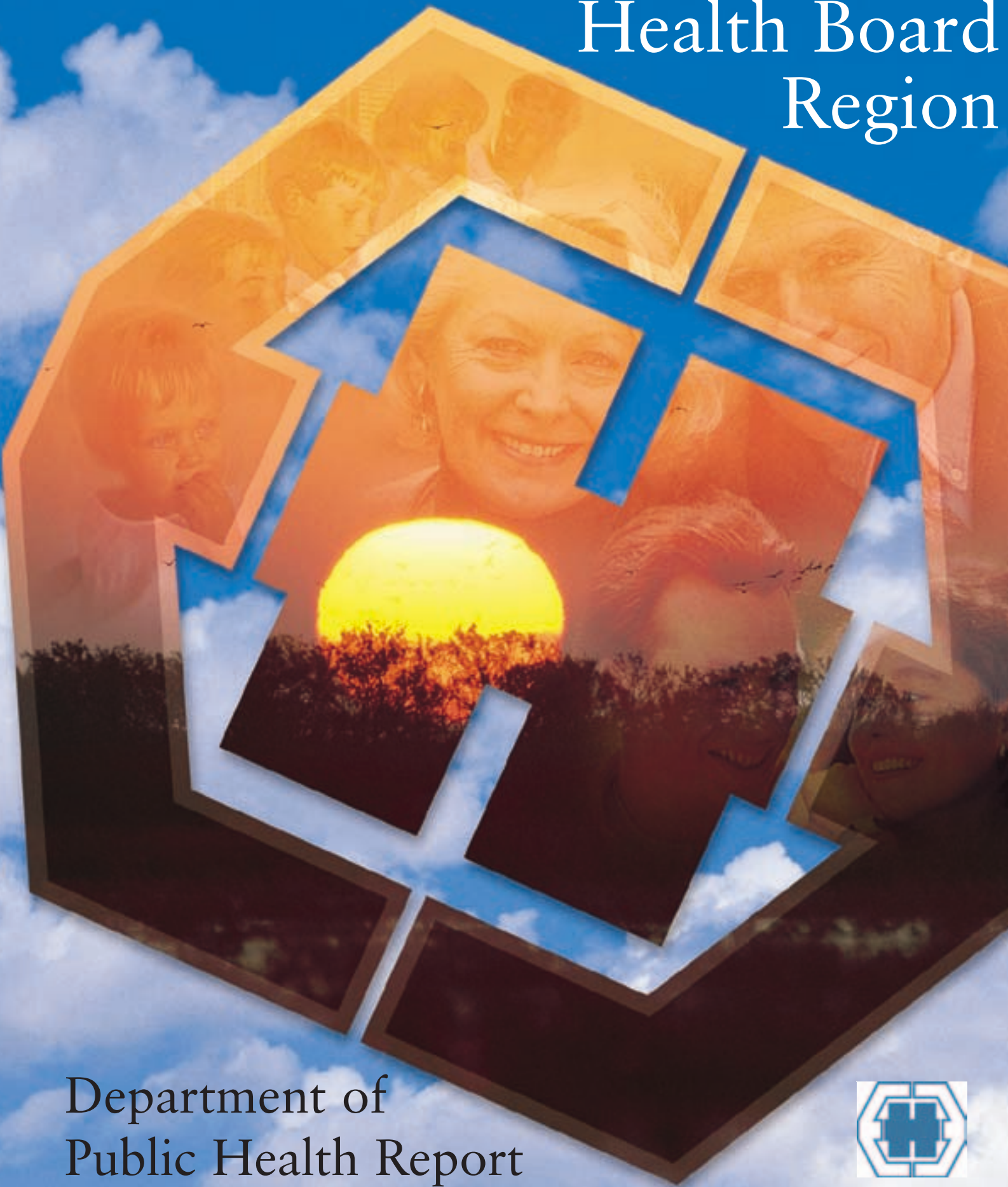


Public Health in the Eastern Health Board Region



Department of
Public Health Report
September 1998



PUBLIC HEALTH
in the
EASTERN HEALTH BOARD
REGION

Eastern Health Board

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Foreword

This is the first comprehensive report from our Board's Department of Public Health since it was set up in 1995. The establishment of Departments of Public Health in each of the Health Boards was timely, as it followed closely upon the publication of the National Health Strategy, "Shaping a Healthier Future". That publication stressed the importance of reorienting or reshaping our health services, so that improving people's health and quality of life became the prime focus of our efforts. Thus measurable health and social gain became of utmost importance.

There is now a responsibility on Health Boards in relation to achieving health and social gain. This means focusing on the quality that can be added to a person's life, together with a demonstrable benefit from the health services. The emphasis now for all services must be on the application of resources, in whatever way, in order to yield the most benefit. To achieve these aims it is necessary to identify need, expand and develop health information systems, evaluate services on an ongoing basis and in particular to have regard to outcome measures. Data collection, analysis and interpretation is of the utmost importance as is research. The Department of Public Health is central as regards these matters and I particularly welcome the emphasis on "potential for health and social gain" throughout this report.

Since our Department of Public Health was established, it has had a major input into planning, including the annual service plans, the Board's cancer plan, the women's health plan



and the Ten Year Plan for the Elderly. The Department has also played a major role in relation to a number of needs assessments, including a needs assessment for the homeless and a needs assessment in relation to disabilities.

I would like to take this opportunity to thank all those involved in the production of this fine report. It provides a comprehensive collection of data and identifies important health issues. The report makes a significant contribution to the priority setting process.

A handwritten signature in dark ink, consisting of a stylized 'P' and 'J' followed by a long horizontal stroke.

Mr. P.J. Fitzpatrick
Chief Executive Officer

Acknowledgements

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

- Thanks are due to all the staff members of the Department of Public Health who contributed to this report.
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- Sincere appreciation must be recorded in relation to the work undertaken by Dr. Howard Johnson, Dr. Tony Holohan, Dr. Anna Clarke, Dr. Patricia Fitzpatrick, Dr. Freda O’Neill and Dr. Emer Shelley in the preparation of this report. The team is grateful to Dr. Emer Feely and Dr. Miriam Owens who proof read the final drafts of the report.

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Physical & Sensory Disabilities

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Glossary of Terms

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

Frequently Used Abbreviations

CSO	Central Statistics Office	NPIC	National Poisons Information Centre
ESRI	Economic and Social Research Institute	NRA	National Roads Authority
GMS	General Medical Services	PHIS	Public Health Information System
HIPE	Hospital In-Patient Enquiry	RICHs	Regional Interactive Child Health System
HIU	Health Information Unit	WHO	World Health Organisation
A&E	Accident and Emergency		

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Demographic and Health Status Indicators for the Eastern Health Board Region and Ireland

Indicator	EHB		Ireland	
Infant mortality – Vital Statistics 1996, CSO.				
Number of deaths	113		278	
Infant mortality rate (per 1000 live births)	6.0		5.5	
Road traffic accidents NRA, 1996; HIPE 1997, ESRI.				
Number of road traffic injuries (NRA)	4,979		13,319	
Number of road traffic fatalities (NRA)	111		453	
Number of hospital discharges (HIPE)	1,719		6,614	
Number of hospital bed days (HIPE)	10,491		32,191	
Indicators of disadvantage - Census 1996, CSO; GMS (Payments) Board.				
Unemployed population (age 15+, including first job seekers)	87,560	15.5%	226,728	14.8%
Population in social class 5-6	240,841	18.6%	774,007	21.3%
Eligible persons under the GMS, Dec 1997	338,025	26.1%	1,219,852	33.6%
Elderly living alone - Census 1996, CSO.				
Population aged 70+ years	84,386		287,073	
Population aged 70+ years in private households	74,516	88.3%	256,657	89.4%
Population aged 70+ years living alone in private households	24,485	32.9%	81,121	31.6%

Trends in life expectancy - Eurostat Demographic Statistics.		Ireland	EU
<i>Females (year)</i>			
1980-82		75.6	77.1
1990		77.6	79.4
1994		78.7	80.5
<i>Males (year)</i>			
1980-82		70.1	70.5
1990		72.1	72.8
1994		73.2	74.0

Infectious diseases and vaccine coverage, 1997	Eastern Health Board
Meningococcal disease notifications	173
Meningococcal disease notification rate/100,000	13.9
Tuberculosis notifications	129
Tuberculosis notification rate /100,000	9.9
DTP/DT/Hib/oral polio vaccine coverage at 12 months	Approx. 74%
MMR vaccine coverage at 24 months	Approx. 70%

ICD-9-CM codes used above

Disease category	Codes
All circulatory system diseases	390-459
All respiratory system diseases	460-519
All malignant neoplasms	140-208
All injuries and poisonings	800-999

Chapter 1: Introduction

This is the first formal report covering a range of public health matters by the Department of Public Health of the Eastern Health Board to its Chief Executive Officer. While being selective it deals with many of the major health issues that affect the population within our Board's area.

Health has been defined by the World Health Organisation as: "a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity". Using such a broad definition, few would feel confident in describing themselves as healthy. Furthermore, it suggests that there are few, if any, aspects of life and daily activity that do not influence health. It is true that health is determined by a whole range of influences from genetic inheritance, through personal behaviour, family and social circumstances, to the physical and social environment. Thus, there are many opportunities to improve health and the responsibilities for action to do so are widely spread. This is reflected throughout this report where the potential for health and social gain is emphasised.

The health of the population is of primary concern to our Board and on pages x and xi data are listed that give an indication of where we stand in this regard. These data will also act as a baseline for measuring changes in the years ahead.

Cardiovascular disease is the most common cause of death in Ireland, accounting for 45% of all deaths. It is the second most frequent cause of death in the under 65 age group and for this age group the mortality rate from heart disease is approximately twice that of the European Union average. The Directors of Public Health are of the view that a national strategy for coronary heart disease similar to cancer is needed. Consequently, the recent initiative by the Department of Health and Children in this regard is welcomed. Key issues that should be addressed in such a strategy are set out in this report.

Tobacco use is the single most important preventable risk to human health and an important cause of premature death. Thus, smoking as a risk factor is referred to frequently in this report and features prominently in the section dealing with health promotion. Smoking contributes to the onset of many diseases and it



has been estimated to account for 87% of deaths from lung cancer, 82% of deaths from chronic obstructive pulmonary disease, 21% of deaths from coronary heart disease and 18% of deaths from strokes. In recent years, it has been recognised that the risk from tobacco smoke is not limited to smokers themselves. It is now recognised that non-smokers who are exposed to environmental tobacco smoke are at increased risk of disease. Smoking regulation in public places should, therefore, be strictly enforced.

The prevention of disease and suffering by immunisation is one of the great achievements of medical science. It is against this background that one must report the sub-optimal vaccine coverage against the common preventable infections such as diphtheria, whooping cough, tetanus, poliomyelitis and *haemophilus influenzae* type B (Hib) infection. The latter mentioned gives protection against one of the organisms that causes meningitis. Up to the 1950s, parents and grandparents were often personally familiar with the devastation that could be caused by polio. Similarly, the vision of a child choking and strangling from breathing obstruction caused by diphtheria was known to many. Paradoxically, it is probably the very success of vaccination that has led to the complacency among present day parents regarding vaccination of their children.

The recent deaths of two children in Scotland as a result of whooping cough should act as a stark reminder to everyone of the severity of this

disease and consequently, the importance of not only having all babies vaccinated but commencing the vaccination programme on time at two months of age. Parents are urged to present their baby to their family doctor at two months of age to commence the primary vaccination programme. This service is provided free of charge.

Public Health Priorities

- Tobacco use is the single most important preventable risk to human health.
- A national strategy on Coronary Heart Disease should be developed.
- Coverage rates for primary childhood vaccination are disappointing.
- A national standardised injury surveillance system in hospital accident & emergency departments should be developed.
- Best practice protocols for the management of cancers should be developed and implemented.
- Minimum clinician caseloads for the management of individual cancers should be agreed and implemented.

The Department of Public Health has worked closely with the Office for Health Gain to produce a report and suggested targets in relation to accident prevention. Subsequently, in order to significantly reduce the number of young children being accidentally poisoned each year by prescribed medicines, both this department and the Office for Health Gain developed a campaign to promote safe packaging and storage of medicines. This is aimed both at pharmacists and parents and is supported by the pharmacy profession.

If the levels of mortality and morbidity resulting from accidents are to be reduced, it will be necessary to improve the epidemiological information available in relation to accidents so that priority issues can be identified locally and interventions monitored. In this regard, the development of a standardised injury surveillance system in hospital A&E departments will be important.

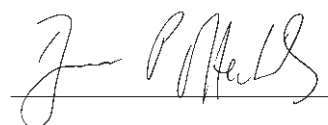
With ever increasing demand and pressure on health care resources, effectiveness of health care services and intervention must be a prime concern. In this regard, evaluation is of importance. The Department of Public Health has been active in this area over a number of years and a selection of work undertaken is presented in Chapter 10. One study, entitled

“Acute Hospital Bed Utilisation Review”, while noting the high level of appropriate admission to acute beds from hospital A&E departments, draws attention to elective medical admissions as an area where better utilisation of beds could be achieved. It also notes that there is scope for increasing the extent to which people are investigated on an out-patient basis rather than being admitted to hospital.

A plan for cancer services produced by the Regional Cancer Directors with significant support from this Department has been approved by the Health Board. In addition, staff from this Department are also involved in the National Breast Screening Steering Group and the Cervical Screening Group. One looks forward to the introduction later this year of a breast screening programme in our Board’s area. One of the key objectives of the cancer plan must be to improve outcomes in relation to patient survival and thus the development and implementation of protocols for the management of cancer is seen as vital. In addition, consideration will have to be given to identifying the minimum clinician caseload for the treatment of individual cancers, so as to allow clinicians maintain expertise and achieve optimal outcomes in relation to treatment of these cancers.

A review of the manner and progress of implementing the recommendations of the Dublin Hospital Initiative Group was undertaken with the co-operation of the CEOs and staff of the major acute hospitals and suggests the need for better monitoring of the implementation of such proposals in the future. The study referred to in chapter 10 highlights barriers to the implementation of the original recommendations.

There is much emphasis today on developing the primary care services. Primary care services typically serve small populations. If we are to develop health services which appropriately serve the varying needs of such small populations, it is essential that an accurate picture of how needs differ between one geographical area or client group and another is obtained.



Brian J. Healy
Director of Public Health

Chapter 2: Summary

The Eastern Health Board has the largest population of the eight regional health boards in Ireland. The need for health care is largely determined by the population structure and the pattern of disease in the community. The key statistical data in relation to the population of our Board's region and health indicators that are referred to in this report are summarised on pages x and xi.

2.1 Chapter 3 – Health Statistics

More than one third of the population of Ireland lives within the Eastern Health Board region. Over recent decades the population of the region has increased considerably, especially in the older age groups. The overall population increased by 41% over the last 30 years and over the last 15 years the elderly population has increased by about 10%. The greatest population increases have occurred in the Southern and Western suburbs of Dublin and near the main towns in Counties Kildare and Wicklow.

Cancer and cardiovascular disease are the major causes of death in the region, as well as accidents which account for a large number of years of potential life lost because of their relatively high mortality rates in children and young adults.

Material deprivation is a known predictor of morbidity and mortality. A deprivation index has been developed by the Small Area Health Research Unit at Trinity College, Dublin which should prove useful in prioritising resources, including bed resources, to geographical areas of special need.

2.2 Chapter 4 – Coronary Heart Disease

Cardiovascular disease is highlighted in the National Health Strategy as the single largest cause of death in Ireland. Although the death rate for coronary heart disease is decreasing in Ireland, it remains high in the European context and accounts for a significant proportion of

health service resources. Smoking, increased blood pressure and hyperlipidaemia are the primary modifiable risk factors for cardiovascular disease. Other important modifiable risk factors include obesity and inadequate exercise.

Lifestyle modification and the optimum use of interventions of proven effectiveness are identified as priority areas for the future. A national coronary heart disease strategy is recommended.

2.3 Chapter 5 – Cancer

Cancer accounts for about one in four deaths. Mortality from lung cancer is considerably higher than the national average in County Dublin in men and women, both under the age of 65 years and at all ages. This is likely to be primarily due to the higher smoking prevalence in the county in the past. Approximately 90% of lung cancer is attributed to smoking and is, therefore, preventable.

Breast cancer accounts for almost one in ten cancers diagnosed in women and is the leading cause of cancer mortality under 65 years of age. A well organised mammography screening programme, with strict adherence to quality assurance guidelines, offers the potential for reducing breast cancer mortality in the screened population by up to 24%. Although the total numbers of deaths due to cervical cancer is small, an effective cervical screening programme may reduce mortality by up to 60% in the screened population.

Skin cancer is the most common of all cancers. Avoidance of excess sunlight is identified as an effective way to reduce the risk, especially for some potentially fatal skin cancers.

The wider application of effective health promotion programmes and adherence to best practice cancer management guidelines developed under the National Cancer Strategy are highlighted as important factors in reducing the burden of cancer in the community.

2.4 Chapter 6 – Injuries and Poisoning

Nationally, injuries and poisoning account for about 50% of deaths under 35 years of age and so contribute greatly to years of potential life lost. Non-accidental injury (e.g. suicide and parasuicide) accounts for a significant proportion of health service resource utilisation.

Poisoning due to medications or household agents account for about 200 admissions of young children to hospital in our Board's region each year. The universal use of child resistant containers provides a simple yet highly effective way to reduce this number.

Suicide has been increasing in incidence in Ireland over recent decades and is now a public health problem of major concern. In 1995, the Department of Health set up the Task Force on Suicide as a response which aimed to understand better the nature of this increase and to develop a national suicide prevention/reduction strategy. The Eastern Health Board Department of Public Health, in conjunction with the Departments of Public Health in the other health boards, is currently undertaking research to establish the incidence of suicide and the factors that are associated with its occurrence.

Falls resulting in hip fractures, which tend to occur in elderly women, lead to a significant degree of morbidity and mortality. A healthy diet, exercise and the removal of environmental hazards in homes offer ways to reduce the risk.

Approximately 100 deaths and almost 5,000 injuries due to road traffic accidents occur in our Board's region each year. As bicycle helmets reduce the risk of head injury by about 75%, they should become the norm, especially for children in whom the proportion currently using such protection is only one in six. Before obtaining a licence, motorcyclists should be required to undergo training in the safe use of motorcycles. The strict enforcement of safety belt wearing, the observation of speed limits and the lowering of the permissible alcohol level in drivers, together with local traffic calming initiatives, could significantly reduce the everyday hazards on our roads.

2.5 Chapter 7 – Infectious Diseases

Although infectious diseases no longer cause the high level of mortality seen in the past, both emerging (e.g. *E. coli* 0157) and re-emerging

infectious diseases (e.g. diphtheria) give grounds for concern internationally.

Meningococcal disease, following its distinctive cyclical pattern, has continued at a high level in our Board's region in recent years. The early recognition of the possible signs and symptoms of the disease and immediate access to medical care, when penicillin should be administered without delay, remain the most important steps in reducing the morbidity and mortality from this disease.

The incidence of tuberculosis has continued to fall in our Board's region. The early notification of cases to allow for the tracing of contacts, and adherence to national best practice management guidelines are essential to prevent the re-emergence of the disease, and the emergence of drug resistant tuberculosis which has been seen in other countries. Neonatal BCG vaccination should continue to be offered until criteria for its discontinuation are met.

The sub-optimal coverage with primary vaccines (approximately 70% or less by the target ages) in the pre-school population in our Board's region, followed by a drift of some of the vaccine preventable diseases into older age groups, emphasises the necessity of a co-ordinated initiative to achieve and maintain vaccine coverage of at least 95% as specified in the National Health Strategy.

E. coli 0157 is an emerging cause of foodborne illness. Its early confirmation and notification as a cause of food poisoning is essential in the interests of public health. The proper refrigeration, storage, defrosting and cooking of all raw and cooked meats are of fundamental importance in the prevention of food poisoning from *E. coli* 0157, salmonella and other infections. Consideration should be given to including *E. coli* 0157 as a specific notifiable disease.

The establishment by the Environmental Health Officers of our Board of a Communicable Diseases Section, working in collaboration with the Department of Public Health, general practitioners and microbiological laboratories, has greatly improved the responsiveness and effectiveness of our Board in the control of food and water borne illness and in the early application of control measures to protect the health of the public.

Ireland has the 10th highest incidence of the Acquired Immunodeficiency Syndrome (AIDS) among the 15 European Union countries. The picture in Ireland is similar to Southern Europe, with a large proportion of AIDS being drug related. The public health control strategies in our Board's region reflect this and are based on policies to reduce the transmission of the infection in drug users.

There are increasing numbers of people coming to Ireland, seeking refugee/asylum status, from countries with a different pattern of infectious diseases to that found in this country. At present, screening for these diseases is offered to refugees/asylum seekers who attend on a voluntary basis. It is often not possible to complete the screening process on one visit and unfortunately a proportion of those who attend do not return to the screening clinic in order to allow the process to be completed. Given the potential benefit of screening for these individuals, their immediate close contacts, as well as the community as a whole, consideration should now be given to making health screening for communicable diseases a requirement when processing of applications for refugee/asylum status in this country.

2.6 Chapter 8 – Health Promotion

The National Health Strategy identifies health promotion as a priority to improve the health and quality of life of the population. A Health Promotion Steering Committee, with a corresponding committee in each community care area, supported by a Health Promotion Resource Unit, provides a framework for developing and co-ordinating the large number of health promotion initiatives throughout the region.

Over recent decades, powerful and consistent evidence has accumulated that identifies smoking as the single greatest factor which threatens the health of the community. Passive smoking, even at low levels, has also been convincingly shown to carry major health risks, including cancer and cardiovascular disease, with children at special risk from many diseases ranging from the sudden infant death syndrome to asthma. Smoking usually begins by the early teens, with approximately one in five second-level pupils smoking and one in three adults being current smokers. Effective health

promotion initiatives to reduce smoking are required. The progressive exclusion of smoking on health board property, all forms of public transport and indoor places of public gathering, the removal of all forms of tobacco advertising through the media and the rigorous enforcement of legislation precluding the sale of tobacco to young children offer ways of significantly reducing the health impact of smoking.

Approximately 20 children are born with neural tube defects in our Board's region each year. An increase in peri-conceptional folic acid intake could reduce this figure by half and a number of initiatives are underway in the region to reduce the incidence of this major congenital defect.

A study in our Board's region confirmed a high rate of illicit drug use in the teenage years, which highlights the importance of effective health promotion initiatives aimed at both primary and secondary schools.

2.7 Chapter 9 – Special Client Groups

Following the publication in 1995 of the Department of Health document 'Developing a Policy for Women's Health – Discussion Document', an extensive consultation process was initiated in our Board's region. As a result, many initiatives are underway or planned to address the issues that it highlights, including the improvement of access to a range of health services for women with physical and/or sensory disability.

Two women's health pilot projects were established in the Coolock and Tallaght/Clondalkin areas, involving the community based health care services in the areas. Surveys which were carried out as part of the projects identified barriers in the access to relevant information and also the presence of many variations in the availability and use of women's health services from the different providers.

In relation to people with physical and sensory disability within the Eastern Health Board, a Planning and Advisory committee, which was set up in 1996, oversees the planning, development and integration of services. In order to achieve its objectives, the committee has established a number of sub-committees which are responsible for the planning and prioritising of physical disability, sensory disability and the

co-ordination of the services. The committee has commissioned a needs assessment for services for people with physical and sensory disability in the Eastern Health Board which will commence in the near future.

In a baseline study carried out in 1997 about the health of the homeless population of Dublin, a high level of behavioural risk factors and a high level of self perceived poor health were found. Many barriers to service utilisation were also identified, indicating the need for a co-ordinated and integrated response to the health problems of the homeless.

Travellers have excess mortality particularly from accidents, infant and perinatal deaths. The Eastern Health Board has operated a mobile service since 1985 which provides specific child health services for travellers in serviced halting sites. The service concentrates on primary care in keeping with the mission statement of traveller services in the Eastern Health Board which aim to raise the health status of the travelling community to the national target levels of the whole population, by providing accessible and culturally appropriate services, developed with traveller participation. Current undertakings include a Health Research Board funded study of the health beliefs and needs of traveller mothers and an initiative to identify traveller babies so that adequate and appropriate action is taken to maximise the health and social gain of the whole traveller population.

2.8 Chapter 10 – Health Services Research

The National Health Strategy highlights the importance of evaluation of services to ensure that the resources available are used to provide quality services. The Department of Public Health, in collaboration with the programmes of our Board and agencies outside our Board, participated in a range of service evaluations.

2.8.1 Acute hospital services

An evaluation of the national public education campaign in early 1996 to encourage patients with minor ailments to attend the GP rather than A&E departments found that 40% attended A&E as it was considered the ‘best place to go for treatment’. Reasons why patients did not attend

their GPs were recorded. While people generally became aware of the campaign through the medium of television, a clear impact of the initiative either on attendance at A&E or on admissions to hospital was difficult to discern.

There has been a marked increase in the utilisation of hospital beds in recent decades. To address the question of whether there is scope for further efficiencies within the current bed complement, a bed utilisation study was carried out in 1995 in the six major Dublin hospitals providing A&E access to acute beds. Overall, 92% of admissions via A&E, 69% of elective surgical and 44% of elective medical admissions were considered to require acute hospital admission. During the inpatient stay, the data suggested that improved management of the process of care could lead to much more efficient use of resources.

In 1990, a Dublin Hospitals Initiative was established to improve the integration and efficiency of the acute Dublin hospital services. The interim report of this group put forward proposals for more effective management of the hospital workload. In 1996, a review of the implementation of these recommendations found that, although staff did not disagree with the recommendations, not all had been implemented.

2.8.2 Services for the elderly and the Community Ward Teams

In a follow-up study of elderly patients discharged from the acute general hospitals in our Board’s region carried out in 1995/1996, the discharge destinations were generally found to be appropriate and criticisms of the services provided by our Board and voluntary agencies in the community after discharge were few. However, to encourage earlier discharges, it was recommended that a mechanism be established whereby the decision to provide Community Ward or other support tailored to the needs of individual clients would be agreed by all parties in advance of discharge, so that the necessary supports are in place on the day of discharge.

In a study carried out in 1995/1996 into the effectiveness and satisfaction carers, clients and referrers to the Community Ward services, similar findings as in the above study were obtained. The importance of pre-discharge

planning was stressed, so that clients, carers and family alike can be reassured that the required back-up will be available in the community after discharge. The wider provision of personal care through home care attendants, integrated with the traditional community based services, was identified as an important service development for the future.

2.8.3 Psychiatric outpatient service

An evaluation of the psychiatric outpatient department (OPD) in 1996 found that while shared care between GPs and psychiatrists was generally welcomed, many barriers were identified to this process. Communication between GPs and the OPD could be improved. Clients were generally satisfied with the OPD visits, unless information or treatment was perceived to be insufficient or waiting times exceeded 40 minutes and most would welcome the opportunity to obtain medication at the local chemist.

2.8.4 Health education and smoking

The Smokebusters programme in primary schools aims to build a strong peer group norm of non-smoking children. Evaluation of the programme in 1996/1997 found that while knowledge increased, attitudes towards smoking did not change and subsequent smoking rates were not significantly reduced. The very high prevalence of smoking in the family environment and the influence of peer pressure were identified as major challenges to the development of effective health education initiatives targeted at children.

The aim of the Rotunda Stop Smoking Programme, involving one-to-one counselling and specially developed education materials, was to encourage pregnant women to quit smoking. Over 50% of women attending the antenatal clinic were smokers. The evaluation of the randomised controlled trial did not find the intervention led to a significant degree of smoking cessation, but was associated with a reduction in the number of cigarettes smoked. The results highlight the difficulties in reducing smoking rates and the importance of thorough evaluation of health education initiatives.

2.8.5 General practice service initiatives

In a study of direct access to physiotherapy services in the Mater Hospital, it was found that a major proportion would otherwise have been referred to the OPD, suggesting such access may lead to a more efficient use of hospital resources.

An evaluation of the use of ambulatory blood pressure monitoring in general practice found that while the technique could identify borderline hypertension, it did not reduce drug costs and many logistical difficulties were highlighted.

An innovative project aimed at 'getting research into practice' (GRIP) is currently under way in our Board's region whereby GPs are assisted in identifying patients who may benefit from a short curative course of therapy for peptic ulceration and may subsequently no longer require expensive medication merely to control symptoms.

2.8.6 Physical and sensory needs assessment

In developing services for clients with physical and sensory needs, a consultative process with the directors of community care* and voluntary organisations was carried out as the initial step in the process. A range of priority needs have been identified.

* Senior Area Medical Officer since July 1998

2.8.7 Prescribing in general practice

A number of studies have been carried out by the Health Information Unit in relation to prescribing patterns for persons covered by the General Medical Services scheme. Prescribing generally increases with age, with over 50% of all persons receiving at least one prescription in a three month period. Only 13% of prescribing costs can be attributed to generic rather than branded drugs, indicating considerable scope for savings. Over half a million pounds are spent annually on drugs of limited value in our Board's region.

Rational prescribing, however, is not always the cheapest option. The low use of inhaled corticosteroids relative to the amount of prescribed bronchodilators, which are recommended for prophylaxis of asthma, suggests there is a need to encourage their increased use. Analysis of antidepressant prescribing suggests a substantial degree of under-recognition of depression.

Indicative Drug Budgeting was introduced to Irish general practice in 1993. The effectiveness of an initiative to increase generic prescribing was evaluated. In a controlled trial, the intervention focused on commonly prescribed drugs and involved liaison between the GPs, the GP Unit doctor and pharmacists and feedback of prescribing changes.

2.9 Chapter 11 – Information Systems

This chapter outlines some of the information systems that are providing valuable data in relation to the public health priorities of the region and identifies some areas where enhancements to the systems are required.

The EUROCAT Register of Congenital Malformations was set up in 1979 as part of a European network. It provides data for our Board's region that is invaluable in responding to concerns about congenital anomalies in local areas and in the evaluation of interventions to reduce the incidence of congenital defects such as neural tube defects with the use of folic acid. The development of registers to provide wider national coverage is to be welcomed.

Eurosurveillance is a European Union system devoted to infectious disease surveillance. Ireland is represented on the editorial board by an Eastern Health Board public health specialist. The system has the potential to significantly contribute to surveillance and control of infectious diseases in the European Union.

The Laboratory Surveillance System (LSS) began in 1988 and collects information on certain infectious diseases directly from the major hospital laboratories in our Board's region. It is a valuable adjunct to the statutory notification of infectious diseases. Feedback to laboratory staff, environmental health officers, public health doctors, paediatricians and GPs is provided by the quarterly ID Bulletin. It is recommended that the list of notifiable diseases should be updated to include some of the newly recognised pathogens.

Data on the patterns of accidental injury are provided by mortality data, road traffic accident data and from hospital admissions. The routine collection of epidemiological data, for example through A&E departments, would be of great assistance in both the planning and evaluation of preventive programmes.

General practice computerised information systems provide a mechanism to assist practice management, while the inclusion of epidemiological data will facilitate co-operation between general practice and our Board in the provision of a quality service to meet the priority needs of local populations.

An accurate estimate of the prevalence of physical and sensory disability in the community is essential for the future planning and development of services for these client groups. The computerised databases of statutory allowance/entitlements, although imperfect, have been used as a starting point in developing a register of these client groups and as a basis for a detailed needs assessment.

Following a pilot study, a hospital based stroke register is under development for the south Dublin region. The register will provide valuable information to encourage the adoption of best practice in the prevention and management of stroke in the community.

The Hospital Inpatient Enquiry Scheme (HIPE) is a valuable resource for monitoring the provision of acute hospital inpatient care. However, the development of unique patient identifiers and the addition of small area geographical coding would greatly enhance the public health potential of the system.

Perceived clusters of health events are more commonly reported by concerned members of the public. The Department of Public Health has a protocol in place which outlines how the investigation of such events should be conducted.

Chapter 3: Health Statistics

The Eastern Health Board provides health services to 1.3 million people who reside in counties Dublin, Kildare and Wicklow. For administrative purposes, Dublin County is divided into eight community care areas which are referred to as Areas 1 to 8. Kildare and Wicklow are referred to as community care areas 9 and 10 respectively. The need for health care is largely determined by the population structure in a given region and the pattern of disease in the community. This chapter outlines the major health statistics of the population living in our Board's region. Subsequent chapters examine a number of key public health issues in greater depth.

3.1 Population Structure

The population living within the Eastern Health Board region is 1.3 million (1996 Census), which accounts for 36% of the population of Ireland. In the 30 year period between 1966 and 1996 there was an increase in the national population of 737,033 (26%). During this period, the population in our Board's area increased by 374,060 (41%), 11% of which occurred since 1981.

Of the total population in the region, the number of people aged 65 and over was 108,315 (8.8%) in 1981 and rose to 117,443 (9.4%) in 1991 and 125,271 (9.7%) in 1996. The proportion of the population in the upper age cohorts (75 and over) has also increased significantly over time as shown in Figure 3.1.

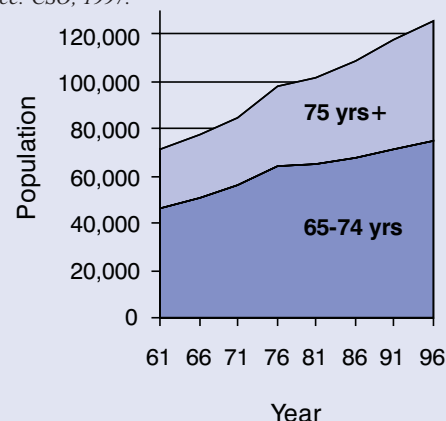
As shown in Figure 3.2, the population of Dublin City and County is younger than that of the other two counties, with a larger proportion of the population in the late teens and early 20s age groups. The age of the population in our Board's area is younger than that of the country as a whole, with a lower dependency ratio of 49% compared to 58% nationally.

In Dublin, the greatest total population increases between the 1991 and 1996 censuses were in the suburbs to the west (Clondalkin, Lucan, Blanchardstown and Castleknock), to the north

(Swords, Kinsealy and Malahide) and to the south (Firhouse, Ballyboden, Glencullen and Shankill) of the county.

Figure 3.1 Trends in the population aged over 65 years, 1961-1996, Eastern Health Board.

Source: CSO, 1997.



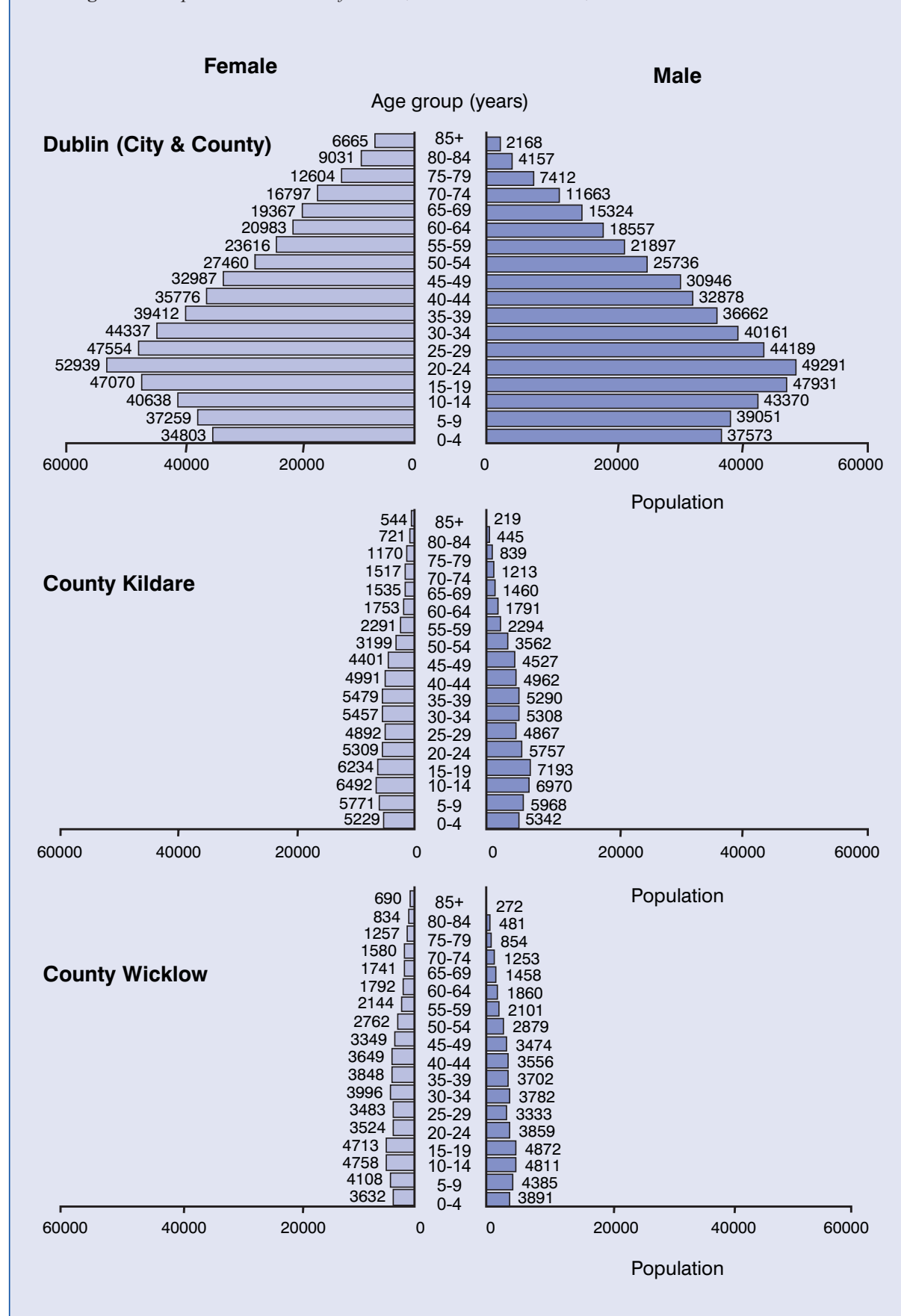
In Kildare, important population increases have occurred in Celbridge, Leixlip, Maynooth, Naas and Newbridge. In Wicklow, marked population growth occurred around Bray and Greystones. In contrast, there has been a substantial decline in population in some Dublin Inner City areas and in older suburbs such as Crumlin, Finglas, Ballymun and Raheny.

As shown in Figure 3.3 the largest increases in population between 1991 and 1996 in our Board's region occurred in Kildare, Wicklow and community care areas 2 and 5 in Dublin. In contrast, area 4 had a decrease in population (-1.5%).

Community care areas 4, 5, 9 and 10 have the highest proportion of children, while areas 2 and 7 have the highest proportion of elderly persons.

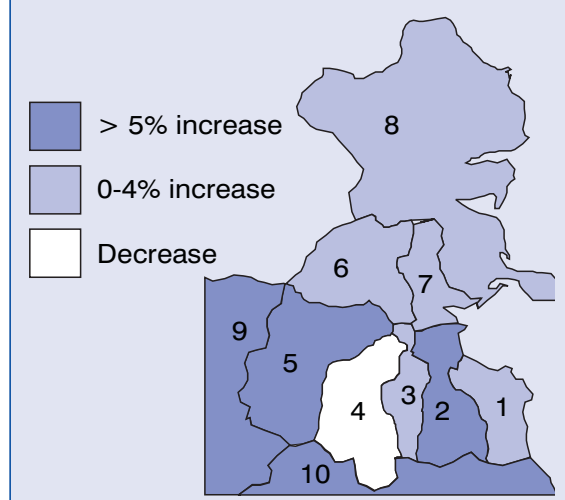
3.2 Birth Trends

Between 1980 and 1996 the number of live births to mothers resident in the region decreased by almost 30% (26,202 to 18,879), as shown in Figure 3.4. However, there was a small increase in live births of 508 (3%) in 1996 compared to the previous year. The crude birth rate for 1996

Figure 3.2 Population structure of Dublin, Kildare and Wicklow, 1996. Source: Census 1996, CSO.

in the Eastern Health Board was 14.6 per 1,000 population, compared to the national rate of 13.9.

Figure 3.3 Population changes between 1991 and 1996 in the Eastern Health Board community care areas. Source: Census 1996, CSO.



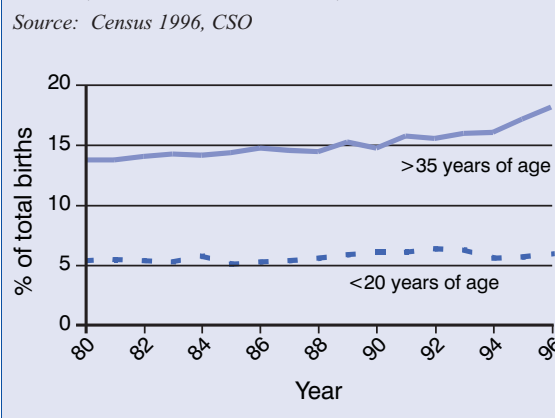
The average age of mothers giving birth rose from 28 to 29 years during the same 16 year period. Over this time, the percentage of births to mothers aged 35 and over increased from 14% to 17%, as shown in Figure 3.5.

The number of births to teenage mothers fell from 1,401 to 1,052 (25% decrease) over the same time period, although there has been a

slight increase in such births as a proportion of total births.

The number of non-marital births in our Board's region increased from 1856 (7% of total births) to 5394 (29%) in the 16 year period from 1980 to 1996 (Figure 3.6). Nationally, 25% of all births were non-marital in 1996.

Figure 3.5 Trends in live births by age group of mother, Eastern Health Board, 1980-1996. Source: Census 1996, CSO



3.3 Teenage Pregnancy

The number of births to teenage mothers fell from 1,401 to 1,052 (25% decrease) between 1980-1996 though there has been a slight increase in such births as a proportion of total births.

Figure 3.4 Trends in the number of live births, Eastern Health Board, 1980 - 1996. Source: Census 1996, CSO.

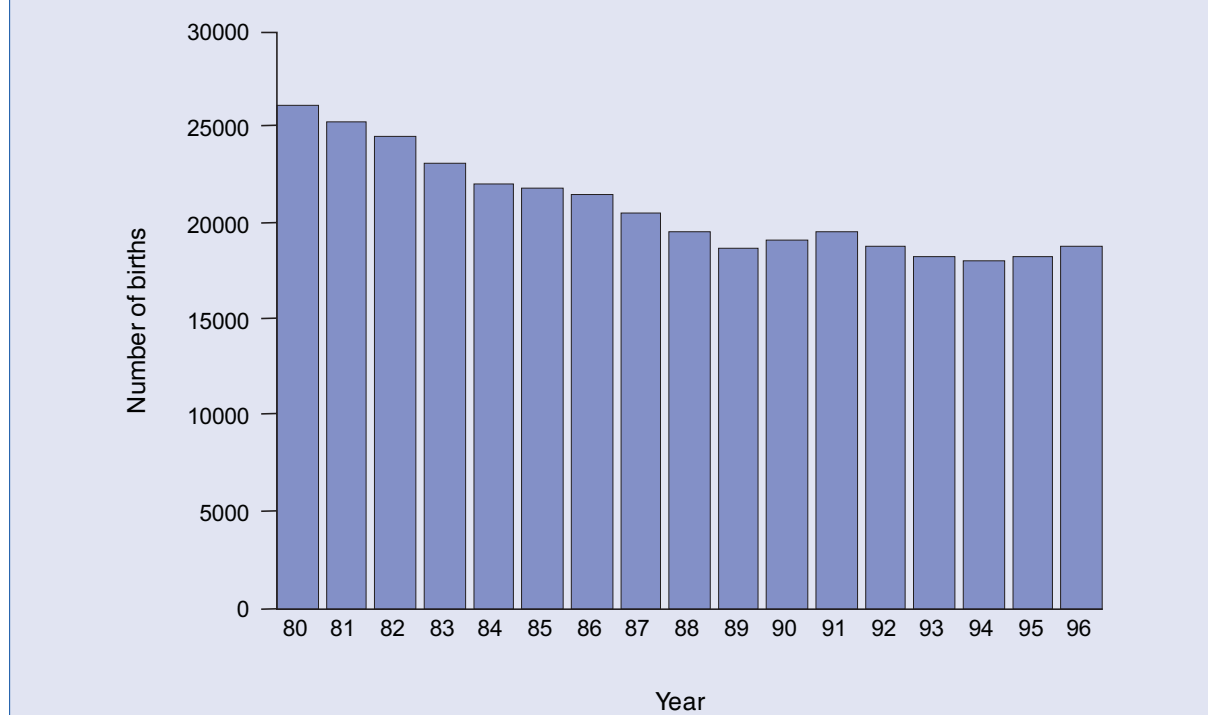
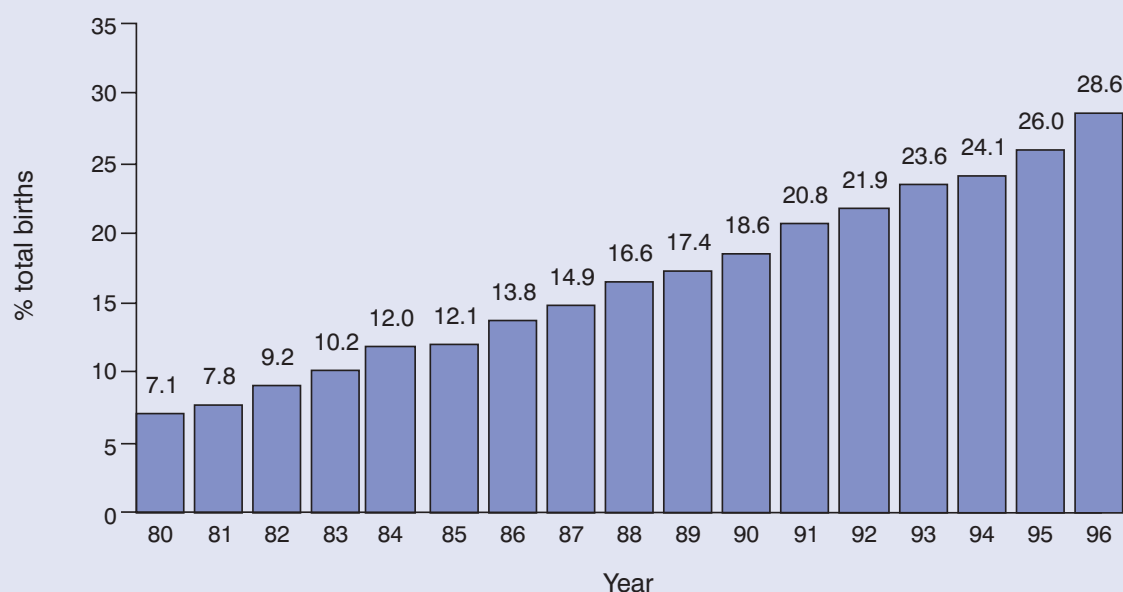


Figure 3.6 Non-marital births as a percentage of total live births in the Eastern Health Board region, 1980-1996. Source: Census 1996, CSO.



Research undertaken in the Eastern Health Board Region in 1997¹ concluded that there is a need for specialist services in the area of sexual health for young people which is not being met by existing services.

The consultative process on women's health in 1995 highlighted teenage pregnancies as a health issue and teenage pregnancy prevention as a priority area in the Plan for Women's Health.² Under the Teenage Pregnancy Prevention Initiative, funding was provided for six initiatives within the youth sector. Training in relationships and sex education/sexual health was made available to 30 youth workers, who in turn implemented programmes within their organisations, and catered for approximately 150 young people. In addition a programme entitled "Baby Think It Over" is running in conjunction with some of the youth organisations, and with certain existing school programmes.

Potential for Health and Social Gain

- Births to teenage mothers as a proportion of total births have risen in recent years and this is now an important public health problem. In order to deal with this issue, there is a need for specialist services for young people in the area of sexual health.

- Specialist services for young people should include their general as well as sexual health and could also include such innovations as a confidential telephone helpline which would provide support and advice.
- The Teenage Pregnancy Prevention Initiative commenced in 1996. The target group for this project is early school leavers and such groups are accessed through various youth organisations. It aims to improve the knowledge, attitudes and behaviours of young people in the area of sexual health, as well as preventing teenage pregnancy, through a series of training and funding initiatives throughout our Board's area.

References

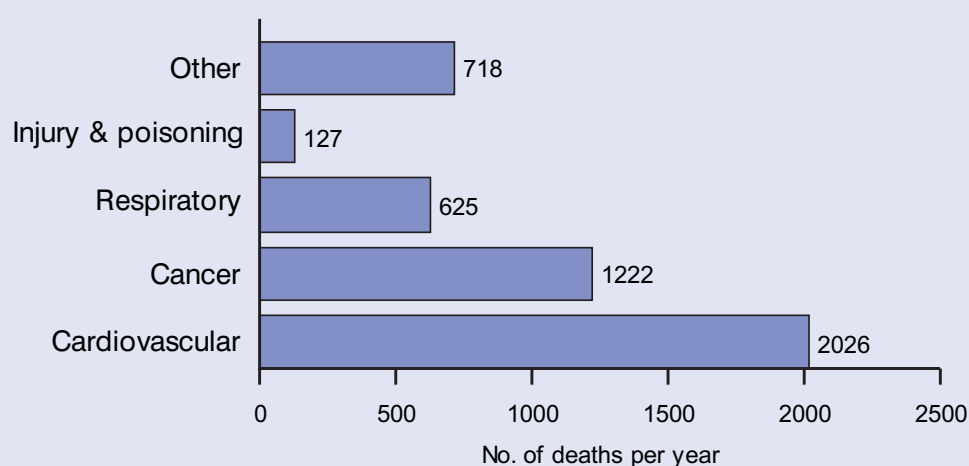
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2. Eastern Health Board. Report on consultative process on women's health [Internal report]. Dublin: Eastern Health Board; 1996.

3.4 The Major Causes of Death

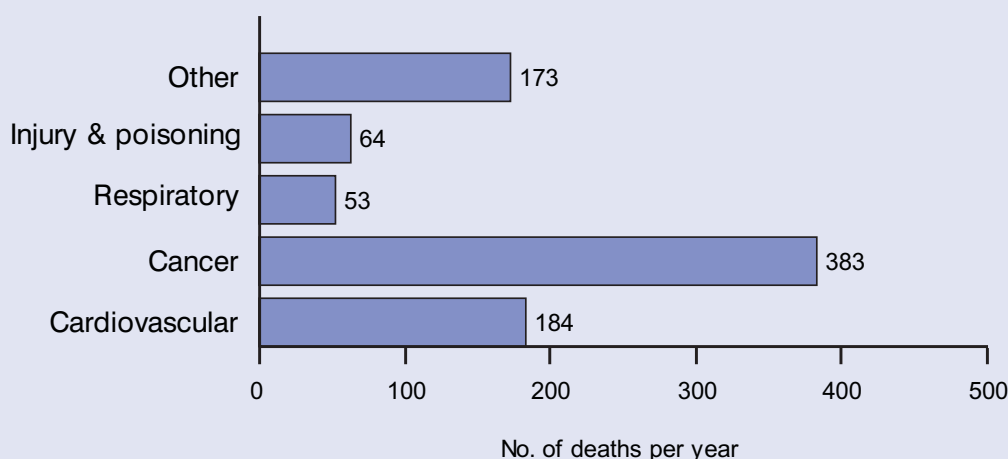
The average number of deaths of residents between 1991 and 1995 in the Eastern Health Board region each year was 9268, giving a crude death rate of 7.3 per 1,000 population. Unlike the

Figure 3.7 Principal causes of female deaths, Eastern Health Board - average annual number of deaths, 1991-1995. Source: PHIS, 1997.

A) Female, all age groups



B) Female, under 65 years of age



earlier part of this century when infectious diseases were among the principal causes of death, non-communicable diseases such as cancer, heart disease and accidents have now become the dominant killers.

As shown in Figure 3.7, cardiovascular disease is the commonest cause of death among females of all ages (43%), while cancer is the next most common cause, accounting for 26% of all female deaths. Conversely, in females under the age of 65, cancer is the leading cause of death (45%), with cardiovascular disease being responsible for 22% of deaths. However, among males (Figure 3.8), cardiovascular disease is the most common cause both of overall deaths (42%) and of deaths under 65 years of age (34%). Cancer

among males accounts for 28% of deaths both at all ages and in those under 65 years of age.

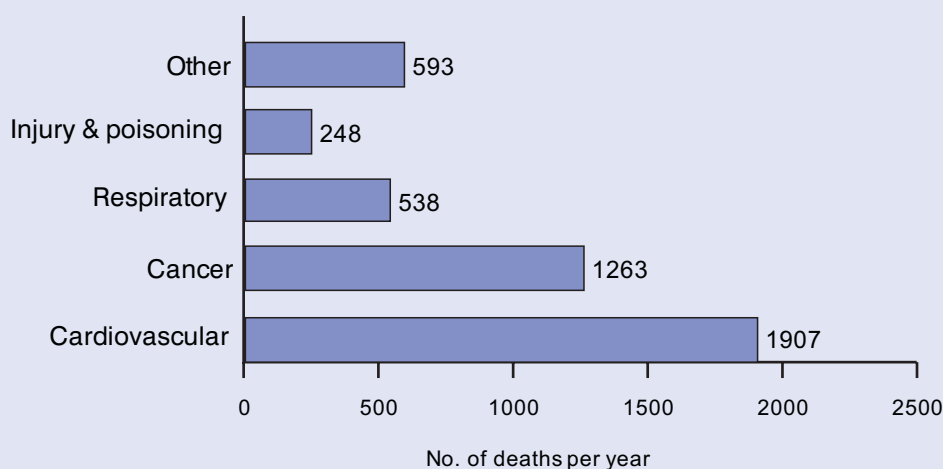
3.5 Socio-Economic Indicators

The distribution of the population by social class (Box 3.1) varies markedly within the region. Community care area 5 has the greatest proportion (27%) of persons in social classes 5 and 6, compared with 12% in area 1. In the region as a whole 13% of the population is in social class 1. Area 1 has the highest proportion of persons in social class 1 (26%), while areas 4, 5 and 6 have the lowest (under 10%).

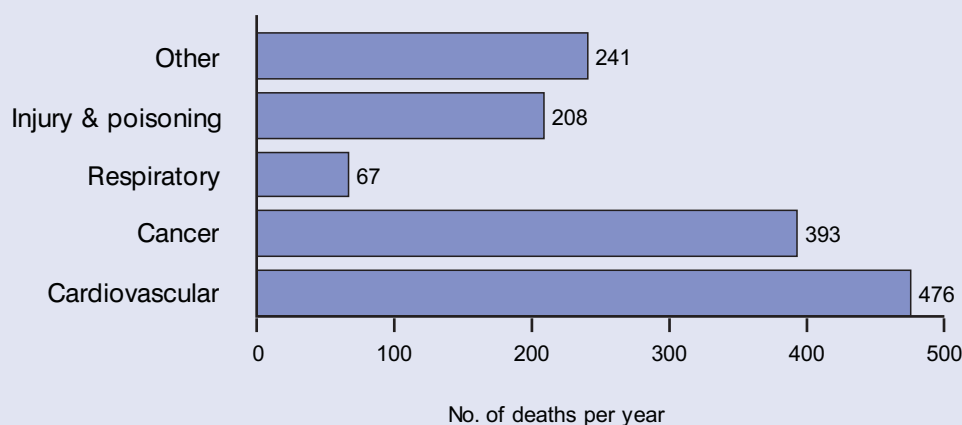
On average there are 4 persons per car in the region. Areas 4, 5, 6 and 7 have the highest number of persons per car (approximately 5)

Figure 3.8 Principal causes of male deaths, Eastern Health Board - average annual number of deaths, 1991-1995. Source: PHIS, 1997.

A) Male, all age groups



B) Male, under 65 years of age



while area 1 has the lowest (2.9). Areas 4, 5 and 6 had the highest rates of male unemployment in the 1991 census (over 15%), while area 1 had the lowest (under 10%).

Approximately 26% of our Board's population is covered by the General Medical Services scheme. Areas 5 and 10 have the highest percentage (35%), while area 1 has the lowest (under 20%).

Thirteen percent of homes in our Board's area are rented from the local authority. This percentage ranges from a low of 7% in community care area 1 to 23% in community care area 5.

Box 3.1 *The Irish Social Class Scale*

<i>Social class 1</i>	Higher professional, higher managerial, proprietors employing others and farmers farming 200 or more acres.
<i>Social class 2</i>	Lower professional, lower managerial, proprietors without employees and farmers farming 100-199 acres.
<i>Social class 3</i>	Other non-manual and farmers farming 50-99 acres.
<i>Social class 4</i>	Skilled manual and farmers farming less than 30-49 acres.
<i>Social class 5</i>	Semiskilled manual and farmers farming less than 30 acres.
<i>Social class 6</i>	Unskilled manual.
<i>Social class 7</i>	Unknown.

3.6 Deprivation and Health

The association between mortality, morbidity and deprivation in local areas has been well demonstrated in other countries and has been used for targeting priority funding and health promotion.¹ The measurement of deprivation as a concept has evolved over time. Based on different measures of deprivation, a number of indices have been described,¹⁻⁹ but the subject has only been explored to a limited extent in Ireland.²⁻⁴ In December 1996, the Small Area Health Research Unit (SAHRU) was established in the Department of Community Health and General Practice, Trinity College Dublin, with the assistance of funding from the Health Research Board. One of the objectives of SAHRU is to examine the association between deprivation and health on a national basis.

Deprivation can be defined as a state of “observable and demonstrable disadvantage relative to the local community to which an individual belongs.”¹⁰ Arising from this broad definition is the concept of material deprivation which entails the lack of goods, services, resources, amenities and physical environment, which are customary, or at least widely approved of in society. Indices based on material deprivation have gained considerable credence, not least for their sound conceptual basis.

The SAHRU index is a composite of five indicators which are widely believed to represent or be a determinant of material disadvantage, namely, unemployment, low social class, lack of a car, living in rented accommodation and overcrowding. In content, the index is very similar to those developed by Townsend⁵ and Carstairs and Morris⁶ in the UK, but has been adapted for Ireland. It should be noted that the SAHRU index does not include socio-demographic indicators such as the elderly living alone, single parenthood, or large families. While such factors do not necessarily reflect material disadvantage, they would clearly be important in an “at risk” index.

Unemployment reflects lack of access to earned income and the facilities of employment. Moreover, it may impose other pressures on individuals through loss of self-esteem and on families through problems and tensions generated. Being in a low social class (see box

3.1) reflects earnings at the lower end of the income scale. Low income limits access to material resources and the ability to make choices in life. Car ownership has been suggested as a surrogate for current income. Non-owner accommodation reflects lack of wealth in the long term as well as current income. Lastly, overcrowding reflects living circumstances and housing conditions. It may also reflect wealth, as people in overcrowded circumstances are likely to improve their circumstances as soon as financial resources are available.

For purposes of mapping, the deprivation scores are grouped into five categories. The class boundaries were chosen to retain the discriminatory features of the component variables rather than to ensure equality of numbers within classes. Figure 3.9 shows the level of deprivation in each of the 495 wards and district electoral divisions (DEDs) in the Eastern Health Board Region.

High levels of deprivation occur primarily in the Inner City area and to the North of the city in the areas of Blanchardstown, Finglas, Ballymun and Priorswood; to the West in Cherry Orchard and Clondalkin; and to the South in Tallaght. Summarising by community care area we note the following proportions of DEDs with a deprivation score of 4 or 5: over 30% in Areas 4, 5, 6 and 7; between 10% and 30% in Areas 2, 3 and 8; and less than 10% in Area 1, Kildare and Wicklow. Of course, it should be stressed that not all deprived people live in deprived areas, just as not everybody in an area ranked as deprived can be considered deprived.

Overall, the correlation between the deprivation score and all cause (<65 years) mortality between 1986 and 1989 is 88% and for all cause mortality for all ages it is 81%. In addition, the correlation between the score and area prevalence of low birth weight is 65%. Hence, the SAHRU index is predictive of relevant health outcomes. Through mapping variation in disease rates, inequalities in health between areas can be identified. The deprivation index can explain in part some of this local variation in health. The SAHRU index provides a method for identifying inequalities and for prioritisation of areas requiring special attention.

Potential for Health and Social Gain

Demands made on the health services are largely dependent on the demographic, health and social profile of the local area. Children under 5 years of age and the elderly population tend to require a higher level of health care input. Deprivation has been shown to correlate with poorer health in numerous international studies and in a variety of population groups.

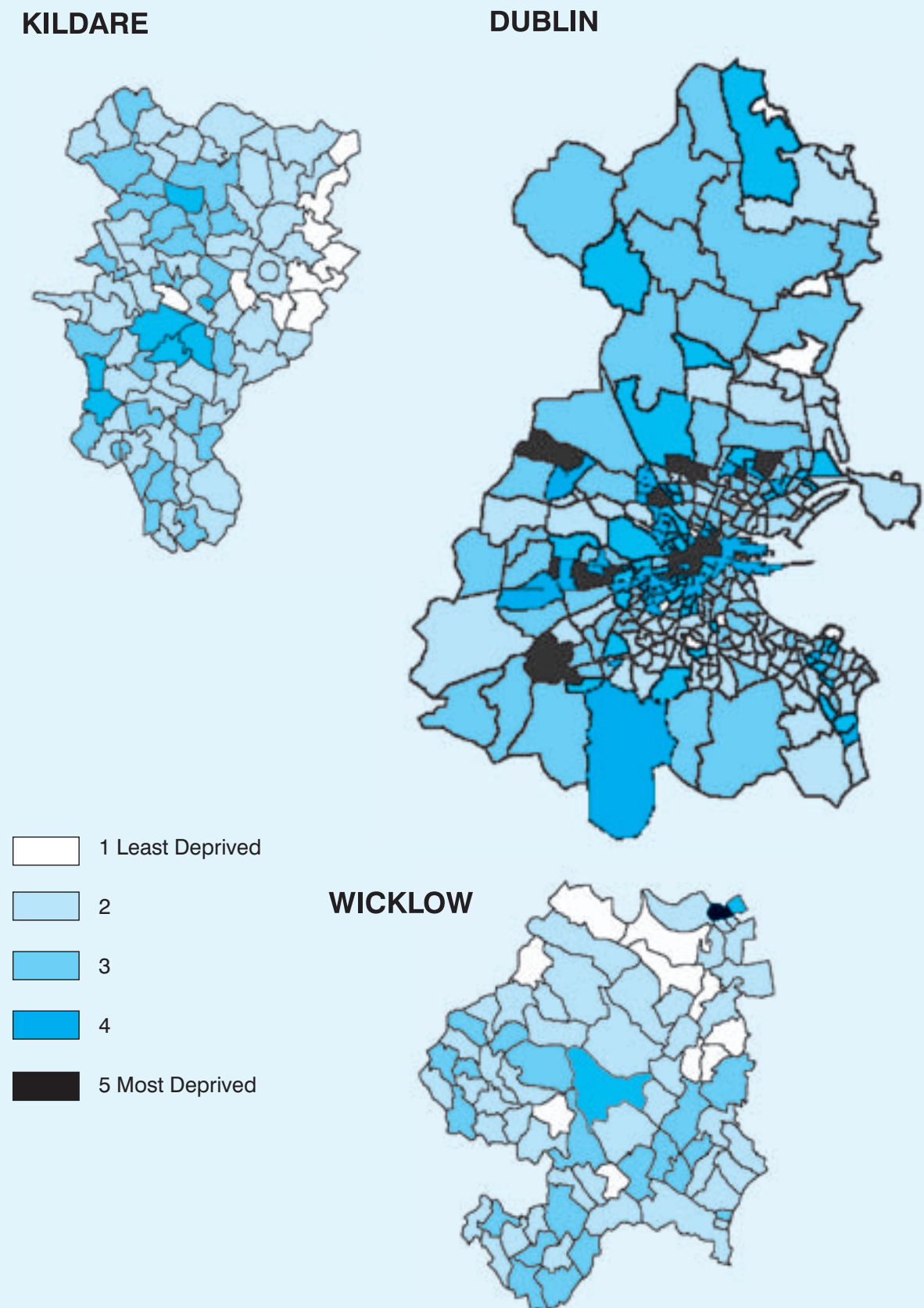
- The National Health Strategy document - “Shaping a Healthier Future”¹¹ acknowledged the existence of mortality “black spots” and the need to “examine variations in the health status of different groups in society” and to “monitor progress at national and local level” as a basis for the attainment of equity within the system.
- The Inner City and the rapidly enlarging and gradually ageing suburbs, especially to the West of Dublin, will make substantially heavier demands on the local health services as we move into the next century.
- To improve the health and social wellbeing of the population living in the Eastern Health Board region, it is clearly important that available resources, both within and outside

the health sector, are focused on areas and population groups in greatest need. In allocating new resources, such areas should be given priority consideration.

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Figure 3.9 Material deprivation by district electoral division in the Eastern Health Board region, 1991. Source: Small Area Health Research Unit, Department of Community Health and General Practice, Trinity College, Dublin.



Chapter 4: Coronary Heart Disease

The National Health Strategy, 'Shaping a Healthier Future' highlights cardiovascular disease as the largest single cause of death in Ireland.¹ Approximately one in four deaths in Ireland are caused by coronary heart disease (CHD) and a further one in ten by stroke.

4.1 Mortality Trends Due to Coronary Heart Disease

In line with international trends the death rate from CHD for both men and women is decreasing in Ireland, but it remains substantially higher than in many developed countries, including the USA and Canada.² In the European Union context, the overall death rate from CHD in this country is above the European average and in the under-65 age group, the Irish rate is the highest.¹

There were substantial increases in mortality from CHD in middle-aged men in Ireland during

the 1960s and early 1970s. This was followed by a plateau in mortality rates and then a slow decline. As shown in Figure 4.1, it was not until after the mid-1980s that Irish men started to benefit from the decline in CHD death rates (21% reduction during the 1980s) which had started during the 1960s and 1970s in other developed countries. Death rates from CHD have also been declining in Irish women. Within our Board's region, the trend in CHD mortality has been similar to that for the country as a whole.

It is estimated that over half of those having an acute coronary event (myocardial infarction) die within 28 days.³ Mortality rates increase steeply with age. A large proportion of deaths occur in the community. Incidence rates have declined and survival rates have improved in those under 65 years. However, there has been little change in event rates overall, probably because of recurrent events in the older age groups.

Figure 4.1 Secular trends in direct age-standardised death rate in males and females from coronary heart disease (ICD 410-414) per 100,000 population, Eastern Health Board and Ireland, 5 year moving averages, 1980-1995. Source: PHIS, 1997.

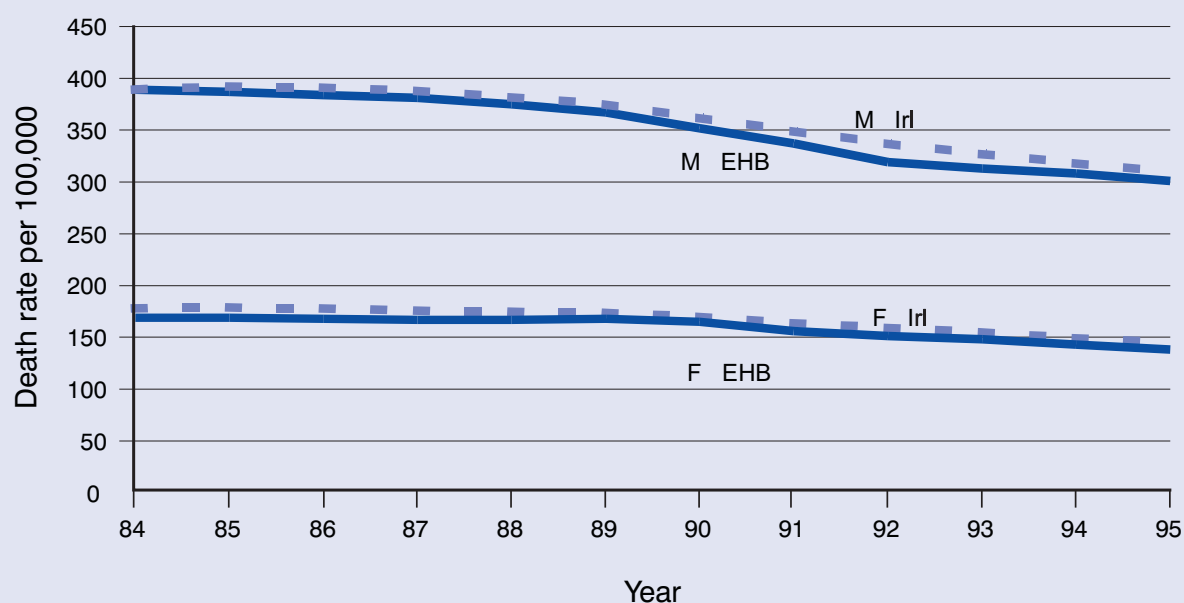
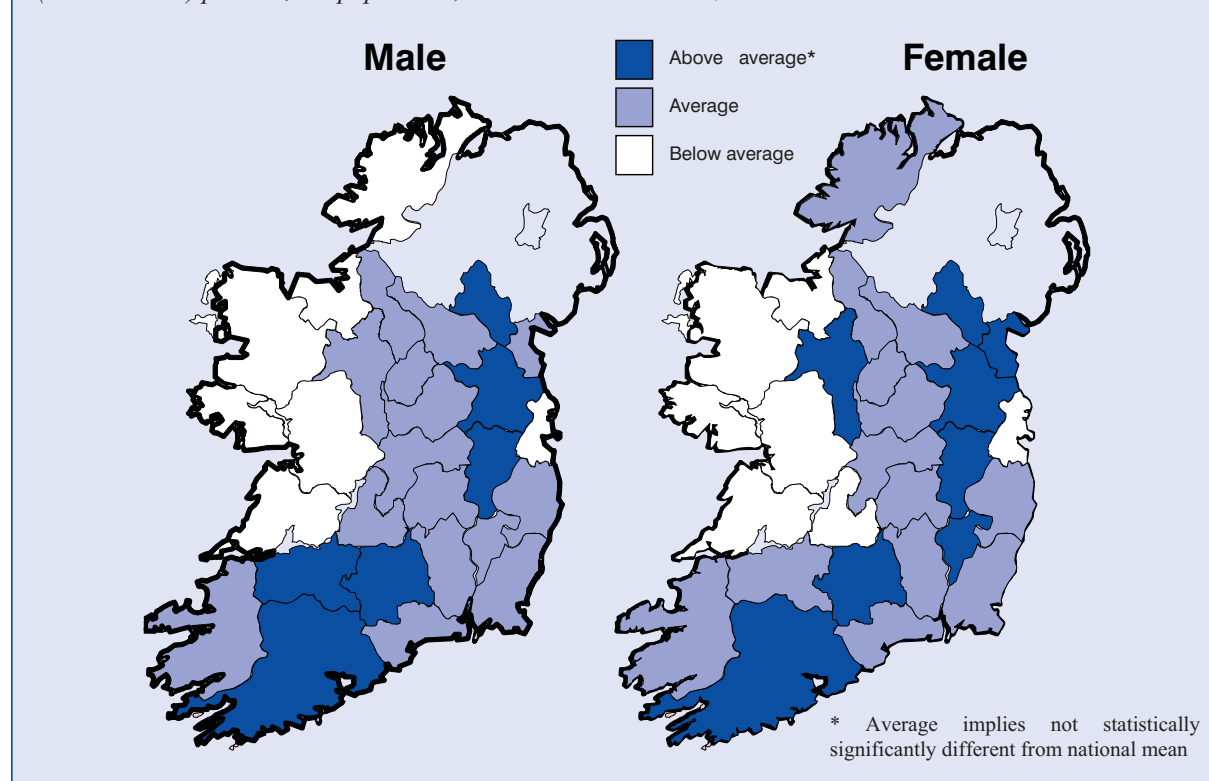


Figure 4.2 Geographical variation in mean direct age-standardised death rates from coronary heart disease (ICD 410-414) per 100,000 population, 1991-1995. Source: PHIS, 1997.



4.2 Mortality and Morbidity Due to Coronary Heart Disease

As shown in Figure 4.2, the mortality rate at all ages from CHD is lower than the national average in County Dublin and in counties mainly in the West of Ireland. In Kildare, the mortality rate is above the national average in both males and females. In the under 65 year age group, there is no marked variation in CHD mortality across the country.

Based on the average number over the period 1991 to 1995, approximately 2182 deaths from CHD in all age groups occur in our Board's region each year, of whom 56% are male and 44% female. In Dublin, Kildare and Wicklow there are approximately 1793, 203 and 186 deaths respectively from this disease each year.

In the under 65 year age group, there are approximately 437 deaths from CHD each year in our Board's region, of whom approximately 80% are male and 20% female. Of these, 361, 44 and 32 occur in Dublin, Kildare and Wicklow respectively.

There were approximately 1837 hospital discharges with a diagnosis of myocardial

infarction in our Board's region in 1996, accounting for over 21,000 bed days.⁴ Of these, 754 (41%) were aged under 65 years, accounting for 7707 of the bed days (37%).

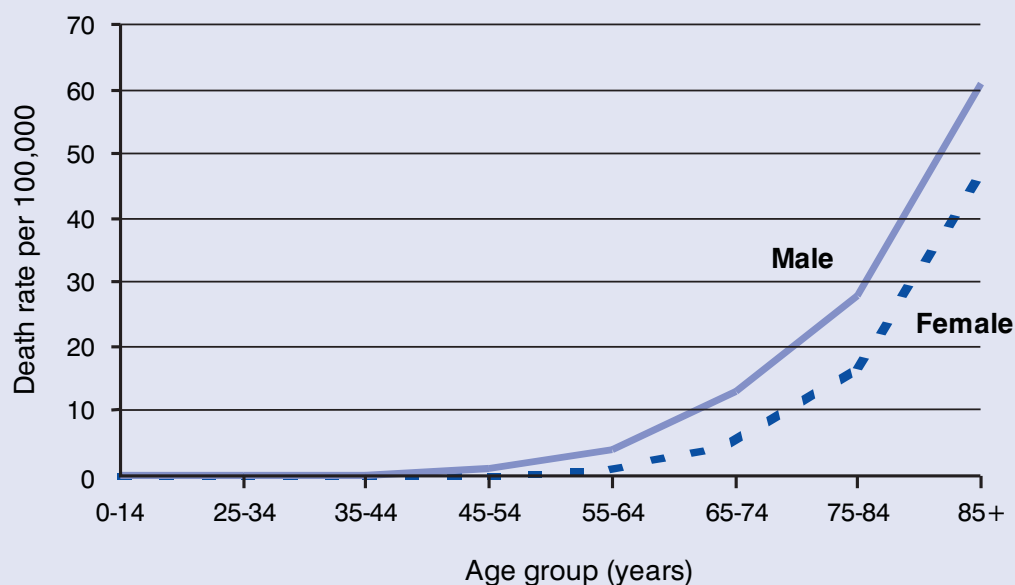
As shown in Figure 4.3, mortality from CHD increases with age with rates starting to increase rapidly after the age of 65.

In a pattern similar to that for mortality from CHD, the percentage of the population prescribed cardiac drugs increases rapidly with age, with over 40% of patients covered by the General Medical Services scheme prescribed one or more cardiac drug by 60 years of age (Figure 4.4).

4.3 Trends in Cardiovascular Disease Risk Factors

Smoking, increased blood pressure and hyperlipidaemia are the primary modifiable risk factors for cardiovascular disease. Other important modifiable risk factors include obesity and inadequate exercise. Since the early 1970s, when almost one in two of the adult population smoked, there has been an overall decline in smoking prevalence nationally. Approximately

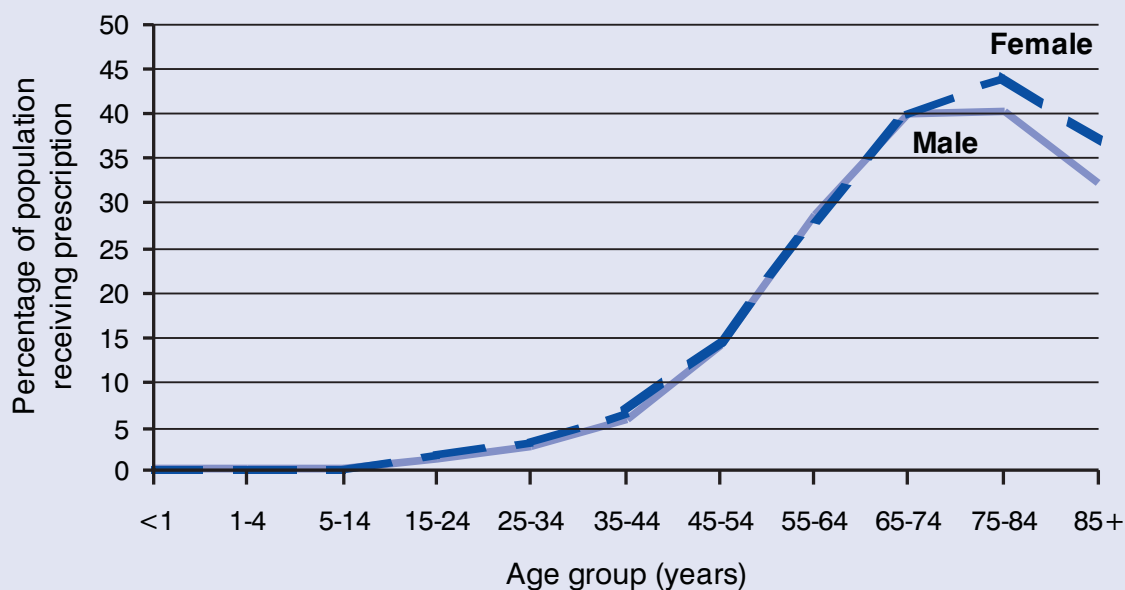
Figure 4.3 Age specific coronary heart disease death rate for Irish males and females, per 100,000 population.
Source: PHIS, 1997.



one in three adult men and women are current smokers.⁵ The prevalence of cigarette smoking is only slightly lower in women in their twenties and thirties compared to their male peers. Those residing in urban areas smoke more than those in rural areas. Smoking prevalence remains substantially higher in the manual compared to the non-manual classes.

The Kilkenny Health Project and the Happy Heart Survey found that approximately one in five of the adult population had raised blood pressure.^{6,7} The population cholesterol levels have declined over time but remain high when compared to other developed countries (estimated mean serum total cholesterol of 5.7 mmol/l compared to that of 5.0 mmol/l

Figure 4.4 Age specific prescribing rates for all cardiac drugs (ATC codes C) for male and female GMS cardholders, Eastern Health Board, April-June, 1997. Source: Health Information Unit, Eastern Health Board.



Box 4.1 *Key issues for a National Coronary Heart Disease Strategy*

- Develop a national strategy to meet the priority needs of the population, with special attention given to the young and those in lower socio-economic groups.
- Review in detail the epidemiology of CHD in Ireland in the context of the changing epidemiology of the disease internationally.
- Undertake a detailed review of the quality of preventive and treatment initiatives (to include acute and ongoing care and rehabilitation) in Ireland, for example in relation to the recommendations of the European Task Force. Information from the private sector as well as from publicly funded services should be included. A further census of coronary care units to update the information obtained in the previous censii in 1992 and 1994 may be required.
- Review information systems in relation to CHD (for example the coronary care unit information system) and advise on the establishment of a national coronary and stroke register.
- Develop best practice guidelines in relation to both the prevention and treatment of CHD, in co-operation with the Irish Cardiac Society, the Irish Heart Foundation and other bodies.
- Establish a system of audit to ensure use of interventions of proven value, both in relation to prevention and treatment of CHD. Priorities for audit should include the early use of antiplatelet and thrombolytic therapy in acute events, the use of statins, the performance of the ambulance service in the transportation of collapsed persons to hospital and the management of waiting lists for coronary artery bypass surgery.
- Agree target levels for the provision of diagnostic and interventional facilities and of waiting times.
- Agree criteria for appropriate referral for coronary angioplasty, coronary artery bypass surgery and rehabilitation.
- Carry out pilot projects to act as models of good practice in the implementation process.
- Advise on a more focused approach to cardio-pulmonary resuscitation (CPR) training, with priority given to training relatives of those with CHD, occupational health personnel and people in remote areas.
- Establish a multidisciplinary Task Force to implement the recommendations of the Strategy.

recommended by the World Health Organisation).⁶ Furthermore, almost one in three adult men and one in two adult women were overweight and almost one in two had low levels of physical activity.⁷

4.4 Coronary Heart Disease Strategy

Our Board's Director of Public Health, together with the other Directors of Public Health, have identified that there is a need to develop a national strategy on CHD similar to the approach on cancer. The principal actions recommended are shown in Box 4.1. The recent initiative by the Department of Health and Children in this regard is welcomed.

4.5 Potential for Health and Social Gain

Cardiovascular disease accounts for a high proportion of both total and premature mortality and a substantial proportion of health service resources. Morbidity and mortality from CHD are strongly influenced by the prevalence of known risk factors in the community. Given the increasing size and age of the population it can be anticipated that in the decades to come there

will continue to be a high need and demand in our Board's region for cardiovascular diagnostic and therapeutic services, including coronary artery bypass surgery.

The National Health Strategy set a medium-term target to reduce the death rate from cardiovascular disease in the under-65 year age group by 30% in the subsequent ten years. A multisectoral approach is required to reduce the excessively high burden of CHD on the community in line with this target.

- Reducing the proportion of young people starting to smoke and helping current smokers to stop should be a health promotion priority in our Board's region (see Chapter 8).
- Effective promotion of a balanced diet, increased fitness and moderation in alcohol intake is needed.
- High risk individuals should continue to be identified early (e.g. opportunistic screening for hypertension, cholesterol screening in high risk individuals) and managed appropriately.
- Survival following acute myocardial infarction would be improved through the earlier presentation of patients to hospital (e.g.

through increasing public awareness of symptoms) and with the optimum use of anti-platelet and thrombolytic therapy according to 'best practice' guidelines.

- Access to effective interventions such as angioplasty, coronary artery stenting and bypass surgery should be on a demonstrably equitable and priority basis.
- Information systems to monitor trends in the prevalence of cardiovascular risk factors, the implementation of best practice guidelines and where possible the outcome of interventions, should be developed and implemented.
- CHD mortality varies throughout Ireland. It is a leading cause of death and accounts for a large proportion of health service resources. Reducing the burden of CHD requires the use of effective preventive and curative interventions, ranging from reducing smoking in the population to equitable access to coronary artery bypass surgery. Clearly,

therefore, there is a need to develop a national strategy on ischaemic heart/cardiovascular disease, similar to the approach that has been adopted in relation to cancer.

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Chapter 5: Cancer

In Ireland, cancer accounts for approximately one in four of all deaths and one in 10 hospital admissions.¹ As shown in Figure 5.1, the overall death rates from cancer for both males and females are very low during the early decades of life and rise rapidly from the late 50s onwards. Hence, as the population ages, even when overall mortality rates from some cancers (e.g. of the lung) may be decreasing, the actual numbers of cases presenting to the health services may continue to rise.

Six of every 10 cancer patients survive their disease and die of other causes. Consequently, the proportion of people in the population developing cancer in any given time period (incidence) is higher than the proportion of people dying from cancer (mortality).

The overall death rate from cancer in Ireland has remained unchanged since the 1970s. In the European context, the cancer death rate in Ireland is generally similar to that of other countries.¹ However, the data suggest that Irish women may have higher lung, bowel and breast cancer rates, while Irish men have a higher rate

of bowel cancer, but a lower rate for lung cancer than the European average.

In terms of achieving health and social gain at the population level, effective strategies for the prevention and treatment of cancer are a priority.

5.1 Regional Variations in Cancer Mortality and Morbidity

Cancer mortality and incidence can vary over time and between different geographical areas.¹ While these variations may be due to differences in the demography of the populations, they may also be due to chance variations in the number of cases in any one time period in any one place, especially when the numbers involved are small. Indeed, as smaller areas with smaller populations are examined, larger fluctuations in cancer rates can be seen.

Differences in the size and age structure of the local population, smoking rates and other lifestyle factors, the degree to which all cases are identified and reported, and the use of diagnostic

Figure 5.1 Age specific cancer death rates for Irish males and females per 100,000 population. Source: National Cancer Registry, 1997.

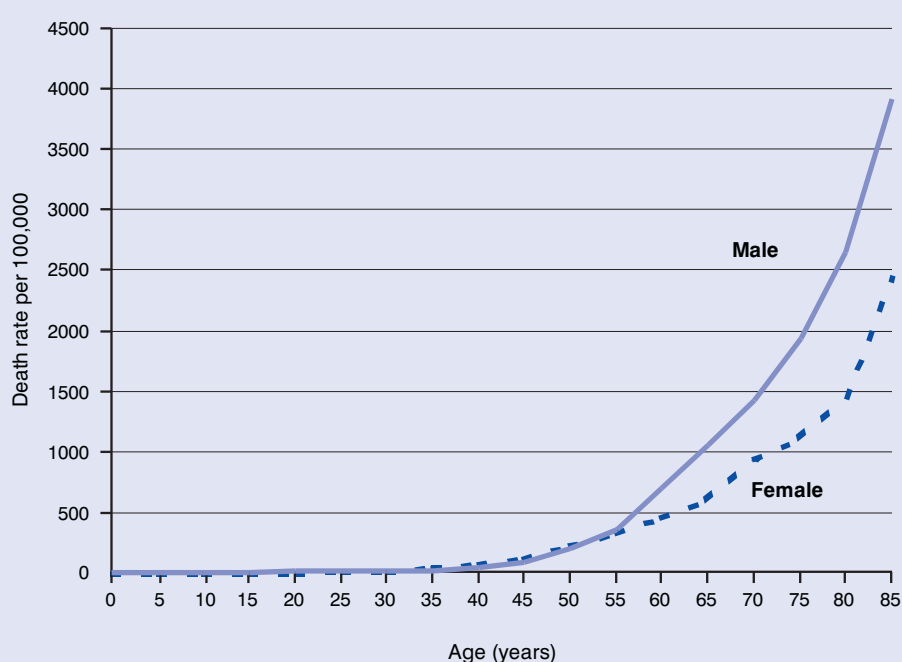
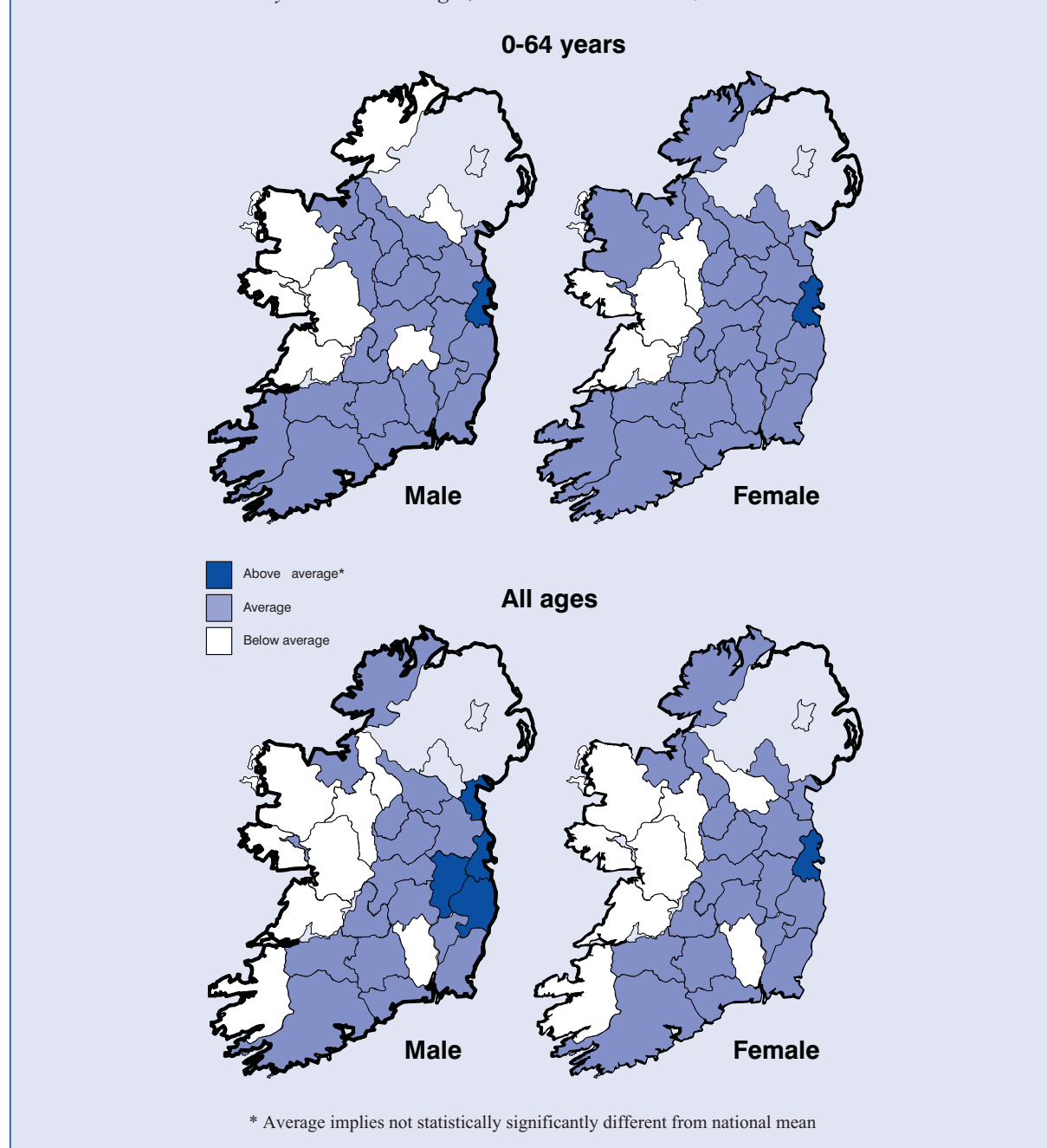


Figure 5.2 Geographical variation in mean direct age-standardised death rates from lung cancer by county in men and women under 65 years and at all ages, 1991-1995. Source: PHIS, 1997.



and treatment services may largely account for the observed variation. Only if the variations are large and persistent over long periods of time should it be considered that location itself may have some influence on the pattern seen.

Examination of national cancer data on a county by county basis reveals that Dublin has above average mortality for lung cancer in both males and females under 65 years and at all ages, while in Wicklow and Kildare (although the actual numbers of cases are small, and caution is,

therefore, required in the interpretation) the lung cancer rate is above average for all ages in males (Figure 5.2). Furthermore, based on the 1994 data provided by the National Cancer Registry, the incidence of lung cancer is also above average in County Dublin (in both males and females).¹ These findings are consistent with the epidemiology of lung cancer throughout the developed world where lung cancer mortality can be shown to be increased in urban areas, due

to the influence of social class, smoking behaviour and air pollution.

Mortality rates in the under 65s in our Board's region for all other major cancer types, in both males and females, are no higher than the national average. While the incidence or mortality from some less common cancers show regional variations when older age groups are taken into account, no consistent pattern such as that found for lung cancer emerges.

While mortality data can provide a strong indicator for important trends in the epidemiology of some cancers, the National Cancer Registry will provide much greater insight into the incidence of disease and the effect of interventions on survival. Important issues in relation to both incidence and management of cancer in the region may come to

light as data from further years become available.

5.2 The Main Types of Cancer

Cancer of the lung, gastrointestinal tract and prostate are the most common causes of cancer death in males, both under 65 years and at all ages (Figure 5.3). In women, cancer of the breast, lung and bowel are the most common causes of cancer deaths, with breast cancer particularly high in the under 65 year age group. Within our Board's region there are approximately 2484 cancer deaths each year, of which 776 (31%) occur under the age of 65 years. The number of cases of selected cancers occurring per year in our Board's region are shown in Table 5.1.

Figure 5.3 Principal causes of cancer deaths, as a percentage of total cancer deaths, in males and females at all ages and in under 65s, Eastern Health Board, 1991-1995. Source: PHIS, 1997.

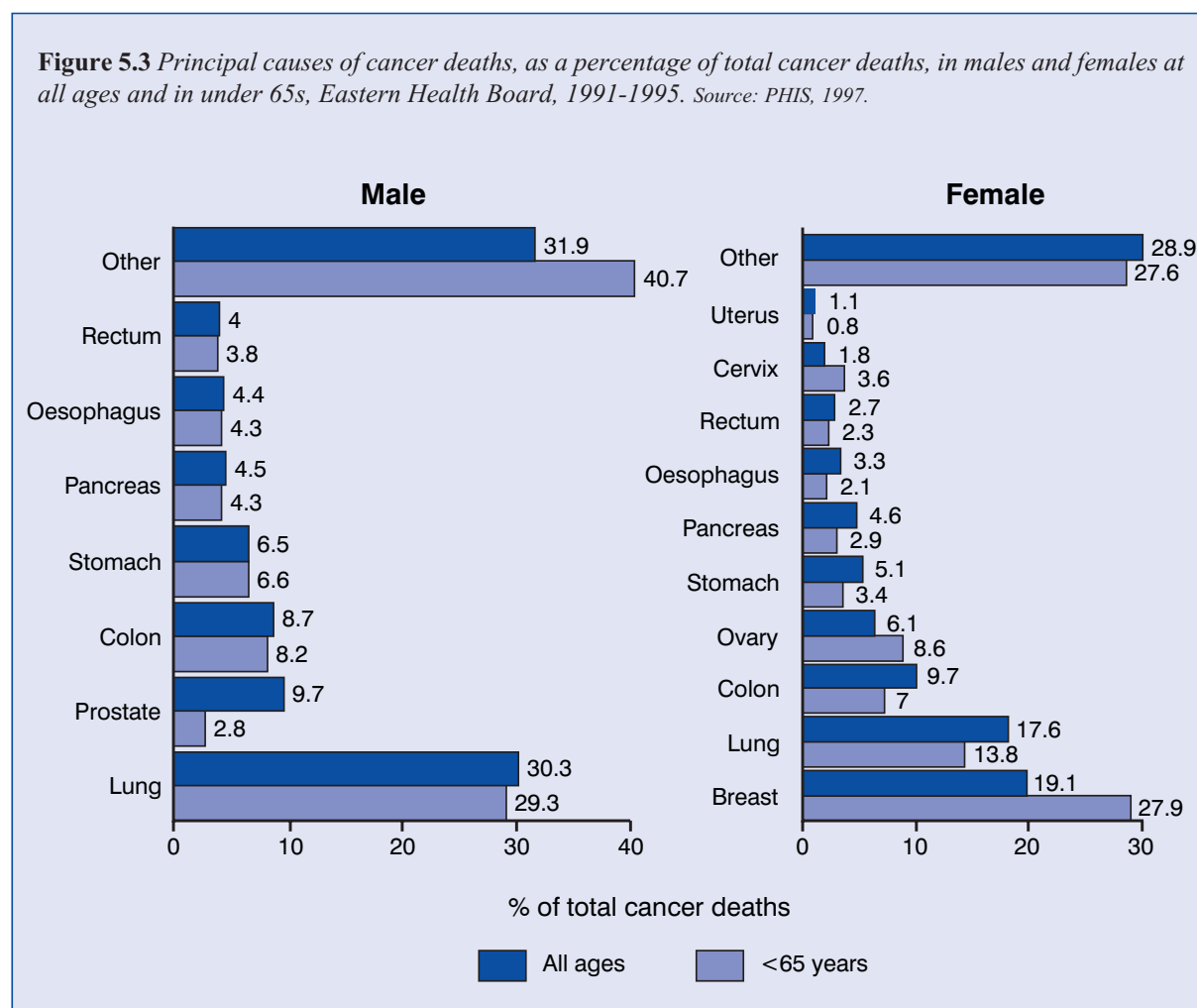


Table 5.1 Mean annual number of cancer deaths from selected causes, in males and females at all ages and in under 65s, Eastern Health Board and Ireland, 1991-1995. Source: PHIS, 1997.

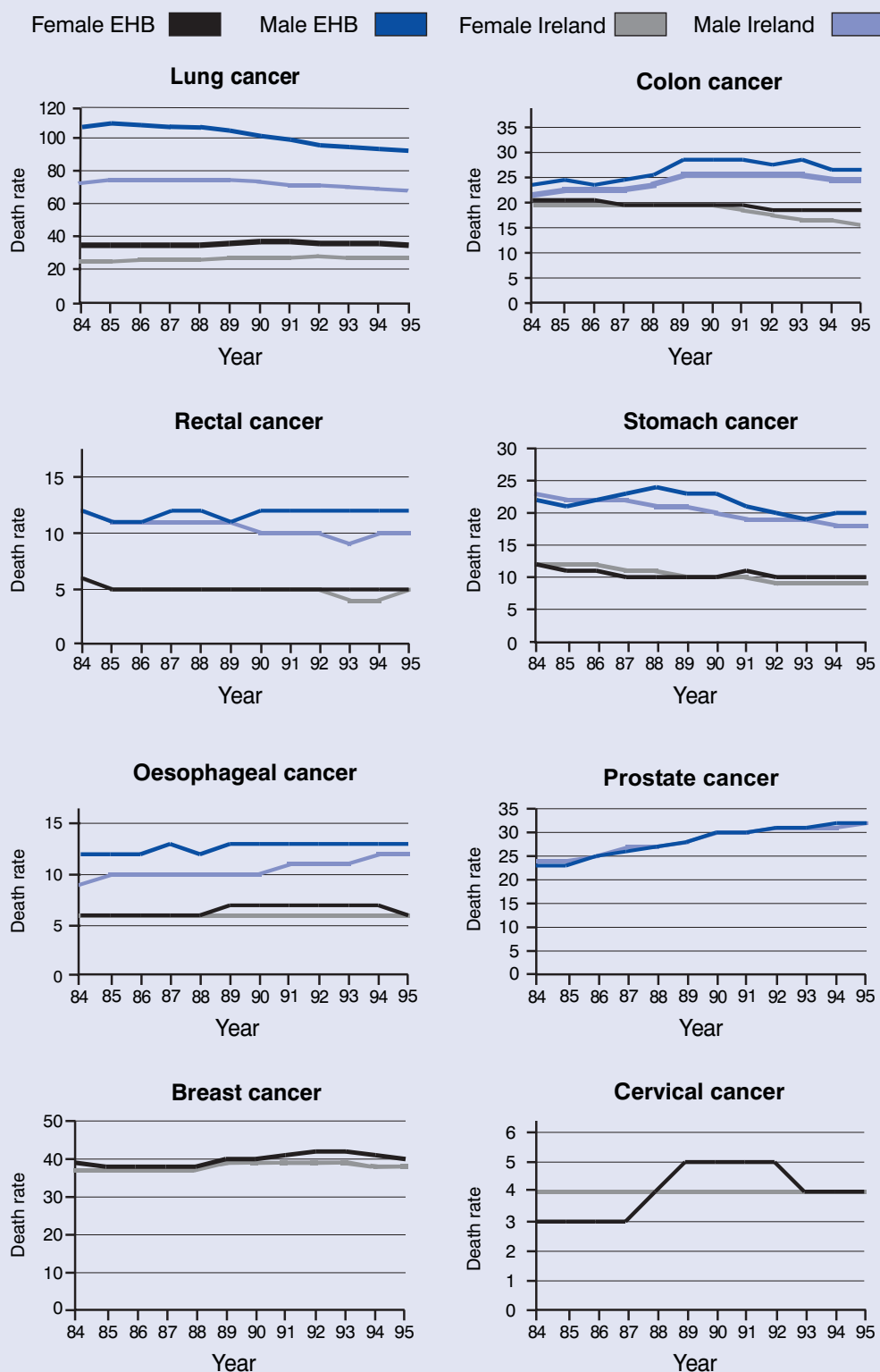
Cancer site	Sex	Dublin		Kildare		Wicklow		Eastern Health Board		Ireland	
		<65 y	All ages	<65 y	All ages	<65 y	All ages	<65 y	All ages	<65 y	All ages
Lung	M	98	322	9	29	8	31	115	382	283	1040
	F	47	191	4	13	2	12	53	216	121	503
	Total	145	513	13	42	10	43	168	598	404	1543
Breast	F	91	198	9	19	7	17	107	234	294	651
Cervix	F	12	18	2	2	1	2	14	22	41	66
Oesophagus	M	13	45	1	4	3	6	17	55	50	175
	F	6	33	1	3	1	4	8	40	20	114
	Total	19	78	2	7	4	10	25	95	70	289
Stomach	M	22	67	2	7	2	7	26	82	71	265
	F	12	55	1	4	0	3	13	62	33	173
	Total	34	122	3	11	2	10	39	144	104	438
Colon	M	25	92	3	9	4	9	32	110	93	371
	F	25	104	1	8	1	7	27	119	69	324
	Total	50	196	4	17	5	16	59	229	162	695
Rectum	M	13	42	1	4	1	3	15	50	43	146
	F	7	28	1	2	1	3	9	33	20	89
	Total	20	70	2	6	2	6	24	83	63	235
Prostate	M	9	103	1	9	1	11	11	122	34	503
Pancreas	M	14	46	2	6	1	4	17	57	56	187
	F	10	47	1	7	0	2	11	56	31	169
	Total	24	93	3	13	1	6	28	113	87	356
Uterus	F	3	11	0	1	0	2	3	14	12	50
Ovary	F	28	63	2	5	3	6	33	74	92	212
Bladder	M	6	27	0	2	1	3	7	32	18	109
	F	1	16	0	1	0	2	1	19	5	51
	Total	7	43	0	3	1	5	8	51	23	160
Leukaemia	M	11	28	0	2	0	3	11	33	40	123
	F	7	24	1	2	1	2	9	28	26	88
	Total	18	52	1	4	1	5	20	61	66	211
All cancers	M	332	1058	30	100	30	105	392	1263	1104	4028
	F	324	1045	33	93	26	84	384	1222	102	3403
	Total	656	2103	63	193	56	189	776	2485	2126	7431

5.3 Trends in Cancer Mortality

As shown in Figure 5.4, over recent years the overall mortality rates from cancer of the lung (males) and stomach are gradually declining.

Mortality rates from cancer of the breast, cervix, oesophagus and rectum (which is decreasing nationally in males) have remained largely unchanged in our Board's region. It is a matter of particular concern that the rate of lung cancer

Figure 5.4 Secular trends in direct age-standardised death rates in males and females from selected cancers per 100,000 population, Eastern Health Board and Ireland, 5 year moving averages, 1980-1995. Source: PHIS, 1997

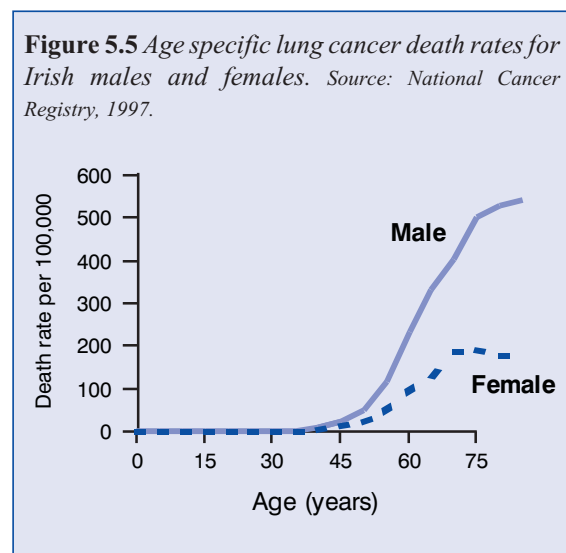


mortality in females is not falling in line with that of males, which while high, is slowly approaching the national rate. Unless the prevalence of smoking reduces, lung cancer rates are likely to remain at the present and unacceptably high level. In line with international trends, mortality from prostate cancer is rising, for reasons as yet unexplained, which may be related, in part, to improved diagnosis. When breast and cervical screening programmes are fully and effectively introduced, a decrease in mortality from these cancers should become apparent after a number of years. Furthermore, as the quality of cancer treatments improves, the better outcome should ultimately be reflected in reduced cancer mortality.

5.4 Lung Cancer

Lung cancer accounts for approximately 600 deaths in our Board's region annually. Of these, over 60% occur in males. The median age at diagnosis is about 70 years.¹ Lung cancer mortality increases with age in the latter decades of life (Figure 5.5).

In the Dublin area, the lung cancer mortality, both in those under 65 years of age and in all ages, in males and females is higher than the national average.



As described in Chapter 8, smoking prevalence has been higher in County Dublin than elsewhere in the country and is likely to largely explain

these findings, together with the influence of air pollution.

Potential for health and social gain

Lung cancer accounts for a high proportion of cancers in both men and women and has the greatest potential for the reduction of the burden of cancer in the community. The increased premature lung cancer mortality in both men and women in County Dublin, together with the higher incidence of the disease, as described above, are striking and are grounds for particular concern. Approximately 90% of lung cancer and 35% of all cancers are attributed to smoking.²

Lung cancer, unlike many other cancers, is preventable. However, the challenge remains how best to bring about significant lifestyle changes on the part of the population, both in terms of preventing the young population from starting to smoke and for the adult population to stop smoking.

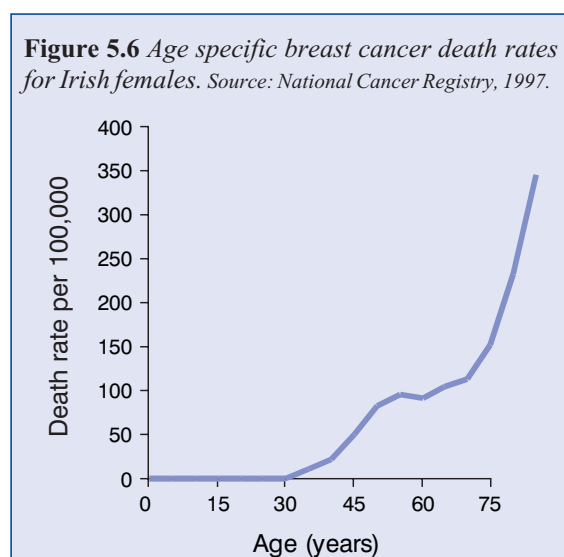
- For lung cancer, screening is not a viable option.
- As approximately 90% of lung cancers are attributable to smoking, smoking prevention holds the key (see chapter 8).
- Approximately one in three of the Irish population smokes and reducing the level of this one risk factor would have the single greatest overall impact on cancer incidence and also on the many other smoking-related diseases.
- Priority should, therefore, be given to health promotion initiatives shown to be effective in preventing young people from starting to smoke and helping adults to stop smoking.
- The planned European Union ban on advertising and sponsorship by tobacco companies is welcomed. However, it will not become operational for a number of years. Given the weight of scientific evidence that identifies smoking as the single greatest risk factor that threatens the health of the public in the developed world, it is recommended that Ireland should show a lead in this respect and press ahead for the earliest ban on tobacco advertising in all forms of media communication.

- Maximum use of pricing policies should be employed to discourage smoking.

- All work, travel, restaurants and other indoor leisure environments should become predominantly, if not exclusively, smoke-free zones.

5.5 Breast Cancer

Breast cancer accounts for almost one in ten cancers diagnosed in females¹. The risk of females under the age of 75 of developing breast cancer is approximately 1 in 12 and the risk of death is 1 in 36.¹ The lifetime risk of death from breast cancer before age 75 has increased from 2% in 1950 to 3.3% in 1989 (an increase of 40%) but now appears to be decreasing.¹ The mortality from breast cancer increases with age (Figure 5.6). The median age at diagnosis is approximately 60 years¹.



Each year approximately 650 cases of breast cancer are diagnosed in our Board's region, of which some 125 occur in the 50-64 year age group (see Table 5.1).

Potential for health and social gain

A number of factors, many relating to hormonal status, are well established as being associated with an increased risk of breast cancer. There is some evidence that obesity and high alcohol consumption are associated with increased risk and that physical activity may be protective.^{3,4} However, to date, no major modifiable risk factor has been identified which can be used as a definitive basis for primary prevention.

- Survival after diagnosis and treatment of breast cancer is directly related to the stage at

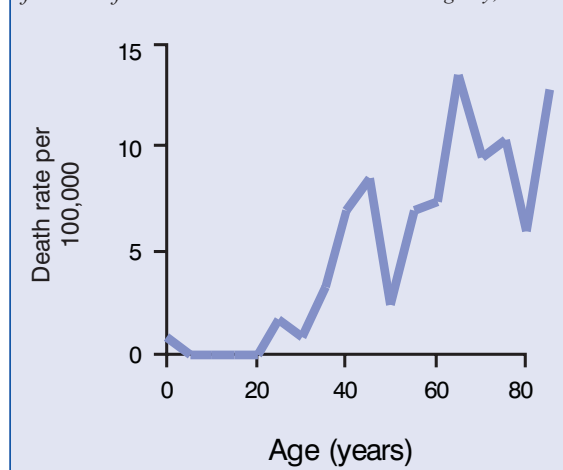
diagnosis. The earlier the cancer is diagnosed, the better the survival rates.

- Promoting breast self-examination has not been found to reduce mortality.
- Mammographic screening in women aged 50-74 years significantly reduces breast cancer mortality by up to 24% after seven to nine years of follow-up.⁵
- The decision to introduce a national breast screening programme for women aged 50-64 years, with the inclusion of the Eastern Health Board in the first phase, is to be welcomed. As further research data become available, it may be appropriate to extend breast screening to include an older age group.
- While the value of breast screening by mammography has been demonstrated by rigorous randomised trials, it is a considerable challenge to achieve similar levels of mortality reduction in the context of a population-based screening programme. Experience from countries with established programmes indicates that strict adherence to quality assurance guidelines is an integral part of high quality programmes. Appropriate training of personnel, adequate experience and sufficient volume of work to maintain skills, together with on-going evaluation are among the key aspects of ensuring the programme meets its objective of reducing deaths from breast cancer.
- It is estimated that, with a well organised breast screening programme, the number of deaths from breast cancer in our Board's region could potentially be reduced from approximately 125 to 95 per year in the 50 to 64 year age group over a period of time.

5.6 Cancer of the Uterine Cervix

Within our Board's region there are approximately 14 deaths under 65 years of age from cervical cancer each year, which accounts for 4% of female cancer deaths in this age group. This is similar to the national average. The median age at diagnosis is approximately 50, with death from invasive disease generally occurring some ten years later. Mortality from cervical cancer increases with age (Figure 5.7).

Figure 5.7 Age specific cervical cancer death rates for Irish females. Source: National Cancer Registry, 1997.



Early (pre-invasive) disease is generally detected through screening women in their 20s and 30s and is uncommonly found after their mid-fifties in women who have been previously screened. Risk factors for cervical cancer include smoking, human papilloma virus infection, early sexual experience and multiple partners. Barrier contraceptives, especially condoms, are considered to be protective.

Potential for health and social gain

- Cervical cancer screening, by detecting the very early signs of potential (pre-invasive) disease, provides a means of achieving an almost 100% “cure rate”.⁶ In contrast, if it remains undetected and untreated over a number of years, it may proceed to invasive cancer which has a 5 year survival rate of less than 60%.
- A national cervical screening programme for women in the 25-60 year age group is planned. It is estimated that over a 20 year period the number of deaths from cervical cancer could be reduced by 60%, given an 80% population coverage and a screening interval of 5 years (accounting for approximately 10 cases in our Board’s region annually).⁶ However, achieving such an outcome would depend on the development of a well organised service including an effective quality assurance programme.

5.7 Skin Cancer

Skin cancer is by far the most common of all cancers, accounting for one third of all diagnosed

cancers.¹ There are two main groups of skin cancer, melanomatous and non-melanomatous. The latter type of cancer is more readily treatable, is rarely fatal and is generally found on the lips, ear and other areas exposed to excess sunlight. In contrast, melanoma, while much less common than other skin cancers, accounting for approximately 5% of diagnosed cancers, is potentially life threatening. It is more common in females than males, but males have a higher case fatality rate.

Potential for health and social gain

- Excess exposure to sunlight, especially early in life, increases the risk of subsequently developing skin cancers. Hence, it is particularly important that young children and infants are not exposed to excess sunlight and, in particular, do not suffer sunburn.
- The advice to avoid sunburn offers a very effective way of reducing the risk of skin cancers - for example to ‘slip’ on a shirt, ‘slap’ on a hat and ‘slop’ on an adequate amount of sunscreen, whether in this country or abroad, especially around midday when sunlight is most intense.
- Many skin cancers are treatable, especially if detected at an early stage. Hence, it is important that the public are aware of the need to seek medical advice where there is an alteration in the appearance of a mole or the appearance of a new skin lesion so that any potentially cancerous change can be identified and removed before there is any spread to other parts of the body.
- Current health promotion initiatives to reduce excess sun exposure of the population, especially as regards persons travelling on ‘sun holidays’ to warmer climates and the information provided to the public during hot summer periods in this country, should be evaluated and implemented where appropriate.

5.8 Colorectal Cancer

Colorectal cancer includes cancer of the colon, rectum and anus. Nationally, it accounts for approximately one in ten of all diagnosed cancers. The median age at diagnosis is approximately 70 years¹. Males are more likely to develop rectal cancer than females;

cumulative risk before age 75 is 5% for males and 3% for females. In our Board's region, there are approximately 300 deaths from colorectal cancer each year.

Potential for health and social gain

- The value of population screening for colorectal cancer has not been established and is currently being investigated. For some high risk groups, however, for example with known gastrointestinal pathologies, colorectal cancer screening may have an important role to play.
- At present, adoption of a balanced diet, with a high intake of fibre from cereals and green and yellow vegetables and moderation in beer and red meat are recommended to reduce the risk of this disease.
- In order that the disease can be identified at a relatively early stage it is important that the early warning signs such as an alteration in bowel habit, rectal bleeding or unexplained weight loss are recognised and medical advice is sought without delay.

5.9 Prostate Cancer

Prostate cancer accounts for 5% of all male cancer deaths. It is generally diagnosed in men in their early 70s.¹ In our Board's region there are approximately 120 deaths from prostate cancer each year. Mortality from prostate cancer in our Board's region is similar to the national average.

Modifiable risk factors for prostate cancer are unknown and effective preventive measures do not currently exist. Although screening and early detection have been proposed as methods to reduce the risk of dying of prostate cancer, clear early detection guidelines are not available. Available scientific evidence is insufficient to determine if screening for prostate cancer reduces deaths or if early treatment is effective in prolonging life.⁷

Potential for health and social gain

- Prostate cancer is not considered a preventable disease. Those cancers which will progress to become clinically significant cannot be reliably determined and it follows, therefore, that widespread screening and testing for early detection of prostate cancer are not scientifically justified at present.

- It is important that the early warning signs of prostate enlargement are recognised and medical advice is sought at an early stage.

5.10 Potential for Health and Social Gain

Cancer is a major cause of morbidity and mortality in our Board's region. In 1994 the National Health Strategy, 'Shaping a Healthier Future' set a medium term target to reduce the death rate from cancer in the under 65 age group by 15% in the ten year period from 1994.

The subsequent Cancer Strategy in 1996 outlined the process by which this might be achieved.⁸ Emphasis is placed on well focused and evaluated health promotion programmes targeted on cancers with well understood risk factors and the provision of quality cancer screening and treatment services integrated at local, regional and national level. Within our Board's region, three Regional Directors for Cancer Services, in co-operation with our Board's Department of Public Health, have produced a cancer service plan for the region which was presented to our Board in early 1998. The following issues are addressed: cancer prevention, diagnostic services, treatment services, including rehabilitation and palliative care and quality assurance. More detailed plans will be drawn up for developing services within each area of our Board and will be updated each year as part of an ongoing process in providing a quality cancer service.

- Best practice guidelines will be developed for the management of cancers.
- The encouragement and implementation of "best practice", whether in relation to health promotion, screening or treatment offers opportunities for reducing the burden of cancer in the community.
- To permit evaluation of health promotion initiatives and the prediction of changes in cancer morbidity and mortality trends, information on the prevalence of behavioural risk factors in the population would be extremely valuable, for example through rolling surveys.
- The integration of all services involved in the prevention or management of cancer i.e. the GP, community care, hospitals, rehabilitation,

palliative care and voluntary support, with the patient's perspective at the core, is clearly of paramount importance.

- The prevention of cancer should continue to be included in the development of cancer services, with priority given to reducing the morbidity and mortality attributed to smoking, both with respect to active smoking and environmental tobacco smoke.
- Information systems should be developed or adapted to monitor patient outcomes and support audit.
- Health promotion should concentrate on reducing the burden of smoking i.e. by enhancing education and awareness campaigns, supporting legislation, providing services to help people to cease smoking and evaluating all interventions.
- GPs require guidelines for the management and referral of cancers and information should be available for epidemiological purposes from the primary care setting.
- Minimum clinician case loads for cancer management should be agreed and implemented.

- A needs assessment of counselling and of palliative care will be undertaken.
- Research will be undertaken with patients to incorporate consumers' views in the provision of cancer services.

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Chapter 6: Injury and Poisoning

The National Health Strategy, 'Shaping a Healthier Future' highlights injury and accidents as one of three main causes of death in Ireland.¹ However, it did not set targets for the reduction of accident mortality and morbidity in Ireland. In 1996, the Office for Health Gain established a National Accident Forum and in 1997 two committees were formed to develop and implement strategies for the prevention of accidents among children and older people.

6.1 Mortality Due to Injury

National data show that injury is responsible for approximately 40% of deaths in 1-14 year olds and for over 50% of deaths in 1-35 year olds.² Consequently deaths from injury contribute greatly to years of potential life lost, a measure of premature mortality. Approximately 380 deaths occur following accidental injury in our Board's region per year (310, 40 and 30 for Dublin, Kildare and Wicklow respectively).

The increase in the incidence of suicide in Ireland over recent decades is a public health problem of major concern. Although the factors responsible are not fully understood and have not been completely characterised as yet, part of the reason for this increase includes the changes in recent years in the recording and classification of suicide as a cause of death. Some evidence exists that the official figures may underrepresent the numbers of suicide deaths, but this is thought to be a small proportion.

6.2 Morbidity Due to Injury

Death represents the most extreme outcome of accidental injuries. Many accidents, however, lead to serious non-fatal injuries and cause long term hardship and suffering to patients and families. Accidental injuries are also costly in terms of the health service. It is estimated that over 5% of the health service budget is spent on managing acute in-patient injury episodes.³ Consequently, injuries exact a high toll on the health sector and other sectors of society.

Approximately one in every six children requires treatment for injuries each year and 10-20% of all injuries require hospital admission.⁴ The HIPE system gives data on discharges of those with injuries who were admitted to hospital. Within our Board's region, there are approximately 20,000 hospital discharges per year following treatment of injury.³ The highest discharge rates following injury are for children and the elderly.

Falls are the most likely cause of injury leading to hospital admission (approximately 40%) and road traffic accidents account for another 10%. However, this latter figure is likely to be an underestimate, as in over 50% of all injury admissions to hospital the place of the accident is not documented.

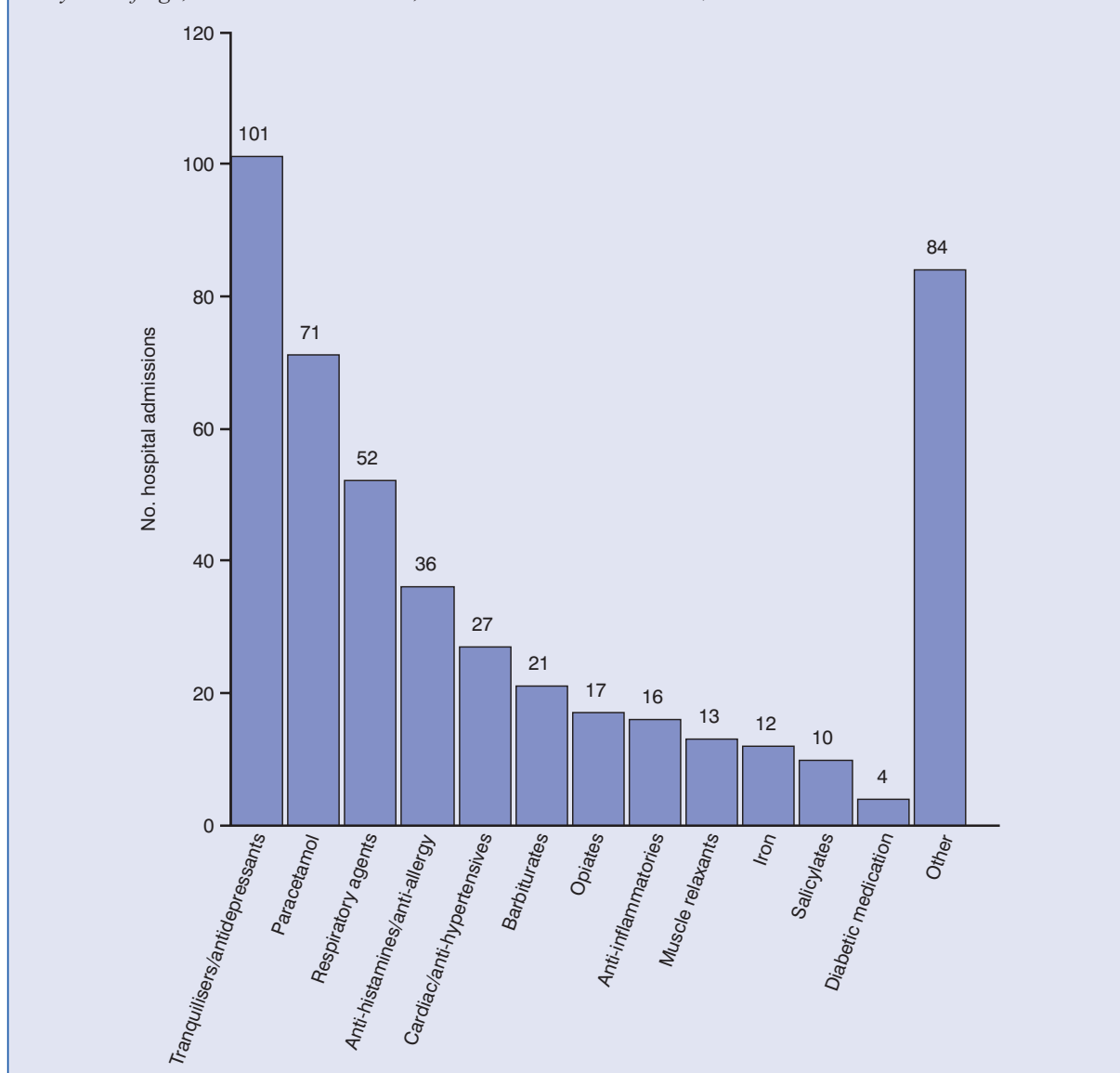
6.3 Poisoning in Children under Five Years of Age

Poisoning due to medication or other agents can be accidental or intentional. It is most likely that poisoning in children under the age of 5 years is accidental. Each year, approximately 200 children under 5 years of age and resident in the region are admitted to hospital following poisoning. Furthermore, it is estimated that three times as many children are treated in A&E departments for poisoning.^{2,4}

The proportion of poisonings resulting from medicines is approximately 70%. The most common medications that lead to hospitalisation of young children are tranquillisers, antidepressants and paracetamol (Figure 6.1). Petroleum products, pesticides and caustic acids/alkalis are the most common non-medication causes of poisoning requiring hospital admission (Figure 6.2).

The usual pattern internationally and in Ireland is that commonly prescribed medicines are most likely to be implicated in accidental poisoning and these are potentially more dangerous than over-the-counter medicine.⁵

Figure 6.1 Medications most commonly leading to acute hospital admission for poisoning in children under 5 years of age, Eastern Health Board, 1994-1996. Source: HIPE 1997, ESRI.

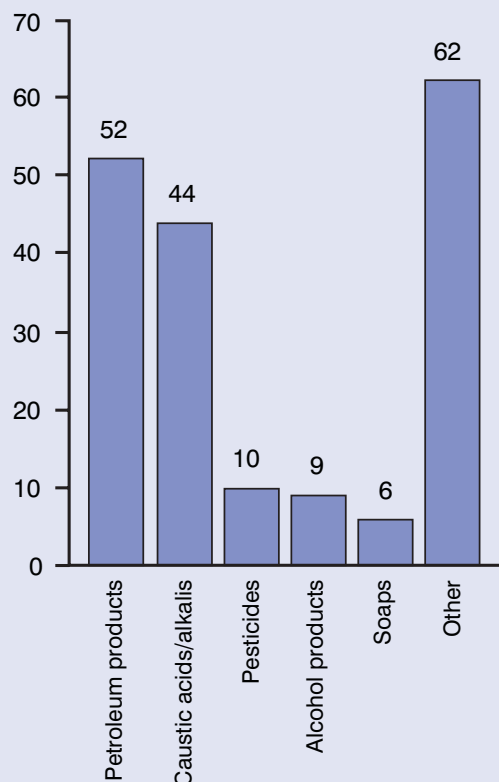


Potential for health and social gain

It is of great concern that poisoning in children under 5 years of age continues at such an unacceptably high level.

- One simple and very effective method of reducing risk is the use of child resistant containers (CRCs) for the dispensing of medicines.⁶
- The use of CRCs represents best practice. It is associated with a substantial reduction in the incidence of accidental poisoning which results in real health and social gain for children.⁷
- CRCs are now mandatory in the United States and in the United Kingdom for medicines not already presented in blister packs.⁸ They are already available for bleach and other potentially poisonous household products in Ireland.
- Dispensing guidelines of the Pharmaceutical Society of Ireland state that pharmacists should use CRCs for medicines not already packaged in blister packs.⁹
- Compliance with these guidelines should be monitored. If use of CRCs continues to be unsatisfactory, a mandatory policy would be indicated.
- In 1997, the Department of Public Health of the Eastern Health Board and the Office for Health Gain developed a campaign to

Figure 6.2 *Poisons (non-medications) most commonly leading to acute hospital admission for poisoning in children under 5 years of age, Eastern Health Board, 1994-1996. Source: HIPE 1997, ESRI.*



promote safe packaging and storage of medicines. This is aimed both at pharmacists and parents and is supported by the pharmacy profession.

- Parents should be aware of the importance of storing both drugs and household agents out of the reach of young children and all such products should be appropriately labelled.

6.4 Suicide

The rate of suicide rose in Ireland between 1945 and 1995 from 2.38 per 100,000 population to 10.69 per 100,000 population.¹⁰ This rise was due to an increase in the rate of suicide in males, as the rate of suicide in females remained the same. There is some regional variation in the rate of suicide, the rate in Leinster between 1991 and 1995 being 9.18 per 100,000 population.¹¹ There are two groups at increased risk of suicide,

namely young men, where suicide is the second most common cause of death, and people aged between 65 and 74 years.

In November 1995, the Department of Health set up a Task Force on Suicide to define the nature of suicide and parasuicide in Ireland, to make recommendations on how service providers can most cost effectively address the problems, to identify the various authorities with jurisdiction in suicide prevention strategies and their various responsibilities and to formulate a national suicide prevention/reduction strategy. The report of this Task Force was published in January 1998 and it made many recommendations including the provision and structure of services relating to suicide and parasuicide, prevention measures, intervention following attempted suicide, aftermath and aftercare for relatives and the need for research and evaluation.

Official figures for suicide may under-represent the true numbers of cases, although the Central Statistics Office estimates this to be no more than of the order of 5%. There is also a need for additional information on factors and circumstances relating to each case of suicide that would facilitate a better understanding of the causes and allow for more appropriate prevention programmes to be developed. The Department of Public Health, as part of a national initiative in each Health Board, is currently undertaking research into suicide in Ireland. The aims of the research are to establish the incidence and associated factors of suicide nationally, to add to present knowledge on suicide and to provide information to facilitate future planning for a suicide prevention programme. The research commenced in 1997 and will continue into 1999.

Potential for health and social gain

- A better understanding of the incidence of suicide and the factors that are associated with it will be provided by the research which is being contributed to by this department.
- This better understanding will lead to health and social gain through improved effectiveness of suicide prevention programmes.

6.5 Falls Resulting in Hip Fractures in the Elderly

The overall incidence of fractures in the elderly cannot be readily estimated because many types of fractures are treated in outpatient or A&E departments which, in the main, do not have information systems to provide epidemiological data. However, hip fractures generally require hospital admission and, therefore, HIPE data give a good indication of the more severe consequences of falls.

Almost 1,000 residents of our Board's region suffer hip fractures each year. Approximately 87% of these occur to people over the age of 65 years and the majority are over 75 years of age. The majority (80%) of hip fractures occur in women and 90% occur following a fall. The mean length of hospital stay is 15 days. Only 40% are discharged to their own home while 50% are discharged to convalescent facilities and 4% die in hospital.

Osteoporosis, which occurs more frequently in older women, is a major underlying cause of hip fractures, which typically result from a fall. Women have a lower peak bone density and lose bone more rapidly than men. With the increasing elderly population in the region, the population at risk for age-related fractures will also increase.

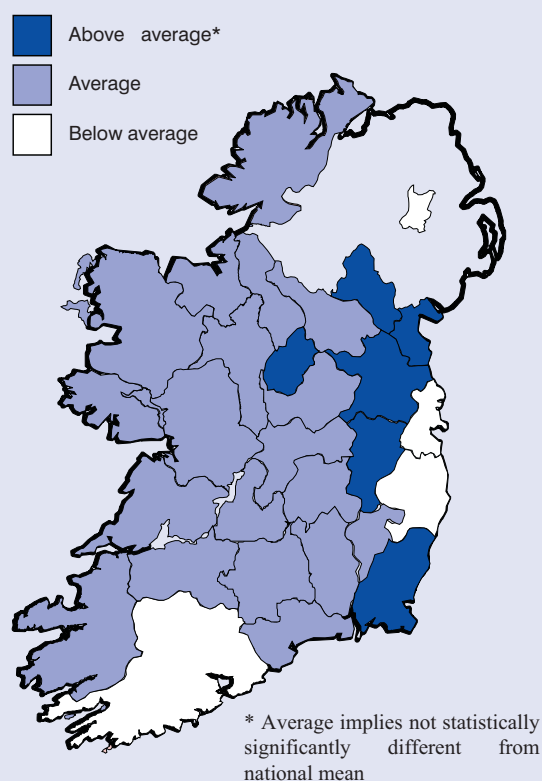
Potential for health and social gain

Strategies for the prevention of hip fractures include the promotion and maintenance of bone and muscle strength throughout life and the prevention of accidental falls and other injuries. These may be achieved in a number of ways.

A calcium rich diet including, for example, fortified milk and cheese, should be promoted to maximise bone density during adolescence, young adulthood and peri-menopausally in women.¹²

- Physical activity to improve muscle strength and balance and the avoidance of weight gain both in younger age groups and later in life, should be encouraged.^{13,14}
- Health promotion should include strategies for the reduction of environmental causes of falls (e.g. the removal of household obstacles and wearing suitable footwear).¹⁴ Such an intervention is being piloted in the Dun Laoghaire area of our Board. This Programme

Figure 6.3 Geographical variation in mean direct age-standardised death rates from road traffic accidents per 100,000 population, 1991-1995. Source: PHIS, 1997.



is supported by the National Council on Ageing and Older People. An evaluation protocol is incorporated and the results of the intervention should be available in late 1998.

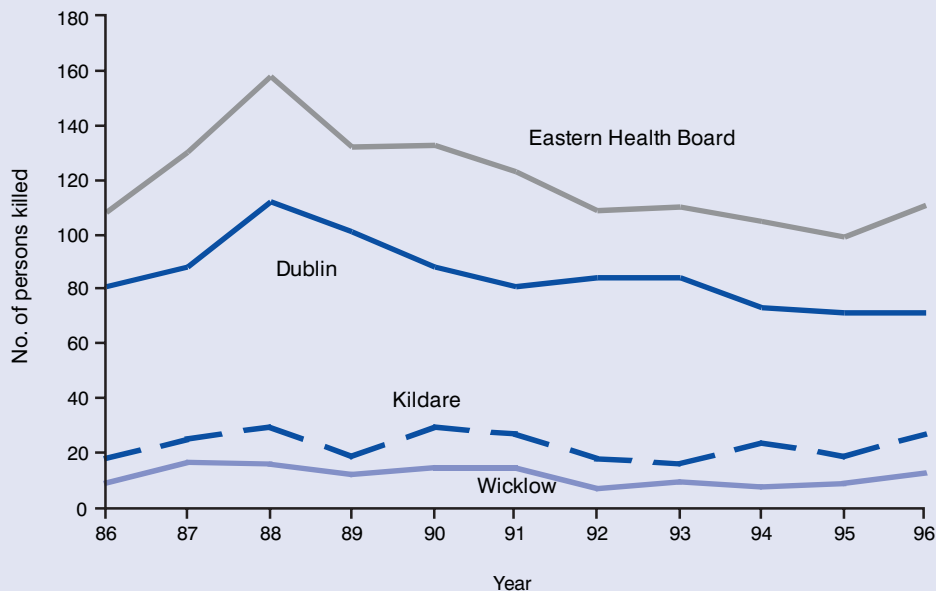
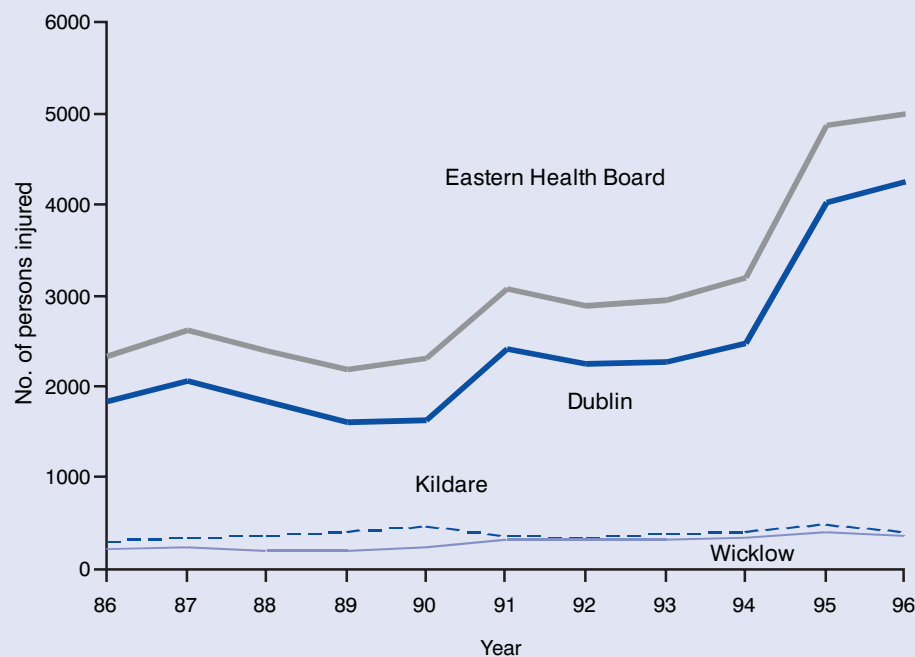
- As frail older people are at greatest risk of falling, an intervention programme to prevent such falls will be piloted in two of our Board's long stay units during 1998.
- Prevention of bone fractures for high risk post-menopausal women may also include the use of hormone replacement therapy (HRT) in appropriate cases.^{13,14}

6.6 Road Traffic Accidents

Nationally, the numbers of deaths and serious injuries from road traffic accidents (RTAs) have fallen over time, but fluctuate from year to year.¹⁵ In contrast, the number of reported non-fatal injuries has steadily increased. These trends are occurring against a continuous increase in the total amount of travel on Irish roads.

Figure 6.4 Secular trends in road traffic accident deaths (A) and injuries (B), Eastern Health Board, 1986-1996.

Source: Environmental Research Unit.

A) Road traffic accident deaths**B) Road traffic accident injuries (new injury reporting format introduced in 1995)**

The examination of RTAs by type of user provides some useful indicators in the development of prevention strategies. In 1996, nationally 453 persons were killed in 415 fatal accidents, with 13,319 persons injured in 8,271 reported injury accidents.¹⁵ Car users accounted for 48% of all fatalities nationally (63% of all injuries), pedestrians for 25% (13% of all

injuries), motorcyclists for 13% (9% of all injuries) and pedal cyclists for 5% (6% of all injuries).

Certain types of RTAs are more common in certain age groups: approximately 30% of all pedestrian casualties and 39% of all pedal cyclist casualties are under 20 years of age; 65% of all motor cyclists casualties are between 18 and 34

years of age; and, 44% of all vehicle user casualties are between 25 and 54 years of age.¹⁵

Nationally, approximately one in three of the fatalities and one in five of the non-fatal injuries occur between 9.00 p.m. and 3.00 a.m., the hours most associated with drinking and driving.¹⁵ In fatal accidents involving at least one driver, 'exceeded safe speed' was the primary contributory action, specified in 41% of such incidents.

As shown in Figure 6.3, the mortality rate from RTAs is higher in the counties to the west and north of County Dublin and Wicklow. The counties of Dublin, Wicklow and Cork have mortality rates from RTAs which are below the national average.

RTAs account for approximately 100 deaths and almost 5,000 non-fatal injuries each year in our Board's region (Figure 6.4). It is of major concern to see the increase in RTA fatalities that occurred in our Board's region in recent years.

Potential for health and social gain

As shown above, the type of road accident, whether involving a pedestrian or vehicle user, is associated with particular age groups. Prevention initiatives should be focused on the following groups: child and elderly pedestrians, child and teenage pedal cyclists, young adult motor cyclists and young and middle-aged vehicle users.

- It is already proven that wearing a bicycle helmet can reduce the likelihood of head injury by more than 75%.¹⁶ A survey carried out in our Board's region found a helmet wearing rate among 11-13 year olds of only 16%.¹⁷ Cyclists who do not wear a helmet put their lives at risk. The wearing of bicycle helmets should become the norm, especially for young people. However, persuading children to wear helmets, which may not be perceived as being 'cool', is difficult.
- Children and their parents require ongoing education on the benefits of helmet wearing.
- All schools should have a policy to encourage helmet use for all children cycling to school.
- Serious consideration should now be given to introducing legislation to make the use of bicycle helmets compulsory. In many countries, for example Australia, Canada and

the United States, this has been shown to lead to a substantial rise in helmet use.¹⁶

- While motorcyclists generally wear crash helmets in compliance with the law, excess speed and poor driving, either on their part or on the part of other road users, place motorcyclists and their passengers at increased risk of fatal and non-fatal injury when involved in RTAs. To improve the safety of motorcycling, before obtaining a licence, new motorcyclists should undergo a compulsory training programme on the safe use of motorcycles, the rules of the road and on the special risks associated with motorcycling.
- Bicycle lanes and traffic calming measures should be extended to as many main routes as possible.
- The main risk factors underlying road accidents should continue to be given high priority in the enforcement of safe driving practices, namely speeding, drink-driving and careless driving.
- Parents should ensure that children always wear appropriate safety belts and that the appropriate type of seating is used for younger children.
- Statutory and voluntary organisations should work with local communities to collectively identify local hazards and to implement appropriate preventive measures. Such a collaborative effort is underway in the Dundrum/Ballinteer area, involving co-operation between our Board, Dun Laoghaire/Rathdown County Council, the Garda Síochána and the Dublin Healthy Cities Project.
- Consideration should be given to progressively lowering and enforcing the permissible alcohol level of drivers.
- Access to enhanced epidemiological information on accidents is required so that priority issues can be identified locally and outcome from interventions monitored. The development of a standardised accident surveillance system in hospital A&E departments would be particularly helpful in this regard. This concept is further discussed in Chapter 11.

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Chapter 7: Infectious Diseases

Infectious diseases, although no longer causing the high level of mortality of the earlier decades of this century, remain a public health concern. International bodies such as the World Health Organisation (WHO) have drawn attention to the threat posed by both emerging (e.g. haemorrhagic fevers, *E. coli* 0157, hospital acquired infections) and re-emerging (e.g. diphtheria and tuberculosis) infectious diseases. Foodborne (e.g. *E. coli* and new variant Creutzfeldt-Jacob Disease) and bloodborne (e.g. hepatitis C and human immunodeficiency virus (HIV)) infectious diseases have received considerable media attention in more recent times.

Many infections are preventable, either through vaccination (e.g. primary childhood vaccination and influenza vaccination in the elderly) or the implementation of best practice (e.g. in the storage and preparation of foods). Traditionally, the surveillance of infectious diseases has depended on their statutory notification. The increase in the notification of food poisoning in 1996 may be attributable to a change in recording practice in the Department of Public Health, whereby diseases such as campylobacter and *E. coli* 0157 are now included in this category.

There is very significant undernotification in relation to this system although changes in the number of notifications of specific diseases do show trends in the incidence of these diseases. A review of the statutory notification system for infectious diseases revealed that nine out of ten medical practitioners in Dublin do not notify any cases to the health authorities (see section 11.4).

The need for improved infectious disease surveillance at local, regional, national and international levels is becoming increasingly recognised. The Laboratory Surveillance System has been developed over recent years by our Board's Department of Public Health in co-operation with laboratories in the region. When fully developed, the system will provide more timely and complete information which is of special importance for the early and effective control of infectious diseases outbreaks. This

information system is further discussed in Chapter 11.

The establishment of the National Disease Surveillance Unit in 1998 is welcomed.

7.1 Meningococcal Disease

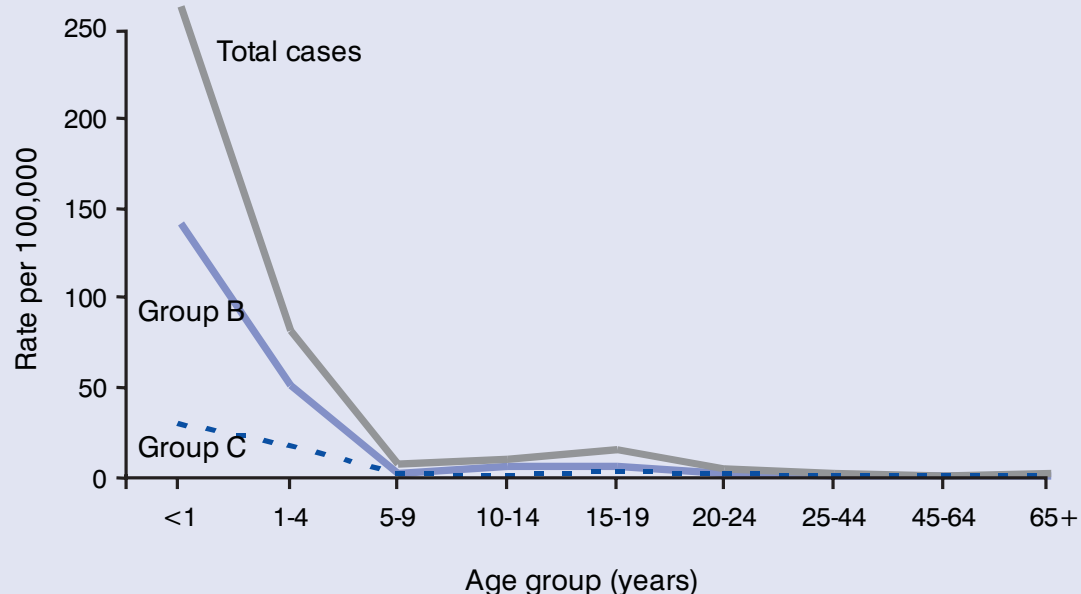
The notification of bacterial meningitis has increased nationally over the past decade. Meningococcal infection is the commonest cause of bacterial meningitis. The occurrence of this disease is cyclical in nature. Increasing immunity to particular strains in the community may partially explain this phenomenon. The vast majority of cases occur sporadically without known contact with a case and are acquired from the 10-20% of the general population who carry meningococci in their throats without any ill effects. While meningococcal disease occurs most frequently in late winter and early spring, cases can occur throughout the year.

In 1997, 173 cases of meningococcal disease were notified (crude rate 13.9/100,000 population). Of these, 142 (82%) were confirmed, 11 (6%) were presumed and 20 (12%) were possible cases. The majority where a group was identifiable were group B (71%) and the remainder were group C (29%). The most frequent sero/subtypes were B:4:P1.4 and C:2a:P1.5, P1.2, similar to those found in Ireland over the past two years. There were 9 deaths attributed to the disease (case fatality rate of 5%), in comparison with six deaths in 1996 and 11 in 1995. In recent years, the incidence of the disease in our Board's region has met the European definition of high incidence with greater than two laboratory confirmed cases per 100,000 total population.¹

As shown in Figure 7.1, most cases occur in infants and young children with a second smaller peak occurring in late adolescence, when group C disease is relatively more common.

Following a period of increased activity, as recently experienced within our Board's region, the incidence of meningococcal disease may begin to wane.

Figure 7.1 Age-specific incidence rates of notified meningococcal disease, all cases and sero-groups B and C, Eastern Health Board, 1997.



Potential for health and social gain

While meningococcal disease remains uncommon, few infections lead to the degree of concern which arises when it occurs in the community. Its affinity for infants, young children and teenagers and its ability to kill a healthy child within a few hours are some of the reasons for the fear.

The recent development of the Meningococcal Reference Laboratory in Temple Street Hospital provides greatly improved diagnostic facilities and allows the epidemiology of the disease to be explored in greater depth than previously. For example, it is possible to determine whether the same strain of meningococcus is causing the disease in an area, indicating a local cluster of cases. Such information greatly assists in the determination of the appropriate control measures required in a particular situation.

Preventive measures against the disease rely mainly on early management of patients and reducing the risk of secondary cases.

- Information on the early signs of possible disease should be readily available to the public, especially to parents with young children and teenagers. Unfortunately, there are no early signs or symptoms which are specific to the disease and allow it to be

distinguished from other causes of meningitis or septicaemia. Symptoms include fever, headache, vomiting and marked weakness. Hence, it can be difficult for parent and doctor alike to make the diagnosis, especially at an early stage. A high index of suspicion is, therefore, essential.

- Parents should be made aware of the rapidity with which the disease can develop. Immediate access to medical advice remains the most important step in reducing the morbidity and mortality from meningococcal disease. If, for example, the diagnosis is suspected in the evening, a medical opinion should not be deferred until the morning. The sudden appearance of a rash (typically red or purple dots or patches in the skin that do not fade when pressed) is a particularly important sign and is an indicator for extreme urgency.
- The mainstay of treatment for the disease remains intravenous penicillin which should be considered whenever the diagnosis is suspected. Where the GP initially sees the patient at home, this treatment should be given before referral to hospital. Where the GP cannot be contacted immediately, immediate transport of the child to the hospital A&E department is recommended.²

- To reduce the risk of further cases of the disease, an antibiotic is given to household and “kissing” contacts. Its main purpose is not to treat possible meningococcal disease at an early stage, although this is a common perception, but to eradicate the infection from the throats of those who may be carrying it at that time. This prevents the organism being transferred on to others who may be more susceptible and may rapidly develop the disease should they become infected. As the infection may be circulating in the general community, it is important that it is understood that such preventive treatment only reduces and does not eliminate the risk of disease in any one individual.
- In the case of group C disease, vaccination can be given to close contacts to prevent the development of the disease. The current vaccine against group C is not effective in children under 18 months and the duration of immunity is poor, lasting for only three years or less in young children. Unfortunately, there is no vaccine against group B disease which is the most common strain in our Board’s region. Hence, meningococcal vaccination is not recommended for routine use in the general population. For these reasons international research is concentrating on developing new vaccines. While early trial results are encouraging, a suitable vaccine is unlikely to be available for a number of years.
- In the interim, efforts should continue to educate parents and young adults on the signs and symptoms of the disease and to promote early presentation to family doctors and hospitals. The report of the Working Group on Bacterial Meningitis² recommends a combination of public information campaigns by the health services and support of voluntary bodies engaged in this area.² The Eastern Health Board has developed a working relationship with the newly launched Irish branch of the National Meningitis Research Foundation.
- The Working Group also recommends that continuing medical education for GPs, hospital A&E doctors and paediatricians should give particular emphasis to the diagnosis and management of this condition. Best practice guidelines for the management of meningococcal disease are now available for public health doctors. The Department of

Public Health of this Board co-operated with the Office for Health Gain and the National Meningococcal Research Foundation in producing an educational video on the disease which has recently become available.

7.2 Tuberculosis

Table 7.1 Tuberculosis notification rates, Eastern Health Board, 1990-1997.

Year	No. notifications	No. per 100,000	3 year average
1990	191	15.3	
1991	183	14.7	190
1992	202	16.2	183
1993	144	11.6	162
1994	159	12.8	153
1995	150	12.0	143
1996	113	8.7	126
1997	129	9.9	

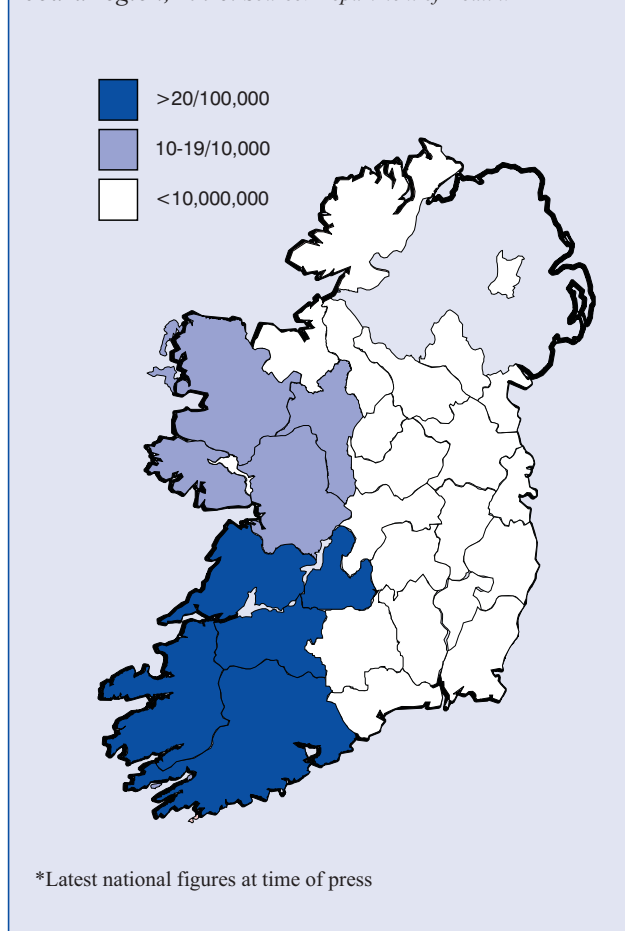
Tuberculosis is a statutorily notifiable disease. Following notification, details on each case are held in the local Tuberculosis Register and collated on a regional basis.³⁻⁵ The following data refer to cases with clinically active disease due to infection with organisms of the *Mycobacterium tuberculosis* complex (*M tuberculosis*, *M bovis* and *M africanum*).

One hundred and twenty nine cases of tuberculosis were notified in our Board’s region in 1997 (Table 7.1). As the number may fluctuate from year to year a three year average has been calculated and shows the overall decline in tuberculosis in recent years. Tuberculosis notification rates increase with age and are higher in males (68 cases, 53%) than in females (61 cases, 47%).

Detailed analysis of tuberculosis notifications, available for 1996 shows that tuberculosis notification rates vary between regions and in the Eastern Health Board the rate is lower than the national average of 12.6/100,000 (Figure 7.2).

Eleven cases (10%) were notified through the Laboratory Surveillance System (LSS), some of which were not notified by any other route. A cluster of cases in one area demonstrates the importance of compliance with treatment. The

Figure 7.2 Tuberculosis notification rates by health board region, 1996. Source: Department of Health.*



use of directly observed therapy should be considered where compliance is in doubt.

As in previous years the large majority of notified cases occurred among the indigenous population (103, 91%). Nine cases (8%) were in immigrants from high endemicity countries.

Eighty-eight (78%) of the cases had pulmonary tuberculosis in whom 68 (87%) had the diagnosis laboratory confirmed. Of these cases, 35 (40%) were classified as infectious (i.e. acid fast bacilli seen on direct sputum microscopy). There were 22 (19%) cases of extra-pulmonary disease, one of whom, who had not received Bacille Calmette-Guerin (BCG) vaccination, had tuberculous meningitis. Primary tuberculosis was diagnosed in three (3%) cases. The number of cases associated with HIV infection has declined in recent years with only one case reported in 1996.

Twenty four cases (21%) had a history of contact with other tuberculosis cases and 20 (18%) had

tuberculosis diagnosed previously. Eight (7%) cases were found by contact tracing.

Potential for health and social gain

As described above, a steady decline has occurred in the number of cases of tuberculosis in our Board's region over the past five years. The reducing incidence of the disease in our Board's area may reflect, in part, the application of best practice in the management of tuberculosis cases and their close contacts.

In this regard, the close co-operation between community care staff and respiratory consultants, especially through the joint staffing of tuberculosis clinics may play an important part.

- Under current legislation, the clinician attending a case of tuberculosis is required to notify a Medical Officer of Health. Prompt notification is important so that contact tracing can begin without delay. It is of concern that some cases are notified through the Laboratory Surveillance System, rather than by the clinician.
- The declining incidence of tuberculosis should not be allowed to generate a sense of complacency. Firstly, tuberculosis has demonstrated an ability to increase in incidence in areas where control measures are not optimised, as occurred in the United States and in other countries in recent years.⁶ Secondly, the number of immigrants arriving in our Board's region from high incidence countries has increased and it is likely that the number of tuberculosis cases associated with this group will rise. It is, therefore, important to ensure that all refugees/asylum seekers are screened for tuberculosis and followed up appropriately.
- In 1996, the Department of Health published the report of the Working Party on Tuberculosis which outlined a model for the prevention, diagnosis and management of tuberculosis in Ireland.⁷ Core concepts include the early identification and appropriate treatment of tuberculosis cases and the screening and follow-up of close contacts. The development by our Board's staff of a tuberculosis management information system will assist in the evaluation of this process and provide epidemiological data on the disease.

- As regards BCG, the Working Party recommended that neonatal BCG should be continued in those areas that currently provide BCG until certain criteria are met, one of which is an incidence rate of less than 10/100,000 total population.
- As seen above, the Eastern Health Board reached this target for the first time in 1996. However, as this figure should be reached nationally before cessation of universal BCG vaccination is recommended, neonatal BCG should continue to be offered in our Board's region.

7.3 Vaccine Coverage and Vaccine Preventable Illnesses

7.3.1 Vaccine coverage

The national vaccination schedule in Ireland is shown in Box 7.1. The target coverage of these vaccines is 95% of children with three doses of three in one (DPT: diphtheria, pertussis, tetanus) or two in one (DT: diphtheria, tetanus), oral polio and *haemophilus influenzae* type b (Hib) by 12 months and 95% of children vaccinated with measles/mumps/rubella (MMR) by 24 months of age.⁸

Computerised coverage rates for MMR have been available since 1991. Following the introduction of the new general practice based vaccination scheme, coverage rates for DPT/DT/Hib/Polio are available in a similar format since 1996. In the past, two different methods have been used to estimate vaccine coverage in the region, giving rise to difficulties in comparing coverage trends over time.

From 1993 to 1995, vaccine coverage was estimated by totalling the number of completed vaccinations returned in the year and expressing this as a proportion of the population born in the same year. The returns included all children who had completed primary vaccination under two years of age. This method, although providing an overall picture of vaccine coverage, could lead to some inaccuracies in the figures if, for example, children did not complete primary vaccination under one year of age.

The current method for estimating vaccine coverage is based on cohorts of children born in each quarter year. Each child's date of

Box 7.1 National vaccination schedule.

Age	Vaccination
At birth	BCG
2, 4, 6 months	DPT, polio, Hib
15 months	MMR
Primary school entry (5-6 yrs)	DT, polio booster
Primary school leaving (12 yrs)	MMR booster

Table 7.2 Mean annual percentage primary vaccination coverage, Eastern Health Board, 1993-1996.

Year	DPT	Polio	Hib	DT
1993 (by 24 Mts.)	76.9	90.0	58.6	12.8
1994 (by 24 Mts.)	72.8	82.7	67.3	8.3
1995 (by 24 Mts.)	78.0	86.0	75.5	8.4
Birth cohort Q1 1996 (by 12 Mts.)	68.3	72.7	72.2	4.7
Birth cohort Q2 1996 (by 12 Mts.)	70.6	73.8	74.0	3.5
Birth cohort Q3 1996 (by 12 Mts.)	73.3	76.1	76.1	3.0
Birth cohort Q4 1996 (by 12 Mts.)	72.8	75.1	75.2	2.6

vaccination is recorded on RICHs and the proportion of children in this birth cohort who have been fully vaccinated by age 12 months is determined.

By 12 months of age, the documented coverage of the completed three doses of DPT/DT/Hib/Polio is approximately 74% (see Table 7.2).

Figure 7.3 shows average quarterly percentage uptake for 1996 of the primary vaccination schedule for each community care area in our Board's area. While there are many variables which could affect the reported uptake of vaccinations in any one area, the uptake of primary vaccination, nevertheless, is lowest in those areas which have higher proportions of people among lower social classes.

Table 7.3 shows the uptake for each individual component of the primary vaccination schedule. It shows how the acceptability among our Board's population of the DPT vaccination has improved relative to the uptake of DT.

Figure 7.3 Average quarterly percentage uptake of primary vaccinations at 12 months of age within each community care area of the Eastern Health Board, 1996.

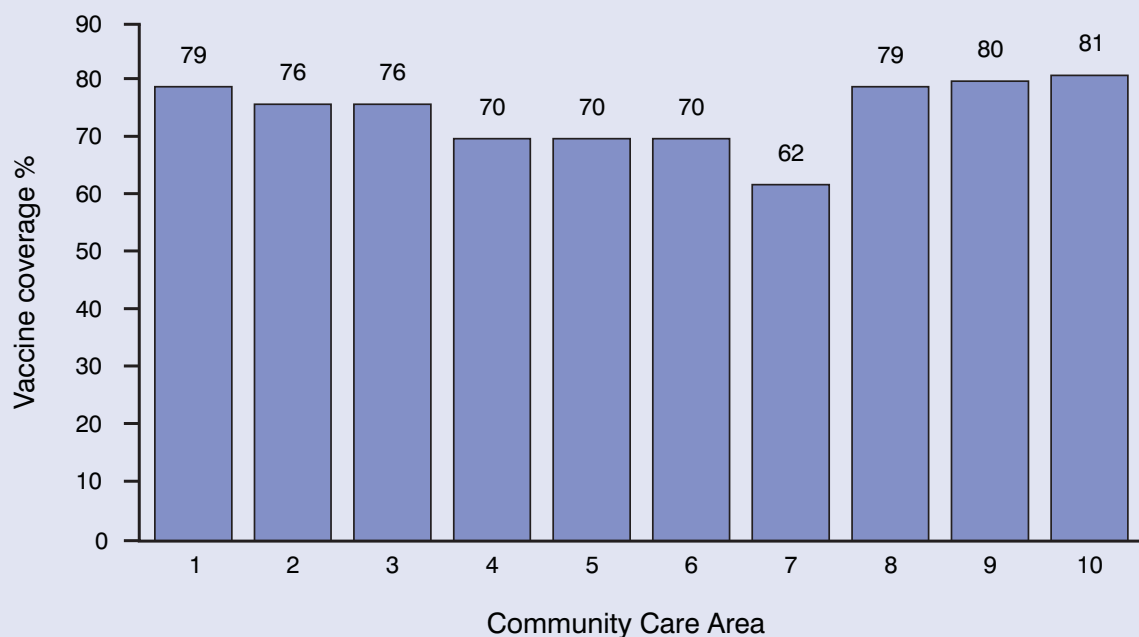


Figure 7.4 shows the coverage of the primary MMR vaccination in our Board's region for cohorts reaching 24 months of age during 1992 to 1997 (i.e. children born between January 1990 and December 1995). As shown, vaccine coverage has generally been less than 70%.

Clearly, the overall coverage of the primary vaccines in our Board's region as a whole is sub-optimal. This gives rise to concerns about the medium and longer term control of these potentially serious but preventable childhood diseases.

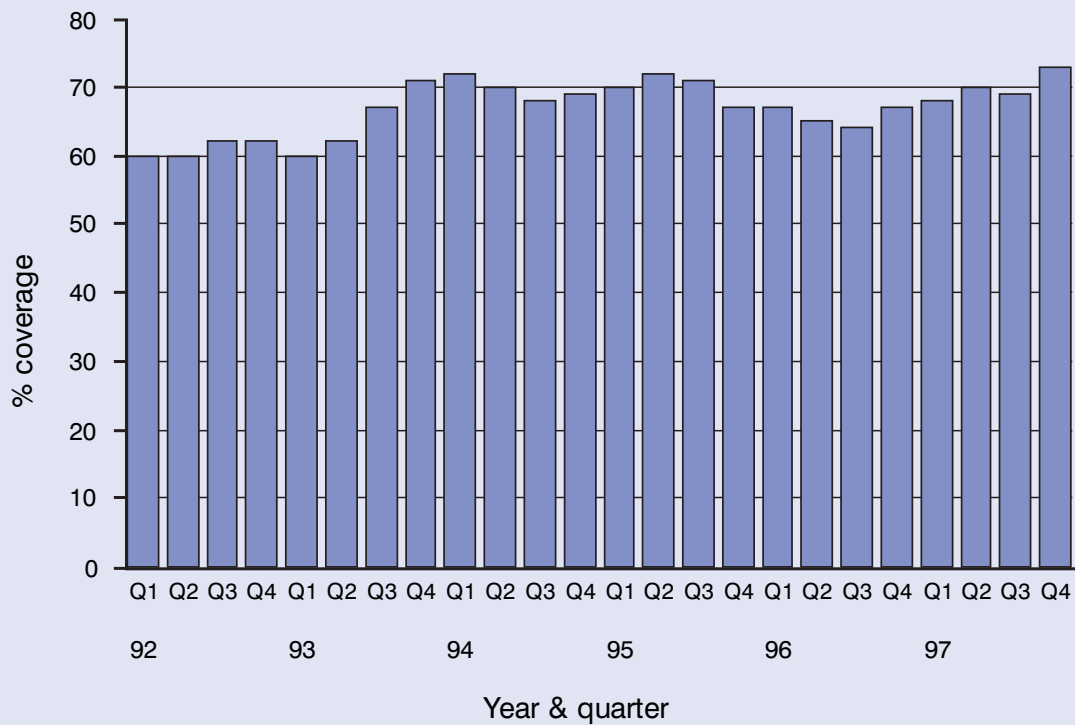
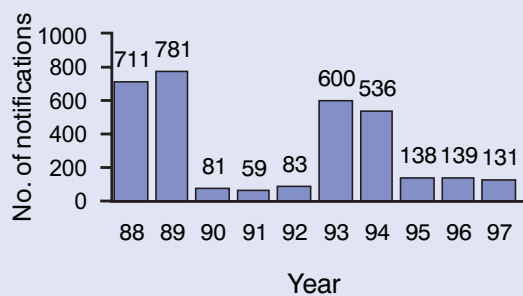
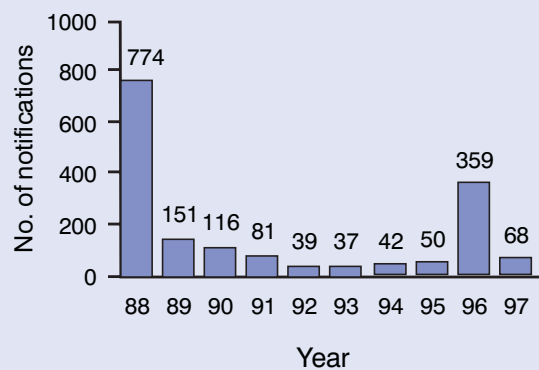
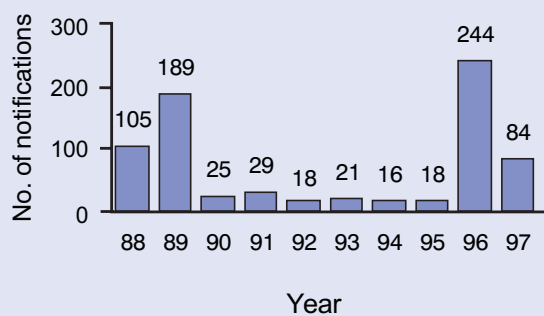
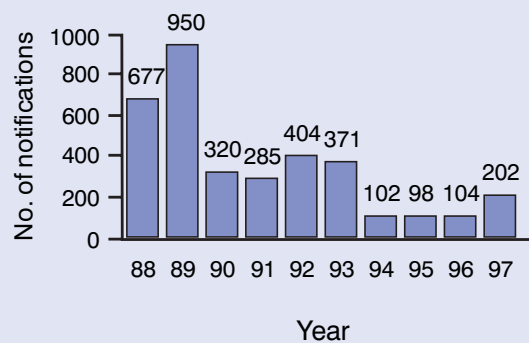
7.3.2 Vaccine preventable illness

Notifications of infectious diseases, despite some limitations in the system (see Chapter 11) can also provide useful data in monitoring the success or otherwise of vaccination programmes.

As shown in Figure 7.5, following a sudden and dramatic increase in notifications in 1993, there has been a marked reduction of measles notifications in our Board's region in recent years. This trend is likely to be explained by the

Table 7.3 Average quarterly percentage uptake for each component of the primary vaccination schedule by community care area in 1996

Community Care Area	Oral polio	Hib	DT	DPT
1	79.5	79.3	3.7	76.0
2	75.6	75.7	1.6	74.2
3	75.6	75.6	3.8	71.9
4	69.8	69.7	4.8	65.1
5	70.1	70.3	3.4	67.3
6	70.4	70.2	2.2	68.3
7	62.3	61.8	1.6	61.2
8	78.7	78.5	2.6	76.2
9	80.1	80.1	5.0	75.4
10	81.5	81.3	6.2	75.1

Figure 7.4 MMR vaccine coverage at 24 months of age, per quarter, 1992-1997, Eastern Health Board.**Figure 7.5** Notifications of selected vaccine preventable diseases, Eastern Health Board, 1988-1997.**A) Measles****C) Rubella****B) Mumps****D) Pertussis**

measles/rubella ‘catch-up’ vaccination programme in primary schools carried out in 1995, when the vaccine was offered to all children who had not received MMR vaccination prior to school entry.

Following a number of years in the early 1990s when relatively few cases of mumps were notified, a marked increase in notifications of the disease occurred in 1996, followed by some decrease in 1997. The majority of cases were in the 5-12 year age group, with similar numbers in both sexes.⁹ As it is known that up to 5% of children do not respond to a single dose of MMR, a second dose is required to prevent these vaccine failures.

There was also a marked increase in rubella notifications in 1996, occurring mainly in 15-24 year old males. This cohort of males would have left primary school before the MMR vaccine was introduced for both sexes at primary school leaving age in 1993. Prior to this, rubella vaccine was only offered to girls at that age. The notifications of rubella returned to more typical levels in 1997.

Following a generally downward trend since the late ‘80s, notifications of pertussis (whooping cough) increased again in 1997. Pertussis occurs in cycles of 3-4 years and the cyclical pattern continues even in areas with good vaccine coverage although at a much reduced rate. The recent rise in pertussis must be compared with greater epidemic years in the past such as 1989 when 950 cases were notified in our Board’s region. Although it is encouraging that more parents are opting for the 3 in 1 vaccine (includes the pertussis component), greater effort is required by all to improve the overall uptake of childhood vaccinations.

The recent introduction of the acellular pertussis vaccine should assist in improving vaccine coverage, as this newer vaccine is associated with fewer local side effects at the site of injection such as redness and soreness and irritability following vaccination.

Potential for health and social gain

Vaccination is considered to be one of the most cost beneficial of all interventions in modern medicine. However, to achieve the full benefit of the primary vaccination programme, high coverage of the vaccines at the appropriate ages

is essential (at least 95%), especially with highly infectious diseases such as measles and rubella.

Sub-optimal coverage of the vaccines can lead to a drift of disease into older age groups, which may carry a higher risk of complications.

- A co-ordinated effort is required to improve both the percentage and timeliness of primary vaccination coverage. In some geographical areas in our Board’s region, the coverage of vaccinations are much lower than other areas, giving grounds for concern as to the long term control of these diseases.
- Despite some improvement in recent vaccine coverage rates, there is an urgent need to bring about an immediate and ongoing increase in the coverage of the vaccines to reach the targets of the National Health Strategy.⁸ The appointment of one individual as a Director of the Primary Vaccination Programme, supported by a structure at regional and local level is strongly recommended.
- Rubella has been shown to be circulating in older teenage boys and young adults. A similar pattern has been observed in Scotland and other developed countries.¹⁰ Older teenage boys will continue to be at risk until the group of boys first immunised against MMR at 11 years of age in 1993 reach their late teens. It is important, therefore, that over the next decade in particular, all women considering pregnancy should be aware of their rubella immune status and be immunised when appropriate. One case of congenital rubella occurred in our Board’s area in 1996.
- The age distribution of mumps cases (5-12 years) prompts discussion of the optimum age for the second dose of MMR currently given on leaving primary school. In relation to the mumps component, vaccination at primary school entry may be preferable.

7.4 E. coli O157

E. coli O157 is an emerging cause of foodborne illness. The true incidence of this infection is unknown as many patients with diarrhoea do not submit samples for laboratory analysis. In Ireland, cases may be notified (under the Infectious Disease Regulations 1981) under the categories of food poisoning or gastro-enteritis, but there is no specific category for *E. coli* O157.

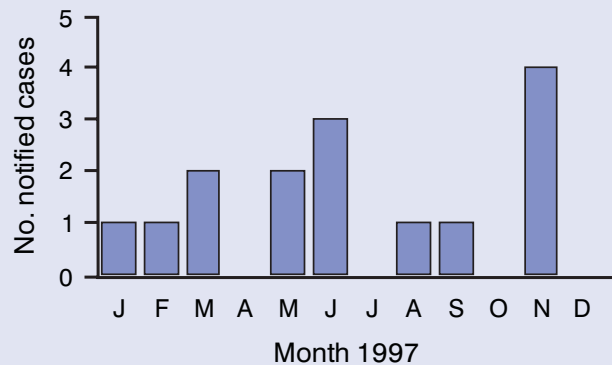
The first reported outbreak of *E. coli* 0157 in Ireland occurred in our Board's region in 1995.¹¹ Thirteen of 27 children attending a developmental day centre for handicapped children developed diarrhoea. The outbreak was investigated by a public health doctor and an environmental health officer. Of the children, eight (30%) satisfied the case definition. Four had bloody diarrhoea and one child with haemorrhagic colitis developed haemolytic uraemic syndrome. There were no fatalities. Two children had positive stool samples for *E. coli* O157 infection and 15 (62%) of 24 children tested had serological evidence of antibodies to *E. coli* O157. Tests on food, drinking water and water from the paddling pool/jacuzzi were negative. However, two meals eaten three and seven days prior to onset of symptoms contained ground beef and were suspected to have been the most likely source of infection. On inspection, the food hygiene measures were found to be inadequate. Recommendations were made regarding the sanitary facilities for staff and children, the storage and food preparation areas, the paddling pool and the general classroom areas and were fully implemented. Control measures were effective in limiting secondary spread.

The severity of the illness, as seen in a proportion of these children, emphasises the importance of *E. coli* 0157 as a pathogen especially in institutional settings and the need for early notification and thorough investigation of the circumstances of each outbreak.

In 1997, 15 cases of *E. coli* 0157 were notified in our Board's region (see Figure 7.6). One child died from the complications of *E. coli* 0157 in January 1997. Investigations were undertaken by the environmental health service and the Department of Public Health to identify the source of infection in each case. Two cases were acquired outside the country with onset of illness while on holiday outside Ireland. A third case in a tourist was possibly acquired outside Ireland with overlap both outside and inside the country during the incubation period.

Apart from a second asymptomatic case in one family there was only one possible outbreak in 1997. In this instance, two cases living in close proximity and notified within seven days had both purchased cold cooked meat from the same

Figure 7.6 Notifications of *E. coli* 0157, Eastern Health Board, 1997.



butcher's premises. While laboratory testing confirmed both were caused by the same strain, microbiological testing in the butcher's premises proved negative. Recommendations were made to improve physical separation of cooked and raw produce and to improve hygiene practices in the premises. No further associated cases were identified.

Potential for health and social gain

The importance of confirming *E. coli* 0157 as the cause for food poisoning and the early investigation and appropriate management of a case is clear.¹² Furthermore, early reporting of a suspected/confirmed case is essential in the interests of public health in order to permit the identification and removal of the source of infection where possible and to provide advice to close contacts or others who may have been exposed. The importance of a multidisciplinary team approach in the investigation of the outbreak of an infectious disease must be emphasised and encouraged. Best practice guidelines for the investigation of reported cases have been developed.

- Most cases of *E. coli* 0157 are not linked to any outbreaks and occur as isolated cases in households. It is important for members of the public to realise that any raw meat can be potentially infected with *E. coli* or other food poisoning organisms. Raw meat must be kept away from cooked meats or other food in refrigerators. Frozen meat products should be fully thawed before cooking. Meat should be cooked until the juices run clear. This is particularly important with hamburgers and minced beef products.

- Subsequent to the recent large outbreak of the disease in Scotland, the Department of Health and Children has advised all Directors of Public Health regarding the need for vigilance and for the early reporting of cases.
- Cases should be notified, by fax if possible, to the Director of Public Health/MOH. In the Eastern Health Board the procedure is as follows: the case will be investigated immediately by an environmental health officer who will establish the risk category of the case and contacts, obtain stool samples where appropriate and investigate the food history and other exposure details. Following liaison between the specialist in public health medicine, environmental health officer and senior area medical officer, control measures will be instituted as appropriate and without delay.
- There is a need for improved surveillance of *E. coli* 0157. Consideration should be given to including *E. coli* 0157 as a notifiable disease as, under current regulations, it is not specifically notifiable except under the general category of bacterial food poisoning or gastro-enteritis under two years of age.

7.5 Food Poisoning Outbreaks

Two large outbreaks of salmonella food poisoning occurred in the Dublin area in August 1996. Both outbreaks were jointly investigated by Eastern Health Board personnel at the Departments of Public Health and Environmental Health.^{13, 14}

The first outbreak occurred among the 115 guests at a reception. Seventy-eight individuals reported a gastrointestinal illness following the hotel-based event. Interviews were conducted with all guests and the case definition (diarrhoea within 72 hours after eating at the reception) applied to 58 individuals. Food specific attack rates and relative risks were calculated for all food items served during the reception.

Consumption of turkey was associated with the highest relative risk of illness and 93% of all cases had been exposed to turkey. For 46 cases, stool samples were available, 39 of these samples were culture positive for *Salmonella typhimurium*. There were no fatalities but seven cases required hospitalisation. Environmental

investigations were conducted in the hotel and at the poultry farms that had supplied the turkeys.¹³

The second outbreak occurred in a hospital with approximately 80 patients and hospital staff falling ill over a three day period. A case control study was conducted with 65 cases and 62 controls. Detailed food histories were obtained for the period of the outbreak and odds of exposure and odds ratios calculated.

A cake was identified as the vehicle of the outbreak and *Salmonella enteritidis* cultured from 95% of the stool samples of cases and from the cake. Further investigations revealed that 12 cakes were supplied to the hospital by a bakery which had used unpasteurised eggs for their preparation. More cakes from the same batch of eggs had been delivered to other outlets and a second outbreak with seven cases was discovered. All seven cases had consumed the cake and the four stool samples available for the cases were positive for *Salmonella enteritidis*. No fatalities occurred but one case developed salmonella osteomyelitis and another three required admission to an acute care hospital.¹⁴

Potential for health and social gain

Salmonella infection can lead to a significant degree of morbidity, with occasionally a fatal outcome, especially in the presence of other disease processes and in older age groups.

- Attention to hygienic transport, storage, preparation and serving of food is of crucial importance in the prevention of food poisoning.
- Cases of suspected food poisoning are notifiable. Early notification followed by prompt and thorough investigation such as described above is essential for the successful control of such outbreaks.

7.6 Role of the Environmental Health Officer in the Control of Communicable Diseases

As a result of ongoing collaboration between Public Health Specialists and Environmental Health Officers (EHOs) over the past two years, as well as a much improved notification system involving GPs and hospital laboratories, it has now been possible to investigate causes of infectious illness more thoroughly instead of

merely treating or isolating those affected.¹⁵ Traditionally the role of the EHO was restricted to the investigation of food poisoning outbreaks and the enforcement of a selection of infectious disease and food control regulations. However, in recent years this role has been broadened to include the investigation of leptospirosis and legionellosis infection as well as a wider range of sporadic foodborne and waterborne infections, for example, listeriosis, salmonellosis, campylobacter, *E. coli* (including O157:H7), cryptosporidiosis, dysentery, giardiasis, typhoid and paratyphoid infections, viral gastro-enteritis, hepatitis A, shigellosis etc.

The establishment in 1996 of an EHO Communicable Diseases Section within our Board to deal with on average 120 notifications of communicable diseases per month and to support other EHO offices throughout the Eastern Health Board region, has greatly improved the response time, the success in isolating suspect foods and the effectiveness of enteric measures.

Upon receipt of a statutory notification or complaint, an EHO will interview the case and complete a surveillance questionnaire which examines for symptoms and food histories. Details are sought over a minimum of three days prior to onset of illness, except in a situation where laboratory analysis at the time of notification has implicated one of the above causative organisms with an incubation period greater than 3 days. In these circumstances food histories are sought which correspond with the longer incubation period. Where complainants have not contacted their GP, they are advised to do so and are made aware that a faecal specimen may be required.

In cases where EHOs are in receipt of laboratory notifications they try to contact the relevant GP to notify them of their role prior to interviews with patients. Early contacts between EHOs and GPs can significantly reduce the potential for the spread of infection and can aid in the speedy identification and subsequent control of sources of infection.

If a food premises or foodstuff is implicated, EHOs initiate a sampling programme to isolate suspect foods and this can include sampling at points of entry to the State i.e. Dublin Airport and Dublin Port. In an outbreak situation, the relevant food premises are inspected by the local

EHO who examines staff medical records, food supplier invoices, menus etc. The EHO also checks the adequacy of temperature control measures, food handling and segregation practices, cleaning regimes and hygiene generally throughout the premises. Where necessary, legal proceedings will be instituted for breaches of the relevant legislation or an application will be made to the court for a closure order. In an outbreak situation an epidemiological investigation is carried out in collaboration with public health colleagues. Where appropriate, EHOs will arrange for all staff to submit stool specimens for microbiological screening.

Box 7.2 Risk groups for spread of gastroenteric illness

- Food handlers in institutions or in industry whose work involves handling foods intended to be consumed raw or without further cooking.
- Carers of vulnerable groups i.e. health care personnel, pre-school and nursery staff.
- Children under 5 yrs who attend nurseries, pre-schools or other similar institutions.
- Older children and adults who may find it difficult to implement good standards of personal hygiene, e.g. those with learning disabilities or special needs.

As certain groups pose a higher risk of spreading infection the initial interview with cases enables the EHO to assess if infected persons belong to any of the four risk groups shown in Box 7.2.

The significance of grouping cases and contacts is that it may be necessary to require temporary exclusion from work or school. Although individual circumstances are assessed, for salmonellosis, campylobacter, clostridium perfringens, cryptosporidiosis, dysentery, giardiasis and viral gastro-enteritis, the guidelines the EHOs work to require exclusion from work or school for cases in risk groups 1 to 4 for a period of 48 hours after clinical recovery and the first normal stool. For hepatitis A cases the exclusion period is 7 days after onset of jaundice and/or symptoms for all infected persons. For *E. coli* O157 the exclusion period is 48 hours for cases not within any of the risk groups 1 to 4 outlined above. All *E. coli* O157 cases in risk groups 1 to 4 and the contacts in risk groups 3 and 4 require microbiological clearance

through two negative faecal specimens at 48 hour intervals before they can return to work. Furthermore, EHOs arrange for all family members or other contacts in risk groups 1 to 4 to be screened microbiologically when either *E. coli* O157, typhoid or paratyphoid infections are confirmed, with the latter also requiring more elaborate microbiological clearance for risk group cases and contacts. With the exception of the latter highly infectious diseases, cases not falling into any of the four risk groups are generally regarded as presenting a minimal risk of spreading illness and they may return to work immediately after clinical recovery and normal stools.

For practically all of the above mentioned communicable diseases, enteric precautions are very important in preventing secondary infection. The EHO has a role in advising parents, carers and infected persons of the risks associated with the infection by instruction in personal hygiene. As most of these communicable diseases arise through the faecal-oral route, thorough handwashing with soap in warm running water and thorough drying is the single most important factor in preventing the spread of infection. EHOs will also advise that towels should not be shared, that soiled clothing and bed linen should be washed in a washing machine with a 'hot cycle' and also on the appropriate disinfection measures to be taken.

EHOs have at their disposal a series of advisory pamphlets that can be distributed to families, schools, institutions etc to reinforce their advice. In addition, once off talks for schools and crèches have been devised by EHOs where outbreaks of hepatitis A and shigellosis have occurred and hygiene courses can also be arranged for staff and managers of food premises.

7.7 Hepatitis B Virus Infection

The epidemiology of hepatitis B virus (HBV) in Ireland, where data are not available at national level, is considered to be similar to other Western European countries with hepatitis B surface antigen (HBsAg) carrier rates ranging from 0.1 to 0.5%. These rates are consistent with low endemicity for HBV. The World Health

Organisation recommends that all countries integrate hepatitis B vaccine into their national immunisation programmes by 1997.¹⁶

To assist in formulating a national vaccine policy, the Department of Public Health of the Eastern Health Board collated existing seroprevalence data for selected subgroups to estimate the burden of HBV infection in the Irish population. As serological markers for HBV remain positive for many years after infection, their prevalence can provide an estimate of cumulative incidence.

The largest data set was available from the Blood Transfusion Service Board in Dublin. Of the 184,658 new blood donors tested for HBsAg between 1980 and 1991, 107 individuals were found to be HBsAg positive (HBsAg prevalence 0.057%). The highest rate in this time period was found in 1980 (prevalence 0.1%), the lowest in 1990 (prevalence 0.014%). As blood donors represent a screened sub-population with low levels of behavioural risk factors, prevalence of HBV markers are likely to be lower in this group than in the general population.

Out of 500 army recruits examined since October 1996, of whom the vast majority were males aged 17 - 22 years, none was found to be a HBsAg carrier or have markers for past HBV infection.

Although there is no compulsory HBV screening of pregnant women in Ireland, data exist from voluntary testing in four Irish maternity hospitals. Antenatal HBsAg carrier rates were in the range of 0.02 - 0.1%. Other data sources are currently being explored and include clinics for sexually transmitted diseases, occupational health clinics and AIDS and drug user services.

More recent data indicates a carriage rate of 5% among refugee/asylum seekers who have presented voluntarily to our Board's infectious disease screening facility.

Potential for health and social gain

The Irish data suggest that the level of HBV infection in the general population is similar to or lower than in other Western European countries. However, it must be kept in mind that available prevalence rates are based on studies which may not be representative of the general population.

- Studies from countries with low endemicity for HBV showed that routine HBV immunisation is not cost-saving.
- However, most studies show that HBV vaccination is cost-effective in terms of preventing infections, chronic carriers and death.¹⁷ The results of these studies may serve as guidance for reaching a decision on this matter but it is in the interest of each country to reach an individual decision based on its own data.
- To obtain reliable estimates of the prevalence of HBV infection in the Irish population more specific studies would need to be undertaken. This is particularly important when deciding if hepatitis B vaccination is to be included in the Irish routine immunisation schedule.

Acknowledgements

The following persons are thanked for their invaluable assistance in providing the above research material: Drs J O'Riordan, E Lawlor, S McDonald (Blood Transfusion Service Board, Dublin); Dr. M Cafferkey (Rotunda Hospital, Dublin); Dr. B Cryan on behalf of Infoscán (Cork University Hospital) and Dr. A O'Connor (St Bricin's Hospital, Dublin).

7.8 Acquired Immunodeficiency Syndrome

In 1996, Ireland had the 10th highest incidence of Acquired Immunodeficiency Syndrome (AIDS) among the 15 European Union Countries. For drug related AIDS incidence, Ireland was the 5th highest and for homosexually acquired AIDS in males joint 11th (Table 7.4). By the end of March 1998, 615 cases of AIDS had been reported in the national surveillance system.

In Southern Europe, AIDS is primarily a drug related phenomenon whereas in Northern Europe it is predominantly homosexually acquired. The pattern in Ireland is similar to Southern Europe with a large proportion of AIDS being drug related and public health control strategies should reflect this.

Table 7.5 shows the incident cases and deaths for drug users in each of the six years up to 1996.

Since the end of 1992, an anonymous unlinked screening programme for HIV seroprevalence has been operated. This has been effected through the maternity hospitals where serum drawn for rubella screening is also used to check

Table 7.4 *AIDS incidence among drug users and homosexual men in the European Union, 1996 (per 1,000,000 total population). Source: European Centre for the Epidemiological Monitoring of AIDS.*

Country	All AIDS	In drug users	In homosexual men
Spain	166	105	18
Italy	91	52	12
Portugal	87	48	12
France	68	16	25
Denmark	30	3	17
Luxembourg	29	5	10
Greece	27	1	16
Netherlands	26	3	16
UK	25	2	14
Ireland	19	8	8
Austria	18	3	8
Belgium	18	1	5
Germany	18	3	10
Sweden	16	3	7
Finland	4	0.4	3

for HIV antibodies. Data from the first four years of this scheme are shown separately for the Eastern Health Board and the remainder of Ireland in table 7.6. Thirty seven of the 222,000 sera tested were confirmed positive giving a sero-prevalence of 0.017%. The rate for women resident in the Eastern Health Board's area was 0.032% compared to 0.009% for the rest of the country combined.

Table 7.5 *Number of incident cases and deaths from AIDS among drug users in Ireland 1991-1996. Source: Department of Health.*

Year	Cases	Deaths
1991	31	9
1992	27	21
1993	42	21
1994	21	27
1995	23	26
1996	33	17

Table 7.6 *HIV anonymous unlinked antenatal screening, percentage confirmed positive by health board area.*
Source: Surveillance Sub-Committee, National AIDS Strategy Committee.

Health board area	Total negative	Total confirmed positive	Total tests	% confirmed positive
EHB	75,871	24	75,895	0.032
Non EHB	146,779	13	146,792	0.009
Total	222,650	37	222,687	0.017

Because of the long latent period between infection with the HIV virus and the development of the clinical syndrome, preventive strategies cannot be dependent on the epidemiology of clinical illness. The annual monitoring of anonymous unlinked screening data will be a more important barometer of the success or otherwise of preventive programmes.

With regard to AIDS, the primary mode of infection and transmission of the HIV virus in Ireland has been intravenous drug use and there are two public health strategies of harm reduction in place to counteract this (see Chapter 9). These consist of the recruitment into methadone programmes of as large a number of injecting drug users as possible and the provision of needle exchange for those injecting drug users who cannot or will not avail of methadone treatment.

Potential for health and social gain

- Overall, drug policy has developed further since the adoption of public health based policies to reduce the transmission of HIV in drug users so that drug free options and rehabilitation programmes are now becoming an option for drug users throughout the region.
- Because of the long latent period of infection continued monitoring of data and promotion of public health policies in relation to drug use will be necessary to prevent a re-emergence of HIV infection.
- The primary mode of transmission/risk behaviour for HIV infection in Ireland remains injecting drug use. Continuing to follow a harm reduction approach should reduce the spread of HIV and other blood-borne infections in this group.

7.9 Screening for Infectious Diseases

There are increasing numbers of people coming to Ireland, seeking refugee/asylum status, from countries with a different pattern of infectious diseases to that found in Ireland. Most such persons are taking up residence in the Eastern Health Board area. They do not undergo any form of health screening prior to arrival in Ireland.

The Eastern Health Board has put in place a health screening facility where such persons are invited to present on a voluntary basis. At this facility refugees/asylum seekers are specifically screened for tuberculosis and hepatitis B. In addition, they are vaccinated for diphtheria where appropriate. Screening for hepatitis C will be introduced in the near future.

It has been identified that there is a higher level of tuberculosis in this group and a significantly higher carriage rate for hepatitis B than in the population generally (41 (6.3%) of the first 652 people screened).¹⁸

Potential for health and social gain

- Consideration should now be given to making health screening in respect of communicable diseases a requirement in relation to the processing of applications for refugee/asylum status in this country. The results of such screening would remain confidential and would not be used in the consideration of asylum applications. It is recognised that this is a national issue.
- Such screening would be of benefit to those concerned, their immediate close contacts, including family if any, as well as the community as a whole.

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Chapter 8: Health Promotion

The National Health Strategy identifies health promotion as a priority in order to improve the health and quality of life of the population.¹ Cardiovascular disease, cancer and accidents are identified as the main causes of premature mortality in Ireland and targets have been set to reduce these diseases (Box 8.1). The main risk factors associated with premature mortality are described in Box 8.2.

Box 8.1 *Principal diseases associated with premature mortality in Ireland (target reduction).*

- Cardiovascular disease (30% in 10 years)
- Cancer (15% in 10 years)
- Accidents (25% in 15 years)

Box 8.2 *Principal risk factors associated with premature mortality in Ireland.*

- Smoking
- Increased blood cholesterol
- Increased blood pressure
- High alcohol intake
- Low exercise level

Action plans were further developed in the subsequent National Health Promotion Strategy document.² Four key settings for health promotion were identified - the school, the community, the workplace and the health services. Other documents relevant to health promotion have been produced at national level in recent years (Box 8.3).

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8.1 Health Promotion in the Eastern Health Board

A number of health promotion initiatives are already underway or planned to begin in the near future in the Eastern Health Board. A Health Promotion Steering Committee has been established to make recommendations on priorities for health promotion and to advise on health promotion policies and plans. A health promotion committee has been established in each community care area and each of these committees has a representative on the central steering committee. A Health Promotion Resource Unit was established in our Board early in 1998, headed by a newly appointed health promotion officer, which will provide support and training to staff and will facilitate co-ordination of health promotion activities. In addition, our Board now have in place 6 drugs education officers whose principal aim is to prevent illicit drug use and to contribute to the rehabilitation of those involved in illicit drug taking.

Box 8.3 *National health promotion documents.*

- National Health Promotion Strategy (1995)
- National Breastfeeding Policy (1994)
- Recommendations for a food and nutrition policy (1995)
- Accidental Injury in Ireland (1995)
- Alcohol Policy (1996)
- Cancer Strategy (1996)
- Report of the Sub-Committee on Young People (1997)
- Promoting increased physical activity (1998)

Health education is incorporated into service delivery with client groups such as young mothers and the elderly. In addition, activities have been developed to promote health in target

groups and appropriate settings. The main health promotion initiatives are listed in Box 8.4. In addition, projects have been developed to meet local needs.

Box 8.4 *Current health promotion initiatives in the Eastern Health Board region.*

- Women's health e.g. teen pregnancy, education about folate
- Community Mothers Programme
- Promotion of breastfeeding
- Schools health education
- Special programmes in schools e.g. Smokebusters
- The Health Promoting Schools Network
- Accident prevention
- Stop smoking clinics
- AIDS and drugs prevention
- Health promotion with travellers

Community care staff also respond to requests from parents' associations, womens' groups and other local organisations to give talks and workshops. In community care areas there is extensive involvement of public health nurses in health promotion, particularly in schools.

James Connolly Memorial Hospital is the lead hospital for the Irish Network of Health Promoting Hospitals which undertakes health promotion projects for staff, patients and the community. A randomised controlled trial of smoking intervention has recently been completed in association with the Rotunda Hospital (see Chapter 10). The community-based alcohol treatment services of our Board are involved in prevention, education and community development activities to reduce alcohol-related problems. The Drugs/Acquired Immunodeficiency Syndrome Programme has recruited Education Officers to work with young people, parents and community groups.

The health promotion activities in the community care areas are numerous and varied. A number of innovative projects have been developed which target deprived areas or vulnerable groups. It has been possible to include a broader range of disciplines than has been traditionally involved in health promotion e.g.

community physiotherapists, social workers. The Greater Blanchardstown Development Project is an example. With effective community development, it has been possible to develop health promotion initiatives within the broader context of the Project. Blanchardstown was the pilot site for 'Food and Health'. Women attended small group sessions to provide them with practical skills to improve their nutrition status and that of their families. Some women received further training, so that they could provide the education course on nutrition to other women in their community.

8.2 The Health Risks of Tobacco Smoking

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

Sidestream smoke released into the environment around the smoker also contains numerous toxins, including ammonia, benzene, carbon monoxide, nicotine and several substances which are known to be highly carcinogenic. As shown in Box 8.5, research on passive smoking followed a somewhat later but parallel course as active smoking. Recent studies have quantified the important hazard posed by exposure to environmental tobacco smoke (ETS) in relation to lung cancer and CHD.

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

The fact that exposure to ETS even at a low level has an important effect on health is of particular concern, especially in relation to children. Sudden infant death syndrome, asthma and ear disease leading to deafness are associated with exposure to ETS, whether from the mother or another member of the household. The risk is further increased if there is more than one smoker in the household.⁴

Box 8.5 *The health risks from tobacco smoke - a historical outline of the evidence.*¹⁻⁴

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

The weight of the evidence outlined above makes it clear that exposure to tobacco smoke is one of the leading preventable causes of morbidity and premature death. However, while history repeated itself in the identification of the health risks from both active and passive smoking, it has also been repeated in the cynical actions of the tobacco industry to deny and obfuscate the findings of that research.¹⁻⁴

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

Our Board implements the legislation on smoking in public places. In partnership with the local authorities involved in Dublin Healthy Cities, signage and other aspects of implementation will be reviewed. In line with the national Voluntary Code on Smoking in the Workplace, our Board has a draft policy on smoking by personnel, which will be implemented following consultation. It is proposed that the partner authorities in Dublin Healthy Cities will do likewise, so as to ensure that these major public organisations are models of good practice in relation to the exposure of clients and staff to environmental tobacco smoke.

References

1. Ronald M Davis. Passive smoking: history repeats itself [editorial]. *British Medical Journal*, 1997; 315: 961
2. Law MR, Morris JK, Wald NJ. Environmental tobacco smoke exposure and ischaemic heart disease: an evaluation of the evidence. *British Medical Journal*, 1997; 315: 973-980.
3. Hackshaw AK, Law MR, Wald NJ. The accumulated evidence on lung cancer and environmental tobacco smoke. *British Medical Journal*, 1997; 315: 980-988.
4. US Environmental Protection Agency. Respiratory health effects of passive smoking: lung cancer and other disorders. Washington DC: Environmental Protection Agency; 1992.

8.3 Smoking Prevalence

8.3.1 Smoking prevalence in adults

Statistics on cigarette smoking prevalence among Irish adults have been collected since the early 1970s as part of the Joint National Media Research Survey and are used by the Health Promotion Unit of the Department of Health and Children to monitor smoking prevalence.

As shown in Table 8.1, the prevalence of cigarette smoking has fallen by 15% in men and by 8% in women since the early 1970s.¹ Approximately 6% of men smoke a pipe or cigars or a mixture of tobacco products, so that the true prevalence of smoking in men is somewhat higher than these estimates. The

Table 8.1 Prevalence of cigarette smoking in selected groups in recent decades.¹

Period (years)	1972-77	1982-85	1991-94
Total	40.6	33.0	29.0
Males	45.7	35.0	30.0
Females	36.0	30.3	28.0
Age groups (years)			
16 - 24	41.6	34.0	27.6
25 - 34	42.3	37.0	36.0
35 - 44	41.0	35.0	31.7
45 - 54	46.3	34.0	29.0
55 +	36.3	27.3	23.3
Occupational group			
Non-manual	34.0	25.7	23.0
Skilled manual	43.6	36.0	31.0
Unskilled manual	48.0	41.7	38.3
Farmers	34.0	25.3	19.3

prevalence of smoking is highest in the 25 to 34 year age group and in the unskilled manual workers occupational group.

The samples in the national survey from residents of Counties Kildare and Wicklow were too small to give estimates of trends in smoking prevalence in those counties. The estimates for Dublin residents suggest that the prevalence of smoking in adults was higher in Dublin in the early 1990s compared to the country as a whole. The excess was 7% in the 1990/1991 survey, 4% in 1991/1992 and 1% in 1992/1993. The narrowing of the gap between Dublin and the remainder of the country may to some extent reflect the greater variation in the Dublin estimate because of the smaller sample size there. However, the national survey of involvement in sports and physical recreation carried out among people aged 16 to 75 years in

1994 found that 34% of Dublin residents were regular or occasional tobacco smokers compared to 33% for the remainder of the country. This suggests that the prevalence of smoking in Dublin may be approaching that in the remainder of the country.

References

1. Shelley E, Collins C, Daly L. Trends in smoking prevalence: the Kilkenny Health Project population survey 1985 to 1991. *Irish Medical Journal*, 1996; 89: 182-5.

8.3.2 Smoking prevalence in young people

Most adult smokers acquire their habit during childhood or adolescence. Indeed the years 10 - 13 are especially important, since most children who smoke will have done so first during these years. Smoking in children is a marker of risk of abuse of other drugs, such as alcohol, cannabis or 'hard' drugs.¹

Smoking prevalence is generally assessed under two headings: *lifetime prevalence*, which is usually defined as having ever smoked a cigarette regardless of whether the respondent currently smokes or not, and *current smoking prevalence*, which is usually sub-classified according to the frequency of current cigarette consumption e.g. regular/occasional smoking. These sub-classifications have varied from study to study.

Surveys as part of the evaluation of the Smokebusters programme in primary schools have found that one in ten of 5th class pupils in Dublin are current smokers. The sample sizes in school surveys in Kildare and Wicklow have been small to date and do not permit separate analysis of smoking prevalence in those counties.

The findings of a number of studies of smoking habits of post-primary school pupils are summarised in Table 8.2. The studies used

Table 8.2 Studies of smoking among post-primary school pupils in Ireland from 1970 – 1994.²⁻⁸

Study year	1970	1980	1984	1987	1989	1991	1994
Authors(s)	O'Rourke et al	O'Rourke et al	Grube & Morgan	O'Reilly & Shelley	O'Fathaigh	Grube & Morgan	Mc Donnell
Age range (years)	12-18+	12- 18+	12-17+	11-19	15 - 17	12-17+	15 - 17
School population	Dublin	Dublin	Dublin	Kilkenny	Cork	Dublin	Dublin
Lifetime prevalence	71%	69%	67%	71%	72%	61%	72%
Current Smoking		55%(62%)	37%(43%)	22%(30%)	37%(37%)	34%(36%)	30%(30%)

similar definitions of lifetime smoking prevalence. Pupils in different age ranges were studied, however and different definitions of current smoking prevalence were used. For example, O'Rourke and colleagues defined regular smoking as 'smoking at least one cigarette per week every week',^{2,3} whereas Grube and Morgan defined regular smoking as 'smoking at least one cigarette daily'.⁴ Despite the differences, it is possible to draw some conclusions from a review of these data.

The evidence suggests that lifetime smoking prevalence may have declined in recent years both nationally and in Dublin schools. The prevalence of current smoking has also declined among school pupils in Dublin. The ESRI study in 1993 found that 30% of post-primary school pupils in the Eastern Health Board were current smokers (1-2 cigarettes in the past month) and 17% were regular smokers (1-2 cigarettes daily in the previous month).⁷ It would appear that smoking has declined among school pupils when compared to the mid-1980s. However, with nearly one in five second-level pupils smoking on a daily basis, there is little room for complacency.

References

1. Kandel DB. Drug and drinking behaviour among adolescents. *Annual Review of Sociology*, 1980; 6: 235-85.
2. O'Rourke A, Wilson-Davis K, Gough C. Smoking, drugs and alcohol in Dublin secondary schools. *Irish Journal of Medical Science*, 1971; 140: 230-241.
3. O'Rourke A, O'Byrne DJ, Condon L, Wilson-Davis K. Smoking - a study of post-primary schools in 1980-1981. *Irish Medical Journal*, 1983; 76: 285-289.
4. Grube JW, Morgan M. Smoking, drinking and other drug use among Dublin post-primary school pupils. Dublin: Economic and Social Research Institute, 1986.
5. O'Reilly, Shelley E. The Kilkenny post-primary schools survey - a survey of knowledge, attitudes and behaviour relevant to non-communicable diseases. *Irish Journal of Medical Science*, 1991; 60 (Suppl 9): 40-44.
6. O' Fathaigh M. Smoking, drinking and other drug use among Cork city post-primary school pupils. Cork: Cork Youth Federation, University College Cork; 1990
7. Grube JW, Morgan M. Drinking among post-primary school pupils. General Research Series, Paper No. 164, Dublin Economic and Social Research Institute, 1994.
8. McDonnell R. Nutrition, smoking, exercise and alcohol: a study of behaviour, knowledge and attitudes among post-primary school pupils in Dublin [Thesis for Membership of the Faculty of Public Health Medicine of the Royal College of Physicians of Ireland]. Dublin, 1994.

8.4 Eastern Health Board Policy and Health Promotion Initiatives on Smoking

The Department of Health negotiated the Voluntary Code on Smoking in the Workplace in order to protect the health of employees. A draft policy on smoking has been prepared for our Board. All relevant groups are being consulted prior to its implementation.

In line with national legislation, many of our Board's premises are classified as non-smoking, with designated smoking areas. In addition to minimising the exposure of employees, clients and visitors to environmental tobacco smoke, implementation of the policy on smoking will support a reduction in smoking among the general population by portraying non-smoking as the 'normal' behaviour. In addition, our Board will provide a model of good practice for other organisations.

With the implementation of the policy, all of our Board's premises will become non-smoking, with smoking limited to specific facilities provided for staff and patients. Buildings will have signs at the entrance and within the building indicating that it is a non-smoking building. Health promotion literature will be displayed together with contact telephone numbers of those offering support to smokers wishing to cease smoking.

In Chapter 10, the results of the evaluation of two recent initiatives (Smokebusters and the Rotunda Stop Smoking Programme) in our Board's region to reduce the prevalence of smoking are described.

8.5 Smoking and the Dublin Healthy Cities Project

A strategy to reduce the prevalence of smoking among the citizens of Dublin is an important component of the Dublin Healthy Cities Project. The Dublin Healthy Cities Plan¹ was widely disseminated during 1998. The partner authorities - the three Local Authorities, the Eastern Health Board, the Health Promotion Unit and the Office for Health Gain - will promote non-smoking among the general public, specific subgroups and in various settings. In addition, the authorities will provide models of

good practice by promoting non-smoking within their own organisations.

The Eastern Health Board and the Health Promotion Unit of the Department of Health and Children, in partnership with the four local authorities in the Dublin region, will pay particular attention to encouraging children to refrain from commencing to smoke. Non-smoking and smoking areas in public places covered by legislation will be clearly signposted. In addition, the partner authorities will play a lead role in the implementation of the voluntary code on smoking in the workplace which has been agreed between the Department of Health and Children, the employers' organisations and the trade unions.

Reference

1. Dublin Healthy Cities Project. Dublin Healthy Cities Plan, Phase 1: 1998-2000. Dublin: Dublin Healthy Cities Project; 1998.

8.6 Folic Acid and Neural Tube Defects

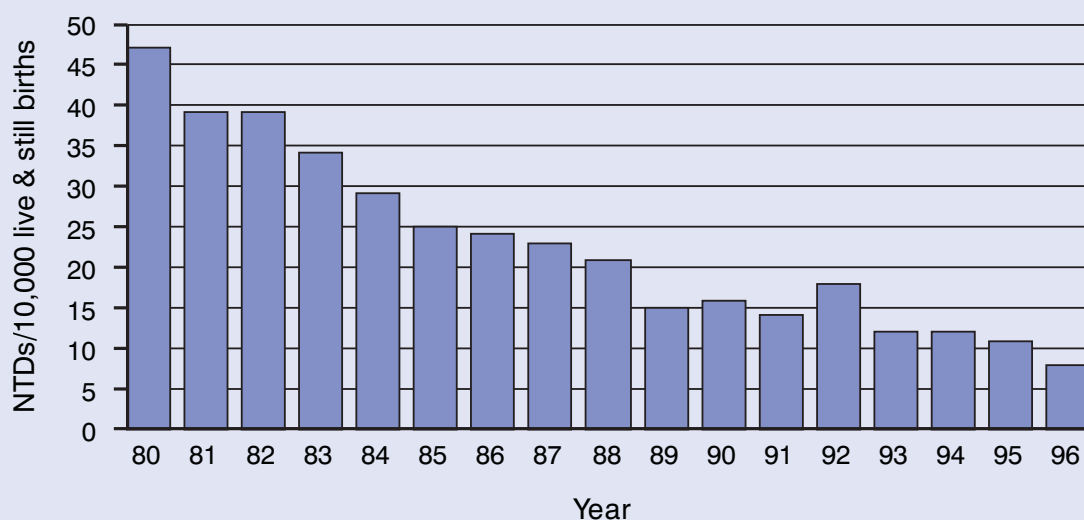
Ireland has a higher birth prevalence rate of neural tube defects, including spina bifida, than many European countries. Approximately 20 children are born with neural tube defects in our Board's region every year. The birth prevalence

rate is approximately 12 per 10,000 births and has fallen substantially since 1980 (see Figure 8.1). However, the birth prevalence rate of neural tube defects among live births in our Board's region is among the highest in Europe. This may be due to both high occurrence and the absence of a programme for prenatal screening and termination of pregnancy in Ireland.

In 1995, a community survey carried out by our Board's the Health Information Unit found that one third of women of child-bearing age in Dublin had not heard of folic acid, only 10% knew it could prevent spina bifida and only 3% were currently taking folic acid supplements. Awareness of folic acid and its benefits was significantly lower among women in lower socio-economic groups.

As a response to these disappointing findings, in 1996 a Folic Acid Action Group was set up in the Department of Public Health. The objectives of this group are to raise knowledge of the benefits of peri-conceptual folic acid among women of child-bearing age, to increase the use of peri-conceptual folic acid supplements among women of child-bearing age, to monitor trends in knowledge and use of peri-conceptual folic acid among women of child-bearing age and to increase the intake of folic acid in food among women of child-bearing age.

Figure 8.1 Trends in the rate of neural tube defects, Eastern Health Board, 1980-1996. Source: EUROCAT.



Box 8.6 Initiatives on folic acid undertaken in the Eastern Health Board

- Advocated the inclusion of 400 microgramme folic acid tablets in the General Medical Services scheme by the Department of Health - implemented in October 1996.
- Requested a dairy company to increase folic acid content of fortified milk (increased from 35 to 70 microgrammes per 100 ml in March 1997).
- A leaflet sent to all GPs in our Board's region on methods for targeting women patients about peri-conceptual folic acid.
- Television news interviews on peri-conceptual folic acid.
- Articles on peri-conceptual folic acid written for Woman's Way magazine, an information guide given out free to all patients attending maternity hospitals for ante-natal care, the Eastern Health Board News and the Irish Medical Times.
- A one-page question and answer sheet giving the critical facts about peri-conceptual folic acid produced (can be photocopied by voluntary organisations, schools etc.)
- The pre-marriage guidance organisation, Accord, agreed to include information on peri-conceptual folic acid in pre-marriage courses.

The group consists of public health doctors. A 'brain-storming' approach is used whereby new ideas for increasing peri-conceptual folic acid intake are sought and each member of the group then tries to implement one or more of the ideas. The initiatives undertaken to date and their outcomes are shown in Box 8.6.

The Folic Acid Action Group also initiated, in collaboration with the masters of the maternity hospitals, an annual survey of 300 attendees at public antenatal clinics in the three main Dublin maternity hospitals. The questionnaire includes questions on knowledge and use of folic acid and the reason for taking it. This will allow monitoring of the effectiveness of the campaign to increase peri-conceptual folic acid use. Surveys of ante-natal women were undertaken in 1996 and again in 1997 to see if there had been a change over time.

The demographic profile of respondents was broadly similar in both years. In 1997, significantly more respondents were aware of folic acid (76% compared with 54% in 1996), knew that folic acid can prevent NTD (57% compared with 39% in 1996) and had taken folic

acid peri-conceptually (16% compared with 6% in the previous year). The main sources of knowledge on folic acid in 1997 were the GP, the media, family and friends.

Conclusions

Between 1996 and 1997 a considerable improvement in both the knowledge and use of folic acid has occurred. It is likely that our Board's campaign which involved health professionals, the media, women's groups, schools and other target groups had a positive influence. Despite this, the uptake of folic acid peri-conceptually is still very low and continuing efforts must be made to promote it.

8.7 The Teenage Drugs Explosion – Fact or Myth?

A study was carried out to assess the extent and pattern of the use of the four commonest illicit street or recreational drugs - cannabis, amphetamines, lysergic acid diethylamide (LSD) and methylenedioxymethamphetamine (ecstasy). The study was carried out in 1996 among second level pupils in Dublin north of the river Liffey and covered the city, suburbs and county, using a confidential, self-report questionnaire.¹ The study population was 15, 16 and 17 year old teenagers from transition (fourth) and fifth year classes in secondary schools in the area. A sample of 19 schools was selected from the 72 schools in the area to be representative of the category of schools (secondary, vocational and community/comprehensive), location (inner city, suburbs and county) and pupil gender.

The survey included 1694 students, of whom 887 (52%) were male and 807 (48%) were female. The lifetime prevalence (i.e. ever used) for use of any of the four illicit drugs was higher in males (68%) than in females (56%) for all the school categories. Approximately one in ten pupils were using drugs by their thirteenth birthday, with higher rates in males initially, with 80% of users in both sexes having commenced by 15 years of age. While drug use was initially higher in mixed rather than single gender schools, similar levels of drug use was found in both categories of schools by the time the pupils reached 15 years of age.

Of the total students using drugs, 40% first started using them in the months of June and

July. Customary users (those who took drugs when they felt like it) tended to begin drug use at a younger age and accounted for 60% of the lifetime prevalence and experimental users for 40%. Cannabis was the most commonly used drug. For customary users, the order of popularity of the other three drugs was ecstasy, LSD and amphetamines, while for experimental users, the order was LSD, ecstasy and amphetamines. Only about one in six customary users had stopped taking drugs, of whom two out of three would have done so within two years of beginning drug use.

The lifetime prevalence for tobacco smoking was found to be 70% and for alcohol 92%.

The study found a high rate of illicit drug use in secondary schools in our Board's region. Drug use often starts in primary school, indicating the need to target effective health education programmes at both primary and secondary schools. As cannabis is the most frequently used illicit drug, special attention should be given to its potential hazards, including its psychological effects. The post-Easter term should be targeted to prepare young people for the summer months during which drug taking is more likely to begin. This study indicates the feasibility of confidential school-based surveys and the methodology could be used to monitor trends in illicit drug use by young people.

Reference

1. Murphy E. The teenage drugs explosion – fact or myth? [Thesis for Membership of the Faculty of Public Health Medicine of the Royal College of Physicians of Ireland]. Dublin: 1997.

8.8 Potential for Health and Social Gain

A considerable degree of health promotion is already underway in the Eastern Health Board area. In deciding how further health promotion initiatives might best be implemented within our Board's region, consideration should be given to the following issues:

- The core health promotion topics should be based on those identified in the national health promotion strategy e.g. the prevention of smoking, drug use, accidents, neural tube defects, the uptake of primary vaccination and breastfeeding.

- Health promotion initiatives should be targeted on those with the largest potential for benefit, whether by high-risk group or geographical area. However, it will be important to avoid excessive targeting of a particular community or an overload of activities at a particular time of the year.
- Given the range of interventions and the expansion which is occurring in health promotion activities, it is important that local initiatives are co-ordinated in the context of a broader regional plan. The establishment of the new committee structures should prove valuable in this regard. Area medical officers with responsibility for health promotion are well placed to co-ordinate these activities locally.
- The development of a Health Promotion Resource Unit in our Board will be a valuable asset to our staff, with support provided by the Department of Public Health, the Nutrition Advisor for the Elderly, the Oral Health Services, the General Practice Unit, Customer Services, Communications and other departments. It is planned to establish such a centre in 1998.
- While health professionals can play an important role in health education, school teachers, local community groups and staff of voluntary agencies, for example, are well placed to reach a wide audience. Hence, a multidisciplinary approach should be adopted where possible.
- Access to appropriate training and resource materials for health promotion initiatives should be further developed in association with the Health Promotion Unit of the Department of Health and Children.
- Despite the reduction in the prevalence of smoking, a considerable proportion of our population continue to smoke. The National Health Strategy has set a target that 80% of the population over 15 years of age would be non-smokers by the year 2000. The powerful negative effects of smoking on health have been well documented and as the single largest avoidable risk factor of premature morbidity and mortality, this target should be accorded a high priority in our Board's region.

- The legislative powers to curb the advertisement, sale and use of tobacco should be used to their fullest potential.
- The high rate of exposure of children to environmental tobacco smoke in the home, given the recent evidence of the adverse health risks of such exposure, is a matter of particular concern. Where parents are unable to quit smoking, effective programmes should be developed which assist them to avoid exposing young children to even low levels of environmental tobacco smoke, for example only to smoke when out of doors.
- In the prevention of exposure to environmental tobacco smoke, our Board should take a lead role whereby all Board properties should become progressively non-smoking over time. Special regard may be required in terms of a degree of flexibility in relation to some patient groups and also for assisting staff to avoid smoking when at work.
- It is well established that over half of all neural tube defects can be prevented by taking

a folic acid supplement before conception and for the first trimester of pregnancy. Neural tube defects are associated with an increased mortality and lifelong morbidity. Approximately 10 cases of neural tube defects could be prevented from occurring in our Board's region each year if intake of peri-conceptional folic acid is increased. The approach adopted by the Folic Acid Action Group may provide a valuable model for the development and evaluation of targeted health promotion initiatives.

- Access to up-to-date information on health behaviour indicators, for example smoking prevalence among adults and young people, is necessary for assessing progress towards national and local targets. National data will be available from the Lifestyle Survey.
- New health promotion initiatives should be rigorously evaluated and only the effective and efficient programmes adopted on a wider scale.

Chapter 9: Special Client Groups

This chapter examines health issues among special client groups. While many of the problems that affect particular client groups fall under the headings in other chapters, it was felt that some specific client groups should be dealt with separately. Women's health has been comprehensively addressed in the Eastern Health Board since its emphasis by the Department of Health in a 1995 Discussion Document. Men's health is also being addressed in the Eastern Health Board at present and it is hoped that a report currently being prepared on men's health will be available in late 1998. The health of the physical and sensory disabled is considered in this chapter.

Equity is one of the three key principles of the Department of Health strategy document "Shaping a Healthier Future" (Department of Health, 1994). It recommends that the pursuit of equity should extend to the examination of the health status of certain groups in society. Specifically, it states that disadvantaged groups should be given special attention. In keeping with this aim the health of the homeless and the travelling community are also addressed in this chapter.

9.1 Women's Health

Following the publication in 1995 of the Department of Health's document 'Developing a Policy for Women's Health - Discussion Document' an extensive consultation process was initiated in the Eastern Health Board.¹ A number of themes emerged from the process (Box 9.1).

In 1996, the Department of Public Health became involved in initiatives to begin to address these themes. A Women's Health Development Officer was appointed. A women's health advisory group was established with representation from the National Women's Council and all the Programmes and Functional Departments in the Eastern Health Board, including the Department of Public Health. This group, together with the Women's Health

Development Officer, is developing and implementing policy in relation to women's health in the region.

Box 9.1. *Key themes resulting from the discussion process on women's health*

- The need for information on a wide variety of health issues and information in relation to service provision.
- The need for increased awareness and service development to meet the requirements of specific target groups e.g. women with a disability, traveller women, victims of violence, lesbian women.
- The need for services to become more client-oriented and to be delivered in a sympathetic and sensitive, yet professional and efficient way with an emphasis on good communication.
- The need for participation, involvement and liaison with the client group in the planning and delivery of services.
- The need for complementary therapies and alternatives to medication for people with mental health problems and support for self-help groups.

9.1.1 Key Issues for Services for Women with Disability

In the Department of Health policy statement on family planning in 1995, the need was identified to ensure that women with a physical and/or sensory disability were not prevented from accessing a comprehensive range of family planning and women's health services by reason of physical barriers or the unavailability of services and personnel sensitive to their special needs.¹

Box 9.2. *Key themes resulting from the discussion process for women with physical and sensory disability.*

- Women with disability want to access all services, including information, which are currently available for women in general.
- Women want to be consulted on an ongoing basis in relation to the planning and delivery of services.

An outline proposal for the development of a family planning and women's health service for persons with physical and sensory disability was included in the Community Care Service plan. From the findings of the women's health consultation process and further consultation with statutory and voluntary bodies providing services to those with physical and/or sensory disabilities, two key issues emerged as shown in Box 9.2.

Submissions were received from two Maternity Hospitals and from a number of GPs. These dealt exclusively with physical access. Many submissions were not costed. Others due to the cost implications were considered outside the scope of the project. The Irish Family Planning Association (IFPA) and Well Woman Centres made a joint submission which addressed most of the issues identified by the Steering Group. The Irish College of General Practitioners (ICGP) made a submission in relation to provision of information. A number of initiatives were selected for funding (Box 9.3).

Box 9.3 *Women's health initiatives selected for funding*

- Structural alterations to three GP premises to improve physical access.
- Minor alterations to the IFPA premises in Tallaght and the Coolock Well Woman Centre to improve physical access. A minicom and loop system to be installed in these centres to facilitate communication with hearing-impaired women.
- A sign language course for staff and a hydraulic couch in one Maternity Hospital.
- The ICGP, IFPA and Well Woman Centres are co-operating to produce leaflets on menstruation, family planning and antenatal care in a simple, large-print format which will be more accessible to disabled women and women with literacy problems. A tape on family planning is also being prepared so that this information will be accessible to visually impaired women. The text of the tape will also be available in Braille.

Given the limited response to the call for applications for funding, the Steering Group formed the view that there was an urgent need for disability awareness training for health service providers. Such training has in the past been provided individually by the National Council for the Blind of Ireland, the National Association for the Deaf and the Irish Wheelchair

Association in relation to their own areas of disability. For this project, they came together and devised a two day course to inform participants what it is like to have a disability in an inaccessible world, to help them understand different types of disability and to learn how to make their services more accessible in attitude and architecture. The first course in November 1996 had participants from the Irish Family Planning Association, Well Woman Centres and the general practice setting. The course was evaluated by the participants and feed-back was positive.

The development of a multi-agency disability awareness course is the most tangible outcome to date from this project. The project was carried out in the spirit of the consultation process in partnership with the voluntary agencies and serves as a model for the development of similar projects in future.

During 1997, alterations to three general practice premises were completed. New information leaflets on contraception and antenatal care came on stream. In 1998, a leaflet on menstruation will become available together with audio-tapes on antenatal care, family planning and menstruation. The text of these tapes will also be available in Braille. There is a need for ongoing disability awareness training for health care workers and further improvements in access to services.

Reference

- 1 Department of Health. Developing a policy for women's health. A discussion document. Dublin: Department of Health; 1995.

9.1.2 Women's Health Pilot Project

In September 1995, two women's health pilot projects were set up, one in the Coolock area and one in Tallaght/Clondalkin. In each area a number of GPs were funded to establish designated women's health clinics in their practices. In addition the Irish Family Planning Association (IFPA) in Tallaght and Coolock Well Woman Centre (CWWC) gave women in those areas a choice of provider for women's health services and provided services free of charge to medical card holders. While the pilot projects are continuing, an interim evaluation was carried out in 1996 and a further evaluation is underway at present.

Table 9.1 *Use of services in the pilot projects for women's health.*

	General Practitioner		IFPA, Tallaght		Coolock WWC	
	n=202	%	n=206	%	n=184	%
Family planning	78	39.0	115	55.0	91	49.0
Oral contraception	60	29.7	87	41.8	56	30.3
IUD/diaphragm/cap	0	0	2	1.0	4	2.1
Emergency contraception	5	2.5	24	11.5	15	8.2
Depot injection	5	2.5	8	3.8	3	1.6
Cervical screening	86	42.5	36	17.3	61	33.2
5 years since last smear*	13	27.6	7	23.3	11	37.9
2 years since last smear*	21	44.7	13	43.3	7	24.1
Menopause						
Advice	20	9.9	3	1.4	16	8.7
Advice and treatment	18	8.9	10	4.8	20	10.9
Breast examination	25	12.3	11	5.3	43	23.4

*These %s are based on the screening interval being known for 47 GP clients, 30 IFPA clients and 29 CWWC clients

Between 1st September 1995 and 30th September 1996 records of 2,806 attendances to GPs in the Tallaght/Clondalkin area, 1,700 GP attendances in the Coolock area, 9,668 attendances to the IFPA, Tallaght and 4,059 attendances at the newly established CWWC were returned. These numbers indicate the high level of demand there is for women's health services. The evaluation was based on an analysis of a sample of records to give some preliminary information on the progress of the project. Of those attending GPs, 64% had medical cards as did 45% of those attending CWWC. In contrast, only 13% of those attending IFPA Tallaght were medical card holders. A supplementary analysis showed that, by November 1995, the proportion of those attending CWWC with medical cards had increased to 63%.

Fifty percent of clients attending the IFPA in Tallaght were from the Dublin 22 and Dublin 24 postal districts and 60% of those attending CWWC were from the Dublin 5 and Dublin 17 postal districts. Patients attending GPs were almost all from their own practice areas. Overall, medical card holders were unlikely to attend services outside their own district.

The main services provided in the pilot projects are summarised in Table 9.1. Blood pressure examination, advice on smoking and advice and treatment of gynaecological problems was also available. Family planning services were the most commonly availed of service and oral

contraception was the most popular method. Intrauterine devices and diaphragms/caps are relatively unpopular forms of contraception among this client group.

The proportion of those having a smear test for whom more than five years had elapsed since their previous smear points to the unsatisfactory nature of the current opportunistic screening arrangements. On the other hand, substantial numbers of women are having smears at intervals of two years or less. While in individual cases a short screening interval may be clinically indicated, frequent routine screening is a waste of resources and contributes to delays in laboratory reporting. Results of the interim evaluation have been fed back to the service providers.

Potential for Health and Social Gain

The life expectancy of women at birth in this country is one of the lowest in the European Union, suggesting that there is scope to add years to the lives of Irish women.

- The main causes of death of women are diseases of the circulatory system, ischaemic heart disease and cancer, especially of the breast, lung and colon. Many of these deaths could be prevented or postponed by changes in lifestyle, particularly by a reduction in smoking, as has been highlighted elsewhere in this report.

- Because women attach such a high priority to health and because of their influence on the health of their families, they are an important resource for health.
- The women's health consultative process highlighted the extent to which women regard the provision of information as a key factor in empowering them to promote their own health and that of their families.
- Difficulties in accessing information which was appropriate, relevant and timely was identified as the factor which caused the greatest disadvantage in accessing health care.
- The development of an information strategy to improve women's access to information on both the health services and health issues in general is a crucial step in improving the health status of women in our Board's region.

9.2 People with Physical and Sensory Disability in the Eastern Health Board

In order to oversee the planning and development of services for people with physical and sensory disability and to co-ordinate the efforts and activities of the Eastern Health Board and of the numerous voluntary bodies involved in the care of people with physical and sensory disability, a Planning and Advisory Committee was set up in 1996. This committee is chaired by the programme manager responsible for disability services in our Board and membership consists of other representatives from public health, community care and general hospital care along with representatives from a number of major voluntary service providers, Disability Federation of Ireland and consumers.

The committee has a number of roles:

1. To pursue opportunities for co-operation and flexibility among service providers to ensure best utilisation of resources.
2. To consider issues relating to quality and effectiveness of service.
3. To prioritise programmes for the allocation of development funds.
4. To pursue opportunities for inter-sectoral co-operation and the drawing up of a protocol in this regard.
5. To consider issues relating to the effective provision of information to service users.
6. To support the development of a comprehensive database in co-operation with the database committee at national level when this is formed.
7. The commissioning of an assessment of the needs of people with a physical or sensory disability.

The committee has set up sub-committees to take on the responsibility of planning and prioritising development in the following key areas: physical disability, sensory disability and co-ordinating services.

The sub-committee on physical disability has since prepared position papers on a) home supports and respite and b) aids and appliances. The sub-committee on sensory disability has prepared a position paper on services for sensory disability.

A database consisting of people with physical and sensory disability residing in our Board's area has been drawn up and will feed into the national database when this is established. This database has been used as a sampling frame from which a random sample has been chosen to participate in the needs assessment which was commissioned by the committee. This study will commence shortly.

Potential for Health and Social Gain

- Better information about the prevalence of physical and sensory disability will be provided by the physical and sensory disability database (see chapter 11). It was established in our Board's area in keeping with the recommendation made in the 1996 Department of Health review group report on health and personal social services for people with physical and sensory disabilities entitled "Towards an Independent Future".¹ This will allow for more informed planning of services for people with physical and sensory disability in the future.
- The needs assessment for people with physical and sensory disability, which is about to commence in the Eastern Health Board (see chapter 10), will further contribute to the information required for planning and development of services for those with physical and sensory disability.

Reference

1. Department of Health. Towards an Independent Future. Review Group Report on Health and Personal Social Services for People with Physical and Sensory Disabilities. Dublin: Department of Health; 1996.

9.3 Health Status and Service Utilisation among the Homeless

In 1997, a study was carried out to provide baseline information about the health of the homeless population of Dublin that would allow planned and prioritised responses to their health problems in terms of service provision and further research.¹ The objectives were to describe the size and composition of the population, to examine behavioural risk factors in the population, to describe the health of the population in terms of self-perceived health and self-reported morbidity, to describe the utilisation of health services and to identify barriers to such utilisation.

The study was a census of homeless people who met the definition of homelessness used in the study. The data were collected over a five day period of time at hostels, bed and breakfast institutions, food centres and on the streets by trained volunteer interviewers using a specially devised anonymous questionnaire.

The response rate was 64%. The population was heterogeneous but did allow some major sub-groups to be characterised. These are, firstly, older Irish males living in hostels who have been homeless for long time periods; secondly, younger females, often with young children, who live in bed and breakfast accommodation; thirdly, refugees, who also live in bed and breakfast accommodation and, fourthly, young Irish males who sleep rough on the streets. The reasons for homelessness, the health problems, the health risks and the utilisation of services all varied between these groups.

The population had many behavioural risk factors. Most spent much of their time outdoors irrespective of their health status or the fact that they might have young children. Almost 80% of them were smokers and almost 30% drank alcohol beyond recommended limits. A further 30% of them said that they had used illegal drugs.

Almost half of the respondents perceived themselves to be in poor health (Box 9.4).

Box 9.4 Self reported health among the homeless

- 27% felt they were limited by their physical health in the previous month.
- 24% felt they were limited by their mental health.
- 29% felt that their health had disimproved in the previous year.
- 66% had at least one physical or psychiatric problem.
- 41% reported at least one of a number of specific chronic diseases.
- The reporting of individual health problems was found to vary with age, sex, duration of homelessness and the existence of behavioural risk factors such as cigarette, alcohol and drug consumption.

Close to half of all respondents did not have a personal medical card. Some sub-groups, such as young males and 'rough sleepers' had particularly low medical card ownership. The possession of such a card was not influenced by the existence of chronic disease. The utilisation of services varied according to age, sex and other demographic factors. Some groups, such as 'rough sleepers', used all services at low levels. Ancillary services, such as social work and community welfare, were mostly used by young women, often with children, and refugees.

Many barriers to service utilisation, such as the lack of a medical card, language difficulties, cultural differences, information barriers and the unacceptability of many of the existing services to homeless people were identified in the study.

Potential for Health and Social Gain

- Consideration should be given to the development of a fixed term strategy for health services for the homeless based upon all available information concerning the health of the homeless. The development of the strategy should include all those involved in the care of the homeless and should be reviewed and extended as appropriate after this period of time.
- The Eastern Health Board has recently advertised for a general manager for services for the homeless, travellers and asylum seekers and this will help to improve the integration and co-ordination of services that are provided by our Board and services which

are provided by agencies with the aid of Eastern Health Board funding. The purpose of the job will be to co-ordinate and streamline all aspects of the service in consultation with the appropriate health board personnel and external agencies with responsibility for the above groups.

- Consideration should be given to the establishment of health services linked to the community welfare services so that homeless people could have access to health services in the form of a “one stop shop” with the welfare and social services which are currently provided for homeless people. This would help to bring health services to those with minimal access. It would also improve integration between health and other services.
- All those who are being admitted to homeless institutions or who otherwise come to the attention of the agencies caring for the homeless should have easy access to health facilities (such as the “one stop shop”) to ensure that any potential problems are identified and dealt with. For this reason, closer liaison, collaboration and greater communication should take place between the health boards, local authorities, education bodies and voluntary agencies.
- Outreach services should be put in place to engage those homeless people, especially street dwellers, whose access to medical services is limited and link them to available services. These outreach services should be linked to the “one stop shop” for the homeless. Planning of services which are sensitive to cultural differences and language difficulties will allow the social and medical services to be tailored appropriately, resulting in more effective interventions.
- In order to overcome the poor coverage with medical cards, special medical cards should be used for homeless people which do not require complex application procedures and which do not require that an address be used. Easy registration should be the underlying principle.
- The chronic diseases (such as tuberculosis, diabetes mellitus, epilepsy and hypertension) should be further investigated to determine their prevalence using clinical examination and investigations as appropriate. This should lead to the establishment of routine screening

for tuberculosis, if prevalence criteria are satisfied.

- The questionnaire that was used in this project should be developed and validated in order to ensure that a useful monitoring tool for the health of the homeless is available.

Reference

1. Holohan T. Health status, health service utilisation and barriers to health service utilisation among the adult homeless population in the Dublin Region [Thesis for Membership of the Faculty of Public Health Medicine of the Royal College of Physicians of Ireland]. Dublin: 1998.

9.4 Travellers

A national study of the health of the traveller population was carried out in 1987. That study showed that travellers had excess mortality, particularly from accidents, infant mortality and perinatal mortality. There were differences between housed and unhoused travellers in accident mortality. The results are summarised in table 9.2. Since 1985, our Board has had a mobile service for travellers where specific child health services are targeted at travellers in serviced sites. This service is concentrated on primary care and a review of the uptake of other services by users of the mobile service at the time of publication of the national study showed that uptake of primary care services was approximately 50% but this fell to less than 20% for certain secondary care services. This survey was questionnaire based, administered by public health nurses working on the mobile clinic. The results are summarised in table 9.3. The study also highlighted other difficulties in relation to the provision of health services for travellers such as a school attendance rate of 72% in those aged 4-14 years, male unemployment rate in those aged 15-64 years of 93% and high mobility as expressed by two thirds of families moving accommodation at least once a year.

As a result of all these findings the mission statement for services for travellers was altered to take account of factors which might be giving rise to low levels of uptake and now reads: *To raise the health status of the travelling community to the national target levels of the whole population, by providing accessible and culturally appropriate services, developed with traveller participation.* In line with this mission statement objectives are now to develop in

Table 9.2 Vital statistics for travellers and Ireland, 1987. Source: Health Research Board.

	<i>Ireland</i>	<i>All Travellers</i>	<i>Housed Travellers</i>	<i>Unhoused Travellers</i>
Total Population Fertility Rate	2.3	5.3	3.2	7.6
Perinatal Mortality Rate (per 1,000 births)	9.9	28.3		
Infant Mortality Rate (per 1,000 live births)	7.4	18.1		
Standardised Mortality Ratio (all causes)	100	254	218	317
Standardised Mortality Ratio (natural causes)	100	227	228	225
Standardised Mortality Ratio (accidents)	100	450	135	843

consultation with travellers' groups a health education programme aimed specifically at travellers and to develop models of traveller participation, health promotion and disease prevention and to make special arrangements where necessary to encourage and to permit travellers to avail of primary care services.

Funding has been secured through the Health Research Board to carry out a qualitative survey of the health beliefs and needs as perceived by the cohort of mothers who gave birth in 1987 at the time of the national study of travellers health. There were just under 140 mothers who gave birth in the Eastern Health Board region in 1987 and these mothers are currently being located and interviewed. The methods being employed include focus groups and also administration of culturally appropriate questionnaires in consultation with travellers themselves and agencies who work on behalf of travellers. The steering group for the study has representation from our Board's Public Health Nursing Services, Department of Public Health and Community Care Services. Travellers are also represented on the group, together with Pavee Point.

Apart from this qualitative study, an initiative is being piloted to identify traveller babies at birth. This is a sensitive issue but in the absence of a routine mechanism to identify travellers it is difficult to provide quality data and analysis of uptake of infant and child health services and maternity services in the traveller community. It is anticipated that the qualitative study being carried out in conjunction with travellers will enable our Board to put in place an identifying mechanism for travellers which will be acceptable to the traveller population to enable more reliable and valid data on traveller health,

particularly maternal and infant health, to be collected in the future and analysed for the benefit of the traveller population.

Table 9.3 Uptake of services by travellers Source: Mobile Clinic, Eastern Health Board.

	<i>Yes</i>	<i>No</i>
GP Service	185 (50%)	188 (50%)
Public Health		
Nursing Service	191 (51%)	182 (49%)
Social Work Service	197 (53%)	176 (47%)
Hospital Service	63 (17%)	310 (83%)
Psychiatric Service	16 (4%)	357 (96%)

Potential for Health and Social Gain

- Information systems should allow the identification of travellers so that appropriate, accessible and acceptable health interventions could be put in place for them.
- More qualitative research is needed to identify such things as the barriers to optimum uptake of services and the ideas and beliefs of the travelling community concerning health and illness.
- Efforts should be made to encourage traveller participation in decisions that are of relevance to them. This would ensure that such decisions are better informed and more acceptable to the travelling community.

9.5 Injecting Drug Users

In keeping with the adoption of a policy of harm reduction to deal with the growing problem of opiate drug use, methadone maintenance and needle exchange programmes were established by the Eastern Health Board at Baggot Street

Table 9.4. Relationship between provision of harm reduction services and drug related AIDS incidence in the European Union. Source: European Monitoring Centre for Drugs and Drug Addiction, Commission of the European Communities, 1992.

Country	Cumulative AIDS incidence in IVDUs per 1,000,000 total population	% IVDUs in methadone treatment	Year needle exchange extended beyond pilot phase
Spain	305	3.0	not by 1992
Italy	195	2.5	not by 1992
France	98	0.1	not by 1992
Ireland	32	1.5	1991
Portugal	25	1.5	not by 1992
Luxembourg	23	1.0	not by 1992
Germany	18	3.0	1988
Netherlands	13	30.0	1986
Denmark	10	-	1987
Belgium	7	2.5	not by 1992
UK	4	15.0	1989
Greece	2	0	not by 1992

Hospital in 1992 and 1989 respectively. Subsequently, in response to the increasing needs identified, the programmes were expanded and there are now seven addiction centres and 20 satellite clinics from which services to drug users are provided.

It is difficult to estimate the number of injecting drug users in Dublin accurately because of the nature of the problem. At the end of June 1998 there were 256 people on the waiting lists for detoxification or maintenance in those clinics, 113 females and 143 males.

Table 9.5 Age distribution of those on the CMTL (at 31st December, 1997). Source: Central Methadone Treatment List.

Age	No. on methadone
20	251
20 - 24	851
25 - 29	724
30 - 34	547
38 - 39	314
40 - 44	120
45	42
Unknown	10
Total	2859

In 1992, the European Union carried out a survey on the extent of these two public health measures

across the European Union and the results are given in Table 9.4. In the year of the survey (1992) there were 150 persons on methadone programmes in Ireland. The Central Methadone Treatment List (CMTL) in Ireland had 2,859 names of people who were receiving methadone on the 31st December, 1997. This represents a remarkable change in policy from the early 1990s and has been reflected also in other European Countries. The age breakdown of the 2,859 on methadone at the end of 1997 is given in Table 9.5.

To increase the level of methadone prescribing from 150 to almost 2,900 has required a considerable change in practice for many GPs, pharmacists and health board staff. There are currently over 100 GPs prescribing methadone and over 60 retail pharmacies dispensing methadone in our Board's region. A good deal of energy has been expended by many of our Board's staff in negotiating the opening and continuing operation of new locations for methadone prescribing and dispensing.

A harm reduction policy was adopted in Ireland because it was known that injecting drug users were at high risk of acquiring blood-borne infections such as hepatitis B, hepatitis C or HIV (see chapter 7). For example, up to the end of March 1998, of the 615 cases of AIDS reported

nationally, almost 42% were injecting drug users. Of the 1,883 HIV positive blood samples tested by the Virus Reference Laboratory, 44% were from drug users. Available international information suggests that the prevalence of HIV infection in this group overall is between 10-30% and the prevalence of hepatitis C infection is between 70-80%. Data from review of a sample of patient notes among methadone dispensing clinic users suggest that the prevalence of hepatitis B may be as high as 30% in those known to have been tested. This review was carried out to estimate the prevalence of blood-borne viral infections in this population and the provision where appropriate of immunisation against hepatitis B, based on the information in clinical records. The results of this review are being used to further enhance public health strategies for the surveillance and control of these infections in drug users. As a result, a standard protocol is being developed for use in all of the methadone dispensing clinics so that a “best practice” approach can be followed in relation to the screening and management of these infections in injecting drug users. To support this approach a standard front sheet to

record the individuals status with regard to these infections is also being developed for inclusion in the case records.

- The primary mode of transmission/risk behaviour for HIV infection in Ireland remains injecting drug use. Continuing to follow a harm reduction approach should reduce the spread of HIV and other blood-borne infections in this group.
- Improving the surveillance and management of blood-borne infections in injecting drug users will increase the benefits to be achieved from a harm reduction approach using methadone maintenance programmes.
- The provision of ten drugs education officer posts (six of which have been filled) over the last year will strengthen the educational and preventive approaches to drug misuse being developed in the Eastern Health Boards area.
- The emergence of the hepatitis C virus in intravenous drug users across Europe, including Dublin, is currently presenting a challenge which will require new strategies.

Chapter 10: Service Evaluation

The National Health Strategy, 'Shaping a Healthier Future', highlights the importance of the evaluation of services to ensure that available resources are used to provide quality services. The Department of Public Health, in collaboration with the Programmes of the Eastern Health Board, participated in a range of service evaluations, some of which are outlined below so as to illustrate the varied approaches that can be adopted.

10.1 Public Education Campaign in Accident and Emergency Departments

The A&E department is the first point of contact with the hospital for many patients. In recent years there has been a trend of increasing numbers of attendances at the six major A&E departments in Dublin. Since 1988, the numbers of new attendances have increased by 39% from 175,032 to 243,835. Departments find it increasingly difficult to cope with these large numbers which result in long waiting times, pressure on staff and dissatisfaction among patients. Studies, both in Dublin and abroad, indicate that a significant proportion of A&E attendees could be managed as well by GPs.¹⁻⁶

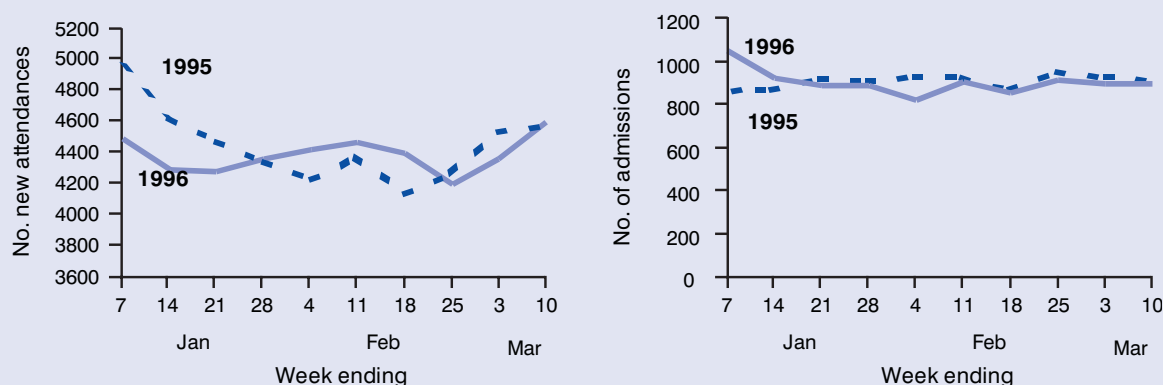
In January/February 1996, a four week national public education campaign was mounted on television, radio and in the newspapers to encourage patients with minor ailments to attend their GP rather than A&E departments. A study was undertaken to determine the impact of this initiative.¹

Key findings

Routine A&E statistics for the period of the campaign were compared with the same period in 1995. Figure 10.1 shows the trends in attendances at and admissions from A&E in the first 10 weeks of 1996 compared with the same period in 1995. During the campaign, the number of new attendees at A&E decreased by 3% compared with the same period in 1996.

In the first three weeks of 1996, the number of new attendances at A&E was greater than the corresponding weeks in 1995. This pattern reversed in the week ending the 28th January, coinciding with the beginning of the public education campaign. The lower numbers in 1996 compared with 1995 continued until the week ending the 25th February when again 1996 figures were higher than in 1995, as was the case in the following week. For the week ending March 10, 1996, new attendances were lower than in the corresponding week in 1995.

Figure 10.1 New attendances at A&E departments and admissions to hospital, Eastern Health Board, January – March, 1995 & 1996.



Box 10.1 *Results of patient questionnaire survey***Duration of symptoms**

- 47% less than 24 hours
- 13% for one to two days
- 11% for two to seven days
- 25% for longer than a week

Perceived seriousness of complaint

- 38% considered the complaint as serious or very serious
- 56% as not serious or a “bit” serious

Willingness to go home if given a definite GP appointment for the following day

- 67% indicated that they would not
- 12% would be willing to wait & see the GP the next day
- 6% unsure

Whether patients considered seeing GP

- 40% No, thought problem best dealt with in Casualty
- 17% Yes, saw GP, told go to Casualty
- 9% No, surgery shut
- 5% Yes, phoned GP, told go to Casualty
- 5% Yes, saw GP, but unhappy with treatment
- 4% Yes, tried but could not contact GP
- 52% No, not happy with my GP
- <1 % No, did not want to bother my GP
- 12% No, for some other reason

If the public education campaign selectively targeted triage category 3 (semi-urgent) and 4 (delay acceptable) patients, then it could be expected that there would be no impact on admissions through the A&E Department and that the proportion of attendees admitted would rise. As shown in Figure 10.1, admissions via A&E for the first two weeks of 1996 were higher than in 1995. However, coinciding with the beginning of the public education campaign, there was a decrease in admissions through A&E in 1996 compared with 1995 which persisted up until the week ending 10th March. There was no increase in the proportion of new attendances admitted through A&E during the campaign which began on 18th January than in the previous year.

A survey of 227 triage category 3 (semi-urgent) and 4 (delay acceptable) patients was carried out in the six major Dublin A&E departments during

the fourth week of the campaign. The majority, 199 (88%) were registered with a GP, 81 (36%) had a medical card, 65 (29%) held Voluntary Health Insurance and 89 (40%) were employed.

The results of the survey are summarised in Box 10.1. Less than 50% of patients had symptoms for less than 24 hours. Only 6% considered that the GP could deal as well as A&E and 4% that the GP could deal faster than A&E with their particular complaint.

When specifically asked whether they had considered seeing their GP with the presenting problem, the main reason for not contacting the GP was that the A&E Department was considered best for treating the condition. Overall, one in five patients expressed some level of dissatisfaction with their GP.

In responses to attitudinal questions in relation to the A&E Department there was strong agreement with statements reflecting the role of the A&E Department in saving lives and in giving priority to seriously ill patients, but less agreement with statements suggesting that patients with minor or long-standing problems should see their GP first or that they could be treated as well or faster by their GP.

Of the 227 patients surveyed, 103 (45%) recalled exposure to the public education campaign. Patients who had contacted their GP were significantly more likely to have their symptoms for longer, to be older, to think that their problem could be dealt with faster by their family doctor, not to be in employment and to have seen television advertisements. Patients who contacted their GP were also significantly more likely to agree with the statement ‘Patients with minor injuries or long-standing problems should see their GP first.’

Conclusions

The survey highlights the strongly held view of many patients attending the A&E department with minor/long-standing conditions that their problems are best dealt with in the A&E department and their resistance to the idea that these problems could be dealt with as well/faster by their GP.

- An underlying level of dissatisfaction with some aspects of the service provided by GPs

was found. GPs should become involved in addressing these issues.

- The overall impact of the public education campaign is difficult to assess.
- Television, radio and newspaper advertisements all had the potential to change the views of those exposed to them but only television advertisements were significantly associated with the desired behaviour i.e. contact with the GP prior to A&E attendance. This suggests that future campaigns should concentrate on television advertising.
- Future campaigns should especially focus on the ability of the GP to deal with minor and long-standing problems and the desirability of those with such problems attending their GP rather than the A&E department.

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10.2 Acute Hospital Bed Utilisation Review

Since 1971, the General Hospital Programme has accounted for approximately 50% of public health expenditure. The acute hospital sector is, therefore, a prime focus in any attempt to contain health care costs or increase efficiency.

There have been major changes within the hospital services in recent decades. Since 1977, the number of beds in publicly funded acute hospitals has decreased by 20%. In the same period, the number of hospital discharges has increased by over 20%. This represents a marked intensification of bed usage in Irish hospitals and has been accompanied by reducing lengths of stay and increased use of day care.

In recent years there have been a number of recurring difficulties such as increased volume of attendances at A&E departments, high level of urgent and emergency admissions, bed crises resulting in patients waiting overnight on trolleys and cancellations of elective admissions and procedures.

To address the question of whether there is scope for further efficiencies within the current bed complement, it was decided to carry out a bed utilisation study in Dublin Hospitals.¹

A prospective study of admissions and days of care for patients in acute hospital beds in the six major Dublin hospitals with A&E departments was carried out in November 1995. Patients were randomly selected for inclusion in the study. For each patient selected, their admission to hospital and their previous day of care was reviewed to determine whether the care they were receiving necessitated their being in hospital at that particular time. Where patients were receiving care which could be provided outside the acute hospital setting, the reason for their continued stay in hospital was determined.

Key findings

As shown in Box 10.2, a substantial proportion of admissions was not considered to require acute inpatient services. This was found to be the case more so for medical rather than surgical cases.

Delays in receiving investigation results or consultations, difficulty in scheduling non-operative procedures, delays in arranging discharge and unavailability of longterm care were the major factors contributing to patients remaining in hospital when either their condition or the level of service they were receiving did not warrant it.

Box 10.2 *Principal results of acute hospital bed utilisation review*

- 53% of the admissions were admitted via A&E and a further 18% were admitted urgently from other acute hospitals or clinics.
- Only 26% were admitted electively.
- 83% were either acute medical/surgical admissions or elective medical admissions. In 19% of these, admission did not appear to be justified on the basis of the patient's condition or the hospital services received in the 24 hours following admission. For 7% of these, it was considered that they had been admitted for investigations which could have been carried out on an outpatient basis.
- 92% of the patients admitted via the A&E department and 44% of elective medical admissions were considered to require acute hospital admission.
- Of the elective surgical admissions, 69% were considered to require acute hospital admission. 26% were considered to be untimely in that surgery was not carried out within 24 hours. 13% were admitted for procedures which could be carried out on an ambulatory basis. For 9%, the procedure was considered to be ambulatory and surgery was also untimely.
- A total of 1567 days of care were sampled. For 69% of these, the patient's condition or the level of service they were receiving justified their presence in hospital on that particular day.

Conclusions

The findings of the study point to some inefficiencies in the use of acute hospital beds. The study highlights a number of areas which should be prioritised to address these issues.

- A substantial proportion of patients are admitted to hospital when management as an outpatient or a day case may have been more appropriate.
- Where patients do require inpatient care, difficulties in relation to management of the process of care can lead to inefficient use of resources.

Reference

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10.3 Review of the Implementation of the Dublin Hospital Initiative

In 1990 a Dublin Hospitals Initiative was established to improve the integration and

efficiency of the acute Dublin hospital services. The interim report of this group, referred to as the Kennedy Report in June 1990¹ put forward proposals for more effective management of hospital workload. In 1996 a review of the implementation of the recommendations of this report as regards efficiency of in-patient management was undertaken with the co-operation of the CEOs and staff of the major acute hospitals. Senior managers, medical and nursing staff at six major acute hospitals in Dublin were interviewed.²

The Kennedy Report recommended that each hospital should have an effective bed management policy in place, operated by senior nursing personnel. This policy should include an admissions and discharge policy and the introduction of protected 1 day and 5 day beds. The need for, and importance of, medical input into bed management was recognised by all hospitals in this evaluation. The approach of the Dublin Hospital Initiative was to recommend the adoption of an effective bed management policy in each hospital which would be drawn up by representatives from medical, nursing and management staff. For this approach to work, it was essential that consultants who would be directly affected by these policies should adopt them and that they be implemented. It was also important that these policies were agreed by nursing and other personnel.

Key findings

What happened in many cases was that no active policy was drawn up, or, where it was drawn up, it was not circulated and adopted by the key players. Where policies were drawn up and implemented, it was possible to improve bed management. For example, hospitals that were successful in protecting 1-day and 5-day wards identified having a clear policy and commitment to that policy as key reasons for their success. Furthermore, their success had been facilitated by physical factors such as locating such wards away from A&E. Hospitals without such policies were not able to effect these changes.

The incentives for individual consultants to develop and adopt bed management policies were examined. A fair policy that was enforced throughout the hospital should have helped everyone but there may have been a conflict in assessing the relative needs of different

consultants and this issue may not have been adequately addressed. In addition, explicit rationing of access to beds may not have been accepted in principle by some consultants.

Most of the problem areas in bed management identified in this evaluation had been raised as issues in the Kennedy report. This indicates that there have been barriers to implementing change. These have been more successfully overcome in some hospitals than others and there is an opportunity here for hospitals with continuing problems to learn from those hospitals which have had more success. However, some recommendations may not be realistic given specific conditions that pertain in individual hospitals. It may not be possible for consultants to have daily ward rounds where they have commitments to two hospitals, or to have ward rounds in the morning when they are in theatre or in out-patients. It may not be realistic to introduce rapid turnover observation wards as envisaged by the Kennedy report. The pressure to fill these beds with sick patients who need care yet do not fill the admission criteria may be too great in most instances, given their proximity to A&E.

Patients awaiting placement in long term care accommodation were a very visible source of bed management difficulties in the hospitals and were emphasised by many involved in the consultation process. However, it must be remembered that the majority of patients are in hospital for short periods of time and that inefficiencies in bed management among these shorter stay patients may account for the majority of inefficient bed days. Issues regarding equity of access to the limited long term care places available was raised. Perhaps this needs formal evaluation. There is undoubtedly a shortage of long term care places and this situation is likely to be worsened given the ageing of the population.

Two groups of patients were clearly identified by this process as in need of special services, namely brain injured patients with behavioural difficulties and elderly patients with dementia and behavioural problems. There is a need for development of services for these groups.

The process of validation of waiting lists was not well understood by many hospitals and not undertaken as suggested by the Kennedy Report. There are two levels to the process of validation.

At a basic level, as indicated in the Kennedy Report, one has to ascertain that those people on the list wish to remain on the list. Without such basic administrative validation, it is difficult to interpret what a long waiting list actually means.

Further validation attempts to standardise prioritisation of patients waiting for admission. This is a more difficult problem and may not be easily resolved. It needs, however, to be addressed explicitly. Prioritisation of patients on lists is carried out in a non-standardised fashion at present and as a result, it is impossible to assess relative priority across specialities.

Conclusions

- The review showed that many of the recommendations of the Kennedy Report as regards bed management had not been implemented.
- In general, those interviewed did not disagree with the recommendations of the Kennedy Report and the problem lay with successful implementation.

Reference

1. Dublin Hospital Initiative Group. Interim report. Dublin: Department of Health; 1990.
2. Pelly H, Igoe D, Connolly E, Hynes M. Review of the Implementation of the Dublin Hospital Initiative (Kennedy) Report. Dublin: Eastern Health Board; 1997.

10.4 Follow-up of Elderly Patients Discharged from Hospital

In recent years, a multidisciplinary Community Ward Team (CWT) has become established in all community care areas within our Board's region. Originally, the primary objective of the CWT was to provide step-down care so that elderly patients could be discharged earlier from acute hospitals into the community. However, in many community care areas the service evolved to the provision of step-up care for clients in the community whose level of dependence increased and where extra support at home may obviate the need for long term residential care or acute hospital admission.

A multidisciplinary steering group, involving the Department of Public Health, community services and senior management in our Board was formed. A study was undertaken to follow

up groups of patients over 65 years of age discharged into various models of care from acute hospitals within our Board's region.¹ The study objectives included determining the service utilisation and client/carer satisfaction with health care services following discharge.

Box 10.3 *Results of follow-up study of hospital discharge in the elderly*

- Elderly patients were generally found to be discharged to appropriate destinations.
- The dependency level of clients in long term care was higher than those in the community, as was the degree of day time and night time supervision required.
- While the great majority of clients expressed no particular difficulties in the immediate post-discharge period, for those who did, limitation of mobility was the most frequently mentioned issue.
- Criticisms of the services were few and tended to be related to the hospital- community interface at the time of discharge.
- Support provided by the public health nursing service and voluntary organisations (home help and meals on wheels) was generally found to be in place within 24 hours of discharge from hospital.
- Physiotherapy and occupational therapy staff from the CWT tended to first visit the client at home after a number of days following discharge and with much longer delays for clients referred to their general caseload.

The study covered 1308 patients discharged in November/December 1995 over a two week period from the 10 acute general hospitals in the Eastern Health Board region. Clients with terminal illness or discharges from psychiatric care were excluded. All clients over 65 years of age returning home with increased level of community support or admitted to long-stay and a sample discharged to home with usual support or convalescence were included in the study (total of 182).

One hundred and thirty five clients (74%) were followed up over a four month period. The initial discharge destinations of those seen at follow-up were as follows: own home or family unit (84), convalescent care (20) and long stay institutional care (31).

During the follow-up period 15% of clients had died and 21% of those discharged home had been admitted to an acute hospital and 3% to long-stay care. The mean age of clients was 80 years and

50% of those who were discharged home lived alone.

During the two week study period, 15 patients were referred by hospital teams to the CWT. As shown in Box 10.3, assessments by CWT staff tended to follow rather than precede the day of discharge from hospital. A high degree of satisfaction on the part of client and carer was found with the range of support services provided in the community following discharge.

Conclusions

The provision of the CWT is a relatively recent innovation within our Board's region. This is the first study to follow-up a cohort of elderly patients discharged from hospital into the service. The overall results of the study reflect the generally high quality of the services provided in the community for elderly patients discharged from acute hospital care. However, the number of referrals from acute hospitals to the CWTs was relatively low (approximately one a day within our Board's region) and there would appear to be some barriers to fully exploiting the resources available to the CWT in enabling earlier discharge from hospital.

- The decision to assess and accept a referral for CWT support is generally taken some days after discharge from hospital. To encourage earlier discharge, it would appear important that a mechanism should be identified whereby the decision to provide CWT or other support tailored to the needs of individual clients, at least on a trial basis, would be agreed in advance of discharge so that the required resources can be in place immediately on discharge where indicated. The regular and frequent presence in the hospital environment of a key decision maker from the community care team (e.g. a senior public health nurse) with access to CWT resources is suggested.
- Reasons for the apparently low referral rate by hospital staff to the CWT service should be elicited and the precise service inputs elderly patients may require in order to return home from hospital earlier than would otherwise be the case should be identified.
- To encourage more appropriate referrals to the CWT, consideration should be given to targeting client types most likely to require input from the CWT on returning home (e.g.

living alone or with a frail carer, with a diagnosis of fracture or stroke), while accepting referrals from all hospital departments.

- The roles of the CWTs, having evolved differently among the community care areas in response to local priorities, should be clarified, evaluated and redefined as necessary.
- Based on the above, simplification and flexibility in the referral and acceptance criteria for the CWT should be considered in order to meet the priority needs of elderly patients on their earlier return home from acute hospitals. A joint hospital/CWT discharge plan agreed with the client/carer (ideally in writing), by improving communication and reducing any uncertainty in terms of service provision, may achieve an earlier and more seamless transition from the hospital to the home environment.
- To ensure that the priority needs of client and carer are met within available resources, a simple review system with agreed process/outcome indicators should be incorporated into the process of care provided by the CWTs.

Reference

1. Four month follow-up study of elderly patients discharged from acute general hospitals in the Eastern Health Board region. Dublin: Eastern Health Board; 1997.

10.5 Evaluation of the Community Ward Team Service

The Community Ward Team, also referred to as the District Care Unit (DCU), is a concept of home based multidisciplinary rehabilitation organised by the community care services in our Board's region for elderly patients. The main objectives for the care programme were to improve patient mobility, facilitate hospital discharge and to support the carer. As discussed in the previous section, the service has expanded in scope and scale since its inception in 1990.

This study was undertaken to describe the profile of patients referred to the CWT, to assess the outcome of patients accepted by the CWT and to ascertain the views of patients and doctors about the service. In a retrospective study carried out in community care area 7 during 1995-1996, the patient profile and progress while in care were

determined in 621 patients referred over three years. A sample of 55 patients discharged from the service over 9 months were followed up and interviewed in their home.

Key findings

Patients were generally referred to the CWT following discharge from hospital and the majority were elderly women, typically with a medical card. Three-quarters of all women referred lived alone.

Sixty per cent of referrals were accepted for care. While the service is intended for patients over 65 years, over 6% of referrals were for younger patients. Patients most likely to be accepted were those with a history of stroke or who were postoperative. Patients referred from GPs and geriatric physicians were also more likely to be accepted for care than those from other hospital consultants. The median length of care in the CWT was 56 days. More than 25% of patients needed extra services at home on completion of the programme and six per cent of patients went to residential or long stay from the care team, while 15% were admitted to hospital.

Patients were generally very satisfied with the quality of care provided by the CWT, especially in respect of the kindness, courtesy and skill of the staff. In over a third of patients their expectations of the CWT were surpassed. Some patients, however, wished for further input from the community based services following discharge from the CWT, especially with regard to personal care support. Overall patients were very happy to be home. Most of the carers interviewed valued the CWT highly, although some did not feel their needs were fully met.

Patients functional status using the Barthel Activity of Daily Living Index was at the level of major disability on admission to care. There was a significant improvement of function on discharge from the CWT. However, there was a small deterioration between discharge and four months later. Patients scored well on cognitive function on initial assessment but not all patients were tested.

Using the Philadelphia Geriatric Morale Score overall patient morale was found to be weakly associated with satisfaction with care, but not to functional status or to the rating of the service outcome.

GPs rated the CWT more highly than consultants, who were less familiar with the CWT and had more difficulties with referral procedures to the CWT. In contrast, both GPs and consultants expressed frustration with regard to the limited accessibility to the usual community care services for the elderly. Both GPs and consultants identified the need for the provision of more personal care rather than professional care to patients to enable them to stay at home.

Conclusions

Services providing care of older people in the community have evolved over time. Imaginative and flexible schemes such as the CWT offer a valuable service for suitable clients. Based on the findings of this study, a number of recommendations were made.

- Referral procedures to the CWT should be simplified and the criteria for admission should be flexible to and responsive to the special needs of individuals, for example, to hospital discharges. Effective and easy communication between community care staff, GPs and hospital staff is essential in this regard. The team leader, the co-ordinator of services for the elderly and the liaison public health nurse are ideally placed to foster such collaboration and co-operation through one-to-one contact.
- To encourage earlier discharge from hospital, careful planning by the hospital and community based staff in the discharge process of dependent elderly patients is important for reassuring families and carers that the required back-up will be available in the community.
- In order to facilitate discharge from the CWT, normal community care services should be enhanced.
- As resources become available to develop the CWT, priority should be given to providing a higher level of personal care services (i.e. through home care attendants), which should be integrated with the traditional statutory community care and voluntary (e.g. home help) services.
- The provision of care in a format similar to that provided by the CWT funded through private health insurance schemes may provide

a mechanism for the statutory services to focus on the needs of the more vulnerable groups, while improved general access to 'home from hospital' support should lead to shorter durations of hospital stay.

Reference

1. Fitzgerald M. Evaluation of the district care unit - a home based multidisciplinary rehabilitation service for older people. [Thesis submitted for Membership of the Faculty of Public Health Medicine of the Royal College of Physicians of Ireland]. Dublin, 1997.

10.6 The Psychiatric Outpatient Department Service

The National Health Strategy 'Shaping a Healthier Future'¹ stresses the importance of evaluation in ensuring the provision of a quality service. In line with these principles, an evaluation of the psychiatric outpatient department (OPD) service, including measurement of client and GP satisfaction, was carried out in 1996.²

A clinic from each of the community care areas with the highest and the lowest percentage of people unemployed and of socio-economic groups 5 & 6 was studied. In a third clinic in another area, the GMS status of attendees was ascertained and a costing project was undertaken. To estimate patient satisfaction, attendees were invited to complete self-administered questionnaires. The views of GPs on the service in the catchment areas were assessed by means of a postal questionnaire survey.

Key findings

Psychiatric OPD attendees were more likely to be in the 35-49 year age group, female, unemployed and entitled to GMS services. Mood (affective) disorders accounted for the largest diagnostic category of patients (43%) followed by schizophrenic illnesses (27%). The majority of clients were long term attendees. Less than 4% of patients were discharged at any one clinic. A high proportion were taking prescribed medication (90%). One third of referral letters to the OPD did not include medication details.

Consultants considered that approximately 40% of attendees required regular OPD attendance, 20% could be managed by the GP alone and the remainder managed by shared care. Potential

obstacles to the latter options included loss of free consultation and free medication for non-GMS patients and increased prescribing costs for the GP for GMS cases. It was considered that removal of these barriers would improve the overall management of the clinic.

Client satisfaction rates with OPD visits were high (approximately 90%). Satisfaction was significantly reduced if waiting time exceeded 40 minutes in one clinic and if the patient perceived that insufficient information on treatment was given. The premises and facilities in one clinic were criticised by clients. The local chemist was considered by the majority of patients to be preferable for obtaining medication rather than coming to the clinic.

Approximately 70% of GPs were of the opinion that their patients' needs were being adequately met by the OPD service. Direct access to psychology services and counselling were sought. More than 17% of GPs considered that the OPD continues to manage patients for too long and approximately 90% were in favour of shared care. Approximately 50% of GPs considered that a standardised referral form would be helpful.

Defaulters accounted for approximately 15% of appointments and many clients attended without appointments. The client scheduling process varied between the clinics. Limited statistical data are manually collected at the clinics.

Conclusions

The study highlights the many strengths and some weaknesses of the psychiatric OPD service in our Board's region.

- While shared care between GPs and psychiatrists would appear to be generally welcomed, a number of barriers were identified to this process and also to patient discharge.
- Communication between GPs and the OPD could be improved in terms of the contents of referral letters to the clinic and subsequent feedback on the clients' progress by the clinic.
- The ability to obtain medication at the local chemist would be welcomed by the majority of clients. While client satisfaction with the OPD service is generally high, it is reduced if waiting times are long or if information on

treatment is perceived to be insufficient and if the facilities in the clinic are sub-optimal.

- Should the above issues be resolved, the overall psychiatric service to clients both in the community and at the clinic level would be improved. The information systems in psychiatric OPDs should be computerised to allow for the collection of epidemiological data and the ongoing evaluation of service provision.

Reference

1. Department of Health. Shaping a healthier future. A strategy for effective healthcare in the 1990s. Dublin: Stationery Office; 1994.
2. O'Neill F. An evaluation of the Eastern Health Board psychiatric outpatient department service. Dublin: Eastern Health Board; 1997.

10.7 Smokebusters Programme

The Smokebusters programme targets second and fifth class primary school children and aims to build a strong peer group norm of non-smoking children. Features of the programme are shown in Box 10.4. In 1995/1996, the Eastern Health Board, Irish Cancer Society and Health Promotion Unit extended the Smokebusters programme to schools in disadvantaged areas in all community care areas in our Board's region on a pilot basis. As considerable effort had gone into encouraging schools to participate in the programme, it was considered that a randomised controlled trial was not feasible.

Box 10.4 Smokebusters programme

- Visits to the school by health board personnel.
- Integration of the programme into other aspects of the school curriculum, in particular artwork, creative writing and mathematics.
- Newsletter to club members.
- Symbolic rewards for commitment to the club.
- Involvement of parents through parents' day in the school.

The objectives of the programme are to increase knowledge and understanding of the health hazards of cigarettes, to encourage the promotion of non-smoking as the norm and to delay the onset of smoking. Parents are involved

from the outset to encourage support in the home environment.

A steering group was established in July 1995 with representation from the Eastern Health Board, Irish Cancer Society, Health Promotion Unit and Department of Education. A co-ordinator and part-time secretary were appointed to the project. A project officer was nominated by the director of community care in each community care area to co-ordinate activities at local level. The programme was implemented in the schools by public health nurses in co-operation with teaching staff. Pupils participating in the programme were assessed in relation to knowledge, attitudes and intended behaviour and the process was evaluated. It is encouraging to note that 82 of the 86 schools invited to participate agreed to do so.

Key findings

A simple random sample of fifth classes and second classes undergoing the programme was chosen for the evaluation. The mean age of fifth class children was 11 years and of second class children was 8 years. Eleven percent of fifth class children had smoked and 22% had had a “few puffs” whereas 4% of second class children had smoked and 9% had had a few puffs. Eighty five per cent of children came from homes where there was at least one smoker. Children’s knowledge, attitudes and smoking behaviour were assessed before the programme, one month after completion of the programme and one year later.

Children improved their knowledge of cigarettes immediately following the programme, but attitudes to cigarettes did not change in the longer term. In fact, one year after the programme, 11% of fifth class children would smoke if their friends smoked. This percentage had been 7% before the programme. Recent smoking behaviour changed significantly in fifth class children over time. One month after Smokebusters 15% were current smokers and 6% were regular smokers. One year after Smokebusters, 25% were current smokers and 11 % were regular smokers.

To evaluate the process of the programme, a self-administered questionnaire was distributed for completion to project officers, public health nurses, superintendent public health nurses,

directors of community care and a sample of teachers. An evaluation interview was held with the project co-ordinator. In addition meetings were held with project officers, public health nurses, teachers and superintendent public health nurses to discuss the operation of the programme.

Overall there was a positive response to the programme. Public health nurses and teachers were enthusiastic and agreed that the basic principle of Smokebusters i.e. belonging to a club, was attractive to the children. Public health nurses found the development of their skills and the improved knowledge of families in the community beneficial. Teachers commented on the positive response to parents’ days. Project officers, while retaining some scepticism about the effectiveness of the programme, acknowledged the enthusiasm of public health nurses and teachers. Superintendent public health nurses also considered it worthwhile for the public health nurses to be involved in the programme while expressing concern over the resource implications. While there was no clear consensus on the optimum timing of the programme in schools, on balance it appeared that the first term was more suitable than later in the school year.¹⁻³

Conclusions

- This evaluation showed a sustained increase in knowledge among primary school aged children, but no lasting change in attitudes towards cigarette smoking. In addition it found that the percentage of fifth class children smoking after one year was considerably higher. The increases in regular smoking from 5% at baseline to 11% after one year and current smoking from 15% at baseline to 25% after one year, need to be interpreted with caution as smoking behaviour may change substantially over this time period, independently of Smokebusters. However these figures must be viewed as disappointing. Smokebusters on its own has not been successful as a primary prevention programme.
- The baseline socio-demographic data revealed a very high prevalence of smoking in the family environment. Any programme, therefore, that is implemented in this socially

disadvantaged group has a major obstacle to overcome if it is to counter this powerful environmental influence on smoking. School based primary prevention programmes should be run in conjunction with focused community and environmental interventions, in order to maximise the benefit achievable.

- The influence of peer pressure in these children was shown to increase as they moved from fifth to sixth class, with the percentage of children who would be influenced by their peers almost doubling over a one year time period. During this time, smoking behaviour also changed significantly. This clearly indicates that this is a critical time period and emphasises the importance of targeting these interventions to primary school aged children.
- The evaluation showed that it is appropriate to target primary prevention programmes to primary school aged children, although working in isolation from other community and environmental interventions will limit the potential success of any single intervention. It also highlighted the importance of having accurate trend data on smoking in young children as this is constantly changing.
- The outcomes from this study highlight the need for the evaluation of innovative health education programmes, so that any effective elements can be identified and that ineffective programmes or programmes of unknown effectiveness are not introduced on a wider scale. The steering group is considering how best to develop the Smokebusters programme so as to improve its effectiveness. The findings of the surveys of pupils provide valuable information to the Group in carrying out its review.

References

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2. Shelley E. Smokebusters survey 1996-1997. Dublin: Eastern Health Board; 1998.
3. Hynes M, Igoe D. Smokebusters – process evaluation. Dublin: Eastern Health Board; 1997

10.8 Rotunda Stop Smoking Programme

The adverse effects of smoking in pregnancy have been well described and include an increased risk of low birth weight, perinatal death, spontaneous abortion, placenta praevia,

abruptio placentae, bleeding in pregnancy, premature rupture of membranes and premature delivery. Recent studies have confirmed an increased risk of sudden infant death syndrome associated with maternal smoking in pregnancy.¹⁻⁹ Smoking in pregnancy has also been shown to have long term adverse consequences in terms of physical growth, intellectual and emotional development and behaviour.¹⁰⁻¹³ For most of these effects, a dose response relationship has been demonstrated.

Children who are exposed to parental smoking in the home are at increased risk of respiratory tract infection, asthma, “glue ear” and hospital admission.^{1, 14-17} There is now evidence of increased risk of sudden infant death syndrome due to household exposure to tobacco smoke.⁸

Box 10.5 Rotunda Stop Smoking Programme

Objectives

- Develop a programme to encourage and support women to stop smoking in pregnancy and to maintain smoking abstinence after delivery.
- Evaluate the effectiveness of the programme by measuring smoking cessation or dose reduction in pregnancy, continued abstinence post-partum and pregnancy outcome.
- Assess the feasibility of incorporating a stop smoking programme into ante-natal care at a hospital.

Methods

- Randomised controlled trial in the Rotunda Hospital.
- Target population of smokers attending the public ante-natal clinic in the hospital for a first visit during a three month period September to December 1995.
- Women randomly allocated into intervention and control groups.
- Interviewer administered questionnaire completed for each participant at the first visit, immediately post-partum and at three months post-partum.
- Key worker was a midwife in the hospital whose full time role was to assist the development of the programme and to take responsibility for its implementation.

Smoking in pregnancy is, therefore, an issue of particular public health concern. The aim of the Rotunda Stop Smoking Programme was to encourage pregnant women to stop smoking.¹⁸ The study objectives and methods are shown in Box 10.5.

The intervention consisted of structured one-to-one counselling by the key worker, the use of an

information pack specifically designed for this programme, the use of a carbon monoxide monitor, involvement of partners and stop smoking support groups. The information pack consisted of a wallet containing an information leaflet about smoking in pregnancy, a self-help manual and a letter to the partner. It was developed by the project co-ordinator and the key worker following focus group work and was also based on the findings of previous work carried out in the hospital by the project co-ordinator.¹⁹ It was designed for a low reading age.

Key findings

Of the 967 women attending the clinic during the study period, 54% were smokers. The target population was generally socially disadvantaged (71% social class 4-6). There was a high participation rate (81%) among those who were eligible and also a high completion rate (88%). There was considerable “mobility” between the smoking and non-smoking groups, so that those who had given up at one stage were often smokers at another.

While more people stopped smoking in the intervention group than the control group immediately post-partum and at three months post-partum, the number was small and this difference was not statistically significant. The intervention group also had made more attempts to quit than the control group (38% versus 27% during pregnancy, 17% versus 10% since delivery).

There was a significantly greater daily dose reduction in the intervention group, both immediately post-partum (reduction of 3.3 versus 0.8 cigarettes, $p=0.004$) and at three months post-partum (reduction of 1.4 versus increase of 0.3 cigarettes, $p=0.05$).

In terms of infant outcome, there was no statistically significant difference between the intervention group and the control group in type of delivery, mean gestation, incidence of prematurity, mean birth weight, incidence of low birth weight or admission to the neonatal intensive care unit.

The majority of women in the intervention group reported that the programme was useful and recommended that it be continued. The materials which were developed for the programme were rated well by the participating women. Use of the

carbon monoxide monitor was not found to be helpful.

As one of the objectives of the study was to assess the feasibility of running such a smoking cessation programme, the observations and experiences of the key worker were recorded in detail with a view to assisting in the development of future programmes.

Conclusions

- The very high rate of smoking and the low rate of stopping found in the target population is of concern. The results of this study highlight the difficulties in reducing smoking rates and the importance of thorough evaluation of innovative health promotion programmes.
- While the intervention in this pilot programme did not lead to a significant degree of smoking cessation (at least in the short term), a reduction in the number of cigarettes smoked was achieved. The experience gained in the study will be valuable in determining the content and evaluation of similar programmes in the future. The randomised controlled trial, as used in this study, can provide the most compelling evidence of effectiveness, while the qualitative evaluation provided invaluable insight into the practical difficulties in developing a smoking cessation programme.
- Other approaches to achieving smoking cessation or reduction should be developed and evaluated on a pilot basis. Examples include an educational video on smoking in pregnancy for use within ante-natal classes and parentcraft rooms, training in smoking cessation counselling for midwives and obstetricians, smoking cessation counselling incorporated into routine practice ante-natally and an introductory health education class offered to all women prior to attending hospital for ante-natal care. Smoking history should be recorded at all ante-natal visits in order to provide baseline data. The materials developed for the programme should be made available to other hospitals and their use should be evaluated.

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Project team - Funding for the project was provided by Europe Against Cancer, the Health Promotion Unit, Department of Health and the Eastern Health Board. The work was supported and facilitated by the Rotunda Hospital. Project Co-ordinator: Dr. Lelia Thornton; Key worker - Ms Carol Gogan, Staff Midwife; Medical advisor - Dr. Peter McKenna, Master, Rotunda Hospital.

10.9 Access to Physiotherapy Services by GPs

10.9.1 Direct Access to Services in the Mater Hospital

A direct access service commenced for local GPs in the vicinity of the Mater Hospital in June 1996. The service has been funded from the Health Board proportion of indicative drug savings and its duration is for a two year period.

The objective of the evaluation was to compare the outcome for GMS patients referred to the direct access service with those referred to the existing service. The study commenced in June 1996. The outcome measures were whether or not physiotherapy was obtained, waiting time for the service, medication, patient satisfaction and duration of symptoms. Half of the practices in the vicinity of the Mater Hospital were assigned to receive the service for a four month period. A crossover then took place whereupon the remaining half received the service.

Had the direct access service not been available, 72% of cases would have been referred to hospital OPD departments and a further 13% to private physiotherapists.

A process evaluation of practice-based physiotherapy is also being carried out in Clondalkin. This project commenced in June 1996 and will run for a further year. The Department of Public Health is also assisting in a patient satisfaction study which is being carried out in association with the physiotherapy department at Beaumont Hospital.

Project team – Dr. C Hayes, Department of Public Health. Dr. N O’Gorman, E Mullan, P Bryan, GP Unit. M Kilduff, D Burnell, G Quinn, Mater Hospital.

10.9.2 Direct Access to Services in Beaumont Hospital

Funding has been provided jointly by the GP Unit and by Beaumont Hospital for the provision of a direct access physiotherapy service for GPs in the vicinity of Beaumont Hospital. The Department of Public Health has been involved in assisting in a patient satisfaction study, comparing satisfaction rates of patients referred to the direct access service with those referred to the existing service. Field work for the project has been completed.

Project team –Dr. C Hayes, Department of Public Health. A Barret, D Keena, Beaumont Hospital. Dr. W Fegan, E Mullan, P Bryan, GP Unit.

10.9.3 Direct access to practice based physiotherapy at Clondalkin

A practice based physiotherapist has been funded by the GP Unit to provide physiotherapy services to three general practices for a two year period. Field work for a patient satisfaction survey has been carried out under the auspices of the Department of Public Health.

Project team Dr. C Hayes, Department of Public Health. Dr. I Keane, Dr. J McCarthy J Cowan, Clondalkin. E Mullan, GP Unit.

10.10 Counselling Services for GMS Patients in General Practice

The GP Unit has provided funding for a counselling service for GMS patients based at the Department of General Practice, Royal College of Surgeons on a pilot basis for two years. The project commenced in April 1996. Six practices had access to the service. The objective of the evaluation was to measure the benefit derived from counselling.

Patients are interviewed at their first visit to assess their expectation of the service at discharge and at 6 months post discharge. A well being questionnaire and the General Household Questionnaire version 30 are the assessment instruments used. GP satisfaction and outcome will be sought at six months post discharge. A GP satisfaction survey with the service is currently being carried out. An interim report is in preparation.

Project team – Dr. C Hayes, Department of Public Health. E Mullan, GP Unit. The work was supported and facilitated by the Department of General Practice, RCSI.

10.11 Ambulatory Blood Pressure Monitoring

Until recently ambulatory blood pressure monitoring (ABPM) has largely been carried out in specialised settings. However, with the advent of less expensive reliable devices for ambulatory measurement, the technique has become attractive for many GPs. Accordingly ambulatory blood pressure monitors were provided to nine general practices for a one year period and an assessment of their use was carried out by the Department of Public Health.¹ The principal objectives were to determine the

indications for use of ABPM in Irish general practice, resulting alterations in management, patient satisfaction with the procedure and the time taken by the GPs and nurses involved. The project was jointly conducted between the Department of Public Health and the Blood Pressure Unit at Beaumont Hospital.

Key findings

The main indications for use of ABPM were borderline or “whitecoat” hypertension (25% of cases) or intolerance or resistance to medication, an additional 25% of referrals. Medication was either started or increased in almost 2 out of 5 cases as a result of monitoring. 1 in 10 males and 1 in 5 females considered that the monitor bothered them a lot and one quarter of all patients would be unhappy to wear the monitor again at night. The time taken to fit and check the monitor was considerable, 10-60 minutes.

Conclusions

- The technique of ABPM facilitated the identification of borderline or ‘white coat’ hypertension. It did not result in reduced savings on drug costs.
- Patient acceptance of wearing the monitor especially at night was an important factor.
- Having a practice nurse was an essential feature of the success of the project because of the time involved.

Project team –Dr. C Hayes, Department of Public Health. E Mullan, GP Unit. Sr. F Mee, Prof. E O’ Brien, Blood Pressure Unit, Beaumont Hospital.

10.12 Getting Research into Practice – the *Helicobacter pylori* Eradication Therapy Study

It is well established that the major cause of peptic ulceration is infection with *Helicobacter pylori*. A short course of anti-ulcer drugs and antibiotics in combination is highly effective in eradicating the bacterial cause of the disease. In 15 studies an ulcer recurrence rate as low as 7% has been shown following successful *H. pylori* eradication.¹

To develop a method for getting research into practice (GRIP) in relation to GMS prescribing, a project team involving the Department of Public Health, gastro- enterologists, the Irish

College of General Practitioners and the GP Unit of our Board was formed.

The aim of this project, supported by a Health Research Board grant, is to evaluate a programme to implement evidence based prescribing using *Helicobacter pylori* eradication therapy (HPET) as a model and using the Irish College of General Practitioners Continuing Medical Education (CME) network as a vehicle.

In our Board's region, 150 GPs in the CME network with patients who are on long term ulcer healing medication will be randomised to an intervention or control group. Following training, prescribing of HPET will be compared between the intervention and control group. Outcome measures will include the proportion of patients with peptic ulcer disease who receive HPET in the intervention and control groups during the study period and the number of prescriptions per patient for ulcer healing medication during the year following the initiative in the intervention as compared to the control group. Results of the study will not become available until 1999.

Reference

1. Penston JH. *Helicobacter pylori* eradication – understandable caution but no excuse for inertia. *Alimentary Pharmacology and Therapeutics*, 1994; 8:369-389.

Project team – Dr. Z Johnson, Dr. B Mc Donnell, Dr. C Hayes, Dr. H Johnson, D Doyle, Department of Public Health. Dr. M Boland, Irish College of General Practitioners. Dr. A Culhane, General Practice Unit. Dr. F Murray, Beaumont Hospital. Prof. C O'Morain, Meath Hospital.

10.13 Physical and Sensory Disability Needs Assessment

It is recognised that services for people with physical and sensory disabilities are underdeveloped.¹ Expansion of services for people with disabilities should be focused on improvements in health status and quality of life and priorities for development should be based on identification of local need.

In 1996, in order to identify a preliminary set of priority services for 1997 prior to carrying out a needs assessment, consultation took place with directors of community care (DCCs) and relevant voluntary organisations.²

Consultation with directors of community care

The DCCs were initially consulted to develop a co-ordinated assessment across all community care areas of priority needs for people with physical and sensory disability. A form was drawn up listing priority areas for development of services and each DCC was requested to indicate under which heading they perceived the most immediate needs. The priority headings chosen were based on submissions previously prepared by the DCCs. DCCs were asked to rank each heading as a priority 1, 2 or 3. They were also given the opportunity to make comments and to add headings that were not already included. The responses were intended to reflect not just their personal views but also those of their local staff, to be obtained through a local consultation process. The results are shown in Box 10.6.

Box 10.6 *Priority needs - the views of DCCs and area teams.*

- **Occupational therapy.** All areas.
- **Physiotherapy.** Most areas (influenced by availability of private physiotherapy and services provided by voluntary organisations).
- **Speech and language therapy.** Most areas, especially for adults.
- **Day centres.** Need for new centre in one area, others indicated that extra places or improved facilities were required in existing centres.
- **Aids and appliances.** Increased budget a priority in most areas.
- **Home help, home nursing and twilight services.** Most areas indicated a priority need under one or more of these headings.
- **Counselling services and carer support services.** Not seen as an immediate priority, although value of service recognised.
- **Long stay residential.** Further evaluation recommended.
- **Residential respite services.** Further evaluation recommended.

Consultation with voluntary organisations

A database of relevant voluntary organisations was set up. A letter was sent to all 47 organisations on the list asking for comment on the priorities identified by the DCCs and to outline any additional areas seen as priorities for development in the coming year. Responses

were received from 19 organisations. While most agreed with the views of the DCCs in principle, some ranked them according to the functions and priorities of their own organisation. Additional recommendations were also made (Box 10.7).

Box 10.7 *Additional priority developments – views of voluntary organisations.*

- Housing and independent living
- Special needs of those with sensory disability
- Services for those with multiple physical and sensory disabilities
- Research
- Provision of classroom aides
- School transport safety system including appropriately equipped buses
- Escorts for all school bus routes
- Establishment of a rehabilitation engineering service
- Supported and sheltered employment opportunities
- Better placement service for adults
- Home-based respite care for children
- Carer support services

Conclusions

- While the above study identified many community-based services that are considered

to require development, further information is required for drawing up a three year programme for the detailed development of services for physical and sensory disability in our Board's region.

- In order to obtain the necessary information, a database of physical and sensory disability was developed in 1997. Subsequently, a detailed needs assessment will be carried out which will include: a survey of a sample of clients and carers and a detailed review and description of current services within the region.

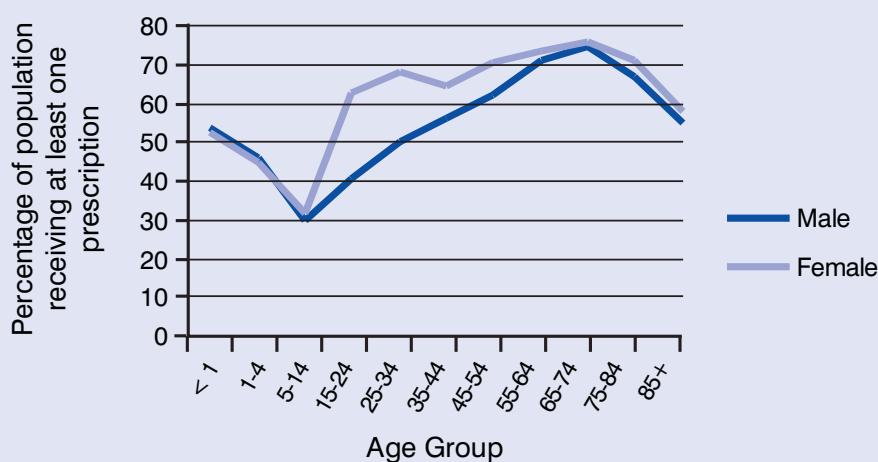
References

1. Department of Equality and Law Reform. Commission on the Status of People with Disabilities: A strategy for equality. Dublin: Department of Health; 1996.
2. Department of Health. Towards an Independent Future. Review Group report on health and personal social services for people with physical and sensory disabilities. Dublin: Department of Health; 1996.

10.14 Prescribing in the Eastern Health Board Region

The Eastern Health Board analyses drug prescribing data for persons covered by the General Medical Services (GMS) scheme. Figure 10.2 shows age-sex specific prescribing rates for all drugs in our Board's region. The rates of prescribing are higher among females except in the very young. Fifty six percent of all persons (60% of females, 50% of males) covered by the GMS in our Board's region received at least one prescription during the period.

Figure 10.2. *Age specific prescribing rates for all medications among GMS patients, 4th quarter 1997, Eastern Health Board. Source: GMS.*



Prescribing costs

Table 10.1 shows that the cost per patient covered by the GMS scheme in our Board's region was lower, although the average cost per item was higher, than the national rate. This is explained by the fact that the average number of items prescribed per person is lower in our Board's region than nationally i.e. volume of prescribing has the largest influence on prescribing costs.

Table 10.1 Comparison of prescribing costs between Eastern Health Board and Ireland, 2nd quarter 1996. Source: GMS.

	<i>EHB</i>	<i>National</i>
Average cost per item	£8.56	£8.45
Average cost per person	£30.50	£32.61
Average no. of items per person	3.6	3.7

In the 2nd quarter of 1996, 13% of all prescribing costs in our Board's region could be attributed to generic rather than branded drugs. The percentage was highest for antibiotics and musculoskeletal drugs at approximately 30%.

Table 10.2 Annual expenditure on limited value drugs, 2nd quarter 1996, Eastern Health Board. Source: GMS.

Slimming tablet	£28,000
Peripheral vasodilators	£228,000
Anti-diarrhoeals	£104,000
Carbocysteine	£208,000
Total	£568,000

In Britain, over 40% of prescriptions were written generically in 1992. While the proportion of drugs prescribed generically in our Board's region has increased from around 10% in 1990 to over 20% in 1995, there is considerable scope for further savings.

Drugs of limited clinical value

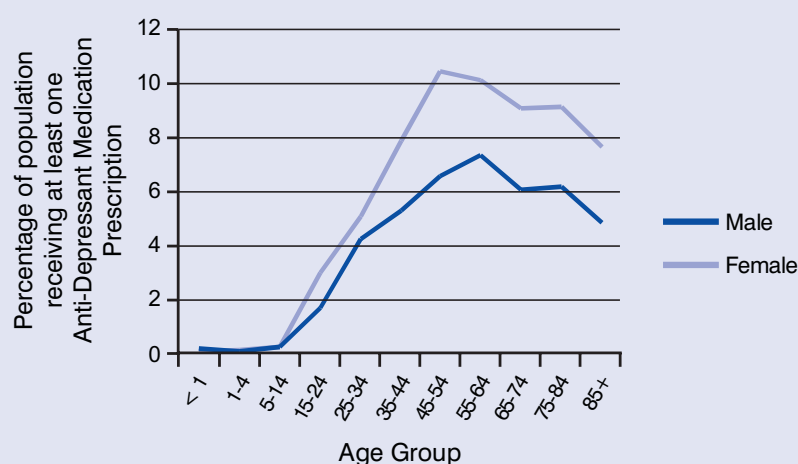
The Audit Commission report on rational prescribing in general practice in the United Kingdom has recommended that considerable savings can be achieved without compromising on prescribing quality through a reduction in the prescription of drugs which are considered to have little or no lasting therapeutic value for the vast majority of patients.¹

Examples of these drugs are anti-diarrhoeal agents, peripheral vasodilators, slimming tablets and cough suppressants. Over half a million pounds per year are spent on drugs of this type in our Board's region for GMS patients. Clearly, there is potential for considerable savings in this area (see Table 10.2).

Prescribing for asthma

Rational prescribing is not always the cheapest option. Inhaled corticosteroids are recommended to reduce the severity and frequency of asthma attacks. However these drugs are substantially more expensive than inhaled bronchodilators. The ratio of inhaled steroids to inhaled bronchodilators has been suggested as an indicator of prescribing quality in

Figure 10.3. Age specific prescribing rates for anti-depressants among GMS patients, 4th quarter 1997, Eastern Health Board. Source: GMS.



asthma. The ratio ranged from zero for some GPs to over 2 for others, the median being 0.56.

Although there is no quoted optimal figure, the Audit Commission in the United Kingdom suggests the need for regular prescribing audit if the ratio is less than 0.25.¹

GPs should be given information on their inhaled steroid/bronchodilator ratio and encouraged to use more preventive medication.

Treatment of depression

It has been shown that depression may not be adequately recognised and hence undertreated in general practice.

Figure 10.3 shows that a higher proportion of women receive treatment for depression than males. For females, the proportion of the GMS population treated for depression during the second quarter of 1996 was 5.1% versus 2.9% for males.

Analysis of antidepressant prescribing patterns of individual GPs shows that a substantial number of GPs in our Board's region prescribe at less than half of the average rate.

These data should help raise awareness of potential under-recognition or over-treatment of depression in some general practices.

Reference

1. Audit Commission. A prescription for improvement: towards more rational prescribing in general practice. London: Audit Commission, 1994.

10.15 Initiative to Increase Generic Prescribing

Indicative drug budgeting was introduced to Irish general practice in 1993. Ireland has a low rate of generic prescribing compared to Britain. To help GPs stay within their drug targets, an initiative to increase generic prescribing was undertaken. The objective of this study was to evaluate the effectiveness of this intervention.

A geographical area containing approximately 100 GPs was selected for intervention and a similar number of GPs were selected from a control area. A range of commonly prescribed drugs for which generic alternatives were

available was targeted including antibiotics, non-steroidal anti-inflammatory drugs (NSAIDs), cardiac, psychotropic, gastro-intestinal and anti-asthma drugs. Intervention included a visit from a GP prescribing advisor, simple documentation on generic prescribing and liaison with pharmacists. Outcome measures used included change in the percentage of items prescribed generically between 1995 and 1996 and the percentage cost over a three month period. This information was obtained from routine General Medical Service prescription claims.¹

Key findings

There was a 4% increase in the proportion of items prescribed and 4% increase in the proportion of expenditure on generic items in the intervention area. The mean percentage increase in the proportion of items prescribed generically per GP in the intervention group was 5% compared to 2% in the controls ($p=0.06$). The mean percentage increase in the proportion of cost which was generic per GP in the intervention group was 4% compared to 1% in controls ($p=0.04$). The mean percentage increase in the proportion of cost which was generic was highly significant for salbutamol ($p=0.006$) and lactose ($p=0.0003$). Expenditure on generic medications increased by £27,000 in the intervention group compared to £6,200 in the controls.¹

Conclusions

- The intervention was successful for 17 of the 26 drugs examined especially for NSAIDs and anti-asthma drugs. It is now being extended to other areas of the Eastern Health Board.
- The combination of a simple focused intervention using face to face contact with GPs and collaboration with pharmacists and the ability to monitor the outcome using routine data makes this an attractive approach which may be applicable to other areas of prescribing.

Reference

1. Hayes C, Johnson Z, O'Doherty K. Evaluation of a generic prescribing initiative in the Eastern Health Board. Dublin: Eastern Health Board; 1997.

Chapter 11: Information Systems

11.1 EUROCAT Register of Congenital Malformations

The Dublin EUROCAT register is a population-based register of congenital anomalies that was set up in 1979 by the Medico-Social Research Board. The register is one of a network of approximately 30 European registries which use a standard approach to data collection and analysis. The Dublin register has been run by the Eastern Health Board since 1989. The objectives of EUROCAT are shown in Box 11.1.

Box 11.1 Objectives of EUROCAT

- Provide baseline epidemiological information on congenital anomalies in the Eastern Health Board region.
- Detect and investigate trends in the frequency of congenital anomalies.
- Evaluate the effectiveness and efficiency of health services (primary prevention and treatment).
- Provide a well-documented database for aetiological and clinical research.
- Act as an information centre that can respond to specific needs, such as the assessment of the impact of environmental accidents or change, or the suspicion of teratogenic influences from food, drugs or other exposures.

The subject population consists of all infants born to mothers resident at the time of delivery in a defined geographic area – counties Dublin, Wicklow and Kildare (approximately one third of all births in Ireland). Not only are defects noted at birth collected, such as Down syndrome and spina bifida, but so also are those appearing later e.g. congenital heart disease. Defects recorded include structural and chromosomal anomalies and inborn errors of metabolism.

Data collected includes information about the baby (birthdate, sex, birthweight, gestation, live/stillbirth, birth order, anomalies present (up to 8), syndrome present, karyotyping, post-mortem) and information about the mother

(birthdate, parity, hospital of delivery, area of residence).

Cases are ascertained by using multiple sources. These include birth notification forms, HIPE data, death certificates, pathology reports, long term illness and Domiciliary Care Allowance records, cardiology outpatient letters, admissions to the special care baby units, voluntary groups and the directors of community care.

Annual birth prevalence rates for the major anomalies are calculated and anonymised data are transmitted to the EUROCAT central registry in Brussels for comparison with other registries.

There are at present approximately 10,000 records on the Dublin EUROCAT database. Data are analysed regionally and also at the central European registry. Regional data analysis provides prevalence rates by year of birth for all and selected congenital anomalies and descriptive statistics for selected anomalies (male/female ratio, proportion stillborn, mean maternal age etc.).

A ten year survival study on patients with Down Syndrome has been carried out using data from the register. The registry has also responded to local concerns regarding increased frequencies of congenital anomalies in geographically defined areas.

The central registry produces periodic reports in which statistical analyses are outlined including total prevalence, time fluctuation, general variation in the prevalence of all and selected anomalies and regional variation in total prevalence of congenital anomalies.

11.1.1 Congenital defects – an overview

Table 11.1 shows the birth prevalence rates of selected anomalies for the period 1980-96. During this period there were 340,000 live births in our Board's region and 9,555 children were born with one or more anomalies. Thus 2.8% of

Table 11.1 Birth prevalence rates (per 10,000 births) of selected anomalies, Eastern Health Board, 1980-96.
Source: EUROCAT Register

<i>Anomaly</i>	<i>No. cases</i>	<i>Birth prevalence rate</i>
Neural tube defects	842	24.8
Congenital heart disease	1,879	55.4
Cleft lip and/or cleft palate	544	16.0
Tracheo-oesophageal atresia	119	3.5
Renal agenesis	159	4.7
Limb reduction defects	137	4.0
Anomalies of diaphragm	132	3.9
Chromosomal anomalies	840	24.8
Down syndrome	646	19.0
Cystic fibrosis	235	6.9

children were affected by one or more congenital anomalies.

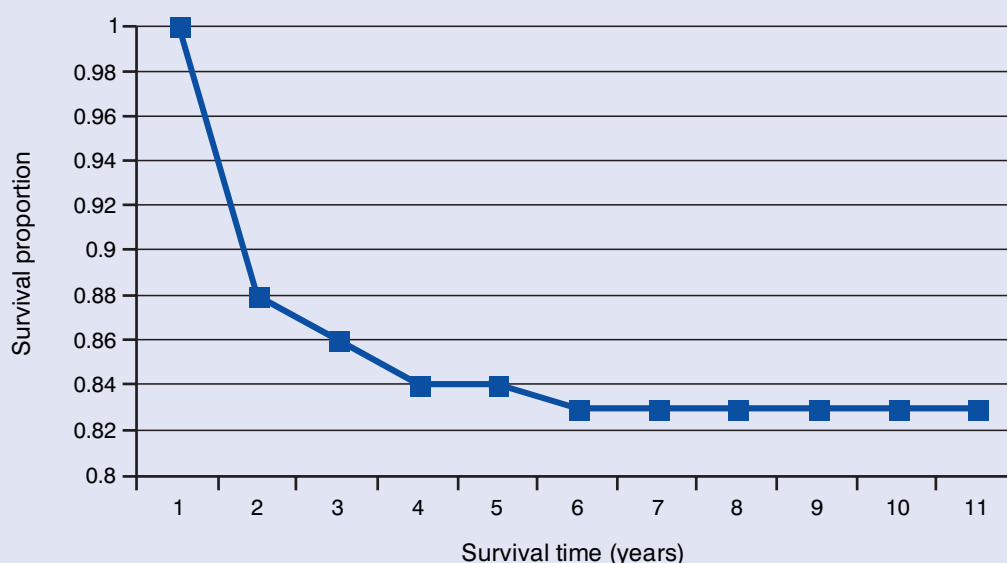
The mean age of mothers giving birth to children with congenital anomalies was 29.3. The lowest mean age was 23.2 in the case of gastroschisis and the highest was 34.4 in the case of Down syndrome. Over 50% of mothers having babies with Down syndrome were aged 35 and over. More boys were born with anomalies than girls – male-female ratio 1.2:1. The lowest male-female ratio was for anencephaly (0.5:1) and the highest was for renal agenesis (2.5:1). Sixteen percent of babies with congenital anomalies were of low birthweight compared with an average of 4.5%

for all live births. The percentage born weighing under 2.5 Kg varied from a low of 4.3% in the case of congenital dislocation of the hip to 84% in the case of Edward Syndrome. Five percent of all children with congenital anomalies were stillborn, ranging from a low of 0.1% for congenital dislocation of the hip to a high of 30% in the case of neural tube defects.

11.1.2 Survival of children with Down syndrome

A EUROCAT study of the survival of 389 children born alive with Down syndrome in the Eastern Health Board area between 1980 and

Figure 11.1 Ten year survival of children born with Down syndrome, Eastern Health Board, 1980-89.¹



1989 showed that survival was 88% at one year and 82% at 10 years (Figure 11.1).¹ Presence of a congenital heart defect reduced survival to 72%. The major causes of death among the cohort of Down syndrome children studied were congenital heart disease (47%), leukaemia (11%), septicaemia and meningitis (11%) and respiratory infection (9%).

Reference

1. Hayes C, Johnson Z, Thornton L, Fogarty J, Lyons R, O'Connor M, Delaney V, Buckley K. Ten year survival of Down syndrome births. *International Journal of Epidemiology*, 1997; 26(4): 822-829.

11.1.3 Congenital anomalies of the diaphragm

A sustained rise in the birth prevalence of congenital anomalies of the diaphragm since 1989 from approximately 3 per 10,000 to 5 per 10,000 births was detected by EUROCAT. This has been confirmed following a detailed investigation and it appears to be due to a rise in isolated anomalies of the diaphragm.¹ A case control study is currently under way in the Department of Public Health to look for possible causal factors. This will take a number of years to complete.

References

1. Iggoe D. An investigation of a sudden and sustained rise in birth prevalence of congenital anomalies of the diaphragm in the Dublin EUROCAT register [Thesis for Membership of the Faculty of Public Health Medicine of the Royal College of Physicians of Ireland]. Dublin: 1996.

11.1.4 New developments in EUROCAT

In addition to the existing EUROCAT registries in Dublin, Galway and Belfast, a number of new EUROCAT registries are being developed in Ireland. These include the Southern, South Eastern and North Eastern Health Board areas, the latter to be developed in collaboration with the Dublin registry.

11.2 Eurosurveillance

Eurosurveillance is a monthly European bulletin devoted to infectious disease surveillance and field epidemiology. It is one of several initiatives that have been implemented in keeping with the EU policy to increase exchange of information in public health and epidemiology – other initiatives include the development of surveillance networks for communicable diseases and a European training programme for

field epidemiology. The objective of Eurosurveillance is to assist in the development of a public health network through the dissemination of structured, timely and scientifically validated information on infectious disease epidemiology, control and prevention pertinent to Europe and the sharing of experience.

All member states of the EU participate in the project. Funding is provided by DG V of the European Commission. Ireland is represented on the editorial board of Eurosurveillance by an Eastern Health Board public health specialist, as editor of the Eastern Health Board ID Bulletin. The day to day operations of the bulletin are carried out by a permanent editorial team of four people, based in France and England.

Eurosurveillance has a readership of about 11,000 people involved with public health throughout the EU. The Irish readership is about 300. Access is also available electronically for readers on the internet (URL: <http://www.b3e.jussieu.fr/ceses/eurosurv>). Typical reports published in Eurosurveillance are shown in Box 11.2.

Box 11.2 Types of reports in Eurosurveillance

- Outbreak reports – usually those which illustrate the European dimension.
- “Euroroundup” e.g. surveillance of a disease throughout the EU, the epidemiology of a disease at EU level, immunisation policy and coverage in EU countries.
- Changing trends in infectious diseases, new or re-emerging diseases.
- News from European programmes, courses etc.
- Selection of current issues in the national bulletins.

Eurosurveillance has the potential to significantly contribute to surveillance and control of infectious diseases within the EU. Given the interest in the concept to date, further developments are planned. A weekly electronic European bulletin on communicable diseases was introduced in 1997 (URL: <http://www.eurosurv.org>). This will complement the monthly bulletin and will allow the rapid transmission of information to those with responsibilities in communicable disease surveillance.

11.3 Laboratory Surveillance System and the ID Bulletin

The control of communicable disease within the population is an essential task of public health medicine. To achieve this, an effective means of disease surveillance is necessary. Various data sources are used in the surveillance of communicable disease. Traditionally we have relied upon the statutory notification of cases of specified infectious diseases. However, it is recognised world-wide that statutory notification systems tend to under-report to a significant degree. The use of laboratory data in the surveillance of communicable disease has gained popularity in recent years.

11.3.1 Laboratory Surveillance System

The Laboratory Surveillance System (LSS) of the Eastern Health Board was set up in 1989 as a pilot project. Previously, there had been no systematic collection of laboratory data on infectious diseases in our Board's region. The system was initially based in North Dublin. Gradually it expanded to its present form and all major hospital laboratories in our Board's region now contribute data.

LSS is run by a steering committee consisting of health board public health doctors, hospital microbiologists and a medical officer from the Department of Health and Children. It is co-ordinated by a specialist in public health medicine who is also the editor of the ID Bulletin.

The contributing laboratories send in weekly returns to LSS of human isolates of 13 specified micro-organisms. In 1996, over 3,000 reports were received by LSS. The data are computerised, edited and analysed. Information on some diseases, e.g. meningococcal infection, tuberculosis and enteropathogens, is used for immediate action.

11.3.2 ID Bulletin

An integral part of the LSS has been the production of a quarterly ID (infectious diseases) Bulletin. This serves to provide feedback to the contributing laboratories and has been a useful source of information to microbiologists, public health doctors and other health professionals throughout the country. The target audience of

the ID Bulletin consists of the participating laboratories, microbiologists, public health doctors, GPs and paediatricians. It is also sent to environmental health officers and libraries. The content of the ID Bulletin includes standard tables of notifications, news section e.g. outbreak reports, new developments in policy or practice and occasional reviews of specific topics.

11.4 Notification of Infectious Disease System – A Review

Under the Infectious Diseases Regulations 1981,¹⁻³ a medical practitioner should notify confirmed or suspected cases of certain infectious diseases to a medical officer of health. Currently, 46 infectious diseases are notifiable. Table 11.2 shows the ten most commonly notified infectious diseases in the Eastern Health Board in 1997.

Table 11.2. *Ten most commonly * notified infectious diseases in the EHB Area in 1997.*

<i>Infection</i>	<i>No.</i>
Gastro-enteritis under 2 yrs	1249
Salmonellosis	252
Pertussis	202
Bacterial meningitis	200
Viral hepatitis	158
Measles	131
Infectious mononucleosis	113
Mumps	84
Rubella	68
Bacillary dysentery	24

*Includes laboratory notifications since September 1997.
Excludes tuberculosis & sexually transmitted diseases

A review of the statutory notifications system for infectious diseases carried out in 1995 revealed that nine out of ten medical practitioners in Dublin do not notify any cases to the health authorities.⁴ Seventy three (11%) of 670 medical practitioners in Dublin appeared as the notifying source. Two hospitals and one locum agency alone were responsible for 1672 (80%) of the 2097 notifications received in 1995.

To encourage a higher rate of notification, all practitioners in our Board's region were circulated with details of the statutorily notifiable diseases, together with an improved notification form.

Surveillance of infectious diseases using the traditional but under-used statutory notifications as the sole source of information is clearly inadequate. In a rapidly changing environment it is essential that effective systems for ongoing surveillance of all of these diseases are established as a matter of priority. Electronic reporting of infectious diseases from laboratories can provide a much more dynamic and valuable method for disease surveillance. This approach should be further developed.

The present list of notifiable diseases needs to be updated with consideration given the inclusion of diseases caused by emerging and newly recognised pathogens such as rota virus, *E-coli* 0157 and the human immunodeficiency virus. Collation of such data in a national disease surveillance unit will greatly assist in the detection and control of infectious disease, such as food poisoning.

References

1. Statutory Instruments SI No 390. Infectious diseases regulations 1981. Dublin: Stationery Office; Ireland.
2. Statutory Instruments SI No 268. Infectious diseases (Amendment) regulations 1985. Dublin: Stationery Office; Ireland.
3. Statutory Instruments SI No 384. Infectious diseases (Amendment) regulations 1996. Dublin: Stationery Office; Ireland.
4. ID Bulletin 4 (4); Oct-Dec 1996

11.5 Accident and Emergency Department Information Systems

Using hospital admission and mortality statistics, recognised patterns of accidental injury have been identified for different age groups (see Chapter 6). However, it is difficult to be precise about the true number of accidents occurring annually as most are treated by a GP, in A&E departments or at home. The routine collection of epidemiological data from health care sources other than hospital admissions, for example A&E departments and GP, would be of great assistance in both the planning and evaluation of preventive programmes.

A&E department information systems should record data shown in Box 11.3.

Box 11.3 Variables in an A&E information system

- Patient demographic factors such as age, sex, social class and occupation
- Main external cause of injury
- Diagnosis
- Place of injury
- Type of activity
- Date and time of injury
- Narrative description of injury event

11.6 General Practice Information Systems

The National Health Strategy¹ states that the Departments of Public Health in each health board will liaise closely with GPs on exchanging epidemiological data. It includes an aim to have 80% of GMS practices computerised by the end of 1998, so as to improve the sharing of information and help practice management. By March 1998, this level of computerisation had been reached in the Eastern Health Board

While usage is increasing, the extent to which computers are being used for clinical information is limited. Although many practices are using their computers for tasks such as prescribing, administration and financial management, few are recording diagnostic information. In addition to prescribing data, data on risk factors, diagnosis and investigations should be recorded and analysed for practice management to obtain the full benefits of computerisation.

In addition to input from the Department of Public Health to the Specialist Working Group on Morbidity Data, specialists in public health have had input into our Board's Computer Strategy Committee. This committee works to identify solutions to the problems of GP computerisation, improve data communications between GPs and other bodies and promote the collection and use of GP morbidity data by the Department of Public Health. The ideal dataset for epidemiology consists of four groups of data: patient demographic and risk factor data,

diagnosis and episode data, prescription data and investigation/screening data. Future GP software package accreditation should facilitate collection of this dataset and its extraction in a standard format suitable for export to Department of Public Health.

The Department of Public Health has produced coding tables for certain items such as hospitals and specialties for use in GP software packages. The Department of Public Health can use morbidity data coded using either ICPC or ICD9CM. It has been clarified with the Data Protection Commissioner that transmission of fully anonymised clinical data from GPs to the Department of Public Health is compatible with the Data Protection Act, 1988. It has also been clarified that transmission of named information relating to statutory notifiable infectious diseases is in accordance with the Data Protection Act, 1988. The patient concerned should be informed when such a notification is being made.

There are a number of developments which promise rapid benefits to the GP and patient and thus will encourage greater use of computers by GPs (see Box 11.4).

Box 11.4 *Potential uses of computerised GP data.*

- The Eastern Health Board is involved in Healthlink, a project linking GPs and individual hospitals by computer.
- Proposed future links between GPs and the GMS Payments Board will allow rapid transmission of claims.
- The Eastern Health Board Cardlink project which involves a patient-held smartcard will provide rapid access to clinical data in emergencies.
- It is hoped that the planned extension of mammography screening to the whole Eastern Health Board area will allow on-line access by GPs to the screening centres.

The Department of Public Health in the Eastern Health Board chaired the Working Group on Morbidity Data in general practice. A final report was completed in September 1997.² The report defines the ideal common data set and the data elements of this. It also makes recommendations on strategies for achieving morbidity data collection.

Anonymised epidemiological data have been obtained to date from two pilot practices. A number of other practices have agreed to provide data to the Department of Public Health. Data analyses which have been carried out to date include smoking and alcohol use, percentage of those aged over 65 who are living alone and the age specific disease rates for diseases such as asthma, hypertension and chest pain. Linking of prescribing data to disease data is the next step. The future developments and resource requirements are shown in Box 11.5.

Box 11.5 *GP Information Systems – The way forward*

- **Data entry** – If useful epidemiological data are to be obtained from a substantial number of GPs, resources will be required for entry of patient registration, risk factors and chronic disease data and also for maintaining the quality of data on an ongoing basis.
- **Training** – Basic computer training is provided by our Board's GP unit for GPs and their staff. Comprehensive and ongoing training in the use of clinical packages is essential if GPs are to obtain the full benefits of computerisation.
- **Data transmission** – A secure and rapid system for transmitting data between GPs, Departments of Public Health and hospitals is essential if the aspirations of the National Health Strategy are to be fully realised.
- **Coding** – There should be a central point from which agreed coding systems for all relevant items such as hospitals, drugs and diagnostic tests can be obtained.
- **Accreditation** – Future GP software package accreditation should facilitate collection of morbidity data and its extraction in a standard format suitable for export to Departments of Public Health. It is important that Departments of Public Health have an input into this accreditation process.

It is of concern that a number of GP software companies have ceased trading due to the very small market in Ireland. It is in the interest of GPs and health boards who partly finance GP computerisation to take steps to minimise the risk of being exposed to such an outcome.

Reference

1. Department of Health. Shaping a healthier future: A strategy for effective health care in the 1990s. Dublin: Stationery Office; 1994.
2. Specialists in Public Medicine Working Group on Morbidity Data Collection from General Practice: Report of the Specialists in Public Health Medicine Working Group on Morbidity Data Collection from General Practice. 1997.

11.7 Physical and Sensory Disability Database

An accurate estimate of the prevalence of physical and sensory disability in the community is essential for future planning and development of services for these client groups. However, there is no national or regional database regarding physical and sensory disability.¹ The statutory allowance/entitlement databases of the Eastern Health Board were examined to determine the feasibility of developing a register of disability from this source.²

Box 11.6 Sources of information on physical and sensory disability

- Disabled Person's Maintenance Allowance (DPMA)
- Domiciliary Care Allowance (DCA)
- Blind Welfare Allowance (BWA)
- Mobility Allowance (MA)
- Long-term Illness Scheme (LTI)

A computerised database was compiled of individuals under 65 years with physical or sensory disability, in receipt of an allowance/entitlement from the Eastern Health Board because of their disability (see Box 11.6). The computerised record systems for the statutory allowances were used as the source of data.

Physical and sensory disabilities were defined as all cases other than those with disease codes relating to mental illness or mental handicap.

In all, 31,521 records meeting these criteria out of a total of 41,415 (76.1%) were included. This

figure represents approximately 2.8% of the total population aged 0-64 years in our Board's region. However, as these data are allowance rather than person based, this figure is likely to be an overestimate as individuals in receipt of more than one allowance may account for 4-5% of entries.

Long-term illness data

Long-term illness (LTI) accounted for 25,863 (82%) of total allowances. LTI cards are issued to individuals in respect of certain diagnoses to provide drugs and basic medical and surgical appliances which are required for the treatment of that condition free of charge.

However, there are several limitations to using data from this source as a means of estimating the prevalence of physical and sensory disability: only a limited number of conditions are included; only patients who require treatment with drugs and/or medical and surgical appliances for the condition are covered; a substantial proportion of individuals suffering from conditions such as spina-bifida and cerebral palsy have dual mental and physical handicap and it is not possible to identify all such cases; and, the data may be incomplete as some patients with these conditions who are covered under the GMS scheme may not avail of the LTI scheme as they are already entitled to the same services. It was decided, therefore, to exclude LTI data as a source in compiling a register of disability.

Other Health Board allowances

The distribution of recipients by type of allowance other than LTI in each community care area is shown in Table 11.3. These data are

Table 11.3 Distribution of allowance recipients by community care area, Eastern Health Board, 1996

CCA	DPMA	DCA	Mobility	BWA	Total	
	No.	No.	No.	No.	No.	%
1	212	103	26	32	373	6.6
2	289	90	89	60	528	9.3
3	241	79	23	31	374	6.6
4	355	168	80	52	655	11.6
5	235	169	45	41	490	8.7
6	404	169	56	51	680	12.0
7	394	134	62	49	639	11.3
8	455	226	63	31	775	13.7
9	350	157	45	35	587	10.4
10	377	112	34	34	557	9.8
Total	3312	1407	523	416	5658	100

likely to be of use in estimating the prevalence of physical and sensory disability, as applicants have to undergo an assessment of the degree of disability to determine eligibility. There is a wide variation in the use of these allowances between community care areas.

Disabled Persons Maintenance Allowance

Disabled Persons Maintenance Allowance (DPMA) is a means tested (on personal means) allowance payable to people between the ages of 16 and 66 *“who are substantially handicapped in undertaking work of a kind which, if they were not suffering from that disability, would be suited to that person’s age, experience and qualifications”*. It is likely that uptake of this allowance is higher in areas of high unemployment where recipients may have lower financial support from other family members, few educational qualifications and employment prospects are poorer than in other areas.

Domiciliary Care Allowance

The Domiciliary Care Allowance (DCA) is payable in respect of children (2-16 years) who are disabled *“such that they require care and attention which is considerably in excess of that normally required by a child of the same age”*. DCA is not means tested but there may be a lower uptake of this allowance in more affluent areas.

There are several deficiencies in the available information which prevent it giving an accurate estimate of the prevalence of disability. The uptake of certain allowances, such as DPMA and DCA, are almost certainly skewed by socio-economic factors, with higher uptake in more deprived areas. Furthermore, disease misclassification and duplicate records of individuals in receipt of more than one allowance cannot be easily estimated from the data in their present format.

Furthermore, responsibility for DPMA assessment transferred from the health boards to the Department of Social Welfare (Department of Social, Community and Family Affairs since June 1997) in 1996. Hence, arrangements with that Department would have to be put in place to ensure that such a data source remains current. Efforts are underway to develop such liaison between our Board and the Department of Social, Community and Family Affairs.

Conclusions

An allowance database can be a useful starting point in developing a register of people with physical and sensory disability. However, it requires multidisciplinary input and commitment to verify existing records and identification of new entries. In addition the identification and removal of duplicated entries on the existing database and from multiple information sources requires much time and effort.

During 1997, existing records were verified, amended or deleted and new entries were added using information from various sources. It will now provide a useful sampling frame for the purposes of a detailed needs assessment to be carried out in 1998.

References

1. Department of Equality and Law Reform. Commission on the Status of People with Disabilities: A Strategy for Equality. Dublin: Department of Health; 1996.
2. Department of Health. Towards an Independent Future. Review Group Report on Health and Personal Social Services for People with Physical and Sensory Disabilities. Dublin: Department of Health; 1996.

11.8 Stroke Register in South Dublin

Stroke is still a major cause of mortality and morbidity in Ireland, despite a reduction in deaths in recent years. HIPE data show that there were 2,635 admissions for stroke in the Eastern Health Board region in 1996. The average length of stay was 21 days, totalling more than almost 55,000 bed-days. Most stroke patients admitted to hospital survive but are severely handicapped. Such patients usually spend a number of weeks in hospital for treatment and rehabilitation.

Based on HIPE data, it is estimated that as much as £12 million is spent on hospital care for stroke patients in the Dublin area annually. In addition, further ongoing care from the community services (e.g. physiotherapy, occupational therapy) is usually necessary after discharge from hospital. Cardiovascular disease is one of the major target areas for health gain outlined in the National Health Strategy¹ and Health Promotion Strategy.² A survey of stroke cases undertaken in a south Dublin hospital showed that a proportion of patients had preventable risk factors for stroke. These included hypertension (28% of patients were not on treatment), and atrial fibrillation (49% of patients were not on treatment).

Studies have shown that up to 38% of strokes due to hypertension and as much as 70% of strokes occurring as a complication of atrial fibrillation can be prevented with treatment. However, in some patients the pre-existing risk factor may be undiagnosed or there may be contra-indications to certain treatments, even in the presence of known risk factors.

A comprehensive stroke service is composed of many components, crossing a number of health care interfaces such as hospital and community. In order to assess if stroke services are meeting the needs of patients and to audit the effectiveness of stroke services, countries in various parts of Europe have initiated stroke registers. In the Eastern Health Board region, a stroke register project has commenced in three hospitals in south Dublin.

Conclusion

The register is modelled on the European Stroke Database³ and will provide information on the following:

- Determining the proportion of stroke patients who have identifiable preventable risk factors, both treated and untreated.
- Determining if the needs of discharged stroke patients and their carers are being adequately assessed and met in the community.
- Assessing the degree to which a seamless service is provided between hospital and community services.
- Providing an instrument to monitor the extent to which the principles of evidence based health care are being applied in the population to maximise health gain.
- The development of a stroke register will help provide the background data needed to maximise the service provided for stroke patients and their families.

Reference

1. Department of Health. Shaping a healthier future. A strategy for effective healthcare in the 1990s. Dublin: Stationery Office; 1994.
2. Department of Health. A National Health Promotion Strategy. Dublin: Stationery Office; 1995.
3. Analysis of the European Stroke Database Register – pilot project [Internal Report]. Dublin: Eastern Health Board, 1997.

Project team – Dr. B McDonnell, Dr. Z Johnson (Department of Public Health), Dr. M Crowe, M Fan (St Columcilles Hospital, Loughlinstown).

11.9 The Hospital Inpatient Enquiry Scheme

Data on hospital discharges for the Hospital Inpatient Enquiry Scheme (HIPE) is collected by most acute general public hospitals in the country. Data collation is based at the Economic and Social Research Institute (ESRI) in Dublin. The HIPE scheme achieved almost 97% coverage for hospital discharges in the Eastern Health Board area in 1996. The coding scheme used is the International Classification of Diseases (ICD-9-CM).

The system is used for planning clinical audit, health care and hospital management, Diagnosis Related Groups (DRGs), clinical and epidemiological research and for education.

There are a number of issues which limit the efficiency of HIPE use in our Board's area:

- *Absence of a unique identifier of patients:* HIPE is based on patient 'episodes'. This means that patients admitted to hospital on more than one occasion for the same condition will be counted as multiple discharges, although a unique number can be used to identify each patient within the same hospital. In addition, a patient transferred from one hospital to another for the same episode of illness is counted as two discharges. These difficulties can give rise to misinterpretation of data. A unique identification number for all patients would avoid this difficulty and allow more efficient use of data, for example, to calculate incidence and prevalence rates.
- *Absence of DED coding:* It has been shown that health behaviours and mortality can vary substantially between District Electoral Divisions (DEDs). HIPE discharges are not coded by the DED of the patient's area of residence and this limits the use of HIPE as a research tool.
- *Hospital attended:* it would be useful to have access to data on the hospital attended for each HIPE discharge. This would allow studies of patient flow between hospital catchment areas. This data, although recorded, is not available to the Department of Public Health at present.
- *Coding accuracy:* concern has been expressed about the quality of HIPE data, especially in terms of detailed diagnoses. The development

of quality assurance mechanisms would be valuable in this regard.

11.10 The Investigation of Clusters of Health Events

A cluster of health events may be defined as:

“an unusual aggregation, real or perceived, of health events that are grouped together in time and space.”

Perceived clusters of health events, such as cancer, chronic disease and birth defects, are increasingly reported to Departments of Public Health and other health agencies. In many cases, however, it is not possible to demonstrate an excess of the condition in question or to establish aetiologic linkage to a given exposure. Nevertheless, increased public concern and awareness and political lobbying requires Departments of Public Health to investigate such clusters. It is, therefore, considered important that a protocol is in place for the investigation of perceived clusters of health events in the Eastern Health Board region.

11.10.1 Procedure for the investigation of clusters of health events

The steps in the investigation represent a series of stages through which the examination of a reported cluster of adverse health events should be taken. Each investigation may proceed to a different stage, depending on the circumstances. Nevertheless, the person who is making the initial allegation should be told at the outset that he/she will be furnished with a report of the investigation regardless of what stage the investigation is carried to.

In the first instance, communication takes place so that the fears of those involved can be addressed and so that the perception by the community of the risk involved is clearly understood. The person making the allegation is asked to convey their questions and concerns, together with all available details about the cluster, in writing.

Only where appropriate, does the investigation proceed to the next stage. This involves a response team of public health doctors, including representation from the community care area involved, which is convened to conduct the investigation. Once an investigation has

commenced an arrangement is made to meet with the person who has reported the cluster to discuss the time periods, geographical areas and possible explanations for the reported cluster.

Once the person reporting the cluster supplies information about the individual cases in the perceived cluster, further details may be sought directly from these people, assuming that they have given their consent for their details to be passed on to the investigating team. Other cases may also be sought from local GPs so that potentially involved cases are not inadvertently excluded. Following the collection of this basic data, some simple statistics about mortality and disease incidence are calculated and compared to baseline data.

If these initial statistics suggest that there is a true increase in disease incidence, it will be necessary to explore the details about each of the cases in order to establish exact diagnoses. This will include the examination of laboratory, radiological and pathological reports. If this process of investigation reveals that the cases may be part of a cluster, but no likely cause is evident, a detailed case study may have to be set up. If, however, a cause is apparent, a case-control study may have to be set up.

Investigations of this type are very dependent on the identification of individuals by name and ready access to a range of health data concerning such individuals. Without such information, there is often little that can be done in these instances. Such information is often very difficult to obtain.

Potential for Health and Social Gain

- Surveillance systems that provide baseline and ongoing data on both health events and environmental agents are necessary for the effective and efficient investigation of clusters of adverse health events. Some sources of information for such surveillance systems are outlined in Box 11.7.
- In order to enhance the ability of the Eastern Health Board to investigate clusters of health events, further technical developments are required. It is necessary to be able to link health events that are part of a reported cluster to the geographical area that is potentially affected. This can only be achieved by means of coding of health data to the level of the

Box 11.7 *Some examples of data sources for the investigation of clusters of health events***A. Health Data**

- | | |
|-------------------|--|
| 1. Mortality | Death certificates, National Cancer Registry, HIPE |
| 2. Morbidity | Registers (e.g. EUROCAT, National Cancer Registry), HIPE, GP data, drug usage, laboratory data (e.g. genotyping) |
| 3. Ad hoc surveys | Lifestyle risk factors |

B. Environmental Data

- | | |
|---|--|
| 1. EPA database | Industrial chemicals |
| 2. Local authorities | Air, water and land quality monitoring |
| 3. Radiological Protection Institute of Ireland | Radon, other ionising radiation |

district electoral division (DED) or by the linking of geographical co-ordinates to each case in a reported cluster.

for accessing patient records would greatly enhance the ability of the Eastern Health Board to investigate clusters.

- A system of “record linkage” using an unique identifier number and also an agreed system

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