cancer, Eastern Region and Ireland, 1994 to 2001

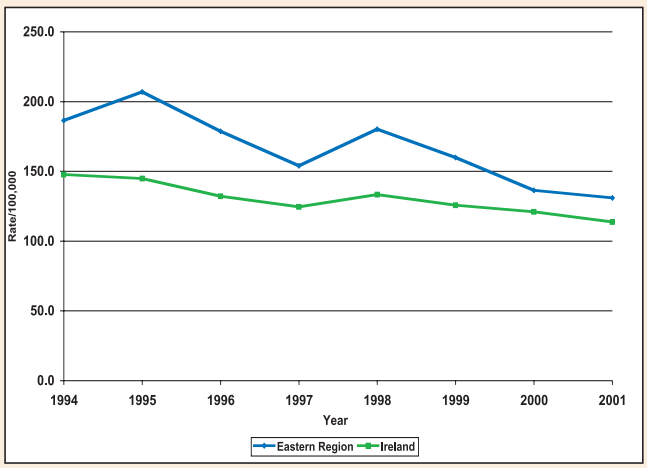
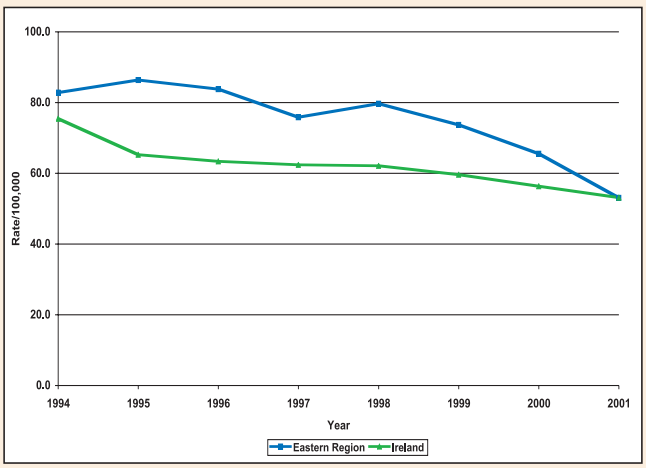


FIGURE 2.7:



Data source: PHIS, version 6

trends (Figure 2.4). The national hospitalisation rate fell by 3.3% annually while the regional level fell by 5.6% annually.

Smoking Status:

The smoking status of newly diagnosed male lung cancer cases during the years 1994 to 2000 is shown in Table 2.6. Overall, 5% of cases never smoked.

Table 2.6: Percentages of new cases of male lung cancer in the Eastern Region by smoking status, 1994 to 2000

	Current Smoker	Ex-Smoker	Never Smoked	Not Known	Total
1994	59.8	21.7	7.6	11.0	100.0
1995	55.9	28.6	4.4	11.1	100.0
1996	52.8	25.1	3.9	18.2	100.0
1997	51.0	23.0	5.3	20.7	100.0
1998	53.2	29.0	5.0	12.9	100.0
1999	54.6	27.6	3.7	14.2	100.0
2000	50.6	27.6	7.1	14.7	100.0
1994-2000	54.2	26.0	5.3	14.6	100.0

Data source: National Cancer Registry

Lung Cancer. Males: Under 65 years

Incidence:

The numbers and age standardised rates of new lung cancer cases diagnosed each year in males aged less than 65 years are shown in Table 2.7. Regionally, the numbers of cases decreased from 136 in 1994 to 93 in 2000.

Table 2.7: Male lung cancer in the Eastern Region, 1994 to 2000. Numbers and ASRs of new cases aged under 65 years by year and area

	East Coast		Northern		South Western		Eastern Region	
	N	ASR	N	ASR	N	ASR	N	ASR
1994	25	24.5	55	38.0	55	38.2	136	34.6
1995	28	26.3	40	27.3	48	33.1	116	29.1
1996	20	18.8	63	41.5	41	27.7	124	30.3
1997	19	17.0	51	33.1	54	34.4	124	29.3
1998	22	19.3	43	27.5	51	30.7	116	26.5
1999	24	21.0	52	33.0	41	23.5	118	26.7
2000	16	13.5	44	27.2	33	18.7	93	20.4

Data source: National Cancer Registry

Key point

- Lung cancer incidence, mortality and hospitalisation rates for males aged under 65 years are all decreasing significantly in the Eastern Region.

A significant downward time trend was identified for the regional age standardised rates, Figure 2.5, with an annual percentage change of -6.8%. Rates in the East Coast and South Western areas also displayed significant downward time trends with changes of –7.9% and –9.7% respectively.

Mortality:

Mortality rates for lung cancer in males aged under 65 years from 1980 to 2001 were examined for the region, for Ireland and for the EU (Figure 2.6). Significant downward time trends were identified for all three areas. The regional decline was greatest as it had a rate of decrease of 3.7% per year compared to 2.9% for Ireland and 1.4% for the EU with the result that the regional rate has been below that of the EU since 1997.

Hospitalisation:

As with male lung cancer for all ages, significant downward time trends for age standardised hospitalisation rates were observed for residents of the Eastern Region and of Ireland over the period 1994 to 2001 inclusive (Figure 2.7). The annual percentage changes were –5.8% and –4.0% respectively. Given these trends, area rates are expected to remain level between now and 2010.

Smoking Status:

The smoking status of newly diagnosed male lung cancer cases aged less than 65 during the years 1994 to 2000 inclusive is shown in Table 2.8. Overall, 5% of cases never smoked.

Table 2.8: Percentages of new cases of male lung cancer 0 to 64 years, in the Eastern Region by smoking status, 1994 to 2000

	Current Smoker	Ex-Smoker	Never Smoked	Not Known	Total
1994	69.9	14.7	8.1	7.4	100.0
1995	75.9	15.5	1.7	6.9	100.0
1996	57.3	19.4	3.2	20.2	100.0
1997	60.5	19.4	7.3	12.9	100.0
1998	66.4	19.0	3.5	11.2	100.0
1999	59.3	24.6	1.7	14.4	100.0
2000	60.2	24.7	5.4	9.7	100.0
1994-2000	64.3	19.4	4.5	11.9	100.0

Data source: National Cancer Registry

Lung Cancer. Females: All ages

Key point

- Regionally no significant time trends were in evidence in terms of lung cancer incidence, mortality and hospitalisation rates for females.

Incidence:

The numbers and age standardised rates of new female lung cancer cases diagnosed each year are shown in Table 2.9. Regionally, the numbers of cases increased from 195 in 1994 to 233 in 2000.

Table 2.9: Female lung cancer in the Eastern Region, 1994 to 2000. Numbers and ASRs of new cases by year and area

	East Coast		Northern		South Western		Eastern Region	
	N	ASR	N	ASR	N	ASR	N	ASR
1994	44	23.2	84	39.6	66	29.2	195	31.4
1995	50	26.4	97	43.8	89	38.2	236	36.9
1996	50	26.8	99	43.7	84	37.6	233	36.5
1997	70	36.2	76	34.6	105	47.5	251	39.8
1998	55	28.4	87	38.0	98	43.1	242	37.4
1999	50	24.5	126	53.9	78	33.9	255	38.5
2000	61	29.3	85	36.7	87	37.1	233	35.0

Data source: National Cancer Registry

The age standardised rates, as displayed in Figure 2.8, produced no significant time trends.

Mortality:

Mortality rates for female lung cancer from 1980 to 2001 were examined for the region, for Ireland and for the EU. Significant upward time trends were identified for Ireland and for the EU but not for the region (Figure 2.9). The Irish and EU annual increases were 0.5% and 1.9% respectively. Regional levels have been consistently more than double the EU average since 1980.

Hospitalisation:

Age standardised rates of hospitalisation for lung cancer in female residents of the Eastern Region and of Ireland for the years 1994 to 2001 inclusive were examined and significant time trends were not in evidence (Figure 2.10).

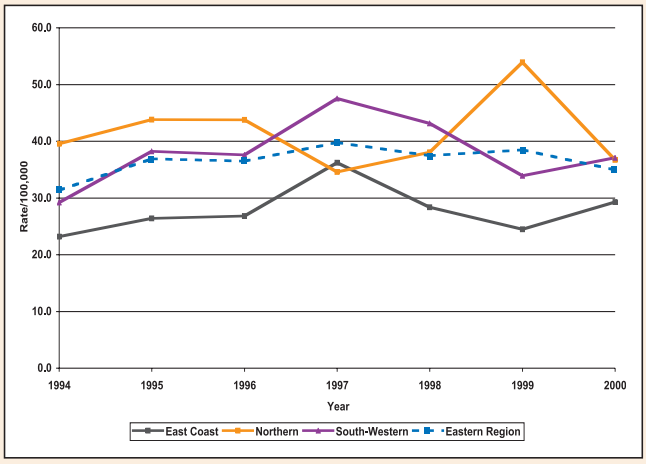
Smoking Status:

The smoking status of newly diagnosed female lung cancer cases during the years 1994 to 2000 inclusive is shown in Table 2.10. Overall, 10% of cases never smoked.

ALL AGES

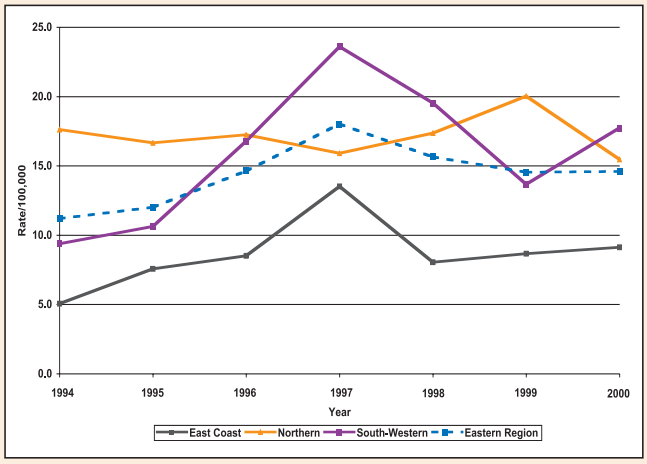
FIGURE 2.8:

Age standardised rates per 100,000 for female lung cancer incidence by area, 1994 to 2000



0-64 YEARS

FIGURE 2.11:



Data source: National Cancer Registry

FIGURE 2.9:

Age standardised rates per 100,000 for female lung cancer mortality, Eastern Region, Ireland and EU, 1980 to 2001

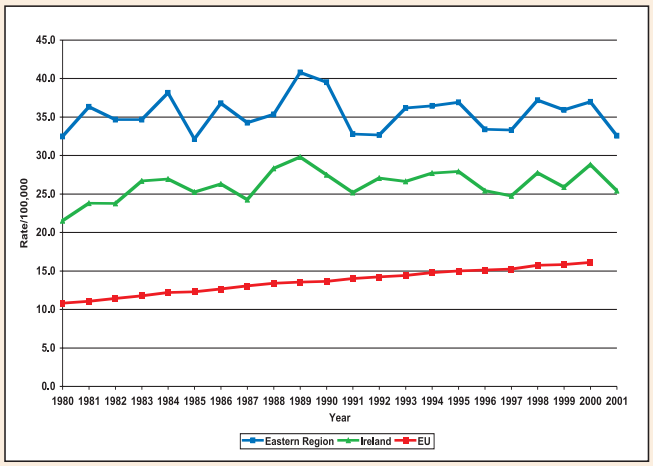
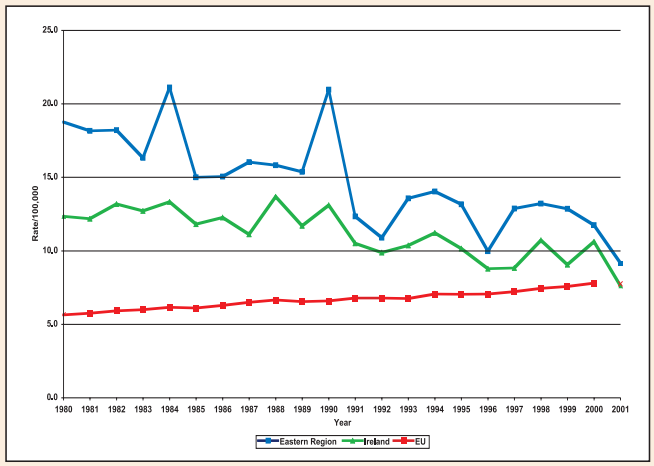


FIGURE 2.12:



Data source: PHIS, version 6; WHO HFA database, 2003

FIGURE 2.10:

Age standardised hospitalisation rates per 100,000 for female lung cancer, Eastern Region and Ireland, 1994 to 2001

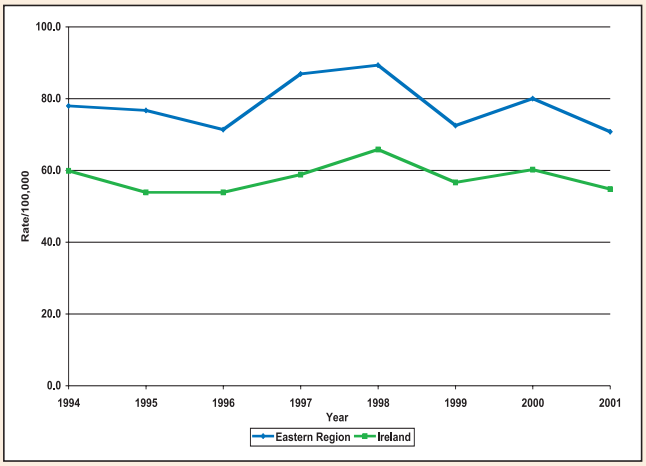
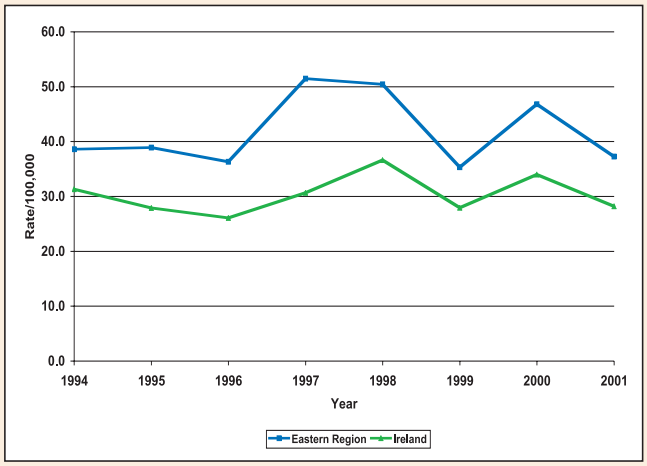


FIGURE 213:



Data source: PHIS, version 6

Table 2.10: Percentages of new cases of female lung cancer in the Eastern Region by smoking status, 1994 to 2000

	Current Smoker	Ex-Smoker	Never Smoked	Not Known	Total
1994	52.8	17.4	13.3	16.4	100.0
1995	50.4	24.6	10.6	14.4	100.0
1996	50.6	24.0	9.9	15.5	100.0
1997	51.0	22.7	7.6	18.7	100.0
1998	51.9	24.9	9.1	14.1	100.0
1999	52.2	24.3	8.2	15.3	100.0
2000	54.5	22.8	12.0	10.7	100.0
1994-2000	51.9	23.1	10.0	15.0	100.0

Data source: National Cancer Registry

Lung Cancer. Females: Under 65 years

Key point

- Lung cancer mortality rates for women aged under 65 years in the region are decreasing significantly.

Incidence:

The numbers and age standardised rates of new female lung cancer cases diagnosed each year in females aged less than 65 years are shown in Table 2.11. Regionally, the numbers of cases increased from 49 in 1994 to 71 in 2000.

Table 2.11: Female lung cancer in the Eastern Region, 1994 to 2000. Numbers and ASRs of new cases aged under 65 years by year and area

	East Coast		Northern		South Western		Eastern Region	
	N	ASR	N	ASR	N	ASR	N	ASR
1994	6	5.1	28	17.6	15	9.4	49	11.2
1995	9	7.6	27	16.7	17	10.6	53	12.0
1996	11	8.5	28	17.2	27	16.8	66	14.6
1997	17	13.5	26	15.9	38	23.6	81	18.0
1998	10	8.1	30	17.4	34	19.5	74	15.6
1999	11	8.7	35	20.0	24	13.7	70	14.5
2000	12	9.1	27	15.5	32	17.7	71	14.6

Data source: National Cancer Registry

The age standardised rates produced no significant trend over time, Figure 2.11.

Key points: Lung Cancer

- Smoking causes 95% of lung cancers and 33% of all cancers.
- Deaths from lung cancer in males are declining at a greater rate than nationally or the EU average.
- Fewer males now smoke.
- Mortality for females in the East is double the EU average.
- Lung cancer deaths in females remain stubbornly high.
- 90-95% of lung cancer patients smoked.

Mortality:

Mortality rates for lung cancer in females aged under 65 years from 1980 to 2001 were examined for the region, for Ireland and for the EU. Significant downward time trends were identified for the region and for Ireland whereas the EU displayed a significant upward trend (Figure 2.12). Regionally and nationally, rates fell yearly by 2.7% and 1.9% respectively while the EU rate increased by 1.4% annually. Should these levels of change be maintained, the expectation is that the regional rate will fall below that for the EU in the year 2010.

Hospitalisation:

Age standardised hospitalisation rates for lung cancer in females aged under 65 years for residents of the Eastern Region and of Ireland over the period 1994 to 2001 were examined and significant time trends were not in evidence (Figure 2.13).

Smoking Status:

The smoking status of newly diagnosed female lung cancer cases aged under 65 years during the years 1994 to 2000 inclusive is shown in Table 2.12. Overall, 10% of cases never smoked.

Table 2.12: Percentages of new cases of female lung cancer, 0 to 64 years in the Eastern Region by smoking status, 1994 to 2000

	Current Smoker	Ex-Smoker	Never Smoked	Not Known	Total
1994	65.3	12.2	10.2	12.2	100.0
1995	64.2	11.3	11.3	13.2	100.0
1996	54.6	19.7	10.6	15.2	100.0
1997	67.9	12.4	7.4	12.4	100.0
1998	62.2	12.2	12.2	13.5	100.0
1999	64.3	17.1	5.7	12.9	100.0
2000	63.4	16.9	11.3	8.5	100.0
1994-2000	63.2	14.7	9.7	12.5	100.0

Data source: National Cancer Registry

Breast Cancer

Key point

- Incidence and hospitalisation rates for breast cancer in the region are increasing significantly while mortality rates are decreasing significantly.

Incidence:

The numbers and age standardised rates of new breast cancer cases diagnosed each year are shown in Table 2.13. Regionally, the numbers of cases increased from 578 in 1994 to 767 in 2000.

Table 2.13: Breast cancer in the Eastern Region, 1994 to 2000. Numbers and EASRs of new cases by year and area

	East Coast		Northern		South Western		Eastern Region	
	N	ASR	N	ASR	N	ASR	N	ASR
1994	171	113.4	185	93.6	222	108.3	578	104.5
1995	166	104.7	172	84.9	199	93.6	537	93.2
1996	179	113.1	173	84.9	243	113.0	596	103.5
1997	189	115.3	222	105.8	214	94.5	625	104.5
1998	182	113.5	212	98.8	256	112.8	651	108.1
1999	182	108.0	222	104.3	250	109.0	657	107.5
2000	198	115.5	294	137.9	275	116.5	767	123.9

Data source: National Cancer Registry

Regional age standardised rates increased significantly, by 3.0% annually, Figure 2.14. A significant upward trend was also identified for the Northern area with rates increasing by 6.2% annually.

Mortality:

Mortality rates for breast cancer from 1980 to 2001 were examined for the region, for Ireland and for the EU (Figure 2.15). A significant downward time trend was established for the region with an annual percentage change of –0.9%.

Hospitalisation:

Age standardised rates of hospitalisation for breast cancer in residents of the Eastern Region and of Ireland for the years 1994 to 2001 inclusive were examined and significant increasing time trends were in evidence. The regional level rose by 10.5% per year and the national level by 8.0%, (Figure 2.16).

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FIGURE 2.14:

Age standardised rates per 100,000 for breast cancer incidence by area,1994 to 2000

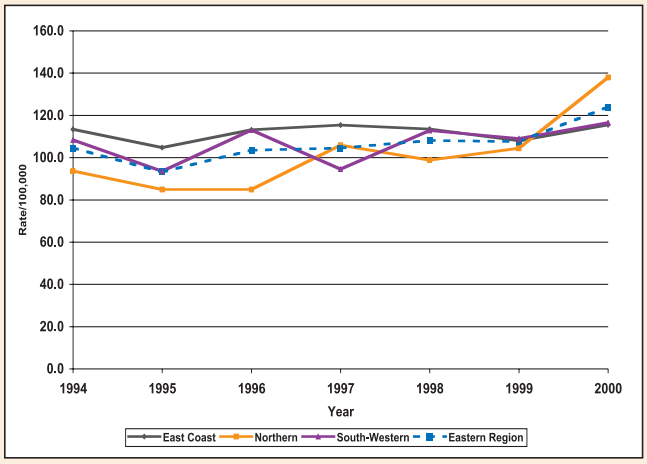


FIGURE 2.15:

Age standardised rates per 100,000 for breast cancer mortality, Eastern Region, Ireland and EU, 1980 to 2001

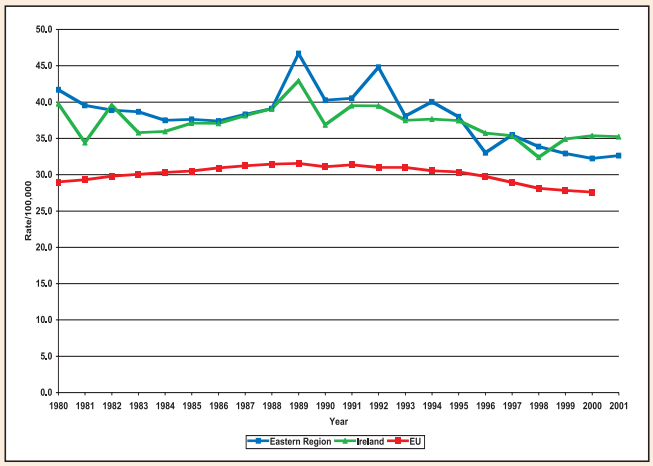
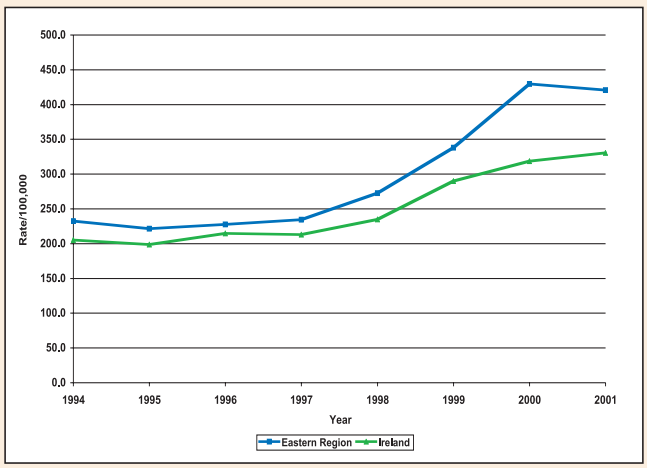


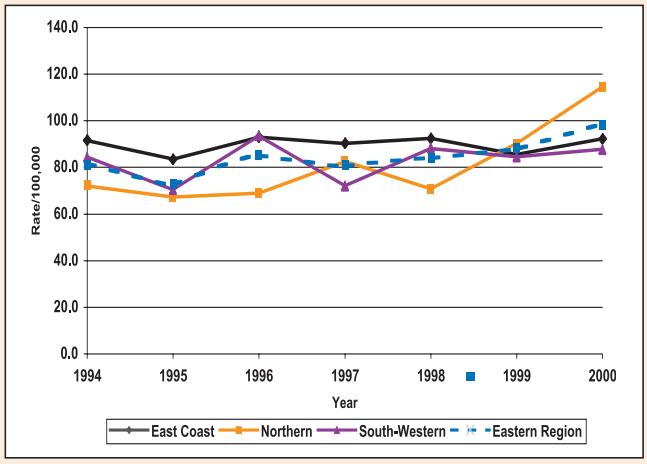
FIGURE 2.16:

Age standardised hospitalisation rates per 100,000 for breast cancer, Eastern Region and Ireland, 1994 to 2001



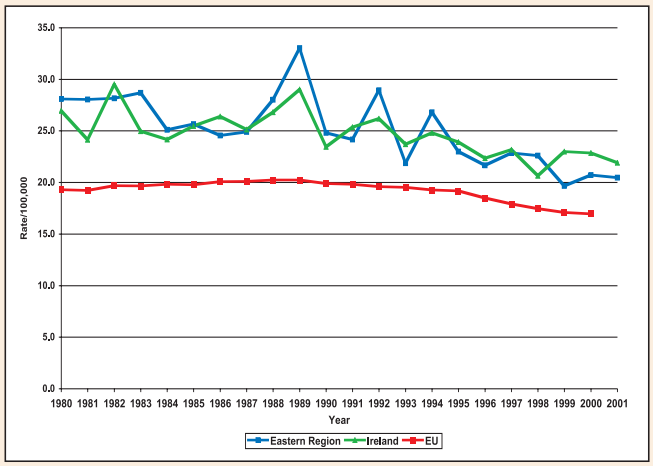
0-64 YEARS

FIGURE 2.17:



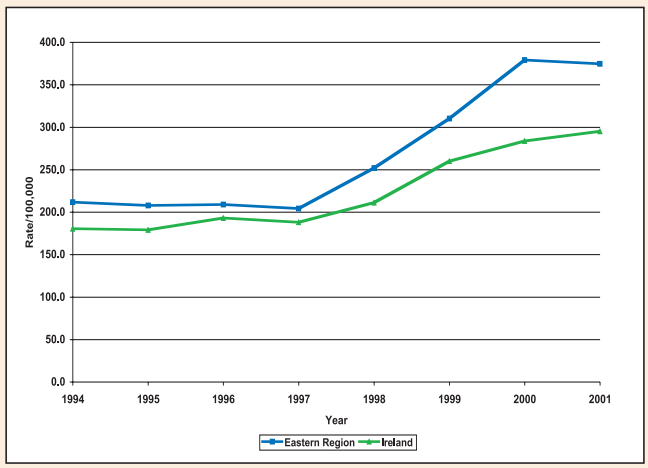
Data source: National Cancer Registry

FIGURE 2.18:



Data source: PHIS, version 6; WHO HFA database, 2003

FIGURE 2.19:



Data source: PHIS, version 6

Breast Cancer. Under 65 years

Incidence:

The numbers and age standardised rates of new cases diagnosed each year in those aged less than 65 years are shown in Table 2.14. Regionally, the numbers of cases increased from 370 in 1994 to 505 in 2000.

Table 2.14: Breast cancer in the Eastern Region, 1994 to 2000. Numbers and ASRs of new cases aged under 65 years by year and area

	East Coast		Northern		South Western		Eastern Region	
	N	ASR	N	ASR	N	ASR	N	ASR
1994	109	91.6	117	72.2	144	84.3	370	82.0
1995	103	83.4	112	67.0	122	70.4	337	72.4
1996	116	92.9	116	69.1	170	93.7	403	85.3
1997	115	90.4	143	82.5	139	72.1	397	81.0
1998	120	92.5	125	70.7	169	88.5	415	83.5
1999	113	85.4	161	90.2	166	84.6	442	87.2
2000	125	92.3	204	114.3	176	87.7	505	98.4

Data source: National Cancer Registry

There was a significant increasing time trend in age standardised rates for the Northern area of 7.1% (Figure 2.17).

Mortality:

Age standardised mortality rates for breast cancer in women aged less than 65 years from 1980 to 2001 were examined for the region, for Ireland and for the EU and significant downward time trends were established for all three areas (Figure 2.18). Regional mortality fell by 1.5% annually while the national and EU levels fell at the slower rates of 0.9% and 0.6%. Based on these trends, the regional level is not expected to fall below the EU level during this decade.

Hospitalisation:

Age standardised rates of hospitalisation for breast cancer in residents of the Eastern Region and of Ireland aged under 65 for the years 1994 to 2001 inclusive were examined and significant increasing time trends were in evidence. The regional level rose by 10.0% per year and the national level by 8.0% (Figure 2.19).

Prostate Cancer

Key point

- Prostate cancer incidence and mortality rates are increasing significantly in men including those aged under 65 years.
- Hospitalisation rates are increasing significantly in those aged under 65 years.
- No satisfactory screening method is currently available.

All age groups

Incidence:

The numbers and age standardised rates of new prostate cancer cases diagnosed each year are shown in Table 2.15. Regionally, the numbers of cases increased from 317 in 1994 to 473 in 2000.

Table 2.15: Prostate cancer in the Eastern Region, 1994 to 2000. Numbers and ASRs of new cases by year and area

	East Coast		Northern		South Western		Eastern Region	
	N	ASR	N	ASR	N	ASR	N	ASR
1994	110	91.1	93	63.7	114	74.3	317	75.2
1995	122	97.2	91	61.4	130	84.1	343	79.5
1996	118	95.0	94	60.0	124	77.1	336	76.4
1997	144	114.9	112	72.4	106	66.3	362	83.0
1998	125	95.4	138	86.2	133	79.4	398	86.9
1999	155	117.1	151	90.7	134	77.8	447	94.8
2000	156	114.1	163	94.5	154	85.5	473	96.9

Data source: National Cancer Registry

Regional age standardised rates increased significantly by 4.4% annually, Figure 2.20. A significant upward trend was also identified for the Northern area with rates increasing by 8.3% annually.

Mortality:

Mortality rates for prostate cancer from 1980 to 2001 were examined for the region and for Ireland and significant increases of 1.8% and 1.7% per year respectively were identified (Figure 2.21).

Hospitalisation:

Age standardised rates of hospitalisations for prostate cancer in residents of the Eastern Region and of Ireland for the years 1994 to 2001 inclusive were examined and no significant time trends were in evidence (Figure 2.22).

Prostate Cancer 0-64 years

Incidence:

The numbers and age standardised rates of new prostate cancer cases diagnosed each year in

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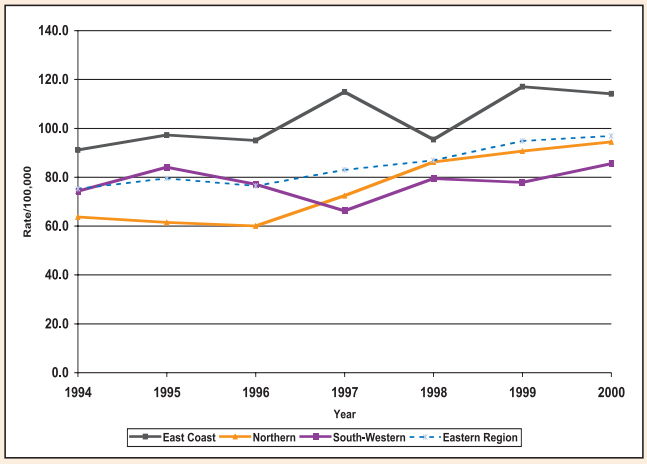
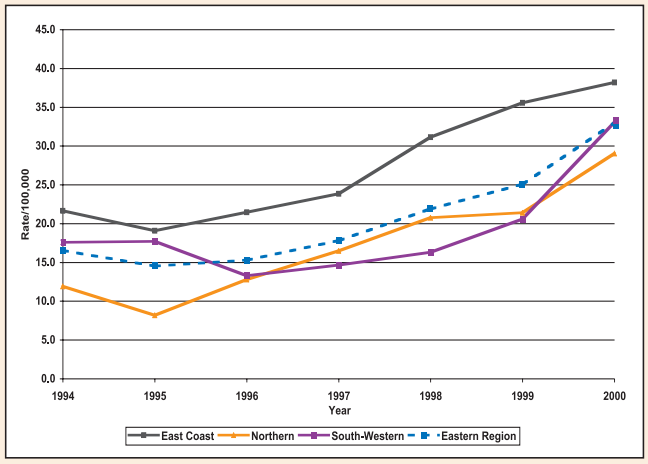
FIGURE 2.20:

Age standardised rates per 100,000 for prostate cancer incidence by area, 1994 to 2000



0-64 YEARS

FIGURE 2.23:



Data source: National Cancer Registry

FIGURE 2.21:

Age standardised rates per 100,000 for prostate cancer mortality, Eastern Region and Ireland, 1980 to 2001

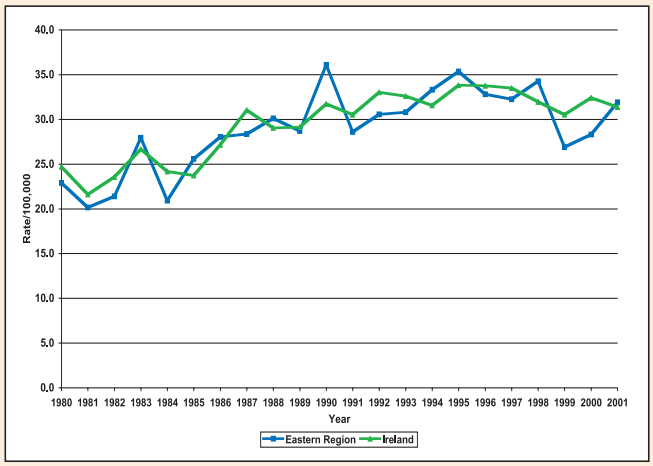
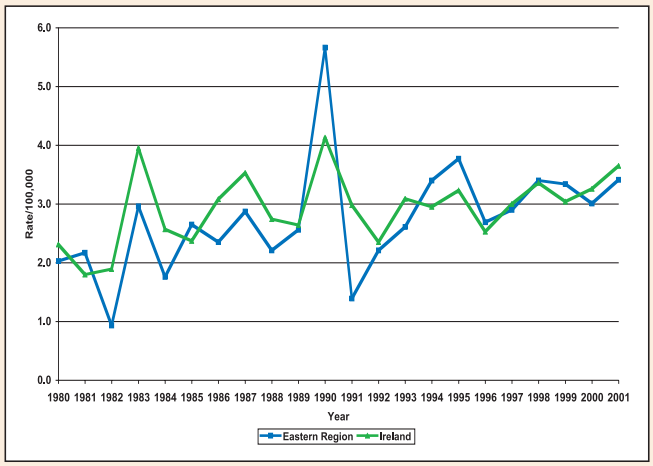


FIGURE 2.24:



Data source: PHIS, version 6

FIGURE 2.22:

Age standardised hospitalisation rates per 100,000 for prostate cancer, Eastern Region and Ireland, 1994 to 2001

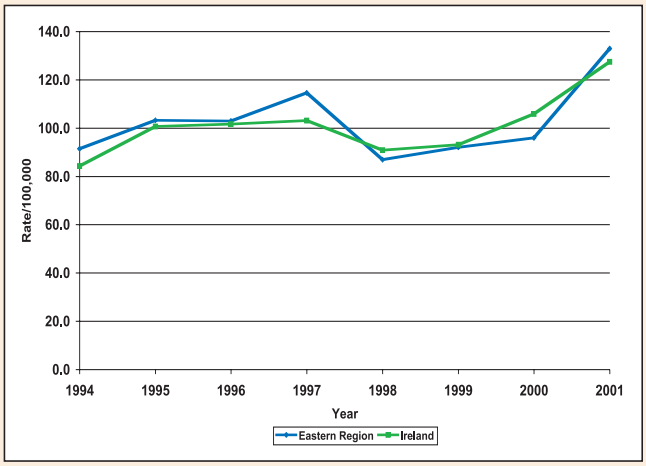
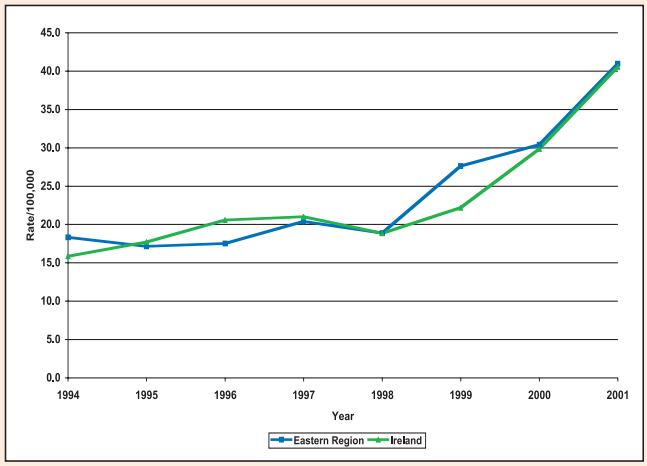


FIGURE 2.25:



Data source: PHIS, version 6

males aged less than 65 years are shown in Table 2.16. Regionally, the numbers of cases increased from 63 in 1994 to 148 in 2000.

Table 2.16: Prostate cancer in the Eastern Region, 1994 to 2000. Numbers and age standardised rates (ASRs) of new cases aged under 65 years by year and area

	East Coast		Northern		South Western		Eastern Region	
	N	ASR	N	ASR	N	ASR	N	ASR
1994	22	21.7	17	11.9	24	17.6	63	16.5
1995	20	19.1	12	8.2	25	17.7	57	14.5
1996	23	21.5	19	12.8	19	13.3	61	15.3
1997	26	23.8	25	16.5	22	14.7	73	17.8
1998	35	31.1	32	20.8	26	16.3	93	21.9
1999	41	35.6	34	21.4	34	20.6	110	25.1
2000	45	38.2	47	29.0	56	33.1	148	33.0

Data source: National Cancer Registry

Regional age standardised rates increased significantly, by 12.6% annually, Figure 2.23. There was a significant upward trend for both the East Coast and Northern areas with rates increasing annually by 11.9% and 18.2% respectively.

Mortality:

Mortality rates for prostate cancer in the under 65 age group from 1980 to 2001 for the region and for Ireland showed significant increases of 2.9% and 1.6% per year respectively (Figure 2.24).

Hospitalisation:

Age standardised rates of hospitalisation for prostate cancer in residents of the Eastern Region and of Ireland aged less than 65 years for the years 1994 to 2001 inclusive showed significant increasing time trends for both areas (Figure 2.25). The annual percentage increases were 11.6% and 11.1% respectively.

Prostate cancer and screening:

Prostate cancer is an important disease accounting for approximately 4% of male deaths per year. In recent years there have been calls for screening for this disease. However population based screening programmes for any disease must satisfy a certain set of internationally recognised criteria before being considered. These criteria include:

- The importance of the condition
- The screening test
- Treatment options and effectiveness
- Acceptability of the screening programme

At present prostate cancer screening methods do not satisfy many of these criteria. The natural history of the disease is unclear and it has no asymptomatic or pre-clinical phase. One of the main problems is the accuracy of the prostate specific antigen (PSA) test which can result in an unacceptable likelihood of false positive results. However there is ongoing research in this area which will hopefully produce results in coming years.

Melanoma

A significant upward time trend for melanoma mortality amongst men of all ages was established for the region with rates increasing by 3.6% annually.

Age standardised rates of hospitalisation for melanoma in both male and female residents of all ages and under 65s of the Eastern Region and of Ireland for the years 1994 to 2001 inclusive were examined and upward time trends were observed for both areas.

Testicular Cancer

There were 246 testicular cancer cases diagnosed from 1994 to 2000 inclusive i.e. an annual average of 35. Testicular cancer ranks 14th for male cancers as it accounts for 1.7% of cases. Almost all (99%) testicular cancers are diagnosed in men aged less than 65 years. Testicular cancer ranks 11th for cancers diagnosed in males aged under 65 as it accounts for 4.2% of their cancers. One fifth of cancers diagnosed in men aged 15-44 years were sited in the testis making it the most common cancer in that age group (Tables 2.3A and 2.4).

Lymphoma

There has been a statistically significant rise in the incidence of lymphoma in men in the region over the past number of years. This mirrors a rise nationally and internationally in lymphoma rates for which there has been no adequate explanation to date. However, it is speculated that various infections (including Epstein-Barr virus), exposure to pesticides and solvents, immuno-suppression and the effect of aggressive chemotherapy regimens for other cancers may play a role. The increased risk of some types of lymphoma in those with AIDS explains some, but not all, of the increase. Investigation of this trend would merit international collaboration.

Smoking and Cancer

Smoking kills. It causes 95% of lung cancers and one-third of all cancers.

Table 2.17 shows the smoking status of newly diagnosed cancer cases in the Eastern Region. While the clear link between smoking status and lung cancer can be seen, it is more difficult to examine the relationship between smoking and the development of breast and prostate cancer because of the high percentage of incident cases where smoking status is not recorded.

Key points: Reducing cancer risk

- Don't smoke.
- Eat a healthy diet – what people eat is the second biggest contributor to cancer risk.
- Eat five or more portions of fruit and vegetables each day.
- Take physical exercise.
- Maintain a healthy weight.
- Use alcohol sensibly.
- Take care in the sun.

Table 2.17: Percentages of new cancer cases for selected sites in the Eastern Region by smoking status, 1994 to 2000

Gender/Site/Age	Current Smoker	Ex-Smoker	Never Smoked	Not Known	Total
Male Lung – All Ages	54.2	26.0	5.3	14.6	100.0
Male Lung – Under 65	64.3	19.4	4.5	11.9	100.0
Female Lung – All Ages	51.9	23.1	10.0	15.0	100.0
Female Lung – Under 65	63.2	14.7	9.7	12.5	100.0
Breast – All Ages	21.2	9.1	39.2	30.5	100.0
Breast – Under 65	24.3	8.1	37.8	29.9	100.0
Prostate - All Ages	17.1	19.6	27.9	35.5	100.0
Prostate - Under 65	18.2	14.7	31.1	35.9	100.0

Data source: National Cancer Registry

Key point

- Hospitals should record smoking status for all patients diagnosed with cancer.

While most smokers want to quit, the addictive nature of smoking must be acknowledged and adequate, varied cessation services must be made available. The recently introduced Government smoking ban in the workplace is welcomed and should contribute to aiding smokers to quit. It will also reduce the impact of second hand smoke.

Quitting smoking at any age gives health benefits and people of all ages should be encouraged and supported in their efforts. Health education in relation to smoking should target:

- Pre-teenage children – to prevent smoking initiation
- Young females
- Pregnant women and their partners
- Parents of young children
- Women over the age of 45 years, as they appear to recommence smoking around this age.

Service developments and priorities

Cancer treatment is often complex. The aim is to attain best patient outcomes. A number of parameters of care are important in this respect. These include:

Information

- The health service needs information systems that facilitate audit of services. Some hospitals in the region are developing and using information systems that facilitate audit and decision making. This is a much welcomed development.
- Guidelines for the treatment of cancers need to be implemented universally
- Patients and their families need well presented information on their cancer and treatment options.

- Health professionals benefit from training in communication with patients and families.

Clinical care:

- Best practice in cancer treatment requires a multi-disciplinary approach, access to specialist teams and access to specialist facilities.
- Specialist services require a certain minimum patient throughput so that expertise can be maintained at an optimum level. This enhances patient outcome. For example, it is recognised that units treating breast cancer need to treat a minimum of 100 new cases per year to maintain expertise.
- It is also clear that many hospitals treat many types of cancer. This can lead to a dilution of valuable resources by a replication of resources. In cases where a critical throughput is not achieved there may be a negative effect on patient outcome. Hospitals in the region need to agree on where specific cancers will be treated.
- It is particularly important to have a policy on the treatment of the less common cancers. Some of these can require a high degree of expertise e.g. oesophageal cancer and it could be reasonably expected that these cancers could only be treated in a very small number of hospitals in the region where the required expertise is available.

Site specific guidelines:

- In recent years there have been significant improvements in services. This undoubtedly is contributing to improved survival e.g. services for symptomatic breast services have developed in line with national recommendations. This means that patients now have access to multidisciplinary specialists in all aspects of their treatment.
- Guidelines of care need to be developed for other major cancers.

Radiotherapy:

- The development of a quality radiotherapy service is a cornerstone of modern cancer treatment.
- A national review of radiotherapy services has shown that an increase in capacity is required in the Eastern Region. Radiotherapy services should be developed on two sites in the region one with 13-14 linear accelerators and one with 8-9 linear accelerators.
- The process of developing these sites should begin as soon as possible so that patients in the region and from other adjacent regions have access to radiotherapy in a timely equitable manner.

Medical oncology:

- All patients should have equal access to specialist services.
- Treatment should be evidence based and in line with best practice.
- Rising oncology drug costs are of concern in the Eastern Region.

Psychosocial services:

The psychosocial care of patients with cancer is a core part of treatment but as yet it is relatively underdeveloped. Recent investment by the ERHA in this service is an important development.

Chapter 3

Acute Hospitals

Introduction

In the Eastern Region approximately 40% of the health budget is spent in the acute hospital sector. However, for a variety of reasons such as the increasing and ageing population, and advances in medical technology there is considerable pressure on acute hospital beds and other hospital services within the region.

Experience from this country and other countries has shown that important features of a good hospital service include

- High quality care,
- Adequate beds and other service provision, and
- Accountability.

These are the areas that the proposed new body, the Health Services Executive, may need to prioritise once it is established. The Directors of Public Health and Specialists in Public Health Medicine have considerable experience and expertise in this area.

Activity[1]

Analysis of hospital discharges in the Eastern Region - 1994 to 2001

General findings

An analysis of all discharges from acute public hospitals in the Eastern Region including those of non-residents of the region between 1994 and 2001 was carried out. It updates the ERHA Bed Capacity Report (2001) in which activity between 1994 and 1998 was examined. Obstetric and psychiatric activity were excluded.

The key findings are:

- The annual number of hospital discharges increased by 27% from 220,282 to 279,804.
- Day case activity increased by 86% from 70,919 to 131,546. Day cases accounted for 47% of all activity in 2001 compared with 32% in 1994.
  - Day cases increased for all age groups ranging from a 38% increase in children to a 150% increase in the 65+ year age group
  - In 2001 the highest proportion of day cases (33%) was in the 45-64 year age group whereas in previous years the highest proportions were recorded for the 15-44 year age group.
- Inpatient discharges decreased by 0.7% from 149,363 in 1994 to 148,258 in 2001. Inpatients accounted for 53% of all activity in 2001 compared with 68% in 1994.
- The figure of 1,234,583 bed days used for 2001 is the highest recorded since 1994.

[1] Analysis was carried out using HIPE data sourced from the HIPE and NPRS Unit, ESRI

- The 65+ year age group used the greatest number of hospital bed days. In 2001, older persons accounted for 29% of inpatient discharges and used 46% of total bed days.
- Children accounted for 19% of discharges and 11% of bed days.
- In 2001, the mean length of stay was 8.3 days ranging from 4.7 for children to 13.2 for the 65+ year age group. This is the highest length of stay for the 65+ age group since 1994. For other age groups, length of stay has remained constant since 1994.

Key points

- In 2001, older persons accounted for 29% of inpatient discharges and used 46% of bed days.
- Day case rates increased for all age groups and account for 47% of all activity.
- The length of stay for those aged 65 and over increased since 1998. This is a trend also seen in the UK for which there is no obvious explanation.

Source of admission:

- Emergency admissions have increased since 1994 by 17% while elective admissions have declined by 23%.
- In 2001, 65% of all inpatient admissions were emergencies and 35% were elective.
- Overall the mean length of stay for emergency admissions is two days longer than the average for elective admissions.

Key point

- The reduction in elective admissions has adverse effects on waiting lists and waiting times for essential treatments.

Area of residence:

- In 2001 79% of inpatient discharges lived in the Eastern Region. Inpatients from outside the region were most likely to live in adjacent health board areas. There has been very little change in this activity since 1994.
- Residents of other health board areas used 22% of total bed days in 2001. These patients had a longer length of stay than patients from the Eastern Region.
- Day case patients from other health board areas increased by 107% since 1994. The corresponding increase in day cases among residents of the Eastern Region was 80%.
- The elective: emergency ratios in 2001 were as follows:

Residents of the Eastern Region	28:72
Residents of other health board areas	62:38

- Nearly one-fifth of elective inpatients from other health board areas were admitted for treatment of neoplasms.

Analysis of acute hospital activity for patients with a length of stay of 21 days and over - 2002

An analysis of Hospital In-Patient Enquiry (HIPE) data of inpatient activity which looked at patients with a length of stay of 21 days or longer in the Dublin Academic Teaching Hospitals (DATHs) and James Connolly Memorial Hospital (JCMH) was undertaken for the year 2002.

These discharges accounted for 10% of all discharges and 47% of total bed days used in these hospitals and of these:

- 5,584 (60%) were aged 65 years or over.
- 1,828 (20%) were non-Eastern Region residents.
- 6,134 (66%) had general medical services (GMS) cards.
- 7,314 (79%) were emergency admissions.
- 5,491 (59%) were medical cases.
- The main diagnostic categories were circulatory diseases (23%), neoplasms (22%) and respiratory diseases (11%). However, ranking varied by age group (Table 3.1).

Table 3.1: Main diagnostic categories for patients with length of stay of 21 days or longer in DATHs and JCMH, 2002

<65 years	65+years	All ages
Neoplasms 25%	Circulatory 29%	Circulatory 23%
Circulatory 16%	Neoplasms 20%	Neoplasms 22%
Digestive 12%	Respiratory 13%	Respiratory 11%
Injury 11%	Injury 9%	Injury 10%
Respiratory 7%	Digestive 7%	Digestive 9%

Data source: HIPE and NPRS Unit, ESRI

Key points

- Over one fifth of inpatient discharges are non-East residents despite considerable development of acute hospital services in other health board areas.
- Residents of other health board areas have longer lengths of stay than patients from the Eastern Region.

Sixty per cent of patients were aged 65 years or over. Of those patients, the "old" elderly (75 years or over) represented the greatest percentage (62%) who had a length of stay of 21 days or longer. This trend is evident in many other countries. With the increasing elderly population, and in particular the "old" elderly, a wide variety of community based services including convalescence, rehabilitation of varying degrees of intensity and long term care will have to be enhanced to prevent inappropriate use of acute hospital resources.

Another interesting feature is that almost 40% of these patients were aged under 65 years. A large percentage of these are likely to be the young chronic sick who also require specific community based services tailored to their individual needs.

Key point

- The high percentage of bed days used by inpatients with a length of stay of 21 days or longer highlights the importance of strengthening the post acute capacity of the services and of discharge planning.

Key points

- There is a need to examine whether patients with a length of stay of 21 days or longer who are not residents of the Eastern Region could be rehabilitated in their own health board area.
- Non acute care must be developed so that patients can benefit from an appropriate level of care.

Seventy-nine percent of cases with a length of stay of 21 days or more are admitted as emergencies. The equivalent proportion for all lengths of stay in these hospitals is 70%. This may signify a crisis management solution for the elderly in the community who do not have access to more appropriate services.

From this analysis it is impossible to say what percentage of these patients are inappropriately occupying an acute hospital bed. In a study conducted by Hynes et al. (1990) in the Dublin teaching hospitals, it was found that 46.1% of all patients who were in hospital for 21 days or longer were deemed to be inappropriately placed in an acute hospital bed and that the majority of these (74%) were awaiting another level of care.

Day Surgery in Hospitals in the Eastern Region, 1996 and 2001

In 2001, 64% of elective surgical procedures were conducted as day cases in acute public hospitals in the Eastern Region. This is a slight increase on the 1996 rate of 62%. Day surgery rates* for selected procedures were examined for the Eastern Region for 1996 and 2001 to compare performance levels (i.e. the percentage of the procedures being carried out as day cases) over time.

A marked increase in performance level has been seen for certain procedures such as:

- *Excision of Breast Lump*
- *Varicose Vein Stripping/ Ligation*
- *Transurethral Resection of Bladder Tumour*
- *Dupuytren's Contracture Excision*
- *Carpal Tunnel Decompression*
- *Excision of Ganglion*
- *Arthroscopy*
- *Removal of Metalware*
- *Myringotomy*
- *Operation for Bat Ears*
- *D & C/Hysteroscopy*

whereas only some improvement in performance between 1996 and 2001 has been seen for the following procedures:

- *Orchidopexy*
- *Circumcision*

* The day surgery rate is the number of day cases expressed as a percentage of the sum of elective inpatient and day cases.

- *Inguinal Hernia Repair*
- *Reduction of Nasal Fracture*
- *Laparoscopy/Sterilisation.*

With regard to ophthalmological procedures, no improvement in performance has been seen in cataract extractions between 1996 and 2001 and performance has actually decreased for correction of squint in children. Other surgical procedures such as tonsillectomy and laparoscopic cholecystectomy are being carried out very infrequently as day cases in the region in spite of the international evidence that it appropriate to do so.

Although the findings above relate to the region as a whole, substantial variations in performance levels between hospitals were observed for some procedures. Even though a day case setting is not suitable for all patients, the expectation is that each hospital should perform at the best level. In 2001 4,467 elective inpatients in the region could have been treated as day cases which would have represented a saving of 39 beds. In terms of individual procedures, cataract extractions demonstrate the greatest potential for improvement.

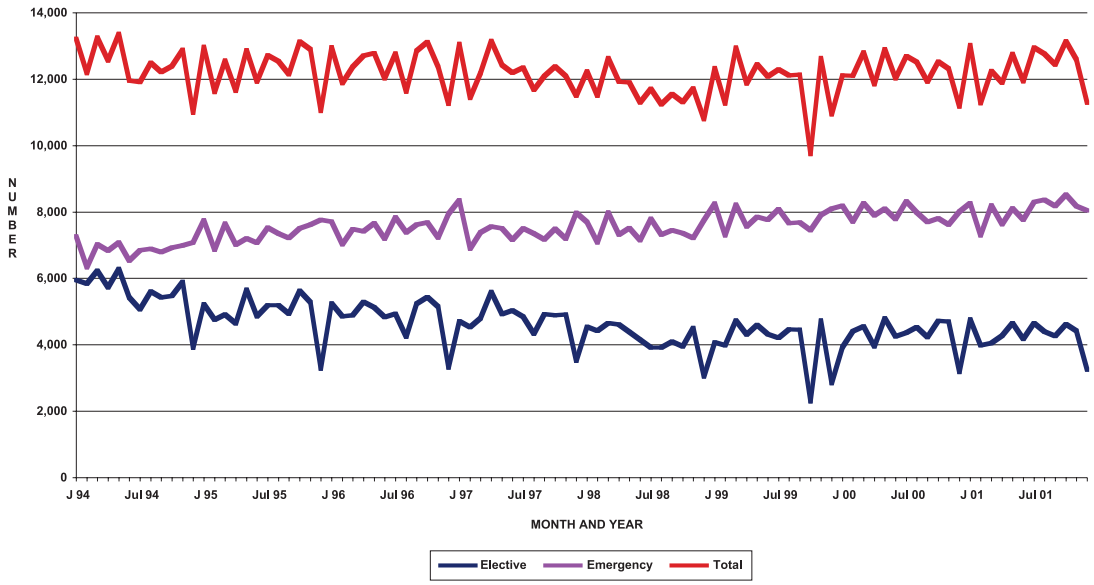
This review shows that performance levels for eye procedures are not improving. Perhaps this specialty needs to be specifically targeted for casetype reform. In relation to other procedures, performance levels must continue to improve and acceptable standards, once attained, must be maintained.

Tackling 'winter pressures' - Seasonality of inpatient admissions 1994 to 2001

Figure 3.1 shows the numbers of emergency, elective and total admissions for each month for which data are available i.e. from January 1994 to December 2001. The striking feature of this graph is the pattern of elective troughs. Elective troughs consistently occurred in December of each year. However, in 1999, the December trough was eclipsed by one in October which occured due to a nurses' strike.

FIGURE 3.1:

Number of inpatient admissions by casetype, source and month, 1994 to 2001



Data source: HIPE and NPRS Unit, ESRI

These elective troughs are caused by increased emergency activity during the winter months or to what is commonly referred to as 'winter pressures'. This relationship between emergency and elective activity can be seen more clearly in Figure 3.2 where the numbers of elective and emergency admissions have been expressed as a percentage of all inpatient admissions. An increase in emergency admission beds leads to a decrease in available beds for elective work and hence an increase in waiting lists.

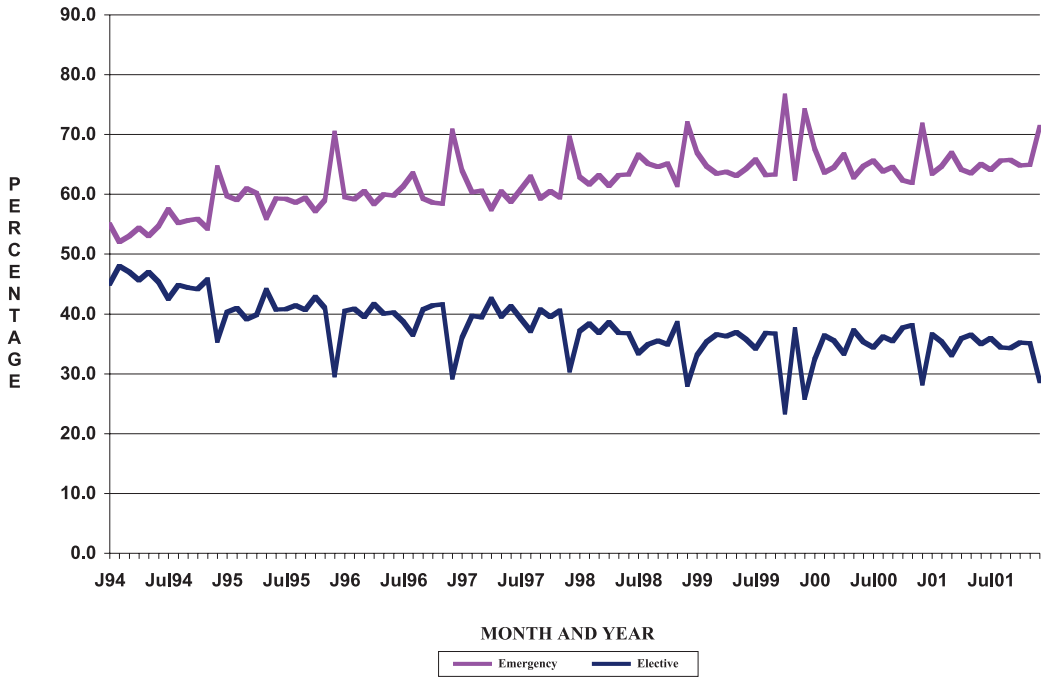
Perhaps the main problem caused by seasonality is not the predictable emergency peaks in winter but the lack of elective peaks in summer when, in order to reduce waiting lists, advantage should be taken of the fall offs in emergencies. Figures 3.1 and 3.2 illustrate that these expected significant increases in elective activity levels during the summer months are not occurring. In fact, these levels are decreasing by a significant 3.8% annually.

Key point

- Elective peaks in activity are not being seen in the Eastern Region during the summer months and elective activity has been decreasing by nearly 4% annually.

FIGURE 3.2:

Source of admission proportions (%) by month of admission, 1994 to 2001

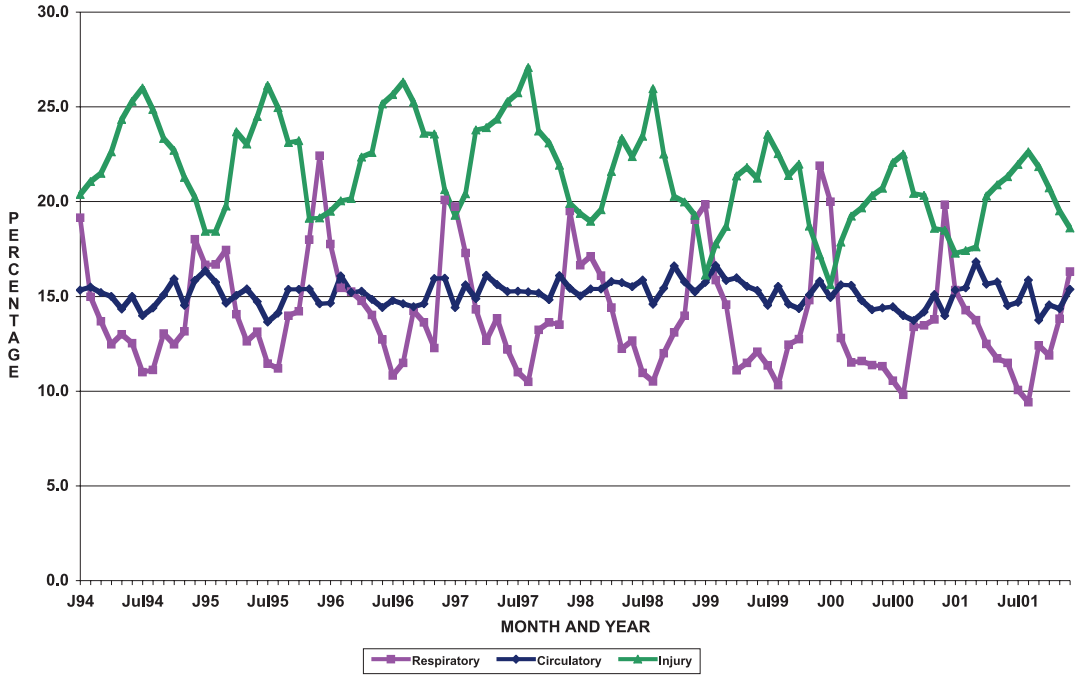


Data source: HIPE and NPRS Unit, ESRI

Injuries and poisonings, circulatory diseases and respiratory diseases account for almost half of all emergency admissions. In 2001, they accounted for 20%, 15% and 13% of emergencies respectively and this has been the general pattern since 1994. However, there were monthly variations for each of these diagnostic categories and notably so for injuries and poisonings and respiratory diseases (Figure 3.3). Injuries and poisonings peaked during the summer months, in either July or August, whereas respiratory diseases dominated the winter months, most notably in December.

FIGURE 3.3:

Respiratory, circulatory and injury emergencies as a percentage of all emergencies by month of admission, 1994 to 2001.

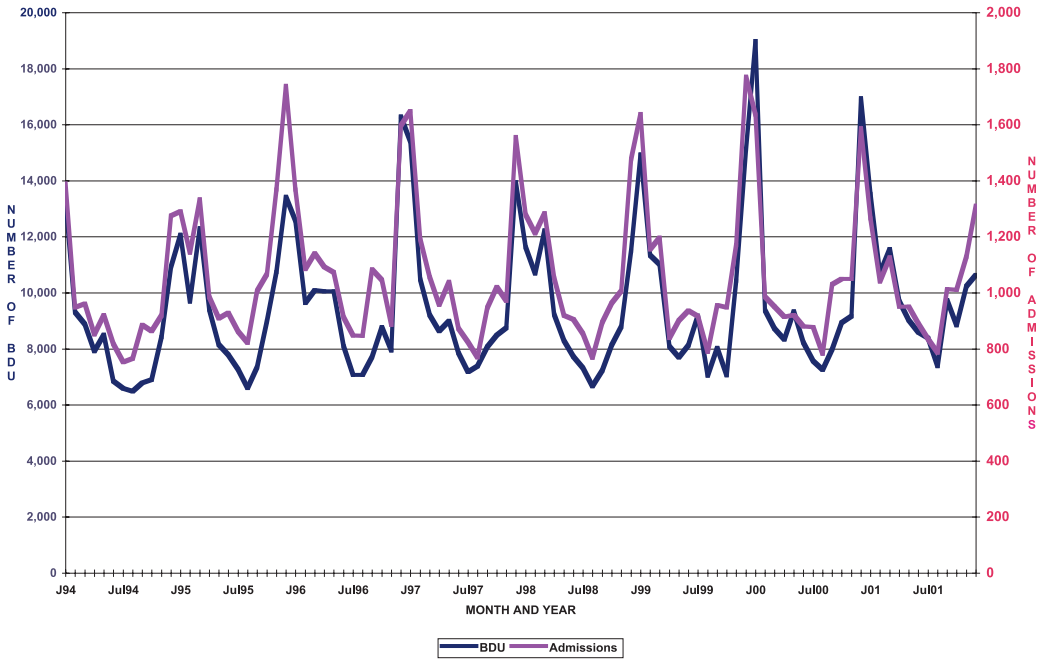


Data source: HIPE and NPRS Unit, ESRI

Figure 3.4 shows the dramatic variations in bed days used for respiratory emergency admissions with winter amounts almost three times those of the summer months (range 6,490 – 18,990).

FIGURE 3.4:

Numbers of emergency admissions and bed days used (BDU) for respiratory diseases by month, 1994 to 2001.

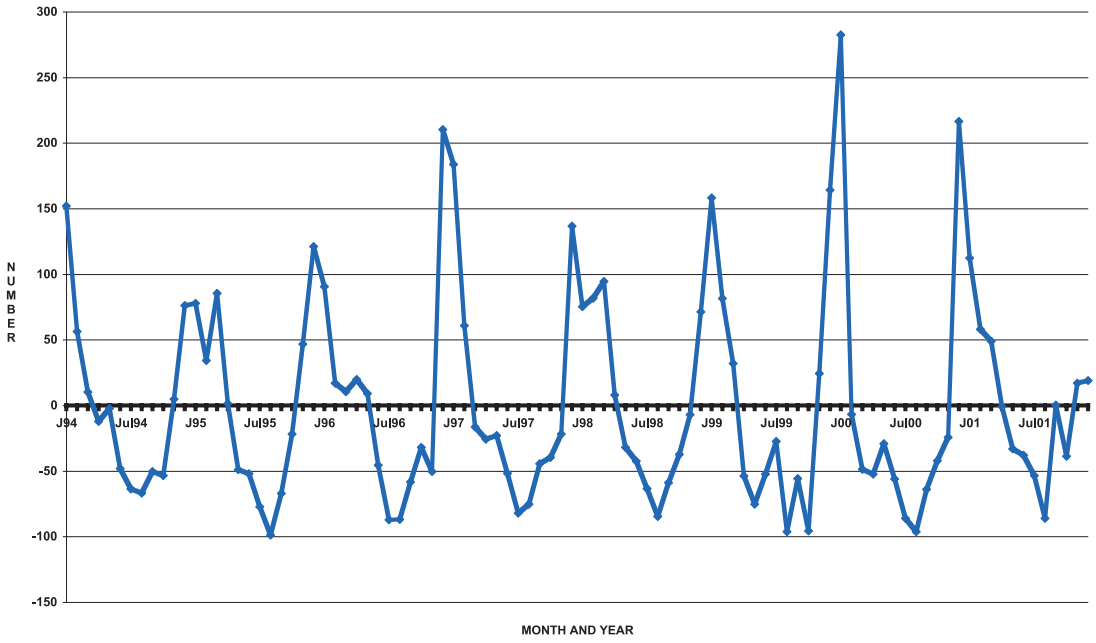


Data source: HIPE and NPRS Unit, ESRI

When demand exceeds capacity, as it did for 37 of the 96 months, considerable bed borrowing from other specialties must have occurred, Figure 3.5. In January 2000, as many as 283 extra beds were required in contrast with August 1995 when 99 beds were not needed. The most prolonged winter pressure period occurred over the seven-month period from November 1995 to May 1996. Some of the other pressure periods only lasted three months as from November to January of the more recent winter of 1999/2000. Emphasis must be placed on reducing smoking rates as well as enhanced community supports to reduce or prevent exacerbations of respiratory disease.

FIGURE 3.5:

Extra beds used by emergency admissions for respiratory diseases by month, 1994 to 2001



Data source: HIPE and NPRS unit, ESRI

Winter pressure periods will continue and indeed with an ageing population they will place even further demands on hospital services. Perhaps, it is time to specifically plan and budget for these predictable events. A regional approach may be required.

Priorities for action

- Additional acute hospital beds are required in the Eastern Region as identified in the Bed Capacity Report 2001.
- Options for increasing the value of acute beds should be explored, particularly exploiting the summer / winter demand pattern.
- A wide range of post acute facilities such as convalescence, rehabilitation of varying degrees of intensity and long term care are required.
- Appropriate care facilities for the young chronic sick need to be developed.

Chapter 4

Cardiovascular Disease

Cardiovascular Disease – the National Context

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

In 2002, the National Health Strategy, Quality and Fairness, was launched outlining a programme of investment and reform. Building on previous strategies, Quality and Fairness reiterates the key elements of health and social gain central to Building Healthier Hearts and specifically targets cardiovascular disease through a number of objectives, namely 'Promotion of health and well-being is intensified' (actions 5 & 13) and 'The system has the capacity to deliver timely and appropriate services' (action 56).

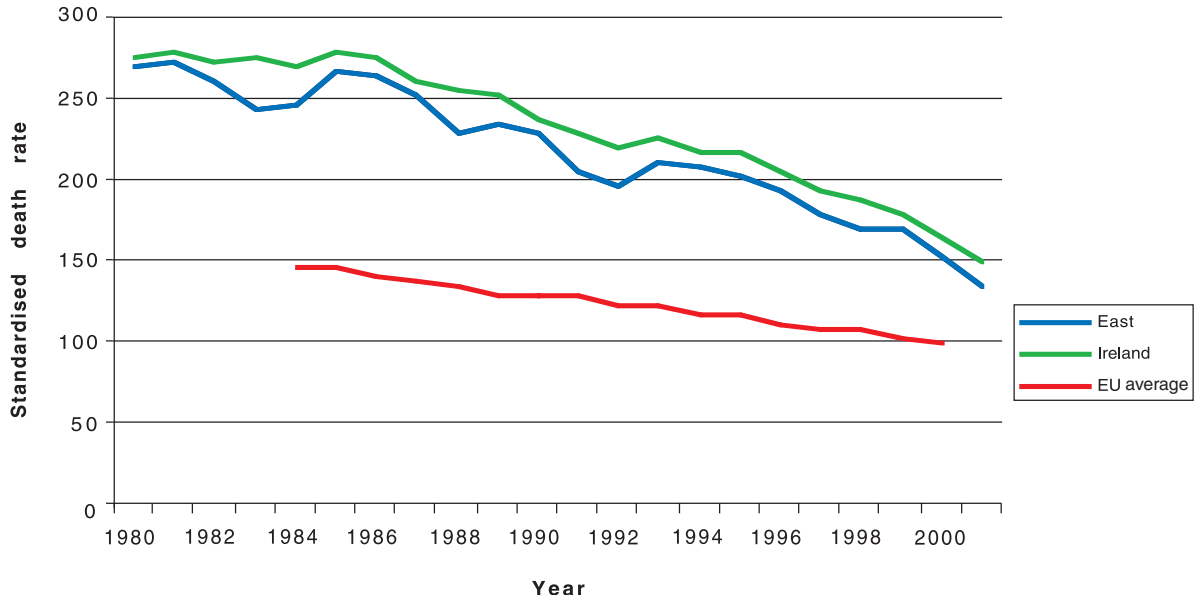
In October 2003 the Eastern Region's Heart Health Action Plan was launched which sets out a roadmap on how the national strategy will be implemented in the Region.

Trends in Mortality, Hospital Discharges and Risk Factors

One quarter of all deaths in the Eastern Region are caused by heart disease and 19% of premature deaths are due to ischaemic heart disease. Deaths from heart disease are declining in the Eastern Region as seen nationally and internationally (Figures 4.1 and 4.2).

FIGURE 4.1:

Standardised death rates from ischaemic heart disease in the Eastern Region, Ireland and the EU, all ages

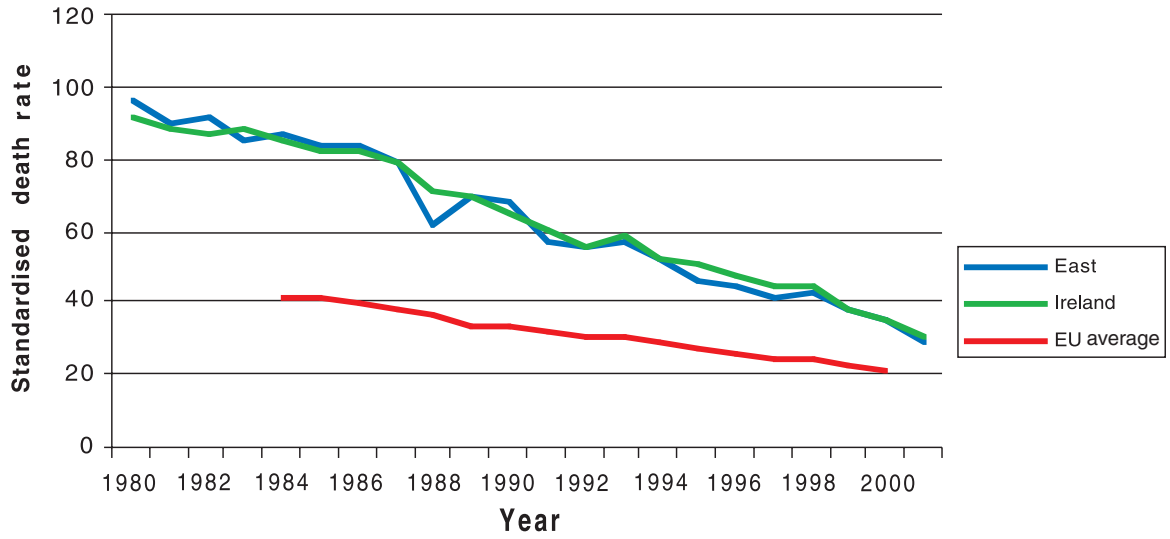


Data source: PHIS, version 6; WHO HFA database, 2003

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

FIGURE 4.2:

Standardised death rates from ischaemic heart disease in the Eastern Region, Ireland and the EU, under 65s



Data source: PHIS, version 6; WHO HFA database, 2003

Key point

- Deaths from heart disease are declining in the Eastern Region.

Health Inequality and Cardiovascular Disease

In the Eastern Region:

(a) Males die twice as often as females from heart disease.

(b) Geographical differences exist with significantly higher death rates noted in two Boards – Northern Area Health Board and South Western Area Health Board (Figure 4.3).

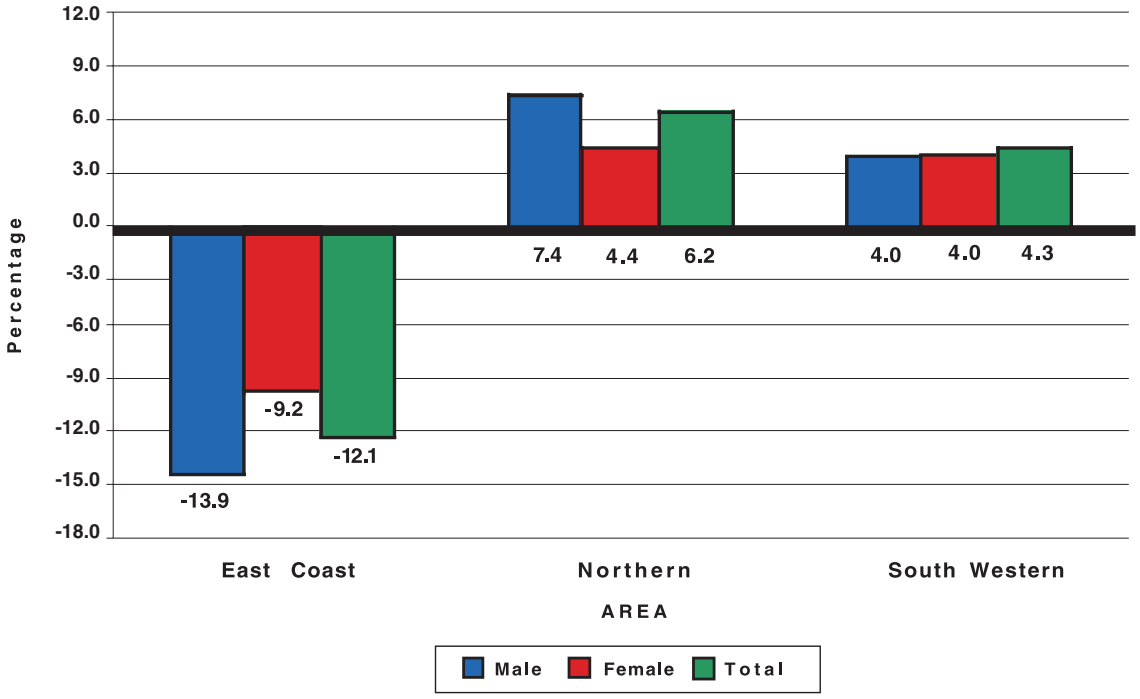
(c) The lowest social class has significantly higher death rates among males than the highest social class.

Key point

- Inequalities in mortality from heart disease exist in the Eastern Region.

FIGURE 4.3:

Ischaemic heart disease. Excess mortality levels (%) by area and gender



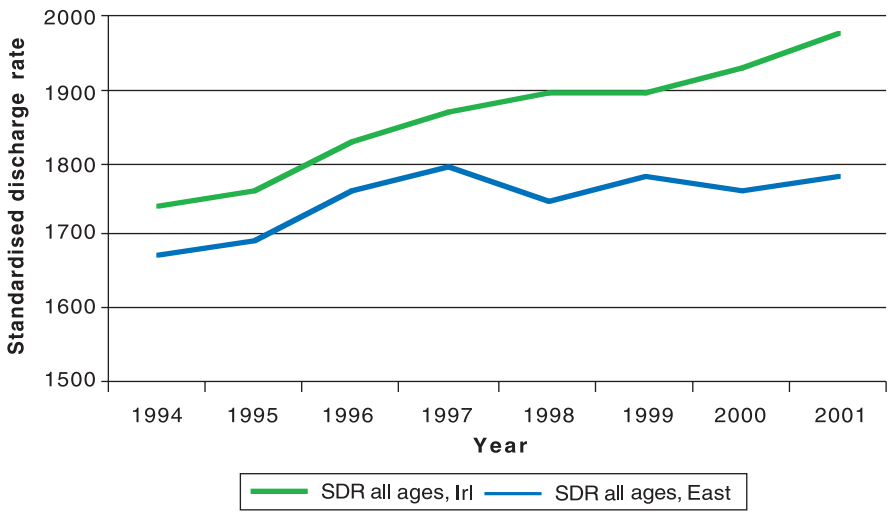
Data source: CSO

Hospital Discharges

Data on discharges from hospitals are collected in the Hospital In-patient Enquiry (HIPE) system. These data for discharges with a diagnosis within the cardiovascular group show an increase from 1994 to 2001 with a more marked pattern for Ireland as a whole compared with the Eastern Region (Figure 4.4).

FIGURE 4.4:

Standardised discharge rates for cardiovascular disease 1994 - 2001, Eastern Region and Ireland



Data source: PHIS, version 6

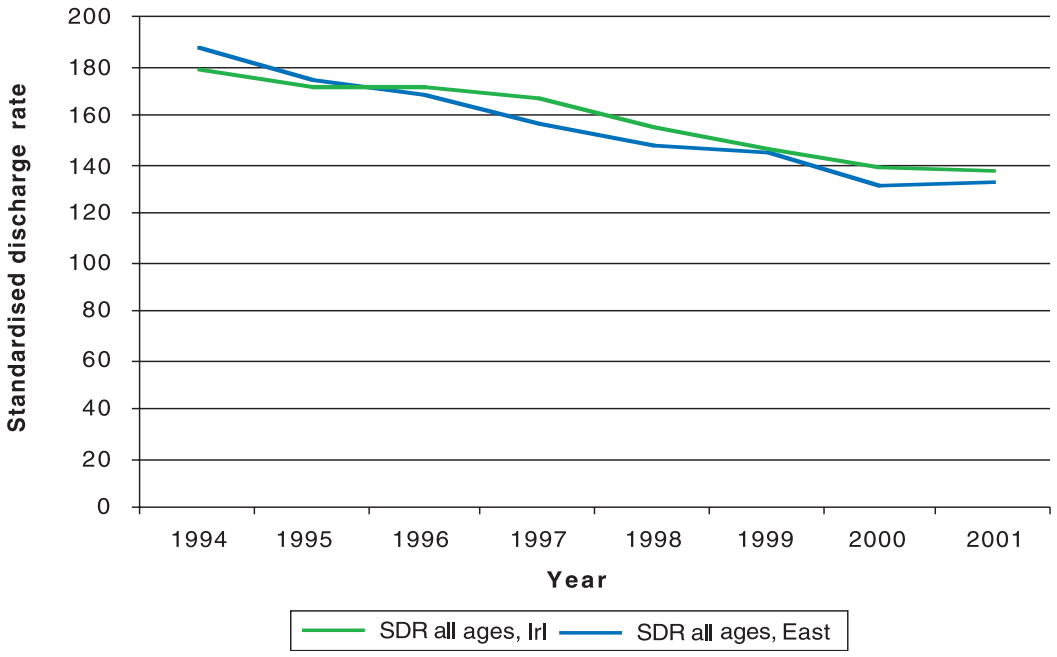
Data on acute myocardial infarction suggest that there was a decline in the discharge rate in the late 1990s with a subsequent rise (figure 4.5). However, the data must be interpreted with caution. A robust data system for events in coronary care units is required and a pilot system is, at present, underway. Some reasons for the increase in the number of discharges are new definitions of acute myocardial infarction following on from increased observation and laboratory detection, an increase in the population overall and changes in coding.

Table 4.1: Data on acute myocardial infarction discharges for hospitals in the Eastern Region

Area Health Board	1998	1999	2000	2001	2002
East Coast	511	570	449	560	685
South Western	598	573	583	651	586
Northern	678	590	611	527	600
Total (Regional)	**1,789**	**1,733**	**1,646**	**1,738**	**1,871**

FIGURE 4.5:

Standardised discharge rate for acute myocardial infarction, all ages, 1994-2001, Eastern Region and Ireland



Data source: PHIS, version 6

Risk Factors for Cardiovascular Disease

Many risk factors associated with heart disease are high in Ireland. Data on risk factor prevalence is taken from the national survey (SLAN/HBSC). It is relevant to the Eastern Region as many risk factors are social class rather than geographically based.

The national survey shows good and bad news when comparison is made between 2002 and

1998. Two features are presented here - the reduction in smoking in the past 5 years (Table 4.2) but worryingly the increase in obesity presented as body mass index (BMI) (Table 4.3).

Table 4.2: Data on smoking from SLAN surveys: 1998 and 2002

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

Source: SLAN survey

Table 4.3: Data on gender distribution of BMI (Body Mass Index)

	Normal 1998 %	Overweight 1998 %	Obese 1998 %	Normal 2002 %	Overweight 2002 %	Obese 2002 %
Male	50	39	11	44	41	14
Female	67	24	9	63	25	12
Total	**58**	**32**	**10**	**54**	**34**	**13**

Source: SLAN survey

In targeting the distribution of risk factors, areas of deprivation need special attention.

Action Plan for 2003-2007

To progress the Cardiovascular Strategy for the years 2002-2007, the Authority initiated a multidisciplinary and multisectoral Heart Health Steering Group.

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

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

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

Reviews, Audit and Evaluation

Catheter Laboratory Review

As part of the overall strategy to improve the prevention and management of heart disease, the Cardiovascular Health Strategy Steering Group commissioned a review of cardiology catheter laboratory services. The key question for the Region was whether the need for laboratory services, (both for the Region's own population and for those who are referred into the Region), were being met by existing laboratory services and whether they have sufficient capacity to meet future needs over the next five years.

The cardiac interventional services have undergone considerable expansion in the last 5 years in Dublin hospitals (Table 4.4).

Table 4.4: Angioplasty activity in Catheter laboratories in Dublin*

Hospital	1998	1999	2000	2001
Mater	494	589	536	666
St Vincents	135	152	163	190
St James	429	479	585	718
Beaumont	65	95	35	250
Tallaght	21	33	72	157
Total	**1,144**	**1,348**	**1,391**	**1,981**

Data source: Catheter laboratory review

** 2001 data from Catheter Laboratory Review. 1998-2000 data from HIPE.*

Building Healthier Hearts set a national target of 1,200 angioplasties per million population by the year 2002. Data for 2001, gathered as part of this review, showed that 16,564 procedures were carried out including 11,873 angiograms and 2,843 angioplasties. Taking the total figure of 2,843 angioplasties carried out in both public and private hospitals and applying it to an estimated referral population of 2.5 million this represents an angioplasty rate of 1,137 per million in 2001 which closely approximates to the Building Healthier Hearts target of 1,200 per million. Seventy percent of this work is carried out in the public hospitals (Table 4.5) and approximately half of these procedures were carried out on patients resident outside the Eastern Region.

Table 4.5: Current activity in the Eastern Region 2001

Hospitals (Adults)	Number of Labs	Angiograms		Angioplasties		Ratio of Angiograms to Angioplasties	Total of all Procedures	
Mater Misericordiae	1	2,180		666		3.27	3,147	
Beaumont	1	1,400		250		5.60	2,152	
St James's	2	2,162		718		3.01	3,217	
St Vincent's	1	1,254		190		6.60	1,689	
AMNCH	1	1,200		157		7.64	1,488	
Total (Public Hospitals)	6	8,196	69.0%	1981	69.7%	3.64	11,693	70.6%
Mater Private	2	2,215		617		3.59	3,107	
Blackrock Clinic	1	1,462		245		5.97	1,724	
Total (Private Hospitals)	**3**	**3,677**	**31.0%**	**862**	**30.32%**	**4.27**	**4,831**	**29.4%**
Total (all adult hospitals)	**9**	**11,873**	**100.0%**	**2,843**	**100.0%**	**3.81**	**16,564**	**100.0%**

Data source: Catheter Laboratory Review

While catheter laboratory activity in 2001 was close to the Building Healthier Hearts target of need for 2002, a developmental plan was devised for the following reasons:

(a) Activity and waiting list information indicates an inordinate load experienced at the one laboratory at the Mater Misericordiae Hospital,

(b) Building Healthier Hearts projected that the European average will be 2,000 angioplasties per million by the year 2010,

(c) changes in practice and future needs are envisaged due to population growth, the growth in repeat procedures, the 'pool' of cardiovascular disease in Ireland, the evolution of electrophysiology as a treatment mode and the need for a 24 hour service in light of the evidence for primary angioplasty.

Consequently, an options appraisal was carried out. The option agreed upon supports the immediate development of a second laboratory at the Mater Misericordiae Hospital, maximises existing capacity, caters for phased growth in activity over the five year timeframe and increases the procedure rate for the population serviced in line with European targets with a range of costs outlined.

Cardiac rehabilitation

Cardiac rehabilitation is an evidence based treatment associated with increased survival after acute myocardial infarction. No data base exists at present to monitor this out patient area. A national system for audit of the process of cardiac rehabilitation offered around the country is currently being elaborated.

Consequently work was undertaken to establish the eligibility for and capacity to provide

cardiac rehabilitation services for the population within the Eastern Region. A baseline study of capacity was conducted in 2000 and repeated in 2002. Eligibility was studied for a two month period in 2001 and data extrapolated to the 12 month period.

Less than half of eligible patients (47%) were invited to participate, although this varied by hospital. Only two thirds of those invited attended with inter-hospital variation noted. However, once the patient attended for cardiac rehabilitation the completion rate was very high (89%) with little variation seen.

Invitation rates varied across the nine hospitals from 0% to 96%. Translating this into geographical areas, patients admitted to hospitals in the South Western area were twice as likely as patients admitted in the other two Boards combined to be invited to cardiac rehabilitation whereas those in the East Coast Area hospitals were least likely. However, attendance levels were significantly higher for patients seen at hospitals in the Northern Area compared to the other two areas combined.

Overall only 53% of the need for this service was met by capacity in the region's nine hospitals in 2000. This rose to 59% in 2002. Four hospitals met over 90% of the identified need with four more hospitals only having the ability to meet between 35% to 51% of need and the ninth hospital yet to open a facility. In order to achieve 85% invitation rate there is a need to establish a further 544 cardiac rehabilitation places across the region.

Table 4.6: Cardiac rehabilitation capacity in the three area boards

	People eligible for cardiac rehabilitation in 12 month period	Capacity to offer cardiac rehabilitation in 2000	Capacity to offer cardiac rehabilitation in 2002
ECAHB	510	300 (59%)	320 (63%)
NAHB	1,158	620 (54%)	712 (62%)
SWAHB	912	444 (49%)	488 (53%)
Total	**2,580**	**1,364 (53%)**	**1,520 (59%)**

Key point

- Less than half of eligible patients (47%) were invited to participate in cardiac rehabilitation. There is a need to increase capacity.

'Door to needle' time

The aim of this work was to establish and compare the current baseline information on the time from arrival at hospital to thrombolysis treatment ('door to needle' times) for treatment of acute myocardial infarction in all hospitals in the Eastern Region following the recommendations in Building Healthier Hearts.

Data on early care of patients with a diagnosis of acute myocardial infarction were collected from the nine hospitals in the region for the period March to May 2002 in a collaborative study (see list of contributors).

Over half (53.8%) of patients with acute myocardial infarction received thrombolysis in the major hospitals compared to 63% in the smaller acute hospitals. Primary percutaneous

transluminal coronary angioplasty (PTCA) was the alternative treatment modality in the major hospitals bringing emergency reperfusion within the region to 62.3%. The site of thrombolysis was the Accident and Emergency Department in the majority of cases (76.6%) for the major hospitals compared with 31% in the smaller hospitals. Door to needle time of 30 minutes or less varied from 32% to 37% in the major hospitals to 16% in the smaller hospitals. Almost one fifth (18%) of patients presented too late for thrombolysis.

Trends in treatment of acute myocardial infarction have changed from studies in 1992 and 1994. There has been a shift to early treatment in the Accident and Emergency Department along with the emergence of primary PTCA as an alternative treatment modality. Door to needle times as envisaged in *Building Healthier Hearts* are still not being achieved especially in hospitals where thrombolysis is offered in coronary care units. A significant minority of patients still present too late for thrombolysis.

Key points

- 'Door to needle' times are falling mainly due to thrombolysis in A&E Departments.
- Remaining challenges are reducing the 'door to needle' times between hospitals in the region and increasing awareness among the public of the need for early presentation with chest pain.
- A significant minority of patients still present too late for thrombolysis.

The Challenges Ahead

Issues and challenges for improving heart health in the Eastern Region include:

1. Implementing the Region's Action Plan in a climate of system change and economic change.

2. Getting the balance right:

   – by reducing the population burden of risk as well as treating and caring for individual patients,

   – by implementing what we know as well as discovering new horizons,

   – between 'high tech' and 'low tech' care of patients,

   – by motivating people to act on the initiatives that do not have considerable resource implications as well as acknowledging and continuing to plan for those that do and

   – by reducing mortality but also accepting the chronic nature of heart disease with attendant quality of life issues.

Priorities for action

- Increase capacity to offer cardiac rehabilitation to all eligible patients.
- Increase the number of patients offered thrombolysis following acute myocardial infarction.
- Implement the regional cardiovascular action plan.

PROTECTING OUR **HEALTH**

APRIL 2004

Chapter 5

Unintentional Injury

Introduction

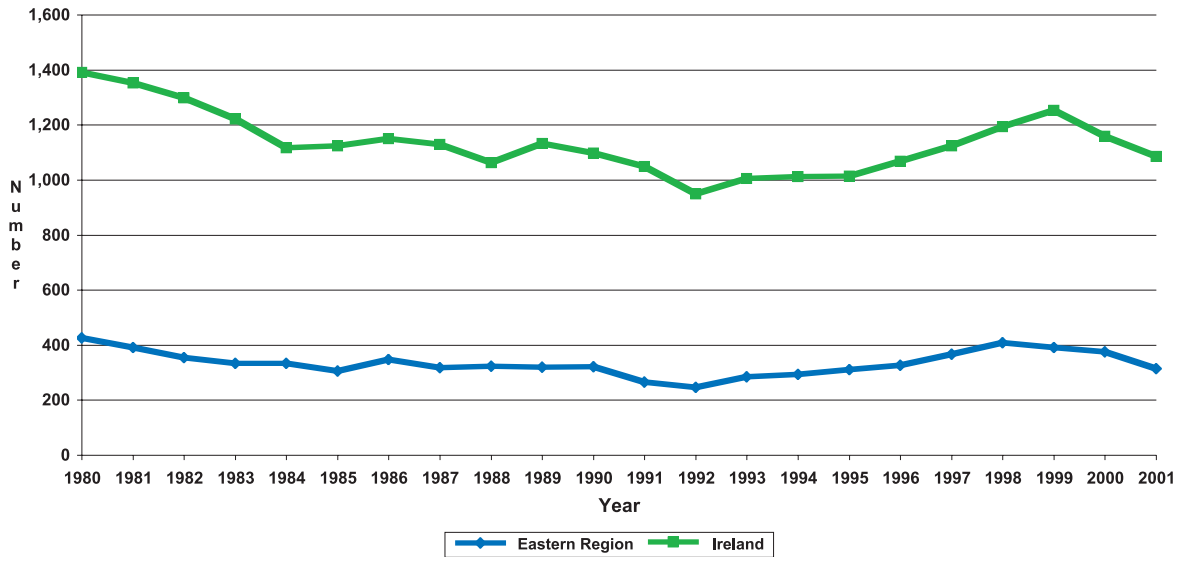
Unintentional injuries (accidents) (E800 - E949) are the second main cause of years of potential life lost (YPLL), after cancer, for people living in the Eastern Region.

Deaths

Since 1980 the number of people in the Eastern Region who died from unintentional injury varied from 246 to 425. The corresponding national range was 949 to 1,390 (Figure 5.1). Although death rates have been declining significantly since 1980, there are fluctuations from year to year (Figure 5.2).

FIGURE 5.1:

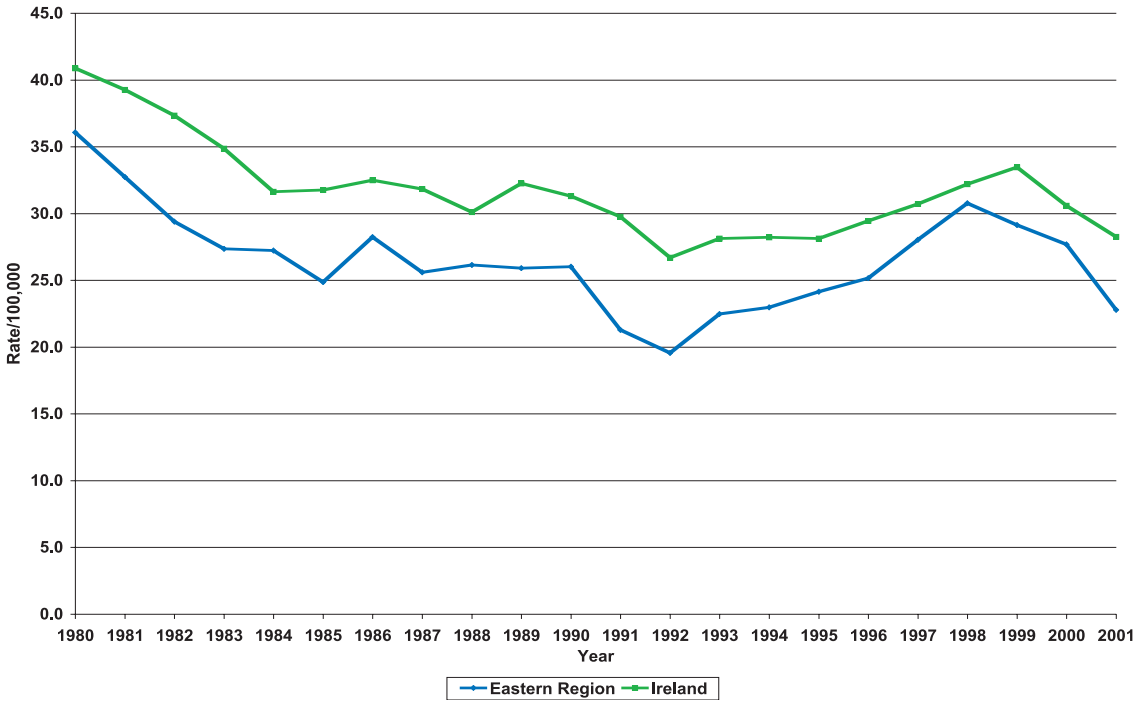
Numbers of deaths due to unintentional injuries by area, 1980 to 2001



Data source: PHIS, Version 6

FIGURE 5.2:

Age standardised rates for deaths due to unintentional injuries by area, 1980 to 2001



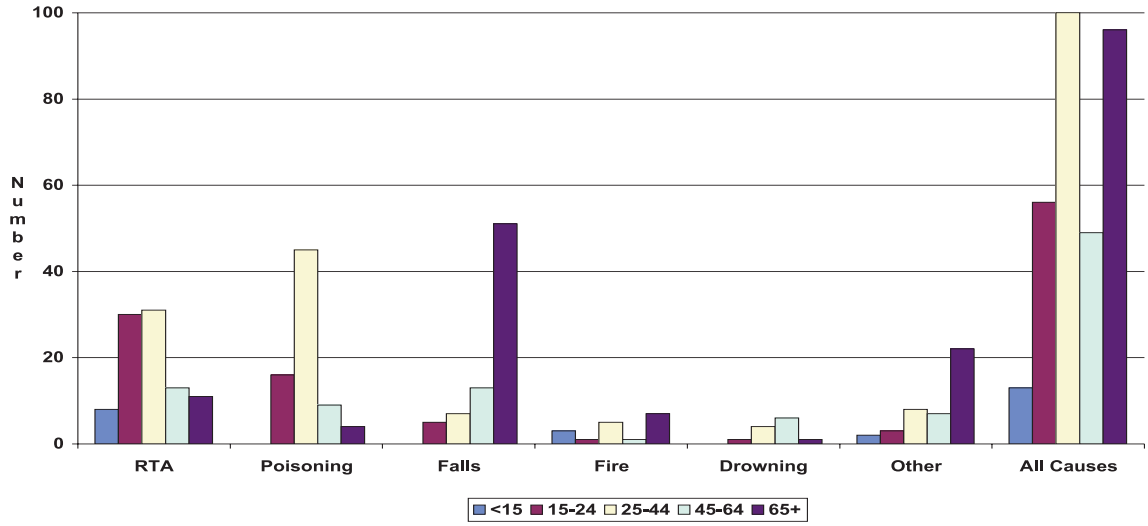
Data source: PHIS, Version 6

In 2001 the main causes of unintentional injury death in the Region are:

- Road traffic 30%
- Falls 24%
- Poisoning 24%
- Fire 5%
- Drowning 4%

FIGURE 5.3:

Numbers of deaths due to unintentional injury by cause and age group, 2001



Data source: PHIS, Version 6

The risk of death by injury is related to age as seen in Figure 5.3:

- two-thirds of road deaths are aged between 15 and 44 years
- two-thirds of fall related deaths are 65 years of age and over
- 72% of poisoning deaths are between 20 and 39 years.

Of these deaths 66% are male and 31% are 65 years of age and over.

Key point

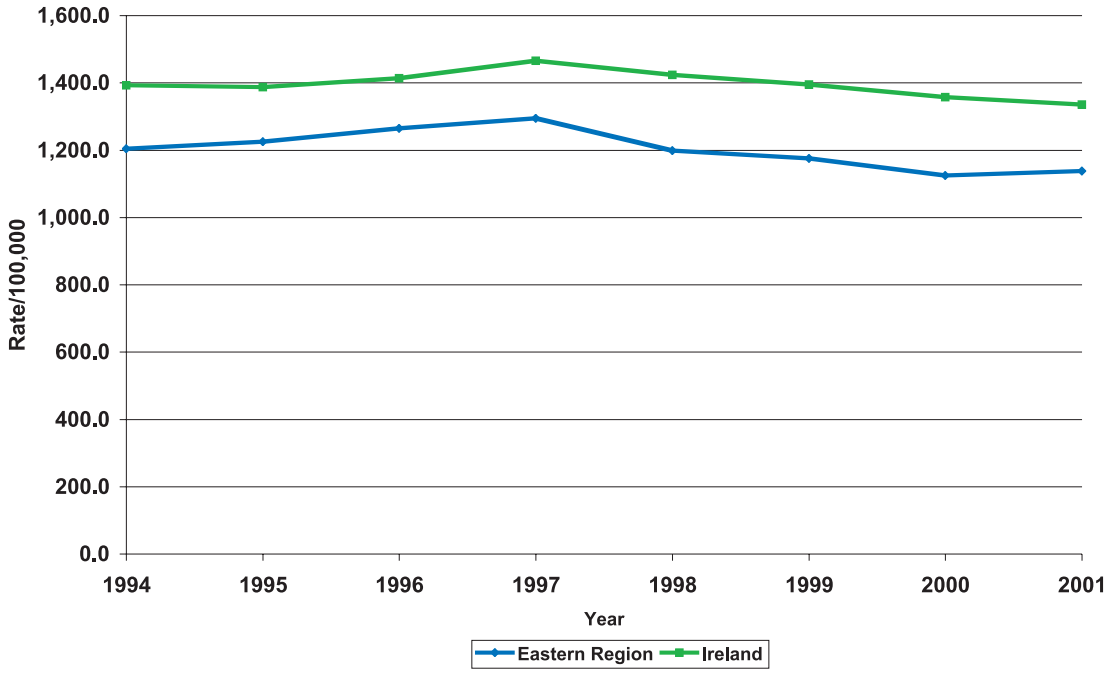
- Road traffic crashes, falls and poisonings are the main causes of death from unintentional injury in the Eastern Region.

Morbidity

Every year there are more than 15,000 hospitalisations in the Eastern Region for treatment of unintentional injury (over 50,000 nationally). Hospitalisation rates are significantly lower in the Eastern Region than nationally, Figure 5.4.

FIGURE 5.4:

Age standardised rates for hospitalisation of unintentional injuries by area, 1994 to 2001



Data source: PHIS, Version 6

Table 5.1 shows the type of unintentional injury resulting in hospitalisation in the different age groups for males and females.

In 2001 in the Eastern Region there were 15,480 hospitalisations:

- 30% were under the age of 15 years
- 19% were in the 65+ year age group
- 59% were male but, of the 2,933 hospitalisations in the 65+ age group, 71% were female.

- The main reasons for hospital admission were:
  - falls 47%
  - road traffic 10%
  - poisoning 5%

Key points

- There are over 15,000 hospitalisations every year for treatment of unintentional injury.
- Injuries due to a fall are by far the main reason for hospitalisation.

Table 5.1: Numbers of hospitalisations due to all and selected causes of unintentional injury in the Eastern Region, 2001

	All Ages			Children (<15 years)			65+		
All and Selected Causes	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
All Causes	9,197	6,283	15,480	2,879	1,709	4,588	843	2,090	2,933
– RTA	1,121	481	1,602	140	68	208	48	55	103
– Occupant	483	304	787	40	25	65	24	32	56
– Motorcyclist *	305	20	325						
– Pedal cyclist	29	9	38	0	0	0	0	0	0
– Pedestrian	222	110	332	84	41	125	20	18	38
– Poisoning	439	329	768	298	206	504	8	17	25
– Falls	3,571	3,627	7,198	1,252	850	2,102	562	1,635	2,197
– Fire and Flames	69	37	106	18	12	30	7	6	13

Data source: PHIS, Version 6.

** For reasons of confidentiality, gender breakdowns are not provided for age subgroups.*

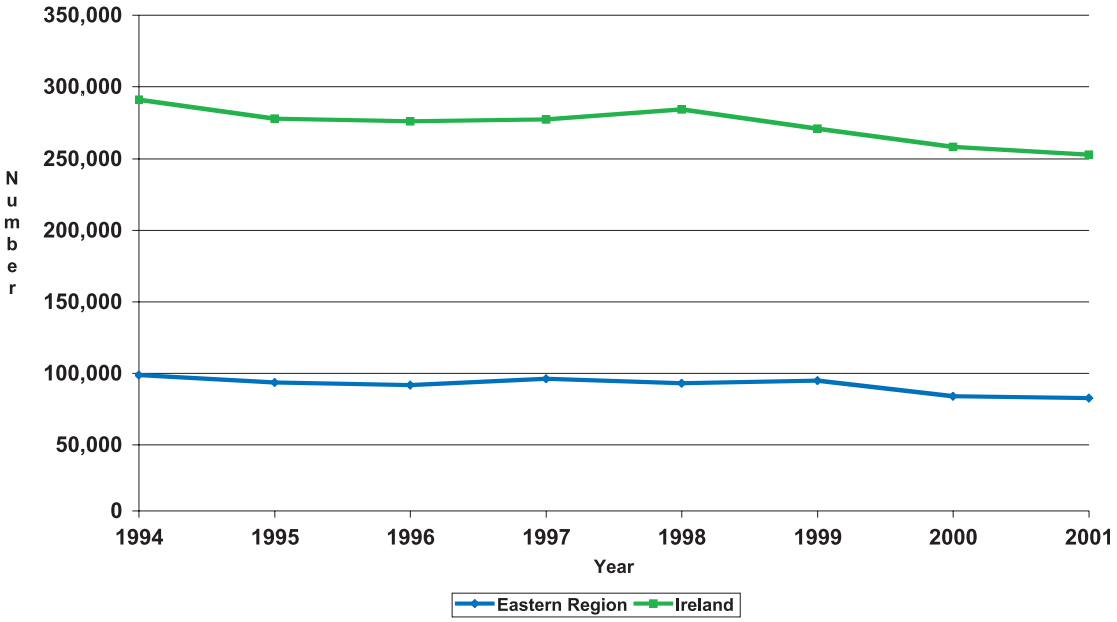
Over 100,000 acute hospital bed days are used in the treatment of unintentional injuries in the Eastern Region (300,000 nationally) each year, Figure 5.5. The average length of hospital stay is 5.7 days although this ranged from 2 days in the 0-14 year age group to over 14 days in those 65 years and over.

Key points

- 100,000 acute hospital beddays are used in the East in treating unintentional injury.
- Many of these injuries are preventable.
- A greater focus on prevention would release a substantial number of acute beds which could be used to treat patients with illnesses, many of whom are currently on hospital waiting lists.

FIGURE 5.5:

Numbers of bed days used for unintentional injury hospitalisations by area, 1994 to 2001



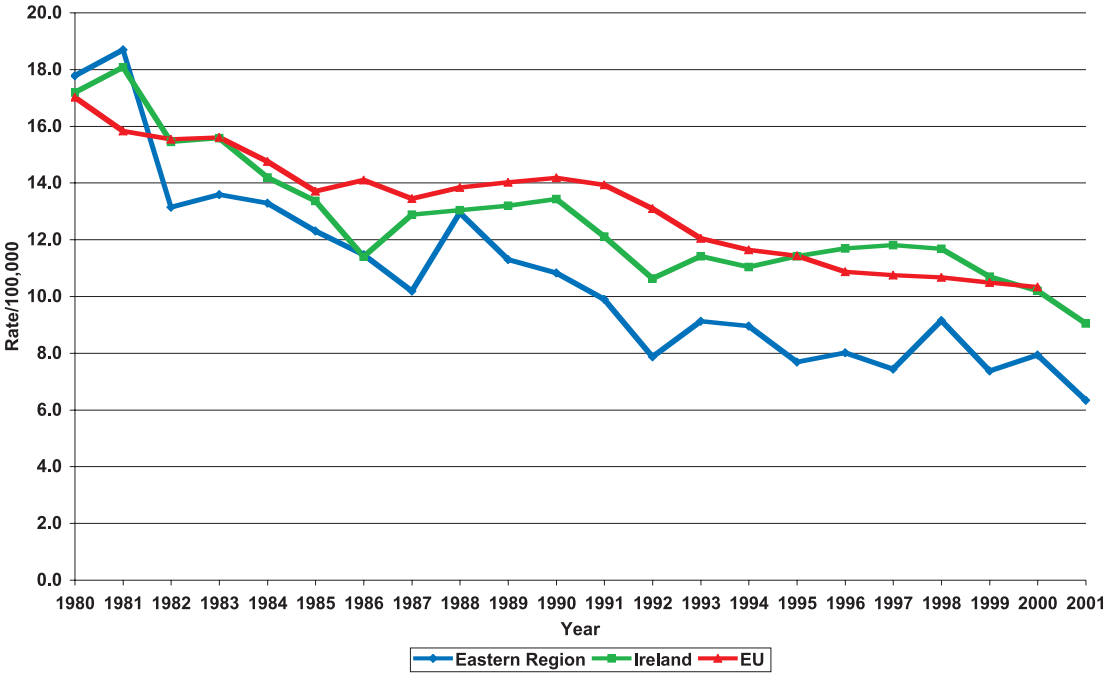
Data source: PHIS, Version 6

Injury On Our Roads

Ireland has the sixth best rate out of 15 EU member states in relation to road deaths per 100,000 population. Road injury costs us €278 million annually. Death rates are lower in the Eastern Region than they are nationally or in the EU. The national rate is lower than the EU average and has been for most years since 1980 (Figure 5.6).

FIGURE 5.6:

Age standardised death rates due to RTAs by area, 1980 to 2001

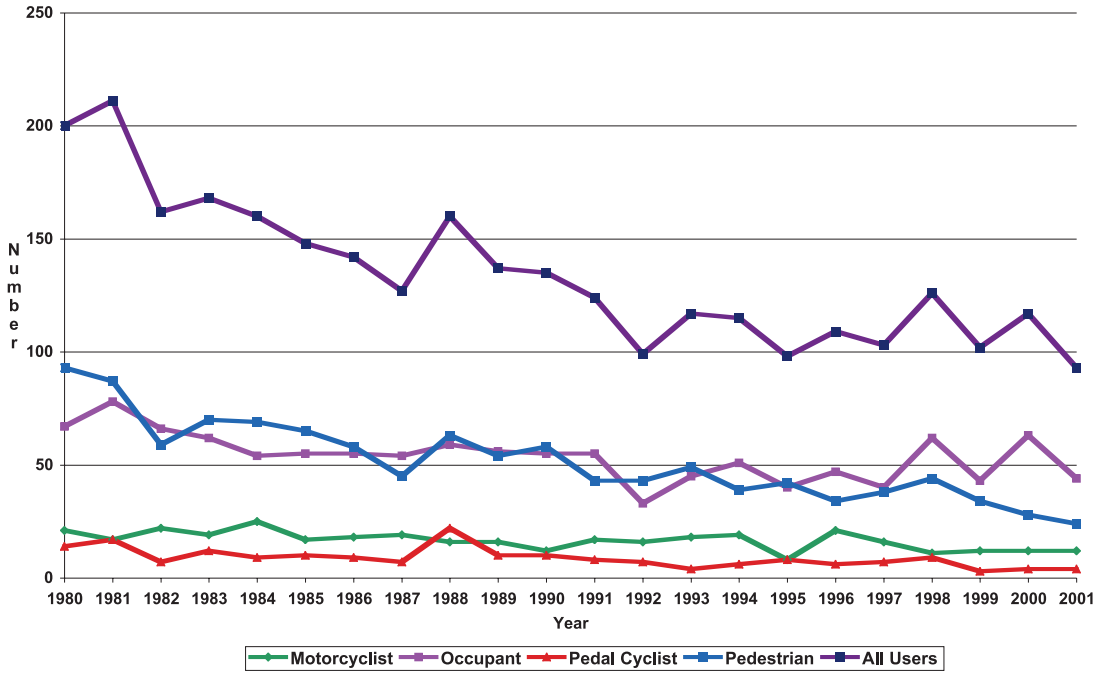


Data source: PHIS, Version 6; WHO HFA, 2003

Figures 5.7 and 5.8 show the numbers and rates of road traffic fatalities since 1980 in the Eastern Region. There have been major reductions in numbers killed and in death rates on our roads for each type of road user over the past 20 years. The numbers killed have dropped from 200 to 93. Overall the death rate dropped from 18 per 100,000 to 6 per 100,000.

FIGURE 5.7:

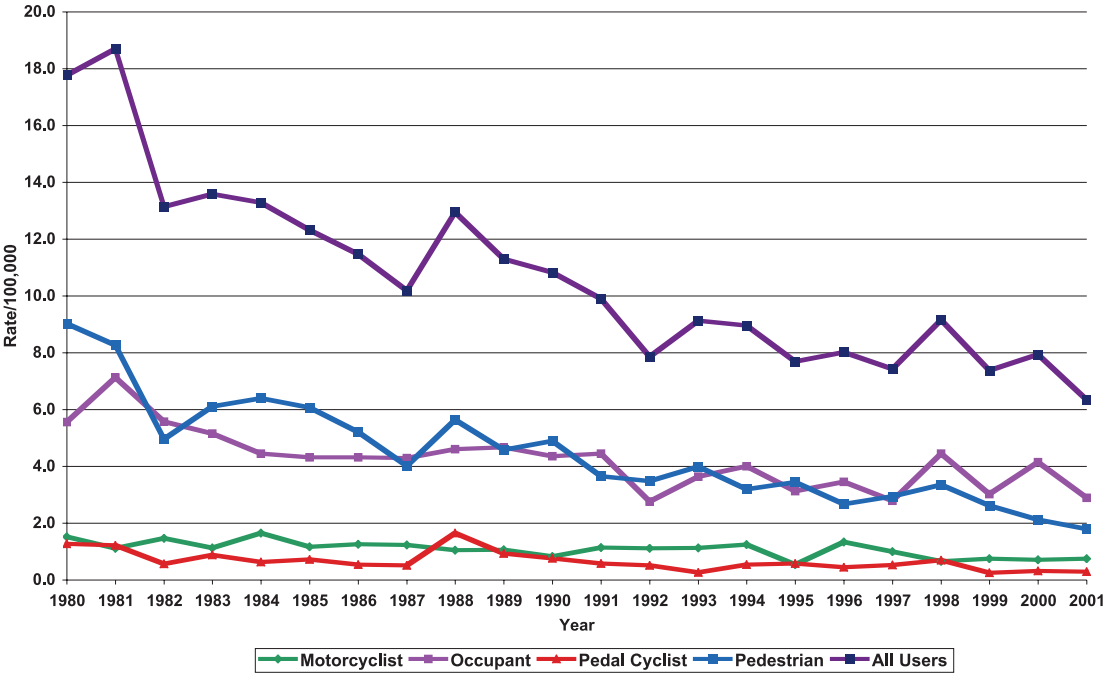
Numbers of deaths due to RTAs by road user in the Eastern Region, 1980 to 2001



Data source: PHIS, Version 6

FIGURE 5.8:

Age standardised death rates due to RTAs by road user in the Eastern Region, 1980 to 2001



Data source: PHIS, Version 6

Although there has been an improvement in road deaths during the past 20 years there is no room for complacency:

- When progress in Ireland is compared with other countries it is evident that we need to do much better. We should learn a lot more from the performance of other countries and their achievements in recent years. The first three months of 2004 has been very disappointing in relation to Irish road fatalities. This pattern must not be allowed to continue.
- Prevention programmes must be targeted towards specific categories of road user. For example, the strategy to reduce pedestrian injury has to be different from that of addressing motorcycle injury.
- Although there has been a substantial drop in pedal cycle deaths from an average of 14 in 1980 to 4 in 2001, this is more likely to be due to reduced cycling on the road rather than greater safety awareness. There is little evidence to suggest that cyclist safety behaviour is better now than in previous years. Cycle helmet use is less than 10%. General awareness that safe cycling, in the absence of cycle lanes, is virtually impossible is more than likely the reason for reduction in cycling deaths.
- Greater efforts are needed in relation to motorcycle deaths. Risk taking behaviour among motorbike users, typically young males with disposable income with a desire for fast powerful bikes, needs to be addressed.

Prevention of Road Injury

There are three linked strategies in the prevention of road injury:

- Education,
- Environmental changes and
- Legislation.

Our limited success can be attributed to one main factor, i.e. law enforcement and, more recently, to the Penalty Points System.

Law enforcement has been shown in numerous countries to be the most powerful factor in reducing carnage on our roads. It leads to greater compliance with speed limits, a reduction in drink driving and greater use of seat belts. The success of 2003 in terms of reduction of deaths needs to be built-on to an even greater degree.

There is a concern that, with competing priorities for scarce resources, some complacency will set in and road injury prevention will no longer continue to receive the priority that it deserves. This must not happen.

Specific measures are now urgently required. These include:

- Introduction of random breath testing – every driver should have a realistic chance of being randomly breath-tested each time he uses his vehicle.
- Reduction in alcohol limit from 80mg / 100 mls to 50mg /100 mls. This is in keeping with most other EU countries.
- Traffic calming in residential areas – specifically to reduce the risk of pedestrian injury.

- Reduction in speed limits in housing estates to 20mph – to reduce pedestrian injuries especially among children.
- Strict enforcement of the penalty point system.
- Greater attention to motor-cycle safety including:
  - Compulsory training
  - Use of L plates
  - Consideration in raising the age of getting a licence from 16 to 17 years.

Key points

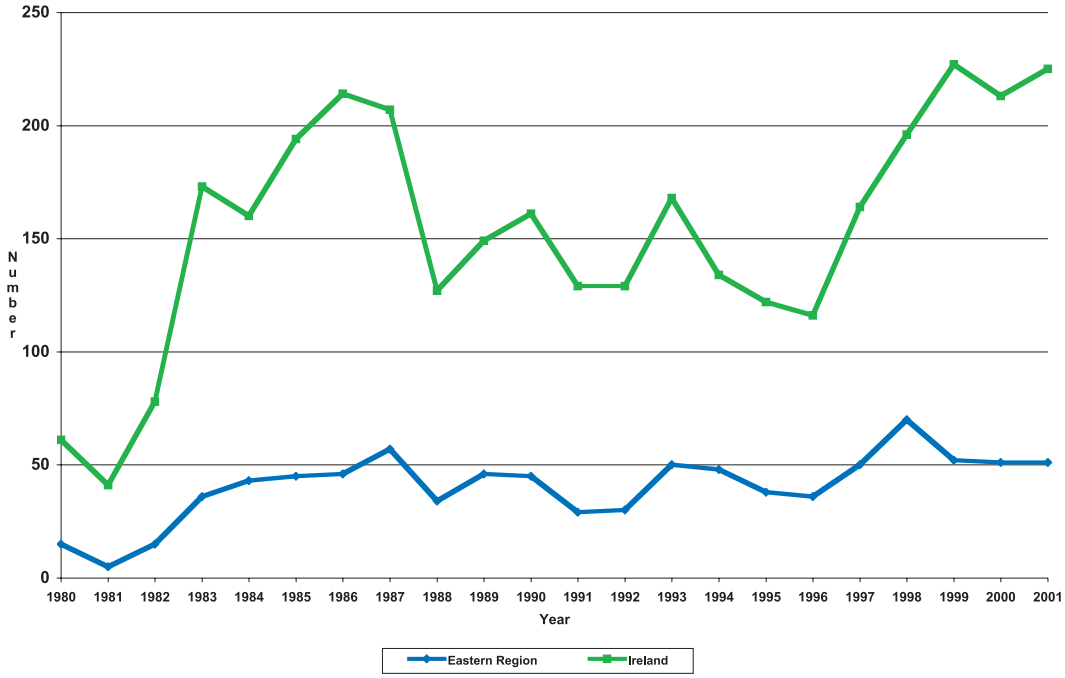
- Law enforcement is the main factor that can be credited with the reduction in road fatalities in recent years.
- The penalty points system should be continually reviewed and enforced.
- Blood alcohol levels should be reduced from 80 to 50 mg /100 mls.
- The speed limit in residential housing estates should be reduced to 20 mph.

Falls in older persons

Two out of three deaths due to a fall are in people over the age of 65 years. The number of fall related deaths in this age group is increasing (Figure 5.9), in keeping with the growth in the elderly population, although there is no clear trend in death rates from falls, Figure 5.10. Every year there are over 7,000 hospitalisations for the treatment of a fall in the East and over 2,000 are in older people.

FIGURE 5.9:

Numbers of deaths in older persons due to falls by area, 1980 to 2001



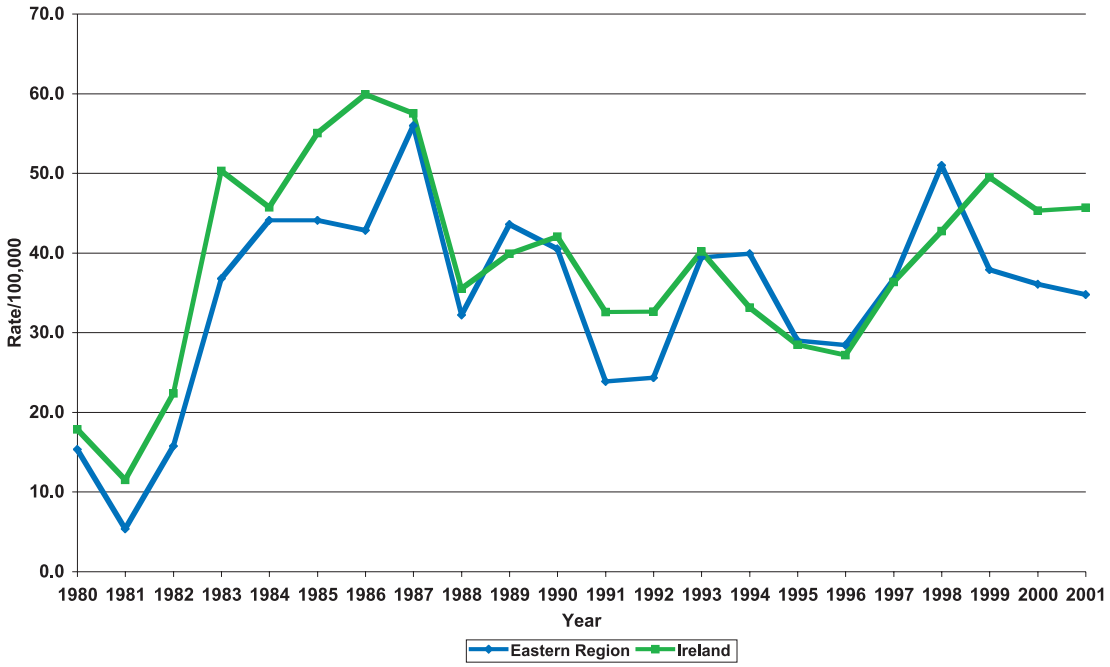
Data source: PHIS, version 6

Key points

- Two out of three deaths from falls are among people 65 years or over.
- Over 2,000 older people are hospitalised each year for treatment of a fall.

FIGURE 5.10:

Age standardised rates for deaths in older persons due to falls by area, 1980 to 2001



Data source: PHIS, version 6

Falls are a worry for older people. They cause:

- very significant morbidity,
- severe injury and physical disability,
- depression and other psychological sequelae, and
- reduced independence.

Key points

- Falls cause over three quarters of injury related admissions in older people and they have considerable physical, social and economic costs.
- Most of the injuries are in older women.
- The acute inpatient cost of a hip fracture is approximately €8,500 in the Eastern Region.

Three out of four fall-related hospitalisations in older people are women. The likelihood of requiring hospitalisation for treatment of a fall increases in females over the age of 65 years, peaking in the 85+ year age group. Fractures and head injuries are the most serious consequences of a fall and the main cause of disability, especially hip fractures. As well as the physical and social health implications for the person, injuries sustained after a fall also place

a severe burden on our health service in terms of hospital capacity and cost. The acute inpatient cost of a hip fracture has been calculated as approximately €8,500 for the Eastern Region. The prevention of falls has to be the mainstay of any injury prevention programme in older people.

Although older men have fewer hospital admissions as a result of injury, they are more likely than women to suffer head injuries after a fall.

Strategies to reduce falling in older people do work. There is substantial evidence that even minor interventions are beneficial. Prevention hinges around two key approaches:

- Correct or minimise personal risk factors, for example poor vision, balance and co-ordination.
- Correct environmental risk factors, for example, remove loose mats or trip hazards.

Such simple interventions are of proven benefit. They need to be recognised as a priority among all health care personnel in long stay units, hospitals and community settings. Safety must be a core principle in all health care settings. Ongoing training in prevention techniques and an understanding among all personnel of the significance of a fall in older people is essential. Prevention strategies require financial input, for example, in correcting environmental risk factors. However it has been shown that the financial savings in preventing serious injuries far exceed any financial inputs, thus injury prevention in older people is a worthwhile investment in financial terms. The individual health and social gains are well recognised.

The increasing problem of serious injury among older women, especially hip fracture, can be attributed to osteoporosis, a skeletal disorder which is caused by poor bone strength predisposing a person to an increased risk of fracture. The estimated life-time risk of a woman aged 50 years sustaining an osteoporotic fracture is 14% for the hip, 13% for the wrist and 11% for vertebral fractures. The corresponding risk in men is 3% for the hip, 2% for the wrist and 2% for vertebral fractures. Following a hip fracture, only one third of people regain their previous levels of mobility and there is a 10-20% reduction in survival with the majority of the excess deaths occurring within 12 months.

Risk factors for osteoporosis include:

- premature menopause
- long term secondary amenorrhoea
- long term steroid treatment
- low body weight
- cigarette smoking.

Other risk factors include low calcium intake, excessive alcohol intake and long-term immobilisation.

Prevention of osteoporosis begins in the teenage years and revolves around not smoking, taking a healthy diet and physical activity especially weight bearing physical activity.

Key points

- Strategies to prevent falling among older people should be developed in all health care settings.
- Awareness of osteoporosis and its prevention should be a priority for women.
- Prevention of osteoporosis starts in the teenage years.

Priorities for injury prevention

The priorities for injury prevention are:

- The reduction of injuries due to falls in older people
- Sustained focus on road death and injury.

PROTECTING OUR **HEALTH**

APRIL 2004

Chapter 6

Communicable Disease

Introduction

The protection of public health through communicable disease control is a critical function of the Department of Public Health. Communicable disease control covers a number of diverse areas. Immunisation against communicable diseases is one of the most effective public health interventions although uptake rates in the Eastern Region remain unsatisfactory. A single case of a communicable disease can cause intense media and public interest or concern. Communicable disease outbreaks can cause severe morbidity and disruption to people's normal activities and can interrupt the routine work of health facilities.

Work in the area of communicable disease can be unpredictable. Public health is to the forefront in dealing with new and emerging communicable disease threats. The last twelve months has seen the emergence of Severe Acute Respiratory Syndrome, a severe respiratory disease which is sudden in onset and is associated with high mortality. The events of September 11th 2001 have necessitated the development of plans and contingencies in all countries to deal with both biological and chemical weapons. The emergence of antibiotic resistance represents another threat to public health. Influenza pandemic planning is another important public health priority.

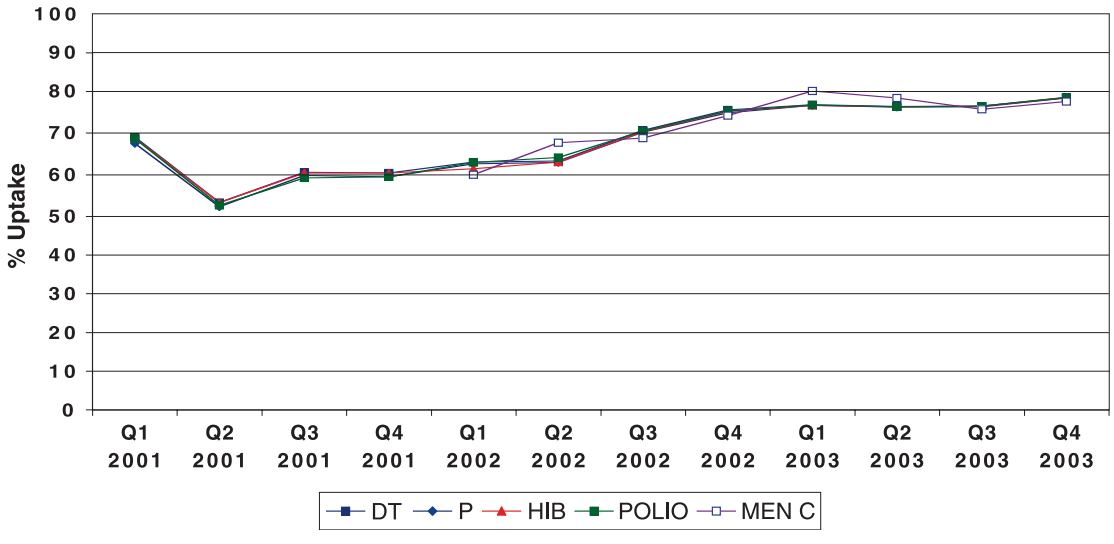
Immunisation in the Eastern Region

Immunisation uptake rates in the Eastern Region, although improving, are still of major concern. Outbreaks of vaccine preventable diseases such as measles highlight the consequences of low immunisation uptake rates. Such outbreaks will continue to occur until immunisation rates reach sufficient levels to ensure population immunity (95%).

Primary immunisation uptake rates at 12 months have improved and continue to rise. Uptake is now 78.5%. Uptake figures at 24 months have risen further to 84% but still do not reach sufficient levels to ensure population immunity.

FIGURE 6.1:

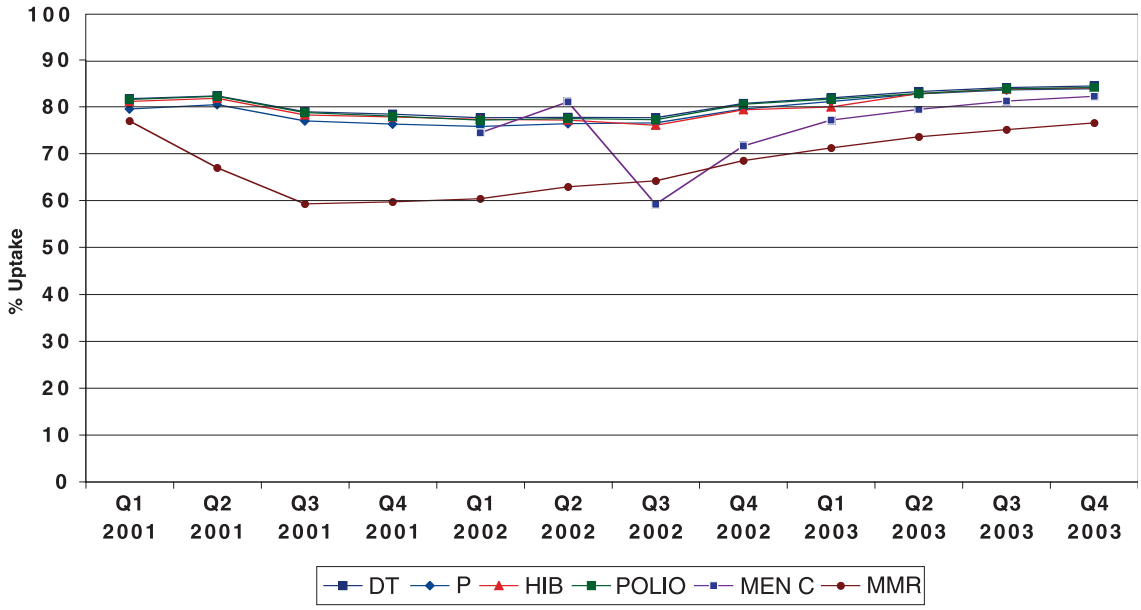
Primary Immunisation Uptake Rates at 12 months of age for those children born from January 2000 to December 2002



Measles, mumps and rubella vaccine (MMR) uptake rates are also rising (now 77.6%) and at a faster rate than other vaccines but again do not reach the national target of 95%. A marked increase in the number of measles cases was seen in 2003 as a result of the low uptake of the vaccine. This outbreak was dealt with effectively and since then the number of measles cases reported in the region remains at a steady background level.

FIGURE 6.2:

Primary Immunisation and MMR Uptake Rates at 24 months of age for those children born from January 1999 to December 2001



Within the Eastern Region pockets have been identified where immunisation rates are particularly low. Public health efforts are targeted at these areas and initiatives to increase immunisation uptake rates that have been successful in other regions or countries need to be considered.

A new Child Health Information System (CHIS) is currently being developed. This will

- Provide lists of cohorts and defaulters to general practitioners,
- Allow more targeting of blackspots (e.g. inner city areas) and
- Provide accurate immunisation records for school immunisations.

Other initiatives that are also being considered include:

- Translation of information leaflets for the most common ethnic groups presenting with their children for immunisation,
- Education of health professionals in the region on the risks of illness associated with vaccine preventable diseases and the benefits of vaccination and
- Updating of school immunisation guidelines.

Key point

- Public health efforts will be targeted at areas of low immunisation uptake.

FIGURE 6.3:

Uptake of DTP and MMR vaccine, births fourth quarter 2001

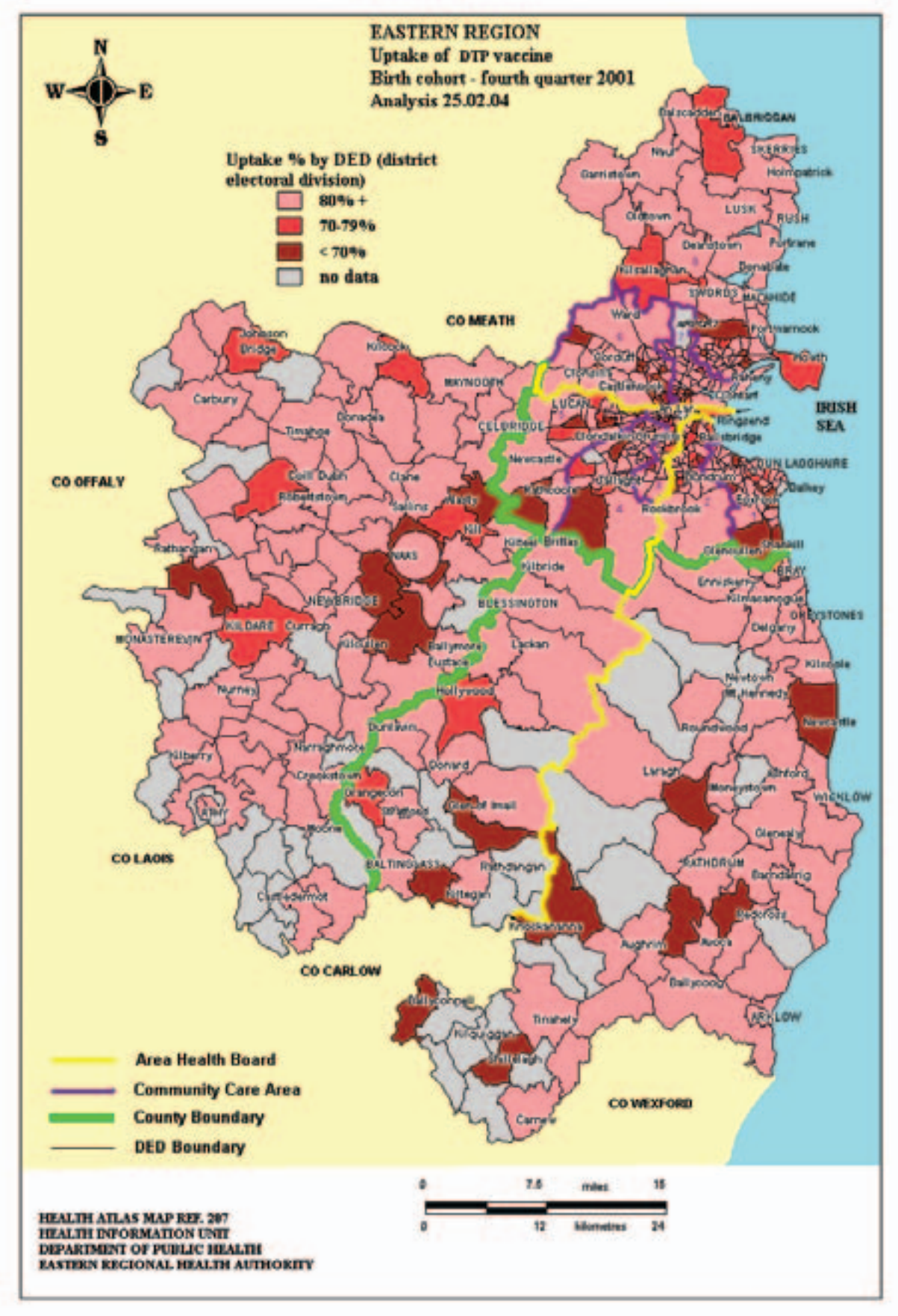
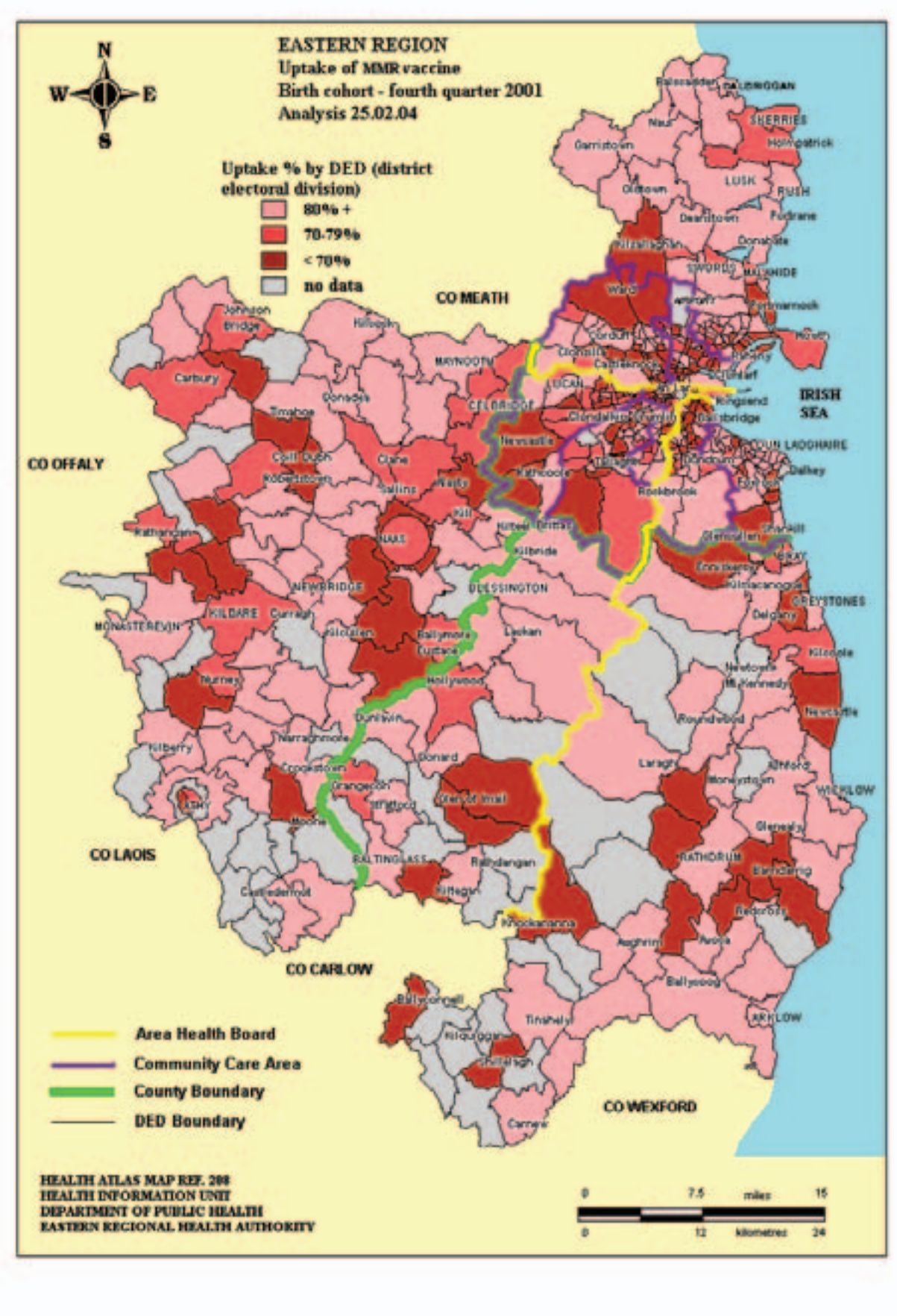


FIGURE 6.3 *continued*



Parental views on childhood immunisations

A qualitative research project was undertaken to gauge the views of parents on childhood immunisation. The aim was:

- to increase the uptake of childhood immunisation in the Eastern Regional Health Authority by identifying parental issues that inhibit the uptake of immunisations and
- to identify and build on areas of strength of the current immunisation system.

Parents of children under the age of five years were invited to attend focus groups. An experienced facilitator and a topic list of themes were used to steer the discussions.

The key themes to emerge included:

- Importance of others in the decision to immunise,
- Lack of relevant accessible information and concerns regarding mis-information,
- Difficulty organising vaccination and
- Feelings of fear and guilt surrounding immunisation.

Specific Diseases:

(a) Bacterial meningitis

Bacterial meningitis is a serious disease which is associated with considerable morbidity and mortality. In 2003, there were 106 cases of bacterial meningitis notified in the Eastern Region (Table 6.1) with four deaths.

Meningococcal disease is the most common cause of bacterial meningitis. Three of the deaths in the Eastern Region in 2003 were caused by Group B meningococcal disease. There is currently no vaccine available against this form of meningitis. The other death was caused by pneumococcal disease. Table 6.1 shows the causative organism for all cases of meningitis in the region in 2003.

Table 6.1: Causative organism for all meningitis cases in the Eastern region, 2003.

Organism	Number	%
Neisseria Meningitidis (meningococcus)	74	70
Streptococcus Pneumoniae	10	9
Bacterial (Organism unknown)	10	9
Haemophilus influenzae b	5	5
Mycobacterium Tuberculosis	3	3
Listeria	2	2
Escherichia Coli	2	2
Total	**106**	**100%**

Considerable strides have been made in recent years in the fight against meningitis. The introduction of Group C meningococcal vaccine in 2000 and Hib vaccine in 1992 have had a major impact on the incidence of these diseases. The dramatic reduction in the incidence of and mortality from Group C meningococcal disease is outlined in Table 6.2.

Table 6.2: Incidence of and mortality from Group C meningococcal disease in the Eastern Region, 2003

Year	Group C cases	Deaths from Group C
2000	43	4 (pre introduction of vaccine)
2001	13	0
2002	9	0
2003	2	0

The Department of Public Health in conjunction with public health doctors in the community are currently working on evidence based meningococcal guidelines.

Key points

- There is currently no vaccine available against Group B meningococcaldisease.
- The number of cases of Group C meningococcal disease has decreased dramatically in the Eastern Region since the introduction of the Group C vaccine.
- There have been no deaths from Group C meningococcal disease in the Region since the introduction of the Group C vaccine.

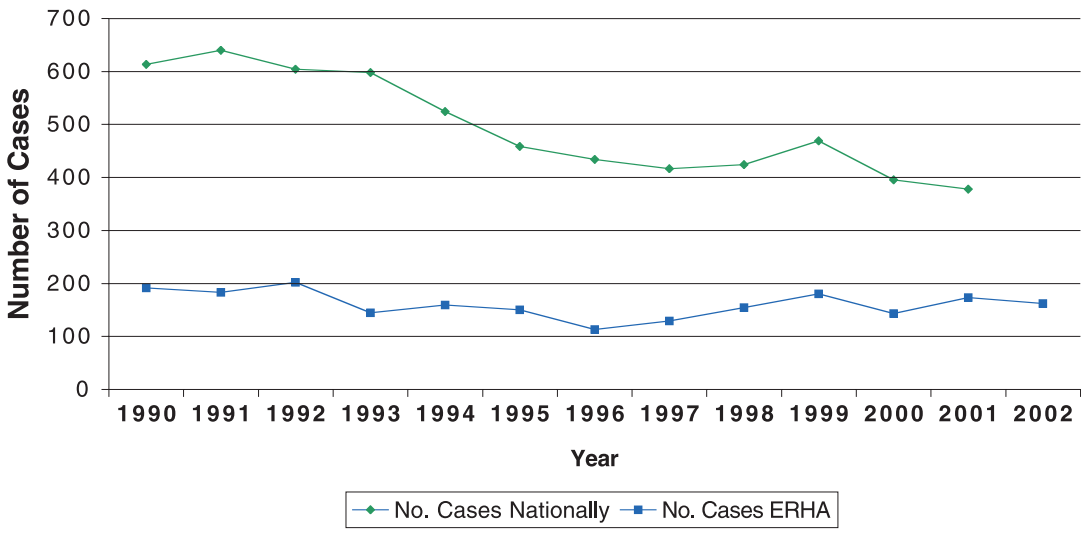
(b) Tuberculosis

Tuberculosis (TB) continues to be a significant problem both nationally and in the Eastern Region. Nationally the number of cases fell consistently through the nineties, with a slight increase in 1999, followed by a reduction in 2000 and 2001. The number of cases in the Eastern Region has remained relatively constant in recent years, with the three-year rolling average staying at between 160 and 168. The total number of cases in 2002 was 163: a decrease from the previous year's total of 171, Figure 6.4.

The highest crude incidence rates of TB in the Eastern Region in recent years were in areas with high levels of poverty and unemployment.

FIGURE 6.4:

Number of TB cases both nationally and within the ERHA, 1990 to 2002



An increase in the number and proportion of cases among foreign nationals has been seen in recent years with 59 cases (36%) in 2002 compared to 35 cases (25%) in 2001 and 25 (17%) in 2000.

The management of TB cases and contact tracing is a highly specialised area. Expert and ongoing management of TB in the community by a multi-disciplinary team is required.

Key point

- The public health management of TB cases is a highly specialised area. Expert and ongoing management of TB in the community by a multi-disciplinary team must be maintained.

(c) E-Coli 0157 (Verotoxin producing E Coli)

Verotoxin producing *E-coli* 0157 (VTEC) causes a severe form of gastro-enteric illness which can lead to kidney failure or death. In 2003 there were 12 laboratory confirmed cases of VTEC notified in the Eastern Region, five of which occurred in young children.

During 2003 two outbreaks of VTEC occurred in the region around the same time. In the first outbreak there were 12 probable cases and five laboratory confirmed cases, three of whom were hospitalised. In the other outbreak there were four confirmed cases, two of whom were hospitalised. For both outbreaks 'outbreak control teams' were convened. The three components of the outbreak investigations were epidemiological, microbiological and environmental.

(d) Influenza

This influenza season (2003-2004) started early with the first cases diagnosed in early September 2003. Influenza rates were higher that that recorded for the previous two seasons and higher than previously recorded in the autumn. The region also had two outbreaks of Influenza A in schools which were the earliest outbreaks reported in Europe. It is extremely important that the surveillance systems that have been put in place continue to provide data in a timely fashion to allow us to detect trends quickly and respond in an appropriate manner. It is also important that all health care workers are vaccinated against this disease.

Key point

- All health care workers require annual vaccination against Influenza.

(e) Measles

A measles outbreak was identified in the last two weeks of 2002 when the number of cases notified exceeded the background level of approximately five cases per week. In view of the very low MMR uptake rates in the region a "measles alert" team was established, linking with the children's hospitals, accident and emergency departments, microbiology departments and general practitioners.

Control measures were quickly put in place. This included detailed follow-up of each possible case of measles and their close contacts. Un-immunised contacts were immunised. Intensive efforts were made to increase the uptake of MMR immunisation.

The main impact of the outbreak was seen in the first three months of 2003 when 255 cases were notified. The number of measles notifications remained higher than normal until the end of July and since then have returned to low background levels. A total of 369 measles cases were reported in 2003.

There is a considerable workload involved in the detailed follow up of all possible cases of measles. Laboratory confirmation and immunisation of close contacts also places an increased burden on other parts of the health service. The control measures, the publicity surrounding the outbreak and the renewed focus on immunisation all led to an increased uptake of MMR immunisation in 2003. The challenge for the future is to get the MMR uptake rates up to 95% so that our efforts are not required for controlling vaccine preventable diseases. Nevertheless we also need to have the surge capacity to respond to a future outbreak in a focused and timely manner.

Key point

- The challenge for the future is to get the MMR uptake rates up to 95%.

(f) Sexual Health

A regional Sexual Health Strategy will be presented during 2004. Membership of the working groups is multidisciplinary with representation from service providers, users, policy makers and health promotion. A wide-ranging consultation process has taken place.

The overall aim of the Strategy is to:

- Promote sexual health and well being,
- Reduce the risk of developing sexually transmitted infections,
- Reduce unintended pregnancy, and
- Reduce inequalities in sexual health for marginalised groups.

Sexually Transmitted Infections Services

There has been a steady increase in sexually transmitted infection notifications in the Eastern Region since 1991 and a slight decline in 2002 (Figure 6.5). In 2001, notifications in the Eastern Region accounted for over half of all national cases.

In order to understand the epidemiology of sexually transmitted infections, information on age, gender and risk groups is necessary. Until early 2003 the percentage of notifications where data on age were provided was only 28%. Other information on risk groups and source of infection is usually not reported. Underreporting is an issue that needs to be addressed. Young people are the principal group affected by sexually transmitted infections with the majority of notified infections occuring in those aged under 30 years.

FIGURE 6.5:

Notifications of sexually transmitted infections in ERHA and Ireland, 1991-2002

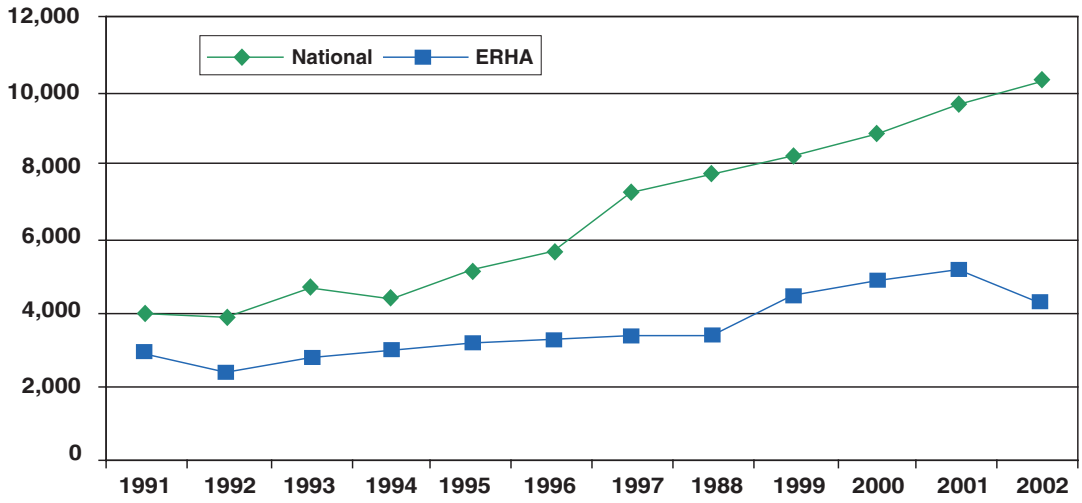


Table 6.3: Comparison of selected national and regional notifications for sexually transmitted infections, 2002

Sexually Transmitted Infections	National	ERHA	ERHA per cent of total
Ano-Genital Warts	3,932	1,588	40%
Chlamydia Trachomatis	1,922	910	47%
Genital Herpes Simplex	358	220	62%
Gonorrhoea	213	120	56%
Infectious Hepatitis B	57	30	53%
Non-Specific Urethritis	2,025	630	31%
Syphilis	303	243	80%
Other STIs	1,660	693	42%
Total	**10,470**	**4,434**	**42%**

Key points

- Sexually transmitted infections are increasing at an alarming rate. Management of the problem in the first instance requires notification of cases.
- For sexually transmitted infections information on age, gender and risk groups is essential.

Syphilis

A syphilis outbreak mainly affecting men who sex with men (MSMs) occurred in 2001. Since that year the total number of cases of syphilis notified in the Eastern Region has remained high. The number of new infections among men who have sex with other men (MSM) has fallen since 2001. There has been an increase in syphilis in heterosexuals. An outbreak control team was set up in 2001 to investigate the epidemiology and to collaborate on control and prevention.

Enhanced surveillance of syphilis has been in place since 2001. This involves collaboration between public health, STI clinicians and the NDSC.

Table 6.4 shows the number of syphilis notifications in the Eastern Region by year and by sexual orientation up to the end of 2003.

Table 6.4: Syphilis notifications by year and by sexual orientation for 2000 to 2003

Year Diagnosis	MSM	Heterosexual	Unknown	Grand Total
2000	37	37	9	83
2001	213	86	4	303
2002	141	99	3	243
2003*	72	46	56	174

**provisional data*

Chlamydia

Chlamydia trachomatis infection is the most common, curable, bacterial sexually transmitted infection in the world with an estimated 89 million new cases each year. It is of particular public health importance because of its association with infertility if left untreated. After anogenital warts, Chlamydia trachomatis was the second most commonly notified sexually transmitted infection to the ERHA in 2001 and 2002. There has been a five-fold increase in the numbers notified since the early 1990s.

Data on prevalence of infection are limited to special projects. Reported rates vary from 9.5% - 13% among clients at an STI clinic in Dublin in 1999 to 13% among a sample of clients at a Family Planning Clinic in Dublin and 4% in female attendees for cervical smears in Trinity College Dublin. Screening with testing and treatment protocols should be extended to risk groups.

Key points

- Syphilis remains a public health problem and needs to be monitored.
- The incidence of chlamydia infection, which is associated with infertility, has been increasing dramatically in the Eastern Region in the past decade.
- Chlamydia screening should be offered to risk groups.

HIV

The epidemiology of the HIV epidemic in Ireland mirrors the situation in many other Western European countries. Heterosexual contact is now the most frequent transmission mode, overall accounting for 44% of all new HIV diagnoses reported in Western Europe in 2002 and for more than 50% in Denmark, Ireland, Israel, Norway, Sweden and the United Kingdom. Overall in Western Europe, increases in cases of newly diagnosed HIV infections occurred through heterosexual contact and in homo/bisexual men but not in intravenous drug users. The recent increase in HIV diagnoses reflects an increase in the number of heterosexual cases in persons from countries with a generalised HIV epidemic, most of whom became infected in their country of origin, but probably also reflects a true rise in HIV incidence among heterosexuals.

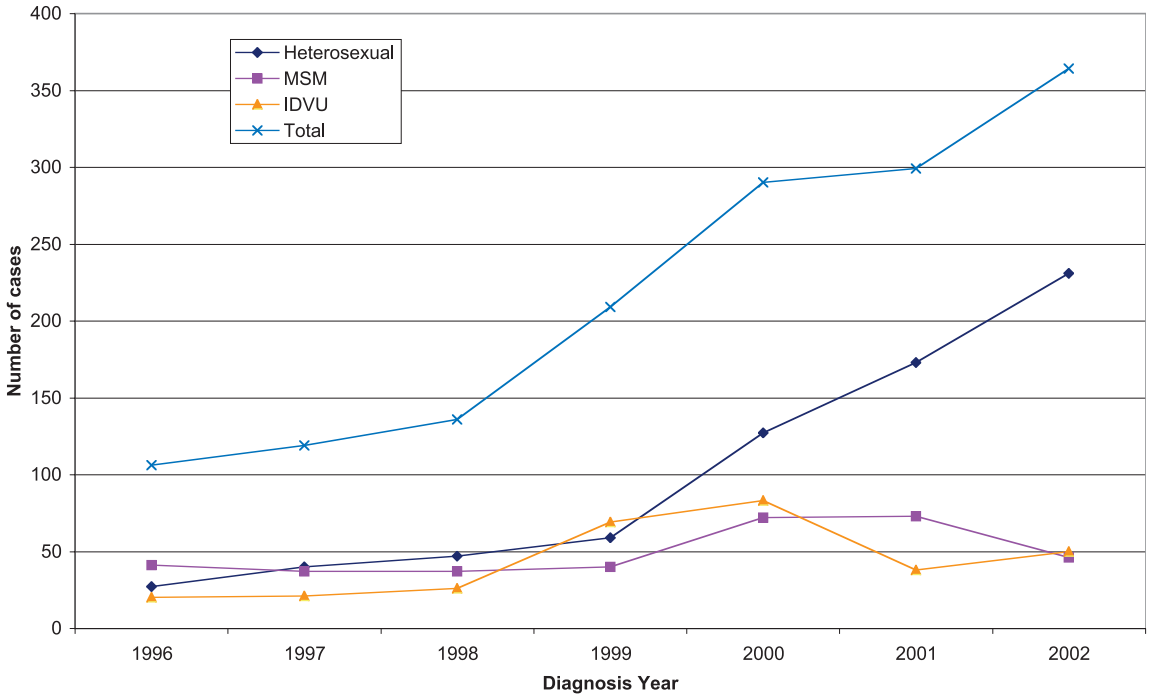
Within Ireland the incidence of cases of HIV has been rising and the incidence is significantly higher in the Eastern Region than it is in the other regions of the country. The increasing incidence of HIV in tandem with the increase in the incidence of sexually transmitted infections is an important public health problem.

Key points

- The recent increase in HIV diagnoses reflects an increase in the number of heterosexual cases in persons from countries with a generalised HIV epidemic.
- Within Ireland the incidence of cases of HIV has been rising and the incidence is significantly higher in the Eastern Region than it is in the other regions of the country.

FIGURE 6.6:

Newly diagnosed HIV infections in Ireland among Heterosexuals, MSM, IDUs and Total for all exposure categories 1996 to 2002



Source: NDSC

In 2002 the total number of newly diagnosed HIV cases was 364. This represents a 22% increase in the number of new cases diagnosed compared to 2001. Of the cases diagnosed in 2002, 57.6% were resident in the Eastern Region at the time of diagnosis. This brings the total number of HIV infections reported in Ireland at the end of December 2002 to 3,009.

The majority of new cases diagnosed in 2002 (63.5%) were among heterosexuals. The mean age was 30.8 years. One hundred and eighty six (51.1%) of the newly diagnosed cases in 2002 were born in sub-Saharan Africa.

We must continue a focused, preventive strategy in relation to traditional risk behaviours, sex between men and injecting drug use while acknowledging and focusing on emerging trends.

Table 6.5: Exposure categories for HIV in Ireland, 2001 and 2002		
Exposure Category	**YEAR**	
	2001 (%)	**2002 (%)**
Heterosexual	173 (57.9)	231 (63.5)
Men who have sex with men (MSM)	73 (24.4)	46 (12.6)
Intravenous Drug User (IDU)	38 (12.7)	50 (13.7)
Children	6 (2.0)	8 (2.2)
Haemophiliac	-	1 (0.3)
Transfusion Recipient	2 (0.7)	-
Other	-	4 (1.1)
Undetermined	7 (2.3)	24 (6.6)
Total	**299 (100)**	**364 (100)**

Source: NDSC

Acquired Immunodeficiency syndrome (AIDS)

After several years of decline following the introduction and widespread use of combination antiretroviral treatment, AIDS incidence has now leveled off in most countries in Western Europe and even shows signs of increasing again in several countries. In contrast to AIDS incidence, AIDS mortality continued to decrease.

The number of AIDS cases reported in 2002 was 12 which brings the total number of cases reported in Ireland to date to 731. The total number of AIDS related deaths reported in Ireland are 369 to date.

There is still no cure for HIV/AIDS and although there is ongoing research there is no vaccine available as yet. Combination therapy has improved the lifespan of people infected with HIV. However, the treatments are complex and extremely demanding on the patients and on the health services. Better survival rates combined with the growing numbers of new infections mean that the number of people living with HIV is increasing. This is putting increasing demands on the services in place at present.

Key points

- The incidence of AIDS is increasing.
- AIDS mortality continued to decrease.

Antenatal Testing

The Antenatal HIV Screening Programme was introduced in Ireland by the Department of Health and Children in 1999. The rate of HIV positivity from anonymous unlinked antenatal HIV screening programme has increased almost three-fold for the two most recent years (2000 and 2001), Table 6.6. This is probably a reflection of the HIV sero-positivity in non-national heterosexuals.

Table 6.6: Results of the anonymous unlinked antenatal HIV screening in Ireland by year, 1993 to 2001

Year	Total tests	Rate of positive results per 100,000 tests
1993	53,480	24.3
1994	51,118	11.7
1995	56,081	10.7
1996	62,008	19.4
1997	64,412	41.9
1998	67,124	38.7
1999	54,089	44.4
2000	56,468	124.0
2001	59,539	126.0
Total	524,319	49.4

Source: NDSC

Due to the fact that treatment with anti-retrovirals during pregnancy greatly decreases the chances of transmission of HIV a linked antenatal testing programme was introduced in 2000. The uptake of this programe is improving and at present stands at 95%-99% in the major Dublin hospitals.

(g) Hepatitis B

Hepatitis B is a vaccine preventable disease which causes a serious illness often with long-term sequelae. Immunisation against hepatitis B is not included in the primary immunisation schedule but is recommended for healthcare workers and other risk groups.

Acute hepatitis B infection is a major priority for surveillance and control in the Eastern Region as numbers of notified cases continue to rise. In 2002, 159 cases were notified to the regional public health departments although major under reporting continues to be a problem. The primary sources of notifications are currently the centres for health screening of refugees and the maternity hospitals. The main risk groups identified are non national women and attendees at sexually transmitted infection (STI) clinics.

All cases of hepatitis B should be reported to the Director of Public Health for public health follow up and contact tracing.

Table 6.7: Regional distribution of hepatitis B notifications in ERHA Q1 1998 to 2003

Region	1998	1999	2000	2001	2002	2003	Total
ECAHB	13	36	43	20	23	20	155
SWAHB	68	78	53	61	37	45	342
NAHB	20	59	51	47	99	129	405
Unknown	0	1	0	4	0	0	5
ERHA	101	174	147	132	159	194	907

Key point

- Acute hepatitis B infection is a major priority for surveillance and control in the Eastern Region as the number of notified cases continues to rise.

(h) SARS (Severe Acute Respiratory Syndrome)

Severe Acute Respiratory Syndrome (SARS) was first recognised as a global threat in March 2003. Between March and July 2003 more than 8,000 probable cases of SARS were reported in approximately 30 countries. 1,707 cases were in health care workers and there were 774 deaths, a case fatality ratio of 9.6%.

In the Eastern Region nine suspected cases of SARS were notified and were followed up by Specialists in Public Health Medicine. None of these suspect cases was confirmed as a case of SARS.

It is important to remain alert for the recurrence of SARS. Specialists in Public Health Medicine conduct surveillance and assist in the development of guidelines for the management of cases of SARS both at a national and regional level.

(i) Small round structured virus (Norovirus) outbreaks

Most outbreaks of infectious disease in the region relate to gastrointestinal disease and, more specifically, to small round structured virus (SRSV) or norovirus. Small round structured virus or norovirus is the name given to a family of viruses that cause gastro-enteritis. The resultant illness has been called 'winter vomiting disease' although it occurs throughout the year. This virus is the most common cause of outbreaks of gastro-enteritis in Ireland. Norovirus outbreaks are of public health importance because they cause considerable morbidity and place an extra financial burden on the health services. They can be associated with major disruption to services because of hospital and ward closures, lack of staff because of illness, delay in patient investigations and deferred admissions.

The resultant illness is generally characterised by the sudden onset of vomiting and/or diarrhoea. It is usually a mild illness lasting 24-48 hours and most cases recover completely. Outbreaks often occur in hospitals and nursing homes, particularly in the elderly. Infection is commonly spread from one person to another or from contamination in the environment. Norovirus infection can also be caused by contaminated food and water.

In 2001, ten outbreaks of gastroenteritis of suspected viral origin affecting 458 people were investigated in the Eastern Region. There was a significant increase in the numbers of outbreaks reported in 2002 with 68 outbreaks investigated, affecting 3,810 people. In 2003 there were 36 outbreaks of norovirus affecting 925 people. Twenty eight of these outbreaks (78%) were associated with healthcare institutions and four with schools or crèches. Norovirus was isolated in 19 of the 36 suspected viral related outbreaks in 2003.

The National Disease Surveillance Centre has recently produced guidelines for the management of norovirus outbreaks in institutions.

Strategies for reducing norovirus outbreaks include education in infection control, improved surveillance systems to assist in the investigation and control of outbreaks and effective management of cases using multidisciplinary teams.

The reduction in norovirus outbreaks between 2002 and 2003 may be due to factors such as

improved outbreak preparedness and the early institution of control measures when cases arise.

Changes to Infectious Disease Legislation

Important changes in the national infectious disease legislation came into operation on 1st January 2004.

An amendment to the Infectious Diseases Regulations 1981 established a revised list of notifiable diseases and introduced a requirement for laboratory directors to report infectious diseases. The most notable changes to the list of infectious diseases are:

- Food- and water-borne illnesses will now be specified individually (e.g. campylobacter infection), whereas previously there was a more generic category of food poisoning (bacterial other than salmonella).
- The addition of diseases such as botulism and tularemia which may be associated with bioterrorism.
- The addition of Hepatitis C.
- The listing of both diseases and pathogens.
- Several pathogens that are important in the monitoring of antimicrobial resistance will now be notifiable.

Under the amended regulations, unusual clusters or changing patterns of illness that may be of public health concern must also be reported.

Table 6.8 gives a breakdown of the number of reported notifiable diseases in the ERHA over the past three years. In spite of the statutory obligation to notify these diseases, a significant degree of under-reporting continues to occur both regionally and nationally.

Table 6.8: Breakdown of reported notifiable diseases by type in the ERHA,2001-3

Notifiable Disease	2001	2002	2003
Acute Encephalitis	1	1	3
Acute Viral Meningitis	94	23	24
Bacillary Dysentery (Shigellosis)	19	14	20
Bacterial Food Poisoning (other than salmonella and dysentery)	479	501	566
Bacterial Meningitis (including meningococcal septicaemia)	139	107	106
Cholera	1	1	0
Creutzfeldt Jakob Disease	3	3	1
Gastroenteritis (when contracted by children under 2 years of age)	818	645	546
Infectious Mononucleosis	48	53	18
Infectious Parotitis (Mumps)	22	17	20
Influenzal Pneumonia	0	1	1
Legionnaires Disease	2	3	4
Leptospirosis	7	0	2
Malaria	10	13	11
Measles	184	105	363
Rubella	45	19	35
Salmonellosis (other than typhoid or paratyphoid)	169	117	164
Tetanus	1	0	1
Tuberculosis*	171	163	112
Typhoid & Paratyphoid	2	4	4
Viral Hepatitis Type A**	66	7	8
Viral Hepatitis Type B	132	139	172
Viral Hepatitis Unspecified	132	86	36
Whooping Cough	75	32	14
Grand Total	**2,620**	**2,066**	**2,231**

Note:

** Total number of tuberculosis cases has not yet been validated for the year 2003*

***Some underreporting of Viral hepatitis A may have occurred during 2002 and 2003*

Body Art and Public Health

Body art is a broad term used to cover all types of skin and body piercing. It also includes tattooing, acupuncture and electrolysis. It has become increasing popular in recent years in Western societies. With this have come calls for greater control of body art businesses, in terms of hygiene practices and informed consent with legislative protection for minors.

Legal considerations

Currently in Ireland, the activities of body piercing are not covered by legislation and there are no plans to regulate them. The Department of Public Health in the ERHA has received complaints from parents that their children have undergone body art without their consent. Body piercing is not considered a medical procedure in Ireland and thus there are no age limits and no requirements for parental consent. There is a growing body of opinion that deep body piercing is bordering on a surgical operation.

Health problems associated with Body Art

The procedure of body/skin piercing induces a number of health risks. One study was conducted amongst GP practices covering a population of 389,000 and 11 known body piercers. Over a one-year period, 56% of GP practices reported 472 complications. The most common complications were bleeding, local infection and oedema of the surrounding tissues leading to embedding of the jewellery. The adverse effects of body piercing can be categorised into:

- Non-infectious complications,
- Infectious complications and
- Complications with pre-existing conditions.

Surveillance of health problems

Information on the frequency and characteristics of complications of body piercing is not available. Many of the minor complications may not present to primary care and Accident and Emergency Departments. For those that do present for medical treatment, there is no system of surveillance yet in place. Consequently there is no ongoing, systematic method for ascertaining the magnitude of the problem. Hepatitis is a notifiable disease and as such is reported to the Department of Public Health. These notifications do not always include information relating to risk factors or source of infection.

As the practices of body piercing and tattooing are not licensed in Ireland, it is difficult to estimate the number of businesses currently in operation. It is also difficult to estimate the number of people who avail of their services. This latter information is required to calculate complication rates, resulting from these practices. It has been proposed that body piercing and tattooing premises be regulated in the future.

Regulation and Control

In the absence of any specific legislation to control the practice of Body Art, the Department of Public Health do not encourage or condone this activity. Members of the public have a responsibility to ensure they are happy with the premises and the operator.

It is recommended that Body Art operators are subject to regulation in the future and that that best practice guidelines are drawn up as a matter of urgency.

Summary of recommendations

In summary, there are two main recommendations in relation to the control and regulation of the practice of Body Art:

1. It is recommended that national guidelines on best practice for Body Art be produced as a matter of urgency.

2. It is recommended that a review be undertaken of the current legislation governing Body Art practitioners and their premises. This review should inform the type of new legislation needed to regulate these practices and to facilitate enforcement of best practice guidelines.

Priorities for action

- Target public health efforts at areas of low immunisation uptake.
- Develop preparedness for emerging communicable disease threats (e.g.) SARS, antimicrobial resistance, biological threats and influenza pandemics.

Chapter 7

Environmental Health

Introduction

Environmental health is an integral component of public health. Its scope ranges from the management of routine incidents which can cause enormous public concern and unnecessary illness to the management of unusual and highly complex issues such as the uranium water contamination described later in this chapter. The management of chemical incidents and chemical threats in relation to security has become an important part of the public health function and on-going training in this changing area is vital. Multidisciplinary working and collaboration with environmental health officers are essential to the successful management of environmental health issues.

Medical Officer of Health (MOH)

Public health in Ireland had its origins in the public health movement which evolved in England in the middle of the 19th century. England was then in the throes of an industrial revolution, with problems arising from infectious diseases such as cholera, typhoid and smallpox, as well as the lack of nutrition and the prevalence of slum conditions in the growing urban areas. This led to legislation enabling Medical Officers of Health to be appointed.

The post of Medical Officer of Health in Ireland had its origin in the 1878 Public Health (Ireland) Act, with the establishment of sanitary authorities in urban and rural districts. Superintendent Medical Officers of Health were appointed to urban districts, while the then District Medical Officers acted in rural districts.

The 1925 Local Government Act established the county as the unit of administration. This Act also provided for the appointment of a County Medical Officer of Health. However, as the Act was discretionary, many County Councils were slow to make appointments and it was not until the 1947 Health Act that the appointment of a Medical Officer of Health was made a statutory obligation for each Local Authority.

The 1947 Act gave significant powers to the Medical Officer of Health in relation to protecting the health of the public. The subsequent Health (Duties of Officers) Order, 1949 set out in detail the duties and responsibilities attached to the post.

The 1970 Health Act resulted in the establishment of the Health Boards and responsibility for the delivery of health services transferred from Local Authorities to these new Boards. A new post, that of Director of Community Care and Medical Officer of Health, was established, the functions of which included those previously attached to the former County Medical Officer of Health post.

The re-organisation of public health medicine in the mid 1990s, with the establishment of Departments of Public Health in each Health Board, headed by a Director of Public Health and supported by Specialists in Public Health Medicine, brought about a new situation. This resulted in the abolition of the Director of Community Care and Medical Officer of Health post. The Health Board (Miscellaneous Assignment of Duties) Regulations 1998, allowed for the medical functions, previously allocated to the Medical Officer of Health, to be assigned to

such specified medical officers as determined by the Chief Executive Officer of each Health Board. These specified medical officers are the Director of Public Health, Public Health Specialists, Senior Area Medical Officers and Area Medical Officers of the Board.

The Medical Officer of Health post has always been one of importance. In addition the title is one that in public health terms is well understood internationally. Looking to the future, there continues to be a threat to health from infectious diseases, environmental accidents, the emergence of new infectious diseases with the potential for significant mortality and the risk to health arising from the ease of international travel. For all these reasons there is no room for complacency. In addition there is the biological threat arising from terrorism and the necessity for contingency plans and effective rapid response at regional level should the need arise. Finally there is the requirement under International Health Legislation for the country to have capacity of an adequate public health response at various levels in the State in the event of a public health emergency of an international nature. All these matters require continuing appropriate leadership and medical expertise.

With another reorganisation of the health service upon us and legislation for same being required, the opportunity should be taken nationally to clearly reinforce the Director of Public Health as the Medical Officer of Health for a given region. This in turn will place certain responsibilities on the person identified, including that of ensuring continuity of service.

Uranium in Drinking Water

In Autumn 2002, the uranium levels in one of three water sources for the town of Baltinglass were found to be in the range 120-140 micrograms/litre. The Department of Public Health was consulted and the use of the affected water source was discontinued. The supply had been in place for about 14 years and it was presumed that the uranium levels in the water were high over this period. There was some local concern relating to possible health effects.

Uranium is a naturally occurring radioactive material that is ubiquitous in our environment, including soil, rocks, water and air. It is a reactive metal, so it is not found as free uranium in the environment. It gets into drinking water when ground waters dissolve minerals containing uranium. High levels of uranium indicate the potential for radon and radium to also be present. Uranium has no known metabolic function in animals or humans and is regarded as non-essential.

While there are currently no guidelines in relation to the level of uranium that should not be exceeded in drinking water in this part of the world, WHO presently recommend that authorities should strive to have the level of uranium in drinking water not any higher than 9 micrograms/litre. However, this level is still under review and may be raised in the near future to about 15 micrograms/litre. In the United States guidelines recommend that uranium should not exceed 30 micrograms/litre.

From a health aspect two areas were considered concerning the high levels of uranium in the drinking water, these were

- Radioactivity and
- Chemical Effects.

Although natural uranium is radioactive it poses little radioactive danger because it only gives off very small amounts of radiation. The Radiological Protection Institute of Ireland indicated that the potential radioactive exposure of individuals consuming the water supply in this case was only marginally above what would be deemed acceptable.

In relation to the chemical effects of uranium, animal studies and the several small studies in humans have shown that uranium is nephrotoxic. There appears to be an association between increased uranium exposure though drinking water and renal tubule function. Both functional and histologic changes to the proximal tubules have been demonstrated. The effects are of modest magnitude and may well be reversible once exposure ceases. A Finnish study found statistically significant levels of sub-clinical kidney malfunction at tubular level only at exposure of 300 micrograms/litre or higher.

Due to some public concern in the Baltinglass Area, the South Western Area Health Board sought the further assistance of the Department of Public Health in relation to this matter in overseeing with others a screening programme for the exposed population. Having regard to the chronic nature of the exposure to uranium in the drinking water in this instance and the limited world literature on the subject it was felt that a screening programme could contribute to the body of knowledge.

The programme, which included the completion of a questionnaire, the measuring of height, weight and blood pressure, and the taking of urine and blood samples for analysis, commenced in July 2003 and will take about a year to complete. To date this study has found no evidence of any adverse health effects from exposure to uranium in drinking water.

Health and Environmental Effects of Landfilling and Incineration of Waste

Introduction

A major report on the effects of various forms of waste disposal commissioned by the Health Research Board at the request of the Department of the Environment and Local Government was released in February 2003. The report - *Health and Environmental Effects of Land filling and Incineration of Waste – A Literature Review* was conducted by an interdisciplinary scientific team from University College Dublin, University College Cork and Dublin Institute of Technology, Kevin Street.

The purpose of the report is to inform policy makers and the public of the technical aspects of both landfill and incineration practices in Ireland and the effects that these practices may have on the environment and human health. The report reviewed national and international literature as well as current practice and recent developments in landfill and incineration technologies. Nearly all of the studies identified in this report relate to other countries, particularly the United States. In addition most of these studies relate to sites using older technologies. For these reasons their relevance to Ireland must be treated with caution.

The findings of the report included the following:

Risk assessment /detection of health and environmental impacts

- "At present, Ireland has insufficient resources to carry out adequate risk assessments for proposed waste management facilities. This is due to lack of dedicated resources or personnel and the presence of serious data gaps in relation to the environmental health effects of these technologies".

- "There is a serious defeciency of baseline environmental information in Ireland at present which is necessary for the detection and monitoring of the environmental impacts of waste facilities".

- "There is a need for capacity building in environmental analysis. In particular, Irish facilities for measuring dioxins are required as a priority".

Health effects of landfilling and incineration

- "Evidence of a causal relationship between specific health outcomes and landfill exposure is still inconclusive. There is insufficient evidence to demonstrate a link between cancer and exposure to landfill. There is modest evidence for an association between birth defects and residence near some landfill sites".

- "There is some evidence that incinerator emissions may be associated with respiratory symptoms. The evidence for a link between cancer and proximity to an incinerator is not conclusive".

Environmental effects of landfilling and incineration

- "Landfills contribute 20% of the total anthropogenic methane emissions and are a potential threat to the quality of the environment. Leachate management is a major concern. Leachate can migrate to ground and surface water from older unlined waste facilities. The risks are considerably reduced for modern double–lined landfills".

- "The disposal of municipal solid waste through incineration produces a range of volatile and gaseous emissions, which if released into the atmosphere can compromise environmental quality. But the adoption of environmental management plans by incinerator operators has been helpful in minimising potential environmental impacts. New and planned incinerators will work to EU Directives which puts a greater emphasis on energy effeciency, residuals management and on the reduction of natural resource consumption than heretofore".

In summary:

This report identifies gaps in information and resources required to evaluate risk associated with environmental hazards. It highlights research needs in this area. It makes no recommendation regarding waste management policy as it was not within the scope of the report.

Emergency Planning – Biological Threats

Following the events of September 11th 2001, many countries have carried out a review of preparedness to deal with a terrorist attack and have now widened their concept of a Major Emergency to include the possibility of a Chemical, Biological, Radiological or Nuclear element.

While the risk of such a direct attack in Ireland is considered low, the possibility of this country being affected as a result of a terrorist occurrence elsewhere has to be considered. Indeed the need for preparedness was emphasised when in late 2001 in excess of 200 suspect anthrax incidents occurred throughout the country, many of which were in the Eastern Region. Most of these occurrences involved a response from Public Health and other health services as well as other agencies.

In Autumn 2001 the Department of Health and Children established an Expert Committee for Contingency Planning for Biological Threats. This group produced a document, with interim

guidelines titled, "Biological Threats: a Health Response for Ireland." The document identified a need to:

- Organise on-call rosters to ensure that appropriately trained individuals are available on a 24 hour basis should an emergency arise.
- Stock pile appropriate antibiotics, antivirals, antitoxins, vaccines and arrange for appropriate storage.
- Designate hospitals as centres for reception of patients with smallpox or quarantine units for those who may have been exposed to smallpox and their contacts.
- Arrange the procurement and distribution of adequate quantities of personal protective clothing and equipment.
- Consider vaccination of staff in designated smallpox units and for all front line emergency personnel.
- Prepare information material on various biological agents for key health professionals.

In the document it is stressed that early detection is essential for ensuring a prompt response to biological attacks.

Work is ongoing in relation to the development and refinement of guidelines and protocols concerning biological threats.

Key point

- The need for preparedness for biological threats was emphasised when in excess of 200 suspect Anthrax incidents occurred in late 2001.

Proposed Amended International Health Regulations

International Sanitary Regulations were adopted by the Member States of the World Health Organisation (WHO) in 1951 in order to provide a single set of rules to protect the world from the spread of what were termed 'quarantinable diseases'. Although the regulations were revised in 1969 and renamed the International Health Regulations, developments since then have suggested the need for further revision. As a result the World Health Organisation has produced draft revised International Health Regulations, which it is proposed should come into effect in 2005.

The purpose of the revised regulations remains essentially unchanged, i.e. to protect against the international spread of disease while avoiding unnecessary interference with international traffic. The proposed revised regulations contain four major changes from the current regulations. These are:

- **Public health emergencies of international concern:**

  States will be required to notify all events potentially constituting a public health emergency of international concern, including those associated with the accidental, natural or suspected intentional release of pathogens, chemicals or radio-nuclear materials.

- **Epidemic alert and response:**

The proposed revised regulations will serve as the legal framework for the WHO's global health security epidemic alert and response strategy.

- **At National level – International Health Regulations focal point:**

  The national International Health Regulations focal point will be a national centre designated by each State to act as the contact point for the WHO at all times and in all matters relating to the application of the regulations.

- **Core requirements for surveillance and response:**

  The regulations will provide States with direction regarding the minimum core surveillance and response capacities required at a national level in order to successfully implement the global health security, epidemic alert and response strategy. Specific capacities are also identified in the revised regulations for airports, ports and other points of entry, recognising their special role in implementing both routine and temporary public health measures.

Overall, the proposed revised International Health Regulations seek to maintain the protection provided by the current regulations, while broadening this protection to include new and future public health emergencies.

The requirements under these proposed regulations are quite specific. For example under Article 4, dealing with surveillance, there is a requirement for health administrations to develop and maintain the capacity to detect and report, in accordance with the regulations, public health risks and events, potentially constituting public health emergencies of international concern present in its territory. Similarly, under Article 10 dealing with the response, there is a requirement for health administrations to develop and maintain the capacity to respond promptly and efficiently to public health risks and emergencies of international concern.

The proposed regulations deal at length with obligations and requirements in relation to points of entry, that is airports and ports. They also deal with the rights of travellers. For example under Article 23, medical examination, vaccination or other prophylaxis, it is stated that, unless recommended by the WHO or otherwise provided in the regulations, medical examination, vaccination or other prophylaxis shall not be required as a condition of admission of any traveller to a State, except for travellers seeking temporary or permanent residence.

Clearly these regulations, if implemented, will place an onus on the health authorities to provide an adequate 24 hour seven day public health response to cover appropriate eventualities.

Seveso II Directive

Major accidents, some involving dangerous substances, have occurred from time to time in the chemical industry worldwide. In the 1970s one major accident in Europe, the Seveso Accident, prompted the adoption of European Legislation aimed at the prevention and control of such accidents.

The first EU directive relating to this matter was adopted in 1982. However, in light of several serious accidents worldwide in the years following this, the directive was amended on several occasions and this subsequently led, in the mid 1990s, to a further EU directive on the

control of major accident hazards – the so called Seveso II Directive. The aim of this directive is two fold:

- Prevention of major accident hazards involving dangerous substances, and
- The limitation of consequences where accidents occur.

This part of the directive covers not only health and safety but also has regard to environmental aspects of such accidents.

The scope of the Seveso II Directive relates solely to the presence of dangerous substances in establishments. It covers both industrial 'activities' as well as the storage of dangerous chemicals.

The EU directive contains and places general and specific obligations on both plant operators and Member States. In Ireland at local level various bodies have been designated and given specific responsibilities. The Health Boards are one of the bodies at local level that are so designated. This places a number of responsibilities on a Health Board, including that of drawing up a specific external emergency plan for each of the sites within the region that are covered by the Seveso II Directive.

In the Eastern Region, a small number of sites are covered by the directive. The Eastern Regional Health Authority have designated Area Health Boards within the region to be responsible for drawing up the appropriate external emergency plan for each Seveso II site in their area. In this regard, the Chief Emergency Planning Officer is taking the lead and has established a committee on which the Department of Public Health is participating.

PROTECTING OUR **HEALTH**

APRIL 2004

Chapter 8

Health Promotion

Introduction

Health promotion is an important component of public and population health. It is also an important area where the targeting of health inequalities is concerned.

The second SLAN (survey of lifestyle, attitudes and nutrition) survey (2002) and its regional report provide useful information for public health action at ERHA and Area Health Board level. This study and the HBSC study (Health Behaviour of Schoo-agedl Children) carried out among school going children aged 10-17 years provide information on various measures of health including general health, smoking, alcohol and other substance use, food and nutrition, exercise and injury.

Self-reported general health improved among men and women between the 1998 and 2002 SLAN surveys in the Eastern Region. Residents of the East Coast Area health board reported the highest national rates of excellent and very good health.

Key point

- Self-reported general health improved in the Eastern Region between the 1998 and 2002 SLAN surveys.

Smoking

In the 2002 SLAN survey published in 2003 a reduction in national smoking prevalence in both males and females in all age groups was recorded. In 2002 27% of the adult population reported being regular or occasional cigarette smokers compared with 31% in 1998. However, smoking continues to be a major public health problem in the Eastern Region. The highest smoking rates nationally in 2002 were seen in the South Western Area Health Board and the Northern Area Health Board. In the Northern Area Health Board, smoking rates were higher among females than males. There continued to be marked age related patterns to smoking with highest rates among both younger males and females.

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

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

In the second national SLAN survey there was also a reported reduction in exposure to

passive smoke with reduced exposures at home, in the workplace and on public transport. Exposure rates at work were much lower than in pubs and clubs, highlighting the importance of the recently introduced smoking legislation.

Key points

- The highest smoking rates nationally were seen in two of the Area Health Boards in the Eastern Region.
- In the Northern Area Health Board, smoking rates were higher among females than males.

Illicit Drug Use

The Government published the latest Drug Strategy "Building on Experience" in 2001. This is to cover the period 2002 to 2008 and a mid term review will be undertaken in 2004. Much progress has been made in key targets relevant to the health services. In particular, the target for the numbers of persons on methadone substitution treatment of 6,500 by the end of 2002 has been exceeded. The current (February 2004) number on substitution treatment in the country is 6,860. However, methadone treatment is not enough. A priority now is to increase rehabilitation opportunities. Many people are on methadone for a long period of time and best practice dictates that realistic rehabilitation and detoxification efforts should be available to people on long-term methadone. The Authority is about to embark on a review of methadone treatment services in the region. During 2003 the National Advisory Committee on Drugs (NACD) published a prevalence estimate of opiate use and the prevalence estimate for Dublin showed a decrease from the estimate of 1996. (Table 8.1)

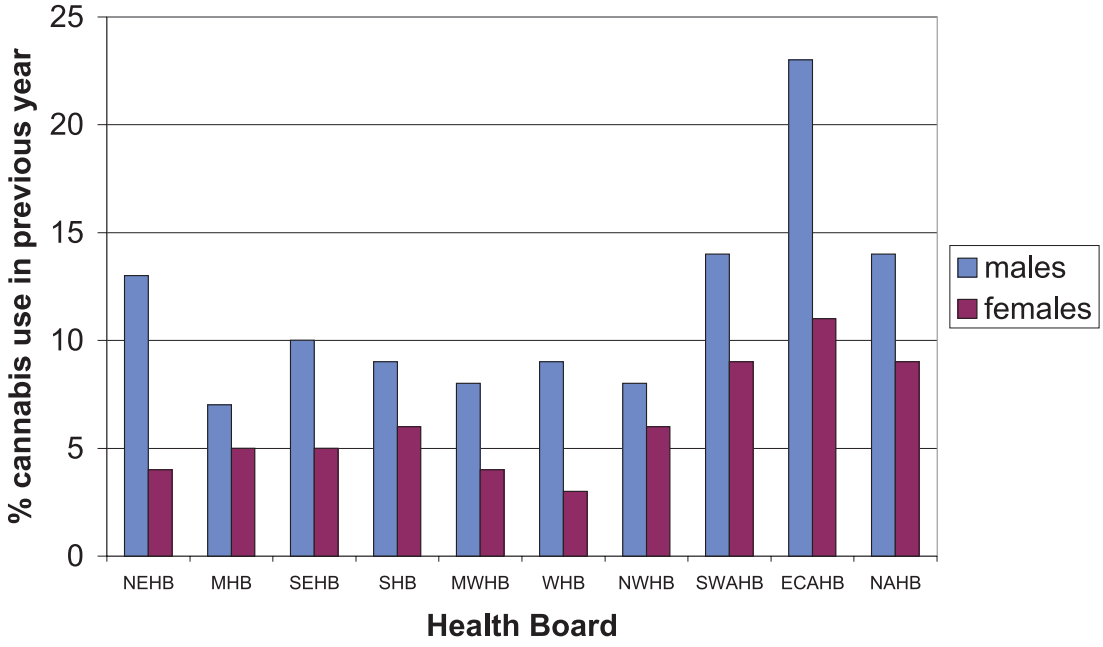
Table 8.1: Estimated prevalence of opiate use in 1996 in specific populations in Dublin compared with current estimates for Dublin in 2000

Sex	Age	Estimated prevalence (Dublin 1996)	Rate/1000	Estimated prevalence (Dublin 2000)	Rate/1000
Male	15-24	5,404	56	3,099	33
Male	25-34	3,512	42	3,464	35
Male	35-54	1,427	11	2,115	16
Female	15-24	1,778	18	1,765	18
Female	25-34	1,039	11	1,671	16
Female	35-54	300	2	697	5
Total		**13,461**	**21**	**12,811**	**19**

A notable regional variation in the use of cannabis in the previous twelve months was evident in the SLAN survey and of considerable statistical significance. In the East Coast area 15.6% of respondents reported using cannabis in the previous twelve months compared to a maximum of 7.3% outside Dublin. A review of the consequences of cannabis use has been commissioned by the National Advisory Committee on Drugs and will be presented during 2004.

FIGURE 8.1:

Cannabis use by sex and health board area



Data source: SLAN survey

Key points

- A priority now is to increase rehabilitation opportunities, particularly for those drug users who have stabilised on methadone.
- Efforts to improve uptake of appropriate clinical care of hepatitis among drug users will follow on from the establishment of a hepatitis C register.

Alcohol

Problems caused by alcohol are beginning to receive more attention. What has become obvious over the past number of years is that we have inadequate structures in this country to deal with the alcohol issue. The excellent work of the Office for Tobacco Control has shown that a focused response to tobacco can have major beneficial effects. Also the structured multi-sectoral response to the use and misuse of illicit drugs has borne fruit with reductions in prevalence of heroin dependence in Dublin and a more comprehensive response becoming available by way of treatment. It is recommended that the Department of Health and Children sets up a unit within the department that will explicitly cover all the service responses required to lessen the harm caused by alcohol. We have gone from being second lowest consumers of alcohol in the European Union to being the second highest. (Table 8.2).

Table 8.2: Alcohol consumption per capita, in litres of pure alcohol in EU Countries, 1989-2000

	1989	1991	1993	1995	1997	1999	2000
Luxembourg	12.5	12.3	12.0	11.9	11.4	12.2	12.1
Ireland*	7.6	8.0	8.2	8.7	9.9	10.7	11.1
Portugal	10.4	11.6	10.7	11.0	11.3	11.0	10.8
France	12.8	11.9	11.5	11.5	10.9	10.7	10.5
Germany	10.4	10.9	10.4	9.9	10.8	10.6	10.5
Spain	10.8	10.4	9.9	10.2	10.2	9.9	10.0
Denmark	9.6	9.9	9.7	10.0	9.9	9.5	9.5
Austria	10.3	10.3	10.1	9.8	9.5	9.3	9.4
Greece	8.4	8.6	9.2	9.0	8.8	8.9	8.0
Belgium	9.5	9.4	9.6	9.1	9.1	8.2	8.4
Netherlands	8.2	8.2	7.9	8.0	8.2	8.2	8.2
United Kingdom	7.6	7.4	7.4	7.3	8.1	8.1	8.4
Italy	9.9	8.4	8.7	8.8	8.0	7.7	7.5
Finland	7.6	7.4	6.8	6.6	7.0	7.3	7.1
Sweden	5.6	5.5	5.3	5.3	5.1	4.9	4.9

Over three-quarters of the SLAN survey respondents nationwide had consumed alcohol in the previous month. The highest rates of consumption were in the Eastern Region – the East Coast Area, South Western Area and Northern Areas (Table 8.3). A higher percentage of males had consumed alcohol in the previous month across all Boards, although in the Eastern Region the difference between the sexes was less marked.

Table 8.3: Regular alcohol consumers by Health Board and age group

Health Board	18-34 years %	35-54 years %	55+ years %	Total %
North Eastern	83.8	78.1	54.1	73.7
Midland	80.6	79.0	53.8	72.8
South Eastern	83.4	82.2	51.7	74.4
Southern	84.4	78.7	59.9	75.7
Mid-Western	86.1	75.2	52.2	73.0
Western	84.8	75.8	58.0	74.3
North Western	83.3	74.1	55.7	72.5
South Western Area	93.4	86.2	67.1	83.7
East Coast Area	92.3	92.1	67.5	85.5
Northern Area	90.9	86.8	68.9	83.5

The most important findings relating to alcohol are that the number of binge drinkers, i.e. those drinking more than six drinks in an average session, increased among men and women. However over 40% of school going children reported never having had an alcoholic drink, up from 31% in 1998; this effect was most marked in the 10 to 11 year olds. Similarly the number of 10 to 11 year olds reporting having had a drink in the last month fell by two thirds as had the numbers of those who were really drunk at least 10 times; 15% of boys in 1998 and 7% in 2002. Types of alcohol consumed were down in all boys' groups but alcopops and spirits consumption increased among girls (from 3% to 8%). The findings suggest a heightened awareness of alcohol as an issue, especially among the very young.

- The highest percentage (20%) of those who consumed alcohol on 5+ days per week was in the East Coast Area.
- The Eastern Region effect was strong, with significantly fewer nondrinkers in the East Coast Area, South Western Area and Northern Area than in the rest of the country ($p<0.001$). There was a clear age trend across all Health Boards, with older people more likely to abstain from alcohol.

On average males drank more on a typical night out than females across all Boards. The Northern Area had the highest average consumption rates per night for both males and females

Table 8.4: Percentage of respondents who are regular weekly drinkers and over the recommended weekly limit for alcohol consumption by Health Board and gender

Health Board	Males %	Females %	Overall %
North Eastern	35.9	16.9	27.4
Midland	27.8	11.2	21.3
South Eastern	18.8	13.7	16.4
Southern	24.3	17.5	21.3
Mid Western	21.8	19.9	21.3
Western	27.9	12.2	18.8
North Western	22.9	21.9	23.8
South West Area	28.1	20.7	24.4
East Coast Area	30.5	21.6	25.3
Northern Area	35.4	24.4	29.5

The way forward in terms of what is effective to reduce alcohol related harm has been outlined in the interim report of the Strategic Task Force on Alcohol in May 2002. The Authority should advocate for the introduction of the measures of proven high effectiveness and proven effectiveness (Table 8.5). With recent high profile court cases involving alcohol and a further Eurostat Report showing female Irish drinkers aged 15-24 years having high rates of alcohol consumption, the case for a watershed ban on advertising (i.e. to ban all alcohol advertising on television before 9pm) is still compelling. It is disappointing that the drinks industry and advertising industry combined have persuaded the Department of Health and Children to opt for the less effective audience profiling approach. This will ensure that Irish children will continue to be exposed in very large numbers to alcohol advertising.

Table 8.5: Effectiveness scale of measures to reduce the harm caused by alcohol

Policy Measure	Proven High Effectiveness	Proven Effectiveness	Some Effect	No Effect
Regulate Physical Ability	Minimum drinking age Alcohol control enforcement Server liability	Limit hours & days of sales Government run retail stores	Server training and tavern management police Limit number of sale outlets	Voluntary code of bar practice
Drink-driving countermeasures	Lower blood alcohol level (BAL) Random breath testing	Zero BAL for young drivers		
Taxation		Increase taxes		
Alcohol promotions			Banning advertising	Advertising content regulations Warning labels
Community action approach			Community mobilisation	
Education & persuasion				Alcohol education in school
Promoting Alternatives				Alcohol free activities

Key points

- The State's response to alcohol should be coordinated in the same way that its responses to tobacco and illicit drug use are.
- The Authority should advocate for the introduction of measures of proven effectiveness in combating alcohol misuse.
- In addition, the Authority should ask the Department of Health and Children to reconsider introducing a ban on television advertising of alcohol before 9pm.

Obesity – Time to Sound the Alarm

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

Definition of Obesity

Obesity is defined by Body Mass Index (BMI) i.e. 'weight in kilos divided by height in square metres' ***BMI= Wt (Kg) / Ht (m^2).*** A BMI of 20-24.9 is normal.

Table 8.6: Categorisation of weight by body mass index

Weight		BMI (kg/m^2)
Underweight		<18.5
Normal		20-24.9
Overweight		25-39.9
Obese	Grade 1	30-34.9
	Grade 2	35-49.9
	Grade 3	>=40

In terms of risk to health, the distribution of obese tissue around the body is important. 'Apple shaped' people, those with excess abdominal fat, tend to have a greater risk of developing diseases associated with obesity. The risk increases when waist circumference is over 94 cm (37 inches) in men and 80 cm (32 inches) in women.

Illness caused by Obesity

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

Obesity is associated with many serious diseases including:

- Diabetes (12 fold increase; 58% of type 2 diabetes is due to overweight). No condition is more closely associated with obesity than type 2 diabetes
- Insulin resistance, glucose intolerance
- Back pain
- Heart disease and stroke (five fold increase; 21% of heart disease is due to overweight and obesity)
- Hypertension (four fold increase)
- High blood cholesterol, Dyslipidaemia
- Cancer (breast and colorectal, endometrium, prostate); 40% of certain cancers are due to overweight and obesity. The WHO states that overweight is the second most common cause of cancer related deaths after smoking. Post-menopausal breast cancer has been clearly linked with weight gain.
- Gall bladder disease
- Sleep apnoea

- Stress incontinence
- Osteoarthritis
- Reproductive abnormalities
- Social and psychological implications.

Childhood Obesity

Obesity in children is a worry. The number of obese children was relatively stable until the 1980s. Obese children are likely to become obese adults. Obesity seriously threatens the health of children, reducing their life expectancy. Some will die before their parents.

Today children's leisure pursuits have shifted from outdoor activities to indoor play, computer games and TV watching. Cars are used for even the shortest journey. Children's diets have also changed. They eat larger amounts of fast food and energy dense food.

Obesity starts in infancy. Breast-feeding can be protective. A history of 3-6 months of exclusive breast-feeding was found to be associated with a 35% reduction in obesity at 5-6 years of age.

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

Economic costs of Obesity

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

Benefits of a 5-10% reduction in weight

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

Prevention

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

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

Table 8.7: Levels of action against obesity

Individual and families

- Take more exercise: make it fun
- Eat a healthier diet: make it interesting
- Curtail TV viewing and sedentary hobbies.

Central and local government

- Prioritise healthy lifestyle policies
- Provide leisure facilities that are safe, affordable and accessible
- Provide safer active transport systems: walkways, cycle paths
- Ensure healthy spatial planning: community infrastructure that supports healthy lifestyles with access to amenities
- Make healthy choices easy
- Provide guidance and support for schools and workplaces to develop and maintain healthy lifestyle programmes including free fruit for primary school children.

Schools

- Develop a healthy food policy including the banning of junk food and vending machines
- Promote healthy eating as part of the curriculum
- Have a healthy policy on commercial sponsorship deals
- Pilot healthy eating in schools: for example, fruit campaigns
- Ensure physical activity is prioritised, is fun and not simply competitive
- Ensure all children have access to exercise in school for two hours per week.

Consumers

- Demand healthier choices in supermarkets and restaurants
- Demand better food labelling
- Demand less sugar and salt additives.

Health sector

- Increase proportion of infants who are breast-fed
- Provide information on healthy diets and understanding food labelling
- Provide health promotion campaigns for local communities
- Involve primary health carers in creating awareness, prevention, advice and support
- Refer patients for exercise
- Provide information on health and weight of children.

Food industry

- Label foods properly to help the consumer make healthy choices
- Reduce sugar and salt content in foods especially cereals
- Adopt a responsible approach and reduce marketing junk food
- Curtail advertising especially at children
- Provide low fat meal options in restaurants
- Provide less supermarket space for junk food.

And if we do not act together…….

- The rising obesity trend will continue
- We can expect a one-third loss in healthy life due to being overweight and obese
- The trend in diabetes will continue as will avoidable increases in heart disease and certain cancers
- The burden on the health service will escalate
- The burden on families will escalate due to premature mortality and unnecessary illness.

Key points

- Obesity is a problem of increasing magnitude.
- We eat too much and exercise too little.
- Marketing activities of the food industry are related to this growing problem.
- Type 2 diabetes is now being diagnosed in overweight children. It is not seen in children of normal weight.
- Halting the rising trend is a public health priority.
- Changing diet and increasing activity is the key to halting the problem.
- Individuals have a responsibility to themselves to change behaviour.
- Schools, workplaces, the food industry and local and central policy makers should assess the health impact of their policies and act now to reduce the trend in obesity.

Folic acid

Approximately 75 children are born with a Neural Tube Defect (NTD) such as Spina Bifida and Anencephaly, each year in Ireland. Peri-conceptional folic acid supplementation has been shown over a decade ago to be an effective method of preventing potentially two thirds of cases. There have been periodic folic acid promotion campaigns in Ireland with the aim of increasing folic acid use by women of child bearing age. However, a survey in the Eastern Region in 2002 revealed that only 23% of pregnant women had taken folic acid peri-conceptionally, notwithstanding the fact that 95% of women had heard of folic acid and more than 75% knew that it could prevent NTD. It is known that women who plan their pregnancy are significantly more likely to have taken peri-conceptional folic acid. However, in Ireland less than half of women plan their pregnancy, placing a major obstacle to peri-conceptional folic acid use. A means of helping to overcome this is the fortification of staple foods such as fortification with folic acid, as is already done in the United States, Canada and Chile, with early signs of a fall in their rates of NTD. A report in 2004 from the EUROCAT network of congenital anomaly registers which reviewed progress on folic acid and NTD in the last decade in 17 European countries, including Ireland, strongly recommends that:

1. Countries should review their policies regarding folic acid fortification and supplementation, taking account of WHO Europe recommendations.

2. European countries could prevent most neural tube defects in planned pregnancies by putting in place an official policy recommending peri-conceptional folic acid supplementation and taking steps to ensure that the population are aware of the benefits of supplementation and the importance of starting supplementation **before** conception.

3. As many pregnancies are unplanned, European countries could achieve more effective prevention of neural tube defects by additionally introducing fortification of a staple food with folic acid. The particular objectives of this policy would be preventing neural tube defects among women who do not plan their pregnancy, and reducing socio-economic inequalities in neural tube defect prevalence.

4. Health effects of supplementation and fortification should be monitored and policies should be reviewed periodically in light of the findings.

5. The European population should be covered by high quality congenital malformation registers which collect information about affected pregnancies. One important use for the information would be to assess the effect of folic acid supplementation and fortification on NTD rates as well as rates of other congenital malformations.

Key points

- Peri-conceptional folic acid supplementation has been shown to be an effective method of preventing potentially two thirds of neural tube defects.
- A survey in the Eastern Region revealed that less than a quarter of pregnant women had taken folic acid peri-conceptionally.

Priorities for action

- Need to target obesity and to produce an action plan.
- The way forward in terms of what is effective to reduce alcohol related harm has been outlined in the interim report of the Strategic Task Force on alcohol in May 2002.

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