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foreword

We treasure good health. It enables us to get the most out of our lives. But what is “health”? The World Health Organisation’s view of health is “the extent to which an individual or group is able:

to satisfy needs

to realise aspirations

to change or cope with their environment

Health is a resource for everyday life, not the objective for living: it is a positive concept emphasising social and personal resources as well as physical capabilities”. What then is the profile of the health status of the population of Cork and Kerry?

Almost 1,000 people die in this area every year before they reach their 65th birthday. Of these almost 350 die of cancer, just over 200 die of heart disease, stroke and related illnesses. One hundred and sixty young people are killed in accidents. Many of these deaths could be prevented. We have major opportunities to improve people’s health.

The poorest in society are affected more than the better off by most of the major causes of death. Therefore, in improving the health of our population, a priority must be better health for those who are deprived – be it through ill health, disability, poverty, unemployment or social exclusion. Health inequalities continue to be a concern.

That tobacco use is the single most preventable cause of death and disease is incontrovertible. The health and economic burden of tobacco use can be reduced by employing proven tobacco control and prevention strategies. Policy interventions are known to offer the greatest opportunity to influence decisions regarding tobacco use at societal level. This country has taken the

lead and March 2004 saw the implementation of the ban on smoking in the workplace. This move is of immense public health importance and is the result of sustained, evidence based policy making in support of better health.

Protection of the health of our population is of paramount importance. We need to remain ever vigilant of the threats posed by infections and hazards in our environment. In recent times we have experienced the reality of Severe Acute Respiratory Syndrome (SARS), anthrax threats and bioterrorism and the likelihood of an influenza pandemic. The ease of international travel has the potential to bring these problems to our doorstep. Global travel and changing lifestyles are facilitating the emergence of new infectious diseases as well as the resurgence of older diseases. It was global travel that generated a worldwide scare on SARS. Our increasingly promiscuous society has been accompanied by an increase in sexually transmitted diseases and the evidence is compelling that intravenous drug misuse has resulted in increased levels of blood borne viruses such as HIV, Hepatitis B and C. There must be better appreciation of the impact of infectious disease and environmental threats on the individual, the population, the health service and the socio-economic impact in a changing world.

As we embark on major reform of our health services, this emphasis on the public health approach to improving the health of our population must be sustained and enhanced.

DR. ELIZABETH KEANE

Public Health Physician | Director of Public Health



SECTION A

population health

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1 Demography of the Southern Health Board

Public health assessment takes a snapshot of the health of the community. The purpose of public health assessment is to monitor health trends, identify emerging problems that require further assessment or rapid intervention, inform prioritisation for resources, and guide programme planning and policy development.

Multiple factors contribute to the individual as well as community health status. In order to build a composite picture of the health of the community, it is necessary to look at the population from a number of angles. Assessment is carried out through the analysis of the following:

- the make up of the community (i.e. its demographics such as age, race, gender and poverty rates)
- a range of important health outcomes (e.g. life expectancy, hospital admissions rates, deaths due to cancer, cardiovascular disease or injuries)
- the pattern of risk factors for illness and injury (e.g. the percentage of the population who smoke or misuse alcohol, are sedentary or overweight)

Demography

THE CENSUS

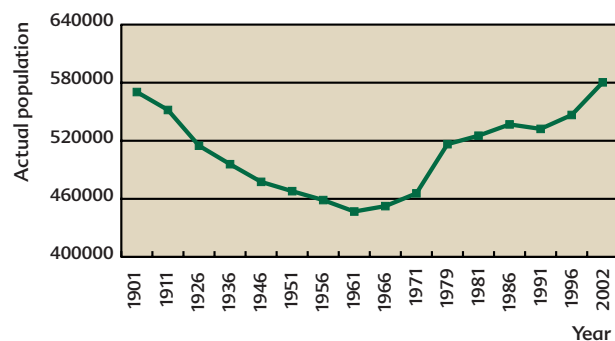
A census is conducted in Ireland every five years, or as close to that as possible. Every alternate census is deemed a mini census in which fewer variables are enumerated. The most recent full census was in 2002, the last full census prior to that was in 1991. Ten-year periods present a reasonable time for trends to emerge so in this report comparisons are made with the 1991 census where possible.

The area of the Southern Health Board region comprises Cork County, Cork City and Kerry County. Knowing how many people live in the region and the demographic characteristics of that population such as the age profile, the numbers at work, and the number of immigrants as well as the changes that have occurred over the last number of years is important information for health services planning and effective policy making to improve population health.

THE POPULATION OF CORK AND KERRY

The population of the Southern Health Board region is higher now than at any time since 1901 (Fig. 1.0). 580,356 people were enumerated in the 2002 census, which is an increase of 9% since 1991. Nationally the population increased by 11%. Fig. 1.1 shows the ages where most of the changes have been occurring.

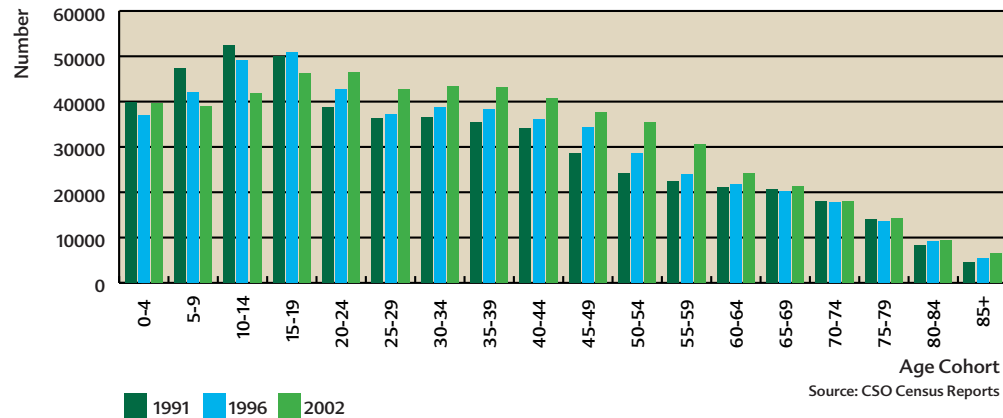
Fig 1.0
Population in the SHB region 1901-2002



Source: CSO Census 2002 Vol. 1

Our population is getting older. There are 69,391 persons aged 65 and over in the region which is 12% of our total population. The biggest change has occurred in the very old, where the numbers of persons aged 85 and over has increased by 40% since 1991.

Fig 1.1
Population in 5 year age cohorts in 1991, 1996 & 2002 in the SHB region



Persons aged 85 and over now account for 1% of our total population. Children (persons aged less than 18) account for one quarter of our population, which is a drop from almost one-third (32%) in 1991.

Comparison of the population pyramids for 1991 and 2002 (Figs. 1.11 & 1.12) reveal that the 'bulge' in the younger age groups has moved up and is now most pronounced in the age groups of those now at work.

Fig 1.11
Population Pyramid SHB 1991

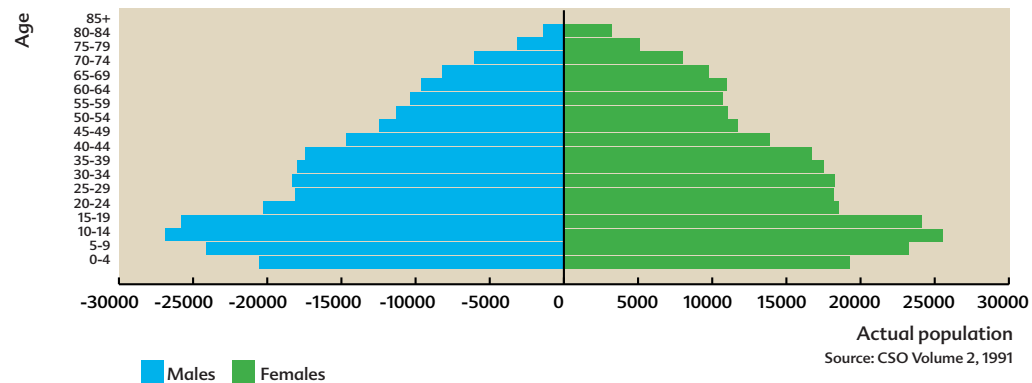


Fig 1.12
Population Pyramid SHB 2002

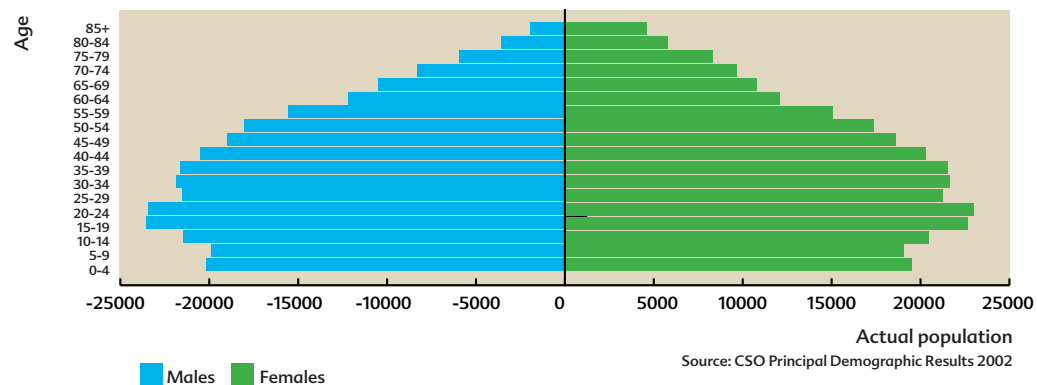
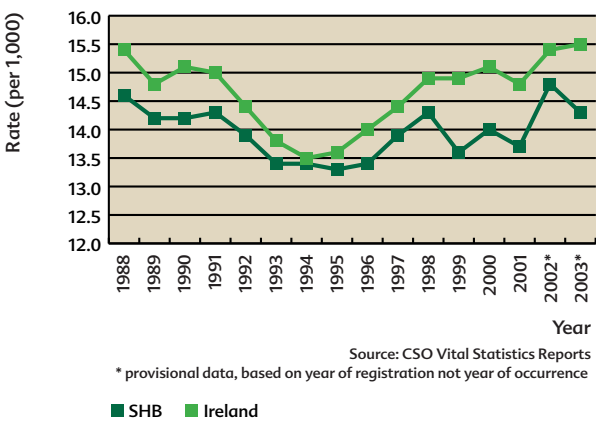


Fig 1.13
Birth rate in the SHB region & Ireland, 1988-2003*



This changing shape in our population pyramid is in keeping with the shape of the population pyramids of other developed countries such as the United Kingdom and the United States. Sweden experienced a growth in population in the mid 1980s to the mid 1990s and a subsequent decline leading to a second ‘bulge’ moving through its pyramid. This type of pattern occurred twenty years earlier in Japan. There are some indications that we may experience a similar short-term growth as the actual number of persons aged 0-4 has increased in the region since 1991 and our birth rate has increased in recent years (Fig. 1.13).

This change in our population profile has considerable implications in providing a health service. Our population is ageing which means that we will have far greater numbers of older people to care for and at the same time the proportion of our population in the younger age cohorts is decreasing rapidly. This means that we have fewer young people to look after more old people, or fewer people who are working to provide for those dependent on them. The dependency ratio is used to measure the ratio of dependent person (adults aged >64 and children aged <16) to independent persons in the community. This ratio is increasing and it is projected that by 2031 there will be 61 dependent people for every 100 people working in the SHB region. In 2002 this figures stands at 49 dependent people. The greater the ratio the greater the demand on the health services for care provision. (Fig. 1.14)

In 2002, 6,567 people were aged 85 and over. Older people are not a homogeneous group and those over 85 have very different needs to those in the 65-75 year age group. Challenges for the future will be to promote a healthy and disability-free old age while reducing the risk of loneliness and isolation despite the increasing numbers of elderly and decreasing numbers of carers.

In addition, it is of concern, that although our population is ageing, our life expectancy at 73 years for males and 78.5 years for females at birth, is the lowest of the 15 EU members (pre May 2004).

Fig 1.14
Dependency Ratios for the SHB region 1996, 2002 & 2031*

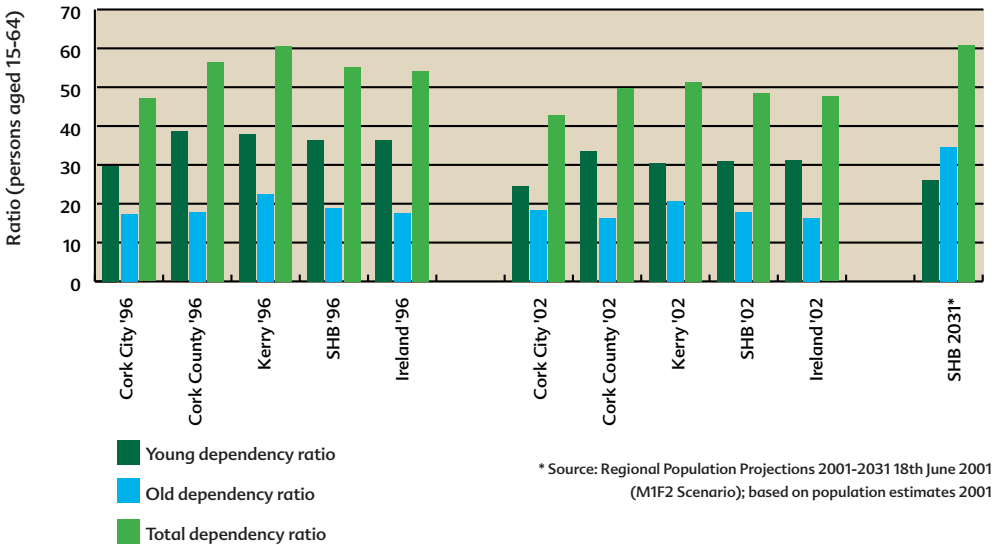


Fig. 1.15

Population density by ED in the SHB region, 2002

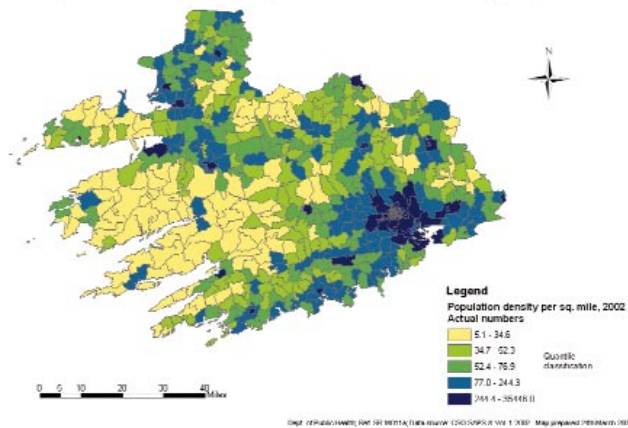


Fig. 1.15 is a map showing the distribution of the population of the SHB region in 2002.

Another feature of our changing population is the increasing number of people who have come to live in the region from other parts of the world. A small proportion (5.5%) of the population who usually live in the SHB region are non-Irish nationals, which is just slightly less than the national picture (5.8%). Over half of non-nationals resident in the Southern Health Board are from EU countries (Fig. 1.16). The figures show that just over 6,000 people, born outside of Ireland, moved into the region in the year before the census was conducted. A further 3,500 Irish born people but living abroad moved into the region in the same time period. Although it is not always possible to differentiate between those who were born in Ireland and those who were not, the trend in in-migration to the region over the last fifty years is one of a marked increase, particularly in the period since the 1996 census was conducted. Of all those who have lived outside Ireland for a year or more and who moved into the region in the last fifty years, one-third did so since 1996 (Fig. 1.17).

Fig 1.16

Non-nationals usually resident in the SHB classified by nationality, 2002

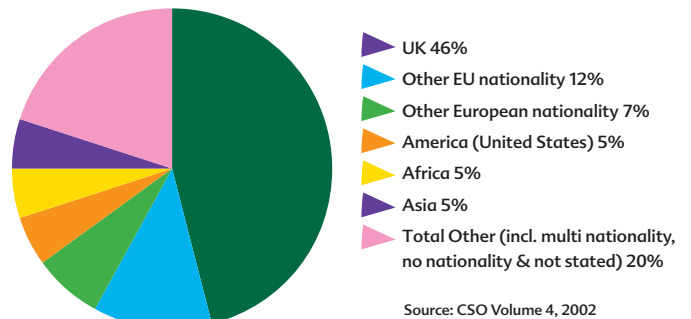
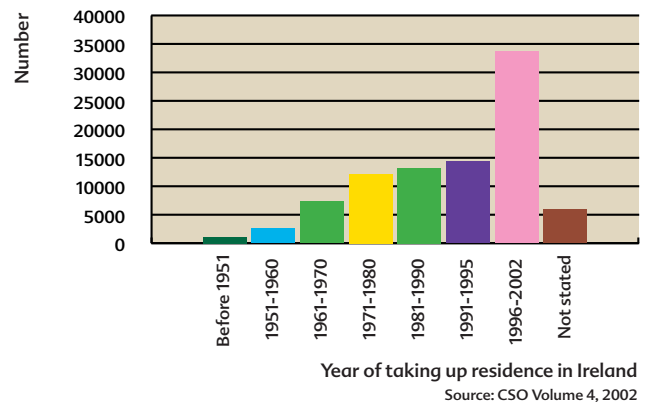


Fig 1.17

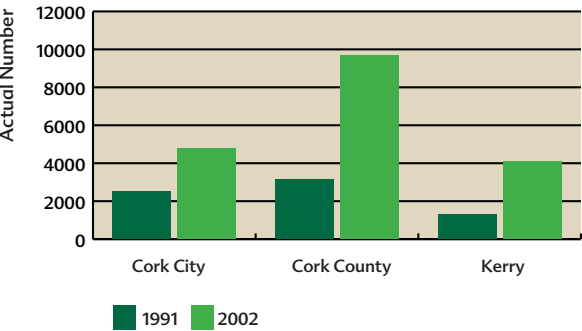
Persons aged one year and over, now usually resident in the SHB but who lived outside Ireland for one year or more classified by year of taking up residence



This movement of people must be considered in planning for health service provision. Adequate access to health service provision must be ensured and where appropriate, recognition of different cultures must be acknowledged.

Our family structures too are changing. The number of one parent families has increased, as has the incidence of marital breakdown. This puts extra pressures on family welfare services. The pattern of societal living is changing and this must be recognised when planning health care services. Since 1991, there has been an increase of 167% in the number of separated persons in the SHB region. In Cork County and Kerry County there have been increases of over 200%. These figures are higher than nationally. In 2002, there were 142% more separated persons recorded in Ireland than in 1991 (Fig. 1.18).

Fig 1.18
Persons separated*, 1991 & 2002

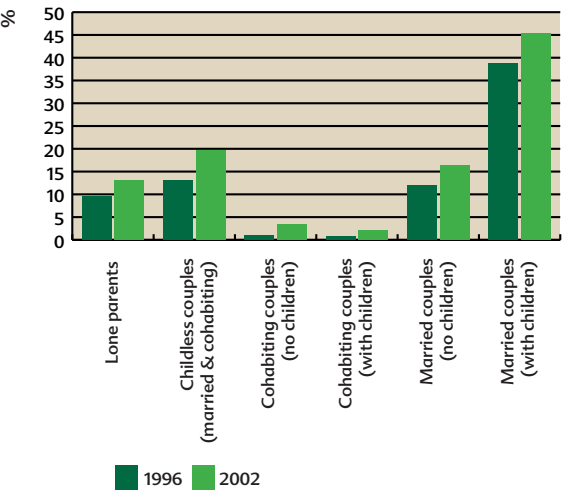


Source: CSO Volume 12, 2002
* including divorced in 2002 census

Although the largest proportion of households (45%) are comprised of married couples with children (Fig. 1.19), the number of lone parent households has risen by one-fifth since 1996 (to 13% of total households). This increase in lone parenthood arises primarily because of non-marital childbearing and marital breakdown. There is much unknown about this group, for example the role of the non-resident second parent and the degree of joint responsibility in parenting which persists in parents who live apart from each other. Also many non-marital births do not result in

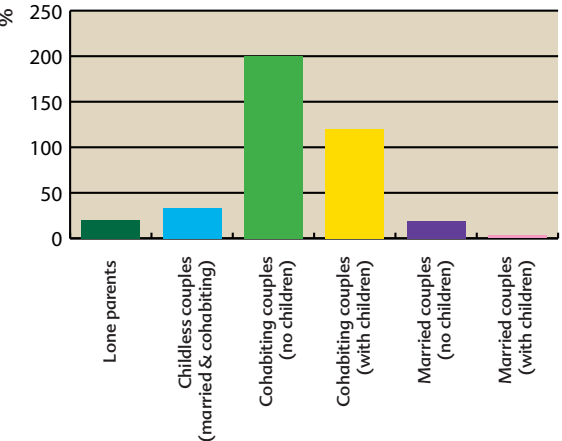
lone parenthood because of informal partnerships and post-birth marriages. The number of cohabiting couples with children has more than doubled (120%) in the same period. These households now comprise 3.5% of total households. Interestingly too, the number of couples (married and co-habiting) without children has risen by one third over the same period. Life choices are changing (Figs. 1.19 & 1.2).

Fig 1.19
Lone parents and couple with & without children: change as percentage total households 1996 & 2002



Source: Table 4. CSO Census 2002 & 1996, Volume 3

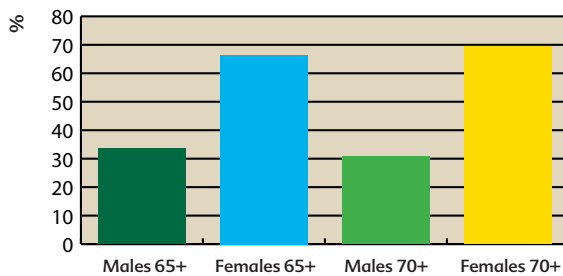
Fig 1.2
Lone parents and couples with and without children: percentage increase 1996-2002



Source: CSO Census 2002 & 1996, Volume 3

Single person households now account for 22% of all private households and of these one-tenth are persons aged 65 and over. In total, about one-third of our older population live alone. Looking at these figures more closely, more women aged 70 and over live alone than do those aged 65 and over. This has very obvious significance for our health services (Fig. 1.21).

Fig 1.21
Males and females aged 65+ and 70+ living alone as percentage total persons aged 65+ and 70+ living alone in private households in the SHB region, 2002



Source: CSO Census 2002, Volume 3

The proportion of persons living alone is the same in Cork County, Kerry County, the SHB region as a whole and Ireland for both age groups but is slightly higher in Cork City.

HOW THE POPULATION LIVES

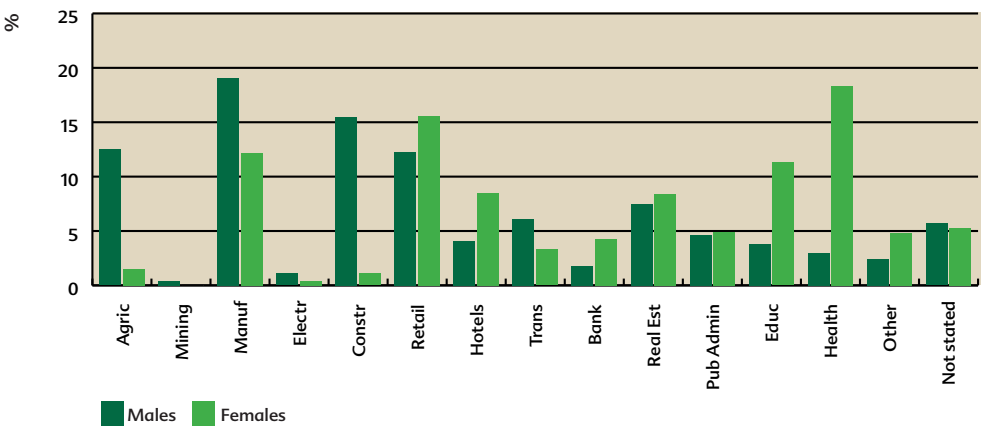
Unemployment has dropped in the period since 1996 and there has been an increase in female participation in the labour force. Over two-fifths (44%) of the population of the region are in the labour force of whom 7% (18,539) are unemployed. These figures match the national picture. Of the 236,295 persons at work in the SHB region, 40% are female. In 1996, 41% of the total population was in the labour force, 36% of those at work were female and 13% of the labour force was unemployed. The table summarises these changes.

	% in labour force	% female	% unemployed
1996	41	36	13
2002	44	40	7

Although unemployment has come down and female participation has increased as well as a considerable actual increase in the numbers at work over the 6 year period, some 8,000 additional people are unable to work due to permanent sickness or disability. This figure is currently 20,772. In 1996 it was 12,697. Even though this figure may partly be accounted for by our increase in population over the period, it does have implications for health service planning and delivery.

In 2002, 8.5% (almost 50,00 people) are disabled in the SHB region. Of these 43% are aged 65 and over. These figures are almost exactly the same as the national picture. There are currently 23,478 carers in the region, of whom 39% are males. The majority (58%) of carers work between 1 and 14 unpaid hours per week but 29% of female carers and 23% of male carers work 43 unpaid hours or more each week. This is similar to the national picture.

Fig 1.22
Percentage males & females at work in the SHB region by broad industrial group, 2002

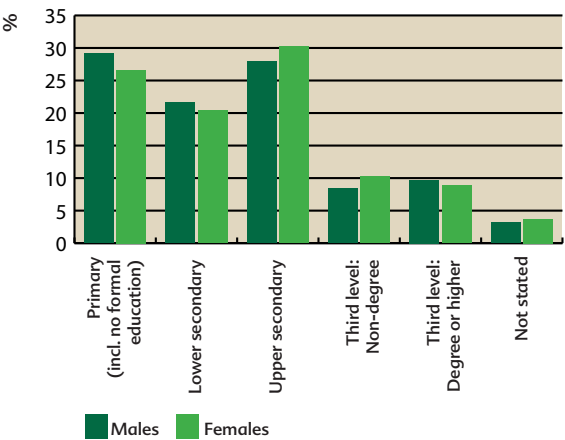


Source: CSO Census 2002, Volume 5

Fig. 1.22 shows the type of employment that our population work in. Manufacturing provides most male employment and the health services provide the greatest proportion of female employment.

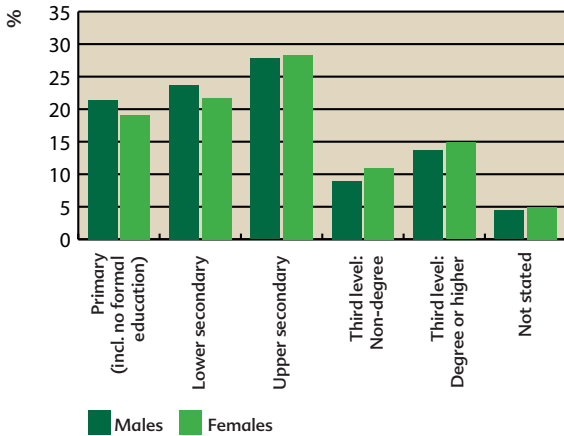
More people are staying in education longer. More females tend to stay on to complete higher levels of education than males (Fig. 1.23 & 1.24) and this is a change from 1996 when fewer people were staying on in education and fewer females than males completed degrees.

Fig 1.23
Percentage males and females who have completed their education classified by the highest level of education completed in the SHB region, 1996



Source: Census 1996 - Vol.8

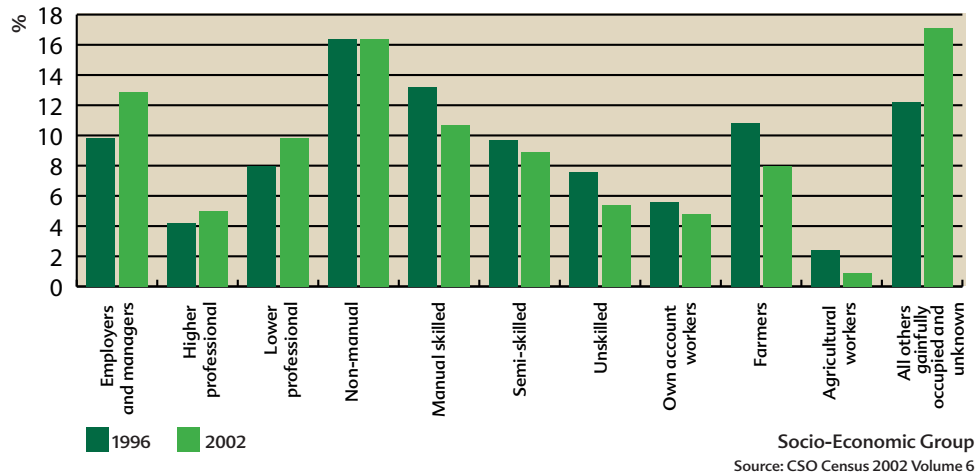
Fig 1.24
Percentage males and females who have completed their education classified by the highest level of education completed in the SHB region, 2002



Source: Census 2002 - Principal Socio-Economic Results

Fig 1.25

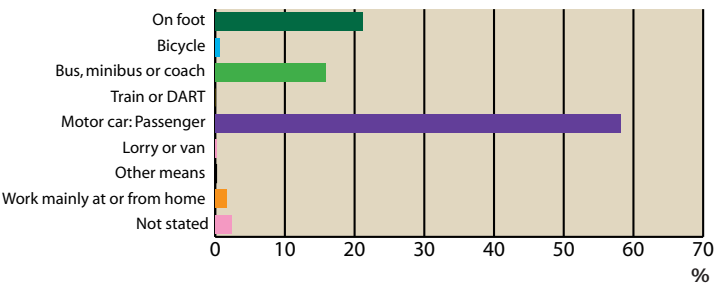
Percentage persons aged 15+ classified by SEG in the SHB region, 1996 & 2002



More people are now in the professional groups than in 1996 (Fig. 1.25). This indicates increasing employment and better standards of living for many. Improved education and standards of living lead to improved levels of health and well-being. However, these figures represent only marginal improvements overall and large numbers of our population are still disadvantaged.

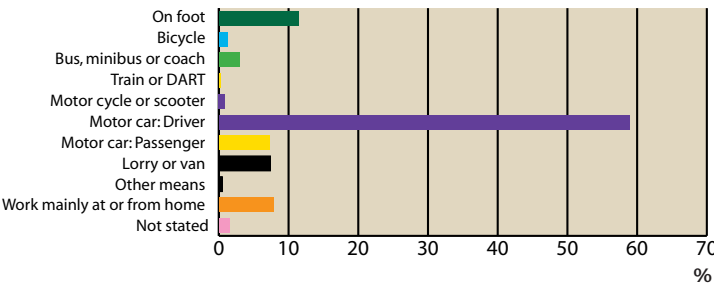
Two-fifths (41%) of households in the SHB region (44% nationally) own a computer. One-third (34% nationally) of households have Internet access. Internet access has relevance for health services information and education. In reality, the figures for those with access to the Internet is probably bigger, as those who do not own a computer may have Internet access at their local library, Internet café, etc.

Fig 1.26
Children at school aged between 5 and 12 years in the SHB, classified by means of travel to school, 2002



Source: CSO Census 2002, Volume 9

Fig 1.27
Population at work aged 15+ in the SHB, classified by means of travel to work, 2002



Source: CSO Census 2002, Volume 9

Eighty per cent of households in the SHB region have at least one car, but car ownership drops to two-thirds in Cork City. It should be noted however that car ownership is a necessity in many rural areas and not a luxury, which partly explains the lower car ownership proportion in Cork City. In addition, some of the 20% who do not own a car may have access to a car. Mode of transport depends on the distances to be travelled and the reason for travel. The census analyses three common daily journeys,

travel to school, college and work. A majority (58%) of children in the SHB region aged 5 to 12 are driven to school, 21% walk and 16% go by bus. Nationally, 50% are driven and 26% walk. Only a minority of the population travel to work by any means of public transport in the SHB region or in Ireland as a whole (Figs. 1.26 & 1.27). Walking to work is not a means by which our population gets cardiovascular exercise.

These high figures for car transport and low numbers walking point to a need for stronger health policy on transport. Walking, cycling and public transport are all forms of travel that are health promoting and protective against risk factors that are major public health problems in Ireland today. Both the short and long term beneficial effects of regular exercise have been well documented for cardiovascular disease and diabetes. It also limits obesity and the progression of osteoporosis and has important mental health benefits. In addition, these modes of transport have a substantially lower risk of accidents and, unlike cars, are environmentally sustainable.

In the future, urban transport policies will have to give the highest priority to strategies that promote walking, cycling and public transport as the main modes of transport for journeys.

CONCLUSION

The results of the 2002 census tell us a lot about our population and particularly the changing societal and socio-economic patterns. The major changes are summarised in Key Points. Change can be positive or negative but to a large extent awareness and forward planning can mitigate negative effects brought about by changes in the structure of the population.

KEY POINTS

- *Our population is increasing and getting older*
- *Our population is increasingly multi-national and we have more in-migration*
- *There are changing societal patterns and huge increases in the number of marital breakdowns*
 - *We have more lone parents now and more cohabiting parents*
 - *We also have more childless couples.*
- *More of our older people are living longer and living alone*
- *Female participation in the workforce is increasing and more people are staying on longer in education*
- *There is less unemployment*
- *There are also increases in the numbers unable to work due to permanent sickness or disability*
- *There are over 23,000 carers in the region, one-quarter of whom work more than 43 hours per week*
- *Two-fifths of households have a computer and one-third have access to the Internet in their homes*
- *Very few of us walk to work (10%) or school (20%)!*

2 The Health of Our Population

Mortality

Death (mortality) rates have an important advantage over other sources of health information: death is a dramatic and clear-cut occurrence, therefore it is unlikely to be missed and for over a century it has been required by law to be registered.

Mortality rates may be described as crude health indicators, in that they only measure concerns that are severe enough to cause death, however they are a good starting point for describing the health profile of a community. Premature death (defined as death before the age of 65 years, Table 2.0) is deemed to be a more useful indicator as many of these deaths are preventable.

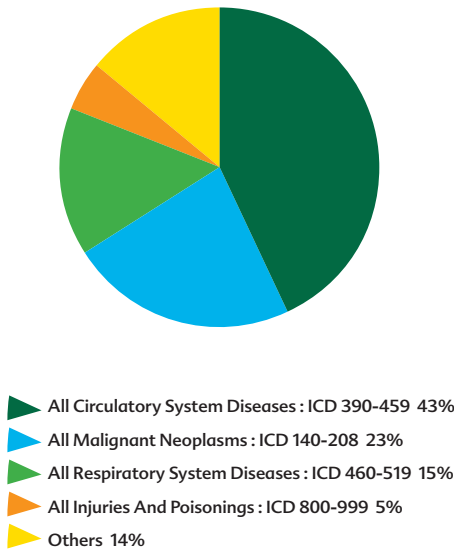
Table 2.0

SHB All Cause Mortality Summary 2002

Cause of Death	Number of Deaths (All Ages)	Number of Premature Deaths (<65 years)	Number of Deaths (65+ years)
Cardiovascular Disease	1944	217	1727
Respiratory Disease	652	52	600
Cancer	1214	343	871
Injury & Poisonings	241	158	83
Other	667	173	494
Total	4718	943	3775

Source: PHIS V7 Beta

Fig 2.0
Principal Cause of Deaths for All Ages,
1998-2002 Percentage Breakdown, SHB



Source: PHIS V7Beta

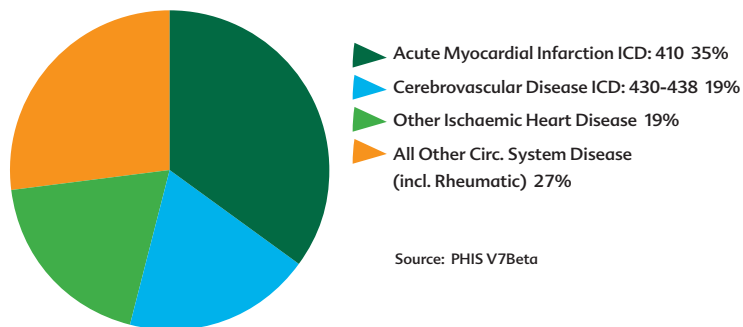
OVERALL CAUSES OF DEATH

Cardiovascular diseases continue to account for almost half of all deaths in the Southern Health Board region (Fig 2.0). Cancer is the next main cause of death, followed by respiratory diseases. This pattern is mirrored nationally and these diseases have been the dominant causes of death for the last 50 years.

CARDIOVASCULAR DISEASE

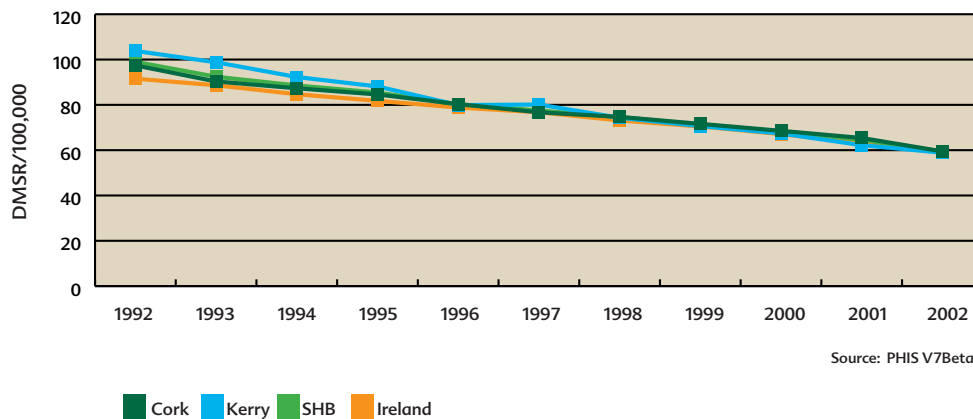
Myocardial infarction (or heart attack) remains the most common cause of cardiovascular deaths, accounting for over one third of the total. Stroke accounts for almost one- fifth of cardiovascular deaths (Fig 2.1).

Fig 2.1
Deaths from Circulatory System Disease for All Ages,
1998-2002, Percentage Breakdown, SHB



Overall the downward trend of premature deaths from cardiovascular disease is encouraging (Fig 2.11). In the last decade, premature death rates have fallen by 40%.

Fig 2.11
Trends for All Circulatory Diseases Mortality (ICD 390-459)
for Under 65 Years, 1992 - 2002 (5-year moving averages)



CANCER MORTALITY

In 2002, there were 1,214 deaths from cancer in the Southern Health Board region (Table 2.1).

On average, 25% of cancer deaths occurred in Kerry and 75% in Cork (Table 2.11) which is consistent with the population distribution.

Table 2.1. Deaths from Cancer, 2002

Site	Both Sexes		Male		Female	
	Deaths	%	Deaths	%	Deaths	%
All Cancers	1214	100	663	100	551	100
All Invasive Cancers	1205	99	660	99.5	545	99
Lung	230	19	152	23	78	14
Colorectal	160	13	97	15	63	12
Breast	96	8	-	-	96	18
Prostate	95	8	95	14	-	-
Pancreas	76	6	29	4	47	9
Stomach	44	4	29	4	15	3
Oesophagus	35	3	20	3	15	3
Leukaemia	48	4	31	5	17	3
Lymphoma	38	3	22	3	16	3
Ovary	48	4	-	-	48	9
Brain	27	2	18	3	9	2
Bladder	30	2	24	4	6	1
Multiple Myeloma	26	2	19	3	7	1
Kidney	23	2	18	3	5	1
Melanoma of Skin	17	1	7	1	10	2
Cervix	9	1	-	-	9	2

Source: PHIS V7Beta

Table 2.11. Total Cancer Deaths (All Ages) by County, 1998-2002

Site	Cork		Kerry		SHB	
	No.	%	No.	%	No.	%
All Cancers	4418	100	1477	100	5895	100
All Invasive Cancers	4394	99.5	1469	99	5863	99
Lung	797	18	257	17	1054	18
Colorectal	603	14	173	12	776	13
Breast	391	9	121	8	512	9
Prostate	311	7	108	7	419	7
Pancreas	240	5	88	6	328	6
Stomach	157	4	64	4	221	4
Oesophagus	161	4	58	4	219	4
Leukaemia	170	4	51	3	221	4
Lymphoma	169	4	56	4	225	4
Ovary	161	4	43	3	204	3
Bladder	92	2	44	3	136	2
Multiple Myeloma	106	2	36	2	142	2
Kidney	73	2	31	2	104	2
Melanoma of Skin	38	1	12	1	50	1
Cervix	44	1	16	1	60	1

Source: PHIS V7Beta

Most of these fatal cancers were invasive (malignant). Similar to the national picture, lung cancer was the most common cause of death overall (19%), it was also the most common cause of death for men (23%). Breast cancer was the most common cause of death for women (18%). Almost half (48%) of all cancer deaths were caused by lung, colorectal, breast and prostate cancer.

A significant feature of cancer mortality is that the disease accounts for more premature deaths (i.e. among adults under 65 years) than any other cause (Table 2.0). This reflects the national picture. In the SHB for 2002, cancer accounted for 36% of premature deaths, as compared with 23% of deaths in the over 65s.

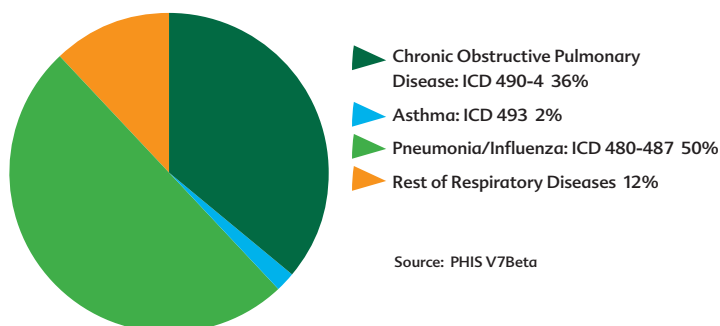
RESPIRATORY DISEASE

Infectious diseases (pneumonia and influenza) are the main causes of respiratory deaths, accounting for half of the deaths in this category (Fig 2.12).

Most of the respiratory deaths occur in the older age group (>65 years) (Table 2.0). This group are more susceptible than younger people to respiratory pathogens.

Mortality from respiratory diseases illustrates the limitations of mortality data in describing the overall health status of a population. For example asthma is a major cause of morbidity in the general population but rarely causes death.

Fig 2.12
Deaths from Respiratory System Disease for All Ages,
1998 - 2002 Percentage Breakdown, SHB



INJURIES AND POISONING

Suicide is the most common cause of death from injury and poisoning in the Southern Health Board region, similar to the pattern in Ireland as a whole (Fig 2.13).

Men are four times more likely than females to commit suicide and over twice as likely as females to die in a motor vehicle accident (Figure 2.14).

Fig 2.13
Main Mechanism of Fatal Injury for All Ages,
1998-2002 Percentage Breakdown, SHB

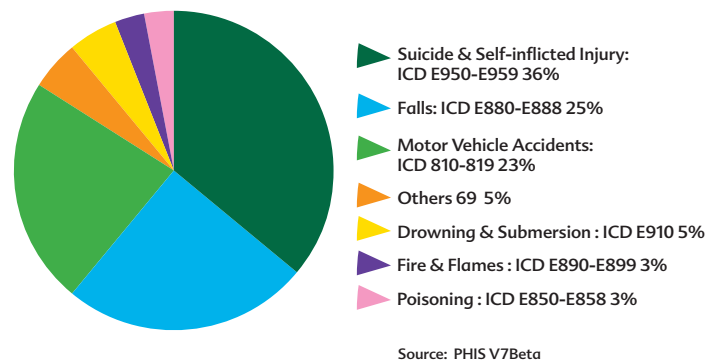
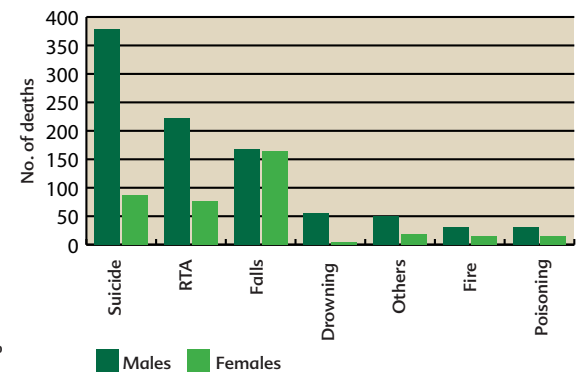
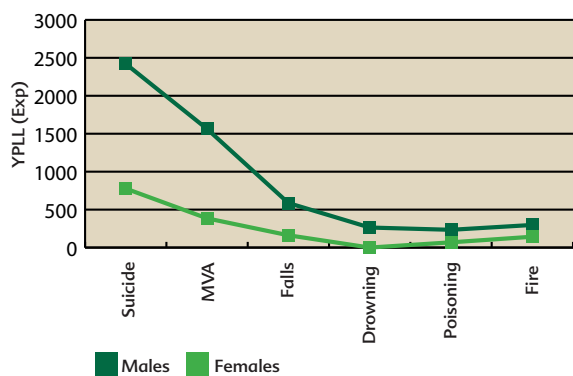


Fig 2.14
Mechanism of Fatal Injury, SHB, Number
of deaths in the most common categories,
1998-2002, Males and Females



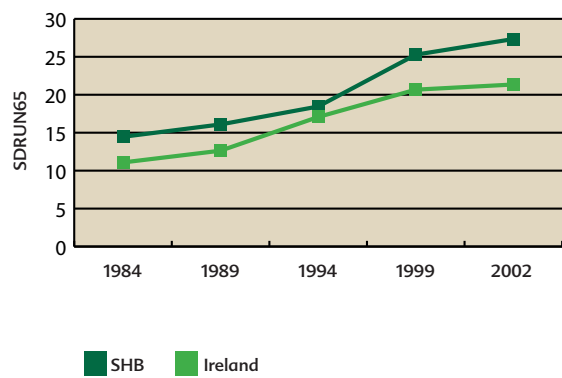
The huge impact such premature deaths have on society is best measured by the Years of Potential Life Lost (YPLL) measure (Figure 2.15). This measures the number of years lost by an individual should he/she have lived a full life span. In 2002, in men, almost 4,000 years of potential life were lost in the Southern Health Board region due to premature deaths from suicide and motor vehicle accidents.

Fig 2.15
Years of Potential Life Lost based on Life Expectancy in Males and Females as a result of Fatal Injury in the SHB, 2002



Source: PHIS V7Beta

Fig 2.16
Age Standardised Death Rates from Suicide in Males Under 65 Years, 1984 - 2002, SHB

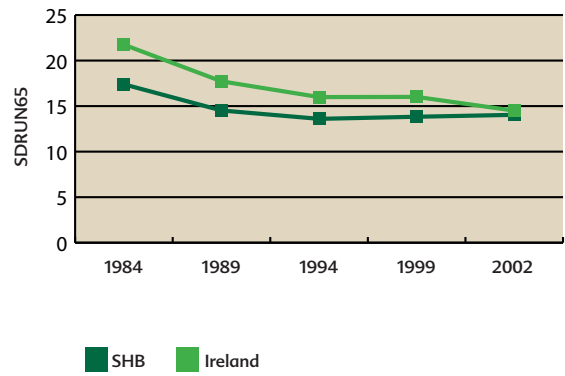


Source: PHIS V7Beta

Figure 2.16 demonstrates that the trend in suicide amongst men is rising, both regionally and nationally.

Death rates from motor vehicle accidents have stabilised in the last decade (Fig 2.17), though they still remain unacceptably high and are above than many of our European neighbours.

Fig 2.17
Age Standardised Death Rates from Motor Vehicle Accidents in Males Under 65 Years, 1984 - 2002, SHB



Source: PHIS V7Beta

Morbidity

Many of the illnesses experienced by a community are short lived and either resolve spontaneously or are self-treated. However, there are a number of conditions that are chronic in nature and that require considerable input from health services. Examples include arthritis, diabetes, some heart and lung diseases.

To develop a composite picture of the health of a community, a variety of sources are used, all of which have some strengths and some limitations. However, put together, they do provide reliable trends regarding the health status experienced by the population over time. One such source is the Quarterly National Household Survey (QNHS) carried out by the Central Statistics Office. Each year, 39,000 households are surveyed and interviews are conducted with the adult members of these households. Information is collected on a wide range of topics, with health being covered in 2001 for the first time and a disability survey carried out in 2002. Survey results are weighted to agree with population estimates, broken down by age, sex and region.

The main limitations of the QNHS is that as it relies on reports from the individual, errors may be introduced due to differing perceptions of illness, forgetfulness or withholding of certain information. Also, diagnostic labels are attached to the illness by the interviewee, which may not concur with the terminology or accuracy of a medical practitioner's diagnosis. Adults (aged 18 + years) only are included in the survey, which results in under representation of paediatric illnesses. Despite these disadvantages, the QNHS does enable major illnesses to be described in the population as a whole. It also gathers information on other variables such as employment status and medical card status, which allows associations between such variables and health indices to be explored in a preliminary way.

SELF REPORTED ILL HEALTH

Almost one third (32%) of people in the Southern Health Board region reported that they have or had at some time, suffered from one of the chronic diseases listed (Table 2.12).

Table 2.12. Percentage of persons aged 18 and over, classified by whether they have, or have ever, suffered from selected conditions, SHB and Ireland, and by sex.

Condition	SHB	Ireland	Male	Female
Angina	2.7	2.3	2.6	2.1
Asthma	5.4	5.0	4.7	5.3
Arthritis (osteo) of hip	3.3	3.0	2.3	3.8
Arthritis (rheumatoid)	3.3	3.8	2.9	4.8
Cancer (skin)	0.3	0.3	0.3	0.3
Cancer (other)	0.8	1.0	0.7	1.2
Chronic bronchitis	1.7	1.4	1.4	1.4
Diabetes	1.5	1.5	1.6	1.4
Gallstones	1.6	1.3	0.6	2.0
Heart attack	1.4	1.5	2.1	0.9
Hypertension	7.6	6.8	5.3	8.1
Osteoporosis	1.5	0.9	*	1.6
Stroke	0.7	0.6	0.7	0.6
One or more health conditions	32.0	30.4	27.8	33.0

** sample occurrence too small for estimation*

Source: CSO (2002) Quarterly National Household Survey: Health, Third Quarter, 2001

Hypertension was the commonest condition reported followed by asthma. Men were more likely to report coronary heart diseases such as angina or heart attacks, whilst more women reported arthritis, asthma, gallstones and hypertension.

ILL HEALTH AND EMPLOYMENT

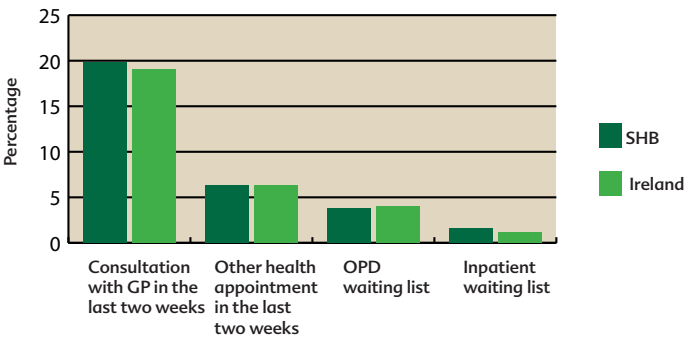
Research on the relationship between the economy and health suggests that, even in modern societies, they are intrinsically linked. International studies have shown that becoming unemployed is a risk factor for ill health and a higher mortality rate. Sociologists have sought to explain this phenomenon, by pointing to the impact of unemployment on the individual and the family. The individual has been shown to experience loss of self-esteem, anxiety, insomnia and depression and the family suffers a reduction in income and thus, material standard of living.

The corollary is also true, in that those who suffer from chronic ill health or disability are significantly more likely than the general population to be unemployed. This is borne out by regional and national data. Eleven percent (42,000) of people in the Southern Health Board region aged 15 to 64 years indicated that they had a longstanding health problem or disability, according to the QNHS Disability in the Labour Force (2002). Over one third (37%) of those with a disability or health problem in the SHB region stated that they were in employment, significantly less than the regional rate of 63% for the total population in that age category. These proportions are similar to the national pattern. These individuals are then doubly disadvantaged – trying to cope on a daily basis with a chronic health problem or disability, their stress is compounded by unemployment and its many sequelae.

HEALTH SERVICES UTILISATION

The QNHS survey demonstrated that the general practitioner or family doctor is clearly the primary healthcare provider with almost 20% of the population having had a consultation with their own GP in the previous 2 weeks (Fig 2.18). Just over 6% had had another health appointment in the same time period and 1.6% of the population in the SHB region were on an inpatient waiting list.

Fig 2.18
Percentage of People Aged 18+ classified by use of the Health Services



Source: CSO (2002) Quarterly National Household Survey: Health, Third Quarter, 2001

HOSPITAL DATA

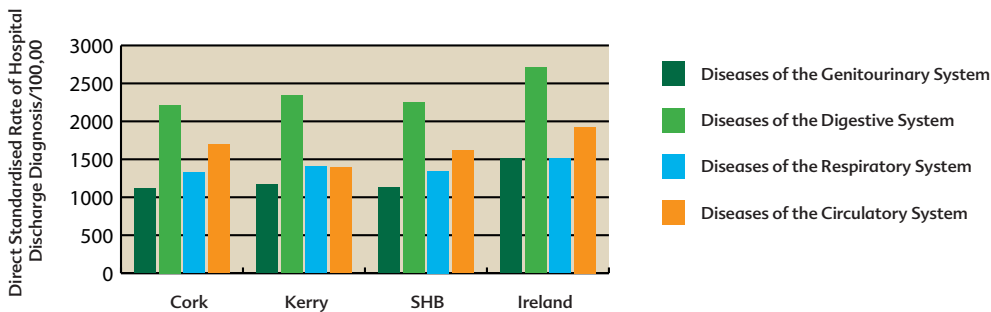
Data on those attending hospitals is collected in most developed countries and usually a component of clinical information is also gathered. In Ireland, that system used is HIPE (Hospital Inpatient Enquiry). In operation since 1994, data is gathered on the number of discharges and the number of procedures performed in publicly funded hospitals. Although a good marker for some conditions, as a measure of morbidity in the population, hospital data systems such as HIPE have some serious drawbacks.

Hospital discharge data as an indicator of morbidity only takes account of those conditions for which hospital care is required. Many important health problems, at least judged by the proportion of the population affected by them and economic impact of working days lost, are unlikely to require hospital inpatient care. Some examples of the latter include migraine, gastroenteritis, and backache. For some conditions, where hospitalisation is practically mandatory (e.g. fractured neck of femur), trends in hospital rates are a reasonable indicator of the true variation of the disease problem in the population.

ALL HOSPITAL DISCHARGES

In 2002, the commonest diagnosis on discharge from hospital was a disease of the digestive system, followed by diseases of the circulatory, respiratory and genitourinary system (Fig 2.19). Hospital discharge rates were lower in the SHB region than the national average.

Fig 2.19
Main Diagnostic Categories, Hospital Discharge Diagnosis for Both Sexes, All Ages, 2002



Source: PHIS V7Beta

CARDIOVASCULAR DISEASES

Mortality rates for cardiovascular diseases have dropped in the past decade and equally, trends in hospitalisation for myocardial infarction have also fallen in the under 65 year age group. Discharge rates for stroke in the same age group have remained constant, however. (Figs 2.2, 2.21). The fall in myocardial infarction hospitalisations may be due to fewer heart attacks occurring in the community. The trend may also be explained by improved therapy and cardiac rehabilitation, resulting in fewer readmissions for myocardial infarction.

Fig 2.2
Age standardised discharge rate for myocardial infarction, SHB and Ireland, <65 years, 1994 - 2000

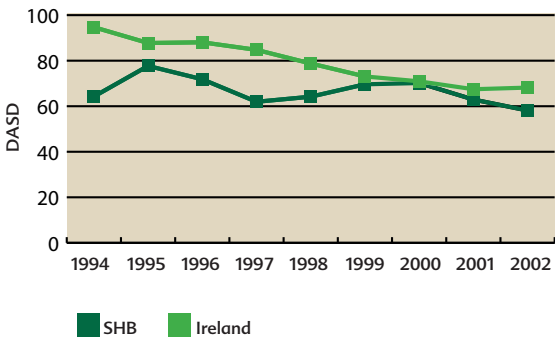
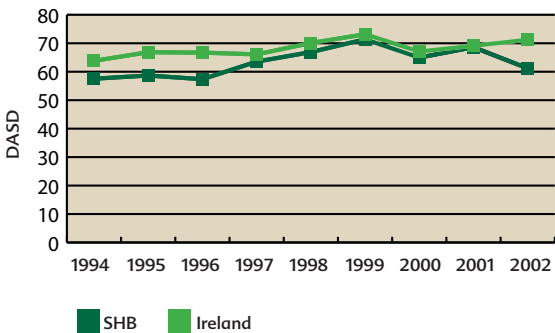


Fig 2.21
Age standardised discharge rates for cerebrovascular disease, <65 years, 1994-2002 SHB and Ireland



RESPIRATORY DISEASES

Hospitalisation rates for asthma have fallen in the past decade, despite a perception that asthma is on the increase in Ireland, particularly in children (Fig 2.22). As general practitioners improve their expertise in the control of asthma and more asthma nurse specialists come on stream, the disease is increasingly managed predominantly in the community. The hospital rates for chronic respiratory diseases (Fig 2.23) have remained stable. The SHB region has lower hospitalisation rates for these diseases than seen nationally.

Fig 2.22
Age standardised discharge rates for Asthma, All Ages, 1994 - 2002

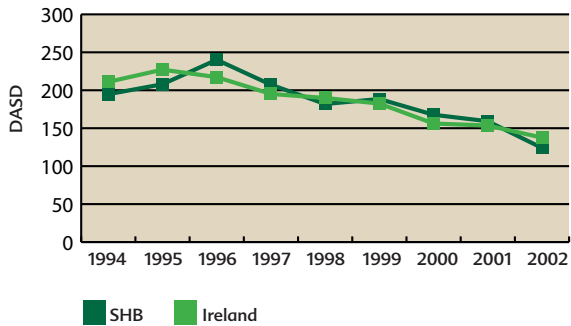
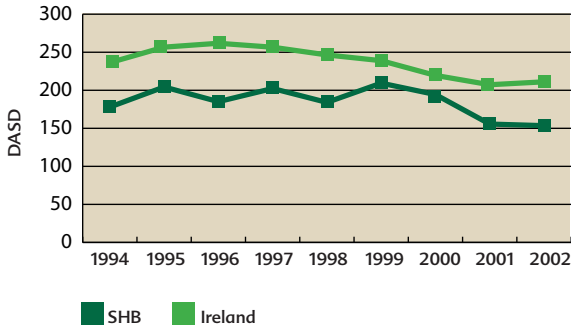


Fig 2.23
Age standardised discharge rates for COPD and Bronchiecstasis for All Ages, 1994-2002



Source: PHIS V7Beta

INJURY AND POISONING

In the HIPE system, external causes of injury, poisoning and other adverse effects are classified separately. Accidental falls was the most common single external cause of injury (Fig 2.24), followed by land transport accidents. The latter includes all private motor vehicle, public transport and industrial vehicle accidents. Women had slightly higher hospital rates than men for accidental falls, whereas men had almost double the hospital rates for transport accidents than women.

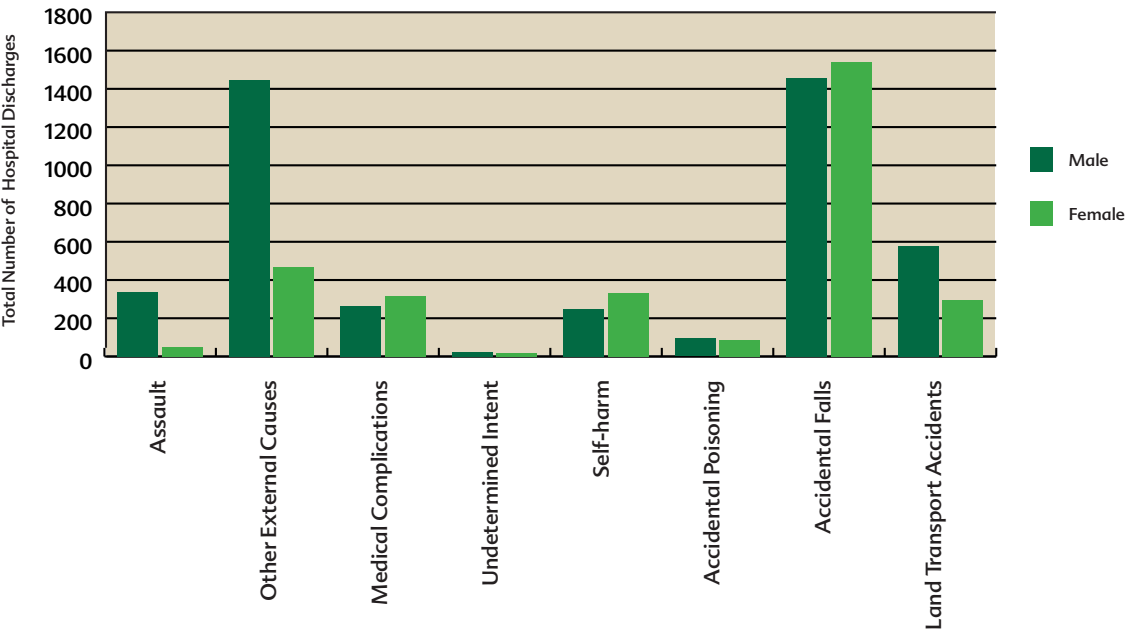
REGISTRATION OF DISEASE

Registers compile information on all cases of a disease or other health condition within a defined population. A good register has multiple uses: it can identify the amount of disease in the population, monitor temporal trends, compare treatment outcomes and facilitate service evaluation and planning. Disease

registers are best suited to a situation where the disease or risk factor status does not tend to change over time. Proper systems must be in place to ensure duplication does not occur and to minimise underreporting. Some examples of national registers include the National Cancer Register, the Intellectual Disability Database and the National Physical and Sensory Disability Database. (The latter two registers are more orientated towards service provision than epidemiology.)

The cancer registration system is a unique worldwide resource. There are cancer registries covering between 1 and 15 million people in most countries worldwide. Cancer registries enable the incidence of the different types of cancer to be calculated and to monitor trends in cancer incidence and survival. Regional cancer data outlined below has been provided by the National Cancer Registry of Ireland.

Fig 2.24
Hospital Discharges for Injury and Poisoning in SHB, All Ages, 2002



CANCER CASES

The pattern of cancer incidence differs somewhat than that of cancer mortality. Almost one third (31.9%) of cancers diagnosed every year are non melanoma skin cancers (Table 2.13). These cancers are readily treatable and rarely kill. Colorectal and breast cancer are diagnosed more commonly every year than lung cancer. However, lung cancer causes more cancer deaths every year, as it is not so amenable to treatment as the other two.

Table 2.13. Number of new cancer cases in the SHB region, 1995 – 1999, by sex.

New cancer cases 1995 - 1999

Site	Both sexes		Male		Female	
	Cases	% of total	Cases	% of total	Cases	% of total
All cancers	17300	100	8638	100	8662	100
All invasive cancers	15106	87.4	8050	93.2	7056	81.5
NMSC	5518	31.9	3121	36.2	2397	27.7
Colorectal	1503	8.7	830	9.7	673	7.8
Breast	1293	7.5	3	0.1	1290	14.9
Lung	1020	5.9	674	7.9	346	4
Prostate	963	5.6	963	11.2		
Lymphoma	391	2.3	231	2.7	160	1.9
Stomach	302	1.8	195	2.3	107	1.3
Bladder	344	2	252	3	92	1.1
Melanoma of skin	336	2	131	1.6	205	2.4
Leukaemia	325	1.9	205	2.4	120	1.4
Ovary	271	1.6			271	3.2
Pancreas	279	1.7	135	1.6	144	1.7
Oesophagus	256	2.5	150	1.8	106	1.3
Kidney	186	2.2	118	1.4	68	0.8
Head and neck	180	2.2	126	1.5	54	0.7
Corpus uteri	195	2.3			195	2.3
Brain	215	1.3	129	1.5	86	1
Multiple myeloma	176	1.1	91	1.1	85	1
Cervix	125	0.8			125	1.5

Source: NCRI 2004

In the period 1995 – 1999, 17,300 cases of cancer were diagnosed in the Cork/Kerry region, an average of 3,460 per year. Over 15,000 (87%) were invasive (malignant). The major invasive cancers for women were breast, colorectal and lung, whereas for men, the main invasive cancers were prostate, colorectal and lung.

Cork accounted for 2,601 new cases annually on average and Kerry 858 new cases (Table 2.14).

Table 2.14. Total number of new cancer cases in the SHB region, 1995 – 1999, by county

Site	Cork		Kerry		SHB	
	No.	Average	No.	Average	No.	Average
All cancers	13006	2601.2	4294	858.8	17300	3460.0
All invasive cancers	11323	2264.6	3783	756.6	15106	3021.2
NMSC	3997	799.4	1521	304.2	5518	1103.6
Colorectal	1155	231	348	69.6	1503	300.6
Breast	993	198.6	300	60	1293	258.6
Lung	791	158.2	229	45.8	1020	204.0
Prostate	755	151	208	41.6	963	192.6
Lymphoma	293	58.6	98	19.6	391	78.2
Stomach	224	44.8	78	15.6	302	60.4
Bladder	248	49.6	96	19.2	344	68.8
Melanoma of skin	265	53	71	14.2	336	67.2
Leukaemia	242	48.4	83	16.6	325	65
Ovary	210	42	61	12.2	271	54.2
Pancreas	210	42	69	13.8	279	55.8
Oesophagus	198	39.6	58	11.6	256	51.2
Kidney	138	27.6	48	9.6	186	37.2
Head and neck	141	28.2	39	7.8	180	36
Corpus uteri	139	27.8	56	11.2	195	39
Brain	171	34.2	44	8.8	215	43
Multiple myeloma	143	28.6	33	6.6	176	35.2
Cervix	100	20	25	5	125	25

Source: NCRI 2004

Disability and Health Status

Within our population are those who live with disability. For some it has originated at birth, for others it is the result of disease or injury.

The spectrum is broad and the impact on the individual extremely varied. Medical diagnosis alone or advancing age do not predict how people can respond or adapt to disease or injury. Even so, it is important to describe the profile of disability and its impact on the health status of a population.

On compiling this profile there are a number of approaches that can be taken. None of these are ideal but each can contribute useful information:

- These include:
- Census Data
 - Population Surveys
 - Registers or Databases

Disability is difficult to define or completely categorise.

The World Health Organisation (WHO) International Classification of Impairment, Disability and Handicap (ICIDH) describes the spectrum of disorders in terms of:

- Impairment** which is any loss of structure or function in the body
- Disability** lack of ability to perform an activity
- Handicap** the disadvantage that a person has in society.

An example often given is that loss of a finger (i.e. an impairment) could be tolerable for most but might be a significant handicap for a concert pianist.

The **WHO International Classification of Function** (ICF) now replaces the ICIDH system. ICF categories function according to various domains including:

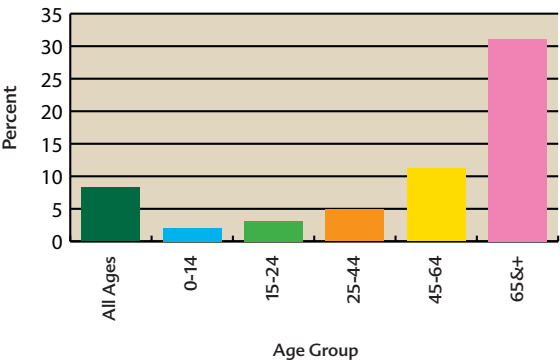
- Body functioning and structure
- Activities
- Participation in society

CENSUS DATA

Disability questions were introduced for the first time in Census 2002. This country now has comprehensive and reliable data with whole population coverage. The questions firstly established whether the individual had a physical or sensory disability such as blindness, deafness or persistent difficulty with basic physical activities (walking, climbing stairs, lifting etc.). Further questions explored the wider aspects of disability such as additional mental illness or intellectual disability, and their impact on activities of daily living.

Based on Census data, overall some 8% of the population reported having a disability. As expected, the level increased with age: rising from 2% in children to 31% for those over 65 years. (Fig 2.25).

Fig 2.25
Persons with Disability by Age Group

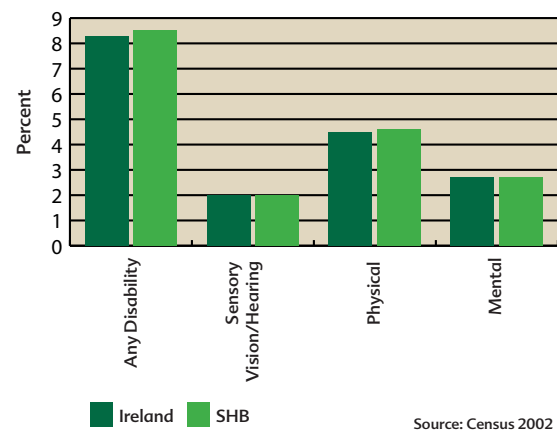


Source: Census 2002

Type of Disability

Of those with a disability, over a half had a physical disability; a third a mental disability and a quarter a sensory (visual or hearing) disability (Fig 2.26).

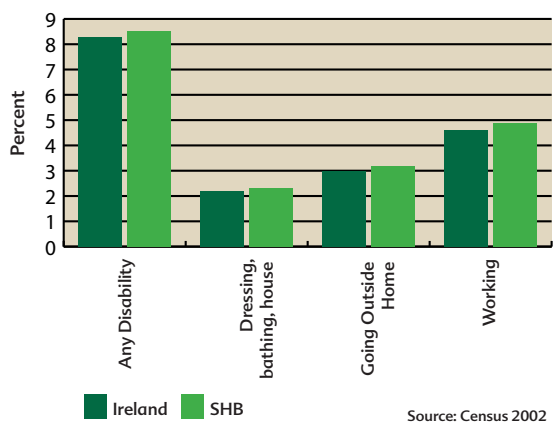
Fig 2.26
Disability Types



Impact of Disability

Over a half (56%) of those with a disability encountered difficulty in working. Just in excess of a third (37%) experienced difficulty in going outside their home alone and over a quarter (27%) described difficulty in activities of daily living such as dressing, bathing or getting around the house (Fig 2.27). These patterns were similar for the population of the counties of Cork and Kerry.

Fig 2.27
Impact of Disability



SURVEY DATA

In the UK, the Office of Public Census and Surveys (OPCS) has undertaken a series of surveys initially in 1985 and repeated in 1995/1996 which have yielded very valuable information on the level and characteristics of disability within the population.

No comprehensive surveys of disability have been undertaken to date in this country.

However, it is useful to extrapolate the findings of the OPCS population surveys and apply them to the Irish population. This approach, while not ideal, does contribute significantly to the overall profile of disability.

OPCS used ICIDH categories and disability was graded 1 - 10 according to severity.

Adults

The overall prevalence of disability in the adult population (16 – 64 years) was 6.7%. When applied to the population of the SHB (580,356) this gives an estimate of approx 26,000 persons with a disability.

Table 2.15. SHB Population Estimates based on OPCS prevalences		
	Level of Disability	SHB Population Estimate
1 - 2	Borderline	9,457
3 - 4	Mild	6,645
5 - 6	Moderate	5,367
7 - 8	Severe	3,067
9 - 10	Max	1,278

Levels of Disability

As expected, fewer people have more severe forms of disability (Table 2.15).

Age

As predicted, disability increases with age. In the OPCS survey 4.3%, or 1 in 25, of the younger population i.e. those aged 16 - 49 were disabled and 15.5% , or 1 in 7, of the older population, i.e. those aged 50 - 64, were disabled. When extrapolated to the Southern Health Board population, this gives an estimate of approx. 12,500 persons aged 16 - 49 and 14,000 persons aged 50 - 64 with a disability. (Table 2.15).

Category of Disability

OPCS categorized disability in 5 broadly distinct groups. The extrapolations to the Southern Health Board population are shown in table 2.16.

Table 2.16. SHB Category of Disability Estimates based on OPCS prevalences

Category	SHB Population Estimate
Physical	16,868
Sight	3,578
Hearing	7,923
Mental (includes behavioural and intellectual disability)	8,690
Other (includes disorders of consciousness, continence, eating, drinking or digestion)	5,623

Some people have more than 1 disability, those with more severe disabilities are more likely to have multiple disabilities.

Children with a Disability

Children with disability have particular needs. The patterns are different than those seen in adults and it is worthwhile considering them separately.

The OPCS survey found the disability prevalence in the child population to be 3.1%, or 1 in 15.

Disability does not increase with age group in children (Table 2.17). This may be due to the fact that many factors causing disability in children are congenital in origin.

Table 2.17. Prevalence of Disability by Age Group

Age Group	Prevalence of Disability
0 - 4	2.1% (1 in 25)
5 - 9	3.8% (1 in 7)
10 - 15	3.5% (1 in 7)
Total 0 - 15	3.1% (1 in 15)

Extrapolating these population levels to the Southern Health Board population gives estimates of disability in children (Table 2.18).

Table 2.18. SHB Estimates of Disability in Children

Age Group	%	SHB Estimate
0 - 4	2.1%	776
5 - 9	3.8%	1595
10 - 15	3.5%	2085
Total 0 - 15	3.1%	4295

REGISTERS AND DATABASES

A National Physical, Sensory and Disability Database (NPSDD) was established for Ireland in 2002.

The purpose of the database is to

- Monitor current service provision
- Assess future service requirements
- Prioritise service need
- Plan service development
- Provide evidence for resource allocation
- Support research

Criteria for registering on the NPSDD

The person must:

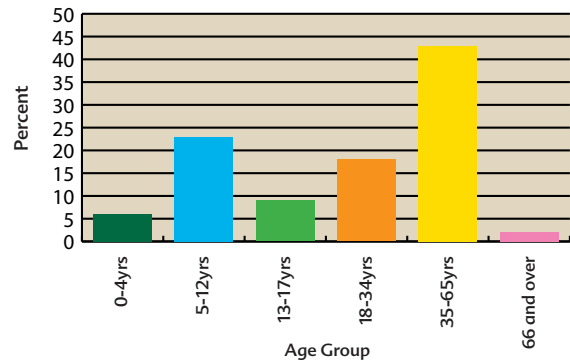
- Have a persistent disability arising from disease, disorder or trauma
- In the case of dual disability, the predominant disability is physical or sensory
- Be under 66 years of age
- Be in receipt of, or require, a specialised health or personal social service which is related to their disability, and
- Have consented to being included on the database

Information held on the database includes:

- Personal details
- Details of Disability
- Current Service Provision
- Future Service requirements
- Additional information such as Medical Card or Long Term Illness Card number.

In January 2003, 2699 persons from the Southern Health Board area had been entered on the database. A third were children under 18 years, and almost a half were over 35 years (Fig 2.28).

Fig 2.28
Disability by Age Group SHB Population

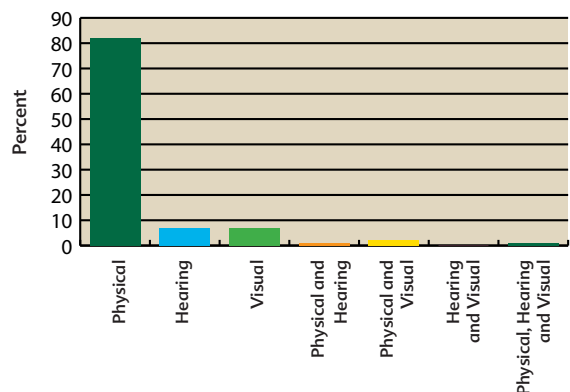


Source: NPSDD 2003

Disability Type

The majority (82%) of persons registered had a physical disability. This proportion reflects the OPCS survey data (when converted for exclusion of mental health conditions). Approx 7% had a visual disability. A small number had multiple disabilities (Fig 2.29). These levels are less than those found in the OPCS survey - the most likely reason being that the database is based on service need and this has a higher threshold for entry than the OPCS.

Fig 2.29
Disability Types: SHB Populations



Source: NPSDD 2003

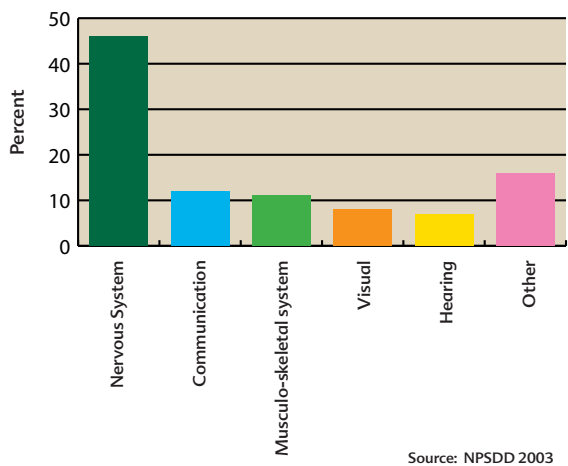
Diagnostic Grouping

To facilitate categorization of disability by diagnostic groups an abbreviated and modified form of International Classification of Diseases (ICD) coding was created.

Almost a half (46%) of the categories are neurological e.g., multiple sclerosis, cerebral palsy, motor neurone disease (Fig 2.3).

The other major diagnostic groupings were disorders of communication (12%), musculo-skeletal disorders (11%), visual (8%) and hearing (7%).

Fig 2.3
NPSDD Diagnostic Groups n=2699



Source: NPSDD 2003

Service Need

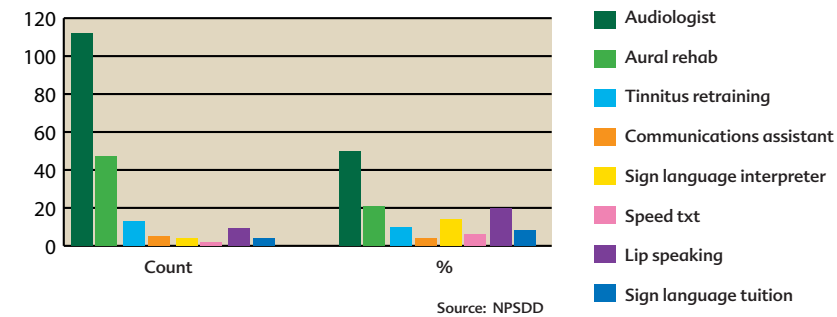
Data is also available on service need and utilization. Fig 2.31 shows some of the services utilized by persons with a hearing disability.

There is tremendous potential for analyzing the database to support the assessment of need and the appropriate planning of services for persons with a disability.

KEY POINTS

- The spectrum of disability within our population is broad.
- The impact on the individual is extremely varied.
- Medical diagnosis alone or advancing age do not predict how people can respond or adapt to disease or injury.
 - In census 2002, overall some 8% of the population reported a disability, rising from 2% in children to 31% of those over 65.
 - Of those with a disability, over a half had a physical disability, a third a mental disability and a quarter a sensory disability.
 - As expected, disability increases with increasing age.
 - Almost a half (46%) are neurological e.g. multiple sclerosis, cerebral palsy, motor neurone disease.

Fig 2.31
Utilisation of Hearing Services



Source: NPSDD

Congenital Anomalies

For an individual child, early detection of a birth defect may be lifesaving, for example, in the case of congenital heart disease. The thalidomide disaster has taught us that it is equally important to examine congenital anomalies from a population perspective. In the 1950s and 60s, a number of babies were born with severe and unusual malformations due to the drug thalidomide, taken by their mothers in early pregnancy. The time taken in recognising that these malformations were linked with thalidomide meant that mothers continued to take the drug and many children were affected.

Since then, congenital anomalies surveillance has become an established public health activity in many countries. These systems were initially set up to act as an early warning marker for possible changes in the rates of congenital anomalies due to drugs or environmental agents. These objectives have now broadened.

In the Southern Health Board the Congenital Anomaly Register set up by the Department of Public Health collates information on all babies (whether stillborn or live births) with a birth defect born to mothers resident in Cork and Kerry. The registry covers the period from 1st January 1996 and includes data on birth defects among babies born since 1996. It is a member of the EUROCAT registry, a network of congenital anomalies registries in Europe. This allows comparisons on data to be made with other areas.

The objectives of the SHB Register are:

- To provide baseline epidemiological information on congenital anomalies in the Southern Health Board region.
- Analysis of the data can detect and investigate trends in the frequency of congenital anomalies to assess the impact of known or suspected risk factors.
- The register can provide information to evaluate the effectiveness and efficiency of the health services (including prenatal diagnosis).
- In conjunction with the other EUROCAT registries the database is used for research on the aetiology of conditions.

There were 38,104 births to mothers in Cork and Kerry during the five years 1996 - 2000. The number of babies with a birth defect was 1055, almost 2.8% of all births. Fifty of the babies were stillborn. There were more male (577, 54.6%) than female infants (478, 45.3%) born with a birth defect. One infant had indeterminate sex.

TABLE 2.19. Cases and prevalence per 10,000 births for Cork and Kerry Registry data compared to Eurocat Registry data, 1996-2000

Congenital Anomaly	No. of Cases in SHB 1996-2000	SHB Prevalence rate per 10,000 births	Range of number of cases per year in SHB	Range of rate of cases per year in SHB	No. of cases EUROCAT in registry 1996-2000	EUROCAT prevalence per 10,000 births
All cases	1055	276.9	204-221	266.18-294.86	62758	215.98
Nervous System	116	30.44	17-31	21.65-42.02	6366	21.91
Eye	22	5.77	2-7	2.55-9.13	1322	4.55
Ear	34	8.92	4-9	5.34-11.74	1091	3.75
Congenital heart disease	351	92.12	58-82	78.62-109.41	17932	61.71
Cleft lip with or without palate	26	6.82	4-6	5.09-8.01	2631	9.23
Cleft palate	35	9.19	5-8	6.48-10.67	1582	5.55
Digestive system	43	11.28	6-12	8.13-16.01	4934	16.98
Internal urogenital system	67	17.6	10-23	12.96-31.18	8231	28.33
External genital system	72	18.9	7-20	9.34-25.46	3560	12.25
Limb	220	57.7	39-48	49.66-62.63	10496	36.12
Musculoskeletal	114	29.92	18-29	23.49-39.31	6418	22.09
Chromosomal	129	33.85	21-34	26.74-45.36	9225	31.75
Other	100	26.24	17-24	22.04-32.02	2678	9.22

The rate of total occurrence of congenital anomalies in the Southern Health Board is within the expected range. However individual birth defects show some considerable variation when compared to international rates (Table 2.19).

Differences in the incidence of congenital anomalies at birth over time or between regions may reflect one or more of the following factors: genetic differences; environmental differences; variations in diagnostic services and in the methods of collecting epidemiological data. Also variations occur in prenatal screening policies and frequency with which prenatal diagnosis is followed by termination of pregnancy in participating countries.

Another important reason for these differences in rates is due to the small number of cases per annum in the Southern Health Board. For an individual anomaly even one or two extra cases in a year can change the rate of occurrence significantly. The rate can vary by a factor of two or three from year to year for random events with low numbers. And, of course, chance differences also occur.

Mental Health

The National Psychiatric In-Patient Reporting System (NPIRS) collects data on all admissions to, and discharges from psychiatric in-patient facilities in Ireland. This reporting system was established forty years ago and is maintained by the Health Research Board. This is a very valuable instrument but, similar to HIPE, it is episode based. It also represents a subset of the population with mental illness i.e. in-patient stays only. Information on out-patient attendances, those in day hospitals, day care centres, and community residential facilities is captured by the Department of Health and Children's annual end of year returns. Those who present with mental illness to their GP, or who never seek professional assistance can only be captured by special surveys.

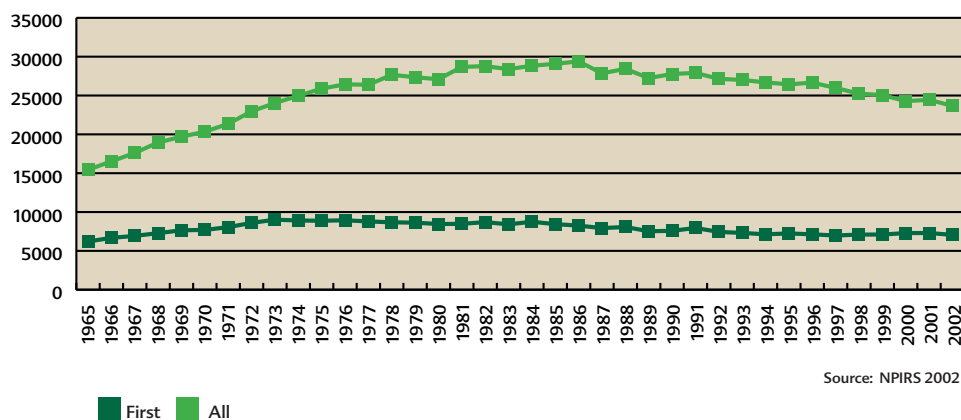
NATIONAL DATA

There were 23,677 admissions to Irish psychiatric hospitals and units in 2002. First admissions accounted for 30% of the total at 7,060 (Fig 2.32).

The steady decline in all admissions since the early 1990s continues after a plateau was reached in the 1980s. This pattern is also evident in first admissions.

In recent years there has been an increasing trend towards shorter episodes of in-patient care and 2002 was no exception, with 69% of all discharges occurring within one month of admission and 93% occurring within three months of admission. However, the Report of the Inspector of Mental Hospitals for 2002 states that 55% of patients in hospital at the end of 2002 were long stay, the majority of whom were over 65 years. The proportion of long-stay patients will continue to decrease with the death of these patients and their non-replacement by new long-stay patients. Community facilities such as hostels and other residences are increasingly being made available to cater for the needs of patients who previously required the support of long-stay psychiatric hospitals.

Fig 2.32
Admissions to Psychiatric Hospitals and Units, Ireland, 1965-2002



SOUTHERN HEALTH BOARD DATA

Patterns of psychiatric illness vary depending on a number of factors, the most important of these are gender and age, marital status and socio-economic group.

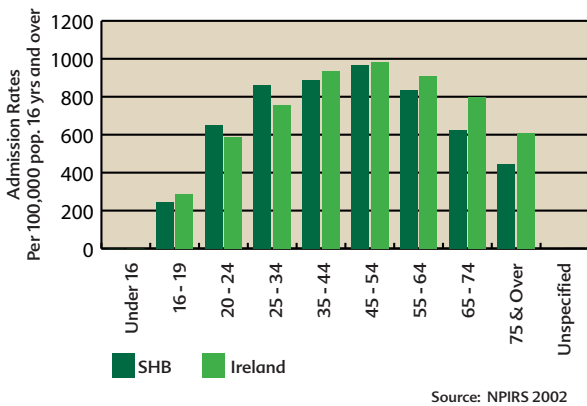
Gender

Males had a higher rate of admission than females in the Southern Health Board and this was the case in all other health boards without exception. It was also the pattern for first admissions.

Age

In the Southern Health Board region admission rates rise with increasing age up to the 45-54 year age group, declining thereafter. This is similar to the national pattern (Fig. 2.33). However, the Southern Health Board has higher admission rates in the younger age groups, 20-34 years and lower admission rates in the older age groups, 65 years and over when compared nationally.

Fig 2.33 Admission Rate by Age Group, SHB and Ireland, 2002



Marital Status

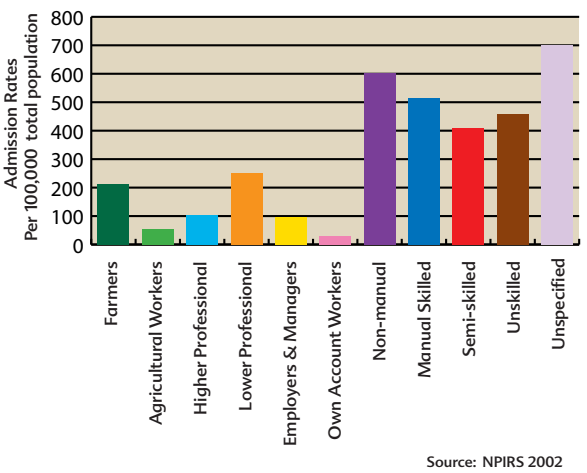
Single persons had the highest rate of admission in six out of eight health boards. Divorced persons had the highest rate of admission in the Southern Health Board at twice the national rate. This is different to previous reported patterns where single people had the highest rate.

Socio-Economic Group

Unskilled workers had the highest rate of admission in all health boards (Fig. 2.34).

The increased rates of admission in the lower socioeconomic groups is quite marked for the Southern Health Board region. In previous reports, farmers and agri-workers had the highest rates of admission but this has now declined dramatically.

Fig 2.34 Admission rate by Socio-Economic Group, SHB, 2002

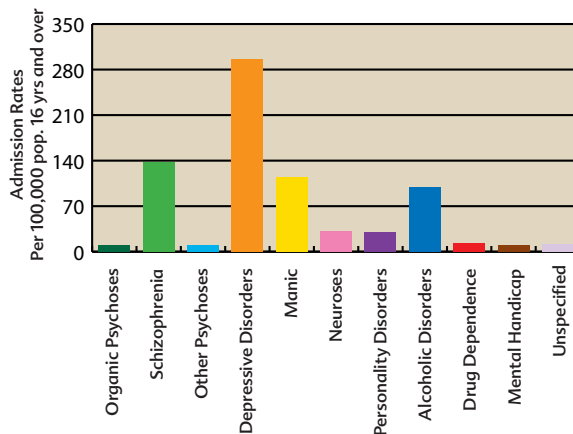


Diagnosis and Discharges

Depressive disorders had the highest rate of all and first admissions in each health board area (Fig. 2.35). The Southern Health Board had the highest rate of admission for schizophrenia and also had the highest rate of non-voluntary admissions (along with the Mid Western Health Board) which were 16% of the total. Alcoholic disorders accounted for 13% of admissions in the Southern Health Board region.

Overall, in the Southern Health Board, 27% of discharges occurred within one week which is slightly lower than the national figure of 30%. About half of those diagnosed with alcoholic disorders are discharged within one week. The trend is increasingly towards shorter episodes of in-patient care.

Fig 2.35
Admissions rates by diagnosis, SHB, 2002



Source: NPIRS 2002

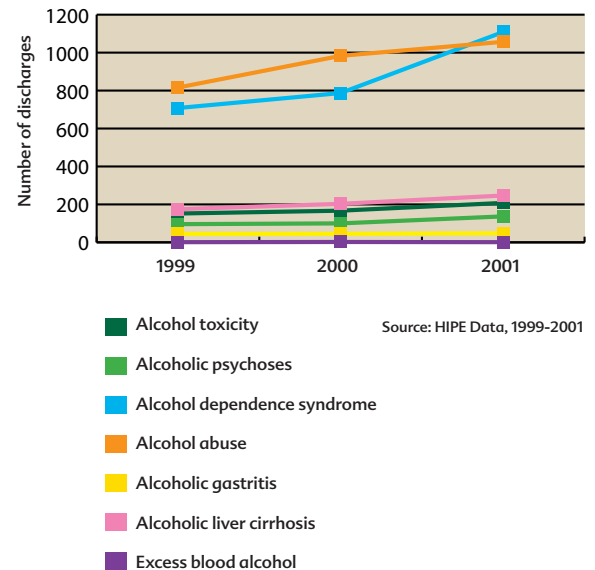
Alcohol related admissions

In examining alcohol related admissions it needs to be borne in mind that referral patterns vary widely between health boards depending on many variables such as availability of services both in-patient and out-patient, public and private and also community supports.

Nationally, out of all psychiatric hospital admissions, 16 years and over, alcoholic disorders accounted for 22% of male admissions and 11% of female admissions.

Looking at alcohol related disorders in the acute general hospital system for the Southern Health Board: there is a rise in the trend for all categories of this diagnosis for both males and females for the years 1999-2001 (Fig 2.36).

Fig 2.36
Principal or secondary diagnosis for hospital discharges



Source: HIPE Data, 1999-2001

KEY POINTS

- A steady decline in admissions to Irish psychiatric hospitals has been maintained since the early 1990s.
- In the Southern Health Board Region admission rates to psychiatric hospitals; are higher for males, unskilled workers, and divorced persons, increase with age up to the 45 – 54 year age group, declining thereafter, depressive disorders are the most common diagnoses, alcoholic disorders account for 13% of admissions,
- Admission rates for alcoholic disorders in acute hospitals in the Southern Health Board show a rising trend.

3 How Healthy is Our Lifestyle

Health is influenced by our lifestyle and behaviours. The first Irish national lifestyle survey report was conducted in 1998 and the second in 2002. We now have a dependable baseline information source on a range of lifestyle related health behaviours in the Irish population, such as smoking, diet and exercise. These behaviours are categorized across age, gender and social status so that differences can be detected where they exist.

In addition to the national lifestyle survey reports (SLAN for adults and HBSC for school children aged 10-17 years) we can now also report findings for the same lifestyle behaviours at a regional level. It must, however, be noted that the main emphasis of the surveys is to establish national patterns. The regional samples, although considerable in absolute numbers, are relatively small and certain subgroups in the population will, by chance, be over or under represented. The most recent report relates to 799 adults (14% national sample) and 1320 children (16% national sample) from the Cork and Kerry region. As a consequence, findings at a regional level where relevant are detailed, but must be interpreted with caution.

Smoking

There has been a fall in reported cigarette smoking rates in virtually every section of the Irish population since the 1998 survey. Overall, 27% of the adult population nationally reported being regular or occasional smokers compared to 31% in 1999.

Rates have fallen among both men and women, however in the South smoking rates were higher among women than men, which is the opposite to the national trend (Table 3.0).

Table 3.0: Percentage of smokers nationally and in SHB

	Ireland	SHB
Regular – Adults Male	28%	23%
Regular – Adults Female	26%	25%
Regular – All Adults	27%	24%
Current – Boys (aged 10-17)	17%	17%
Current – Girls (aged 10-17)	20%	20%

There is evidence that the age of starting smoking is delayed with a sharp drop in reported smoking among 12-14 year olds (20% in 1998 and 11% in 2002).

Among those aged 15-17 years smoking rates were down nationally and in the SHB. There are significant gender differences within the Health Boards and in the SHB 34% girls and 24% boys in the 15-17 year old age group currently smoke.

A major Irish report on the Health effects of Environmental Tobacco Smoke in the Workplace, published in January 2003 provides stark reading:

- Passive smoke exposure increases the risk of stroke by 82%
- Workplace exposure increases the risk of lung cancer by up to 40%
- A non-smoker living with a smoker has a 25% increased risk of lung cancer and a 30% increased risk of heart disease

There are some encouraging trends in exposure to passive smoke. Rates of exposure at home, in the workplace or public transport and in pubs and clubs are all down among adult men and women. Importantly exposure rates at work (29% men and 16.6% women) are much lower than in places of recreation such as pubs and clubs (47.3% men and 31.6% women). This data predates the introduction of the ban on smoking in the work place which will have a major effect on exposure rates to passive smoke.

Dietary Habits

Reported rates of obesity have increased in adults from 11% of men in 1998 to 14% in 2002 and from 9% of women in 1998 to 12% in 2002.

Overall, 34% adults nationally (31% in SHB area) reported eating the recommended 6 plus servings a day of cereals, bread and potatoes compared to 40% in the last SLAN survey.

On a positive note, there has been an increase in adults consuming the recommended 4 or more servings of fruit and vegetables from 61% to 69%. The social class gradient evident in 1998 was much less marked or absent.

However, reported fruit consumption has declined sharply among school going children with 15% boys and 18% girls from Cork and Kerry in the 2002 survey eating fruit more than once daily. Similarly, vegetable consumption has declined particularly among girls with 15% boys and 22% girls from SHB region eating vegetables more than once a day in 2002.

Fried food consumption is much lower among women than men and the overall trend is very slightly down. Of the SHB sample, 12.5% men and 4.9% women reported eating fried food more than four times per week. This trend is particularly evident amongst young men and women and there is a distinct class gradient. The very highest reported consumption of fried foods is 33% in young men (18-34 years) with limited education as opposed to 3% in privileged women in the 55 year+ age bracket.

Physical Activity

Levels remain low and virtually unchanged since the last SLAN survey with just over half of all adults (51%) reporting some form of "regular" exercise (Table 3.1). (Regular exercise is defined as mild exercise most days; or moderate or strenuous exercise three or more times weekly).

Table 3.1: Percentage Engaging in Physical Activity Nationally and in SHB, SLAN 2002

	Ireland	SHB
Mild - Male	22	26
- Female	22	24
Moderate - Male	26	28
- Female	37	35
Strenuous - Male	15	15
- Female	7	6
'Regular' Physical Activity	51	51

There are some marked differences across age, gender and educational status. More females than males regularly engage in moderate exercise across all health boards whereas men are more likely to be strenuously active than women. The most strenuously active are males in the 18-35 category from the third level educated group.

Among school going children vigorous exercise rates are higher among boys than girls at all ages but levels fall in both sexes by the time children are in late adolescence. In the SHB area these levels fall for boys from 63% at age 12-14 to 54% at 15-17 and for girls from 43% at 12-14 years to a low of 26% at 15-17 years.

Particularly frightening are the trends towards inactivity among both adults and children. This pattern is marked among those with less than complete second level education e.g. 37% in 1998 rising to 55% in 2002 of older men and in all the female age groups. Inactivity rates are much higher for girls than boys and rise very sharply by the age of 15 years. A startling 1 in 5 girls (21%) and 1 in 12 boys (8%) living in Cork and Kerry in their mid-teenage years (15-17) report that they exercise less than weekly.

Alcohol and its Misuse in Today's Ireland

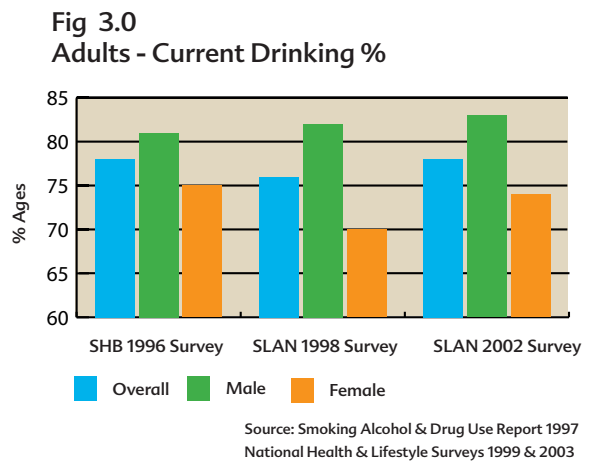
We now have a considerable body of information on alcohol intake in Ireland.

A survey of smoking, alcohol and drug use was carried out in 1996 in Cork and Kerry. Since then two National Health and Lifestyle Surveys have been done in 1998 and 2002 (SLAN in adults and HBSC in school children). In addition, we have the 1996 and 1999 European School Project on Alcohol and other Drugs (ESPAD) and the recently published (2004) all-Ireland report of the National Committee on Drugs and the Drugs and Alcohol Information and Research Unit in Northern Ireland. This section summarises the main findings of these reports.

The key issue is that these reports give a picture of over-use and misuse of alcohol and indicate worrying trends.

ALCOHOL USE BY ADULTS

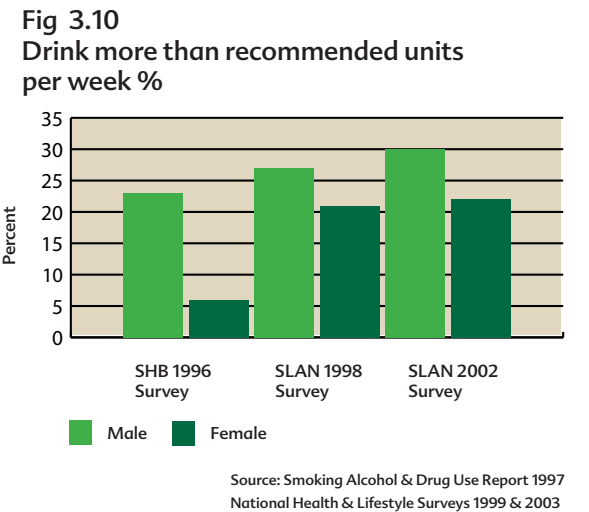
Most Irish adults (four-fifths) describe themselves as current drinkers. This statistic is based on a number of recent surveys (Fig. 3.0). There are several interesting patterns evident in these surveys.



Young adults tend to use alcohol more than older adults e.g. 90% of those in the age group 20-24 were current drinkers in the Southern Health Board 1996 survey. Men are also more likely to feature as current drinkers (Fig. 3.0).

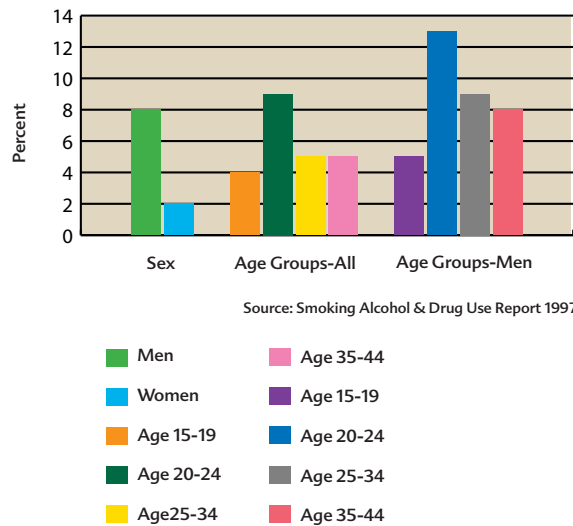
There are some worrying trends in terms of the amount of alcohol consumed. The SLAN surveys report an increase in the median number of drinks consumed at a session by men from 5 (1998) to 6 (2002) whereas women decreased from 4 drinks (1998) to 3 (2002).

A very useful indication of alcohol abuse is the consumption of more than the recommended weekly limits (i.e. 21 units for men and 14 for women). These units are measured in a standardised fashion and 1 unit represents a half pint of beer, a small glass of wine or a small spirit measure. The high level and upward trend detailed in Fig. 3.10 is concerning. This indicates clearly that a quarter of adults are abusing alcohol on a weekly basis.



A screening test for problem/addictive drinking (CAGE Assessment*) was used in the 1996 Southern Health Board survey (Fig. 3.11) and this highlighted problem drinking behaviour in one in ten young men.

Fig 3.11
Cage Positive Scoring



The 2002 SLAN survey provided some insights into problems that are arising for us as a society in terms of alcohol use (Table 3.3).

Table 3.3. Top 3 Problems related to drinking, SLAN 2002

Own Drinking	Others Drinking
Drunk 35%	Arguments re. drink 6%
Should cut down 14%	Verbal abuse 6%
Alcohol affecting work 14%	Family/marital 3%

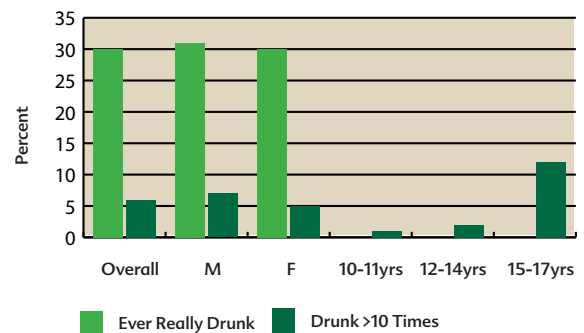
ALCOHOL USE BY YOUNG PEOPLE

The HBSC Irish survey relates to school going teenagers under 18 years of age while the ESPAD survey covered 30 European countries and relates to 15-16 year olds.

The Irish HBSC data paints a serious scenario when 25% of all children under 18 years described themselves as "current drinkers". This phenomenon rises through the teenage years with 55% boys and 50% girls in the 15-17 year age group in this category.

Drunkness is dealt with in the HBSC survey (Fig. 3.12) and indicates a significant gender difference and age relationship again featuring late teenage males.

Fig 3.12
Drunkness <18yrs HSBC 2002

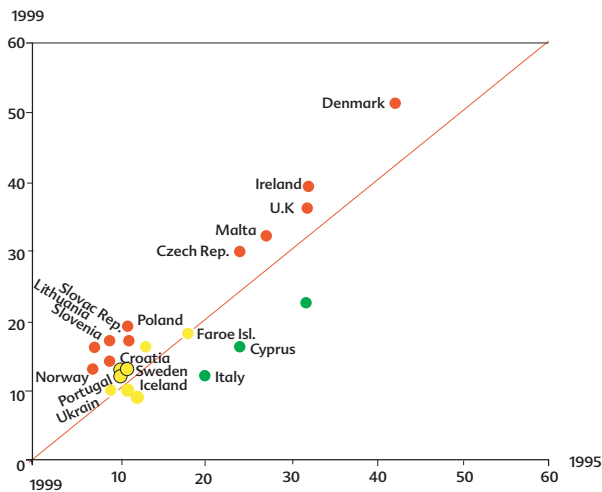


*The CAGE questions are:

1. Have you ever felt that you should **Cut down** on your drinking?
2. Have people **Annoyed** you by criticising your drinking?
3. Have you ever felt bad or **Guilty** about your drinking?
4. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (**Eye-opener**)?

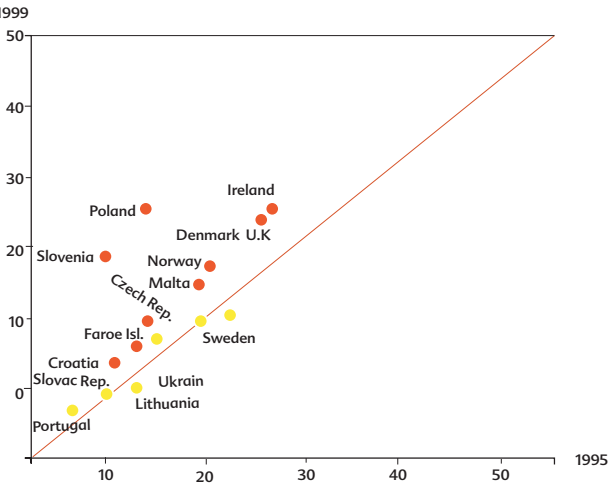
In the European League, Irish students showed the second highest prevalence of alcohol use and this had increased from the 1995 to the 1999 survey (Fig. 3.13). Students in Ireland top the binge drinking table (Fig. 3.14) and this level has also increased since 1995.

Fig 3.13
Alcohol Use 20 or More Times in the Last Year



Changes between 1995 and 1999 in use of any alcoholic beverages 20 times or more during the last year. Countries above the line have increased prevalence rates and countries below have decreased

Fig 3.14
Binge Drinking



Changes between 1995 and 1999 in proportion of all students who have reported “binge drinking” 3 times or more during the last 30 days. Countries above the line have increased prevalence rates and countries below have decreased.

CONCLUSION

Alcohol misuse is now recognised as a major public health problem in Ireland.

Although the legal age of consumption is 18 years, there is now overwhelming evidence that many children are starting to drink in their early teenage years. Indeed drunkenness is a problem in secondary school going children.

We also see evidence of young adults exceeding the recommended weekly limits with young men's drinking being particularly excessive.

There are reports from young adults of alcohol adversely affecting their social wellbeing in terms of work, emotional health and relationships.

All of these indicators point to a significant challenge at a population level. Problem and dependent drinking cannot be simply separated from the mass of other drinkers in our population. Even moderate reduction of intake in each person would lower the national average and lead to less problem drinking. A cultural and attitudinal change towards over use and drunkenness is required.

A multi-stranded approach to prevention and early intervention is called for. Key contributors are legislators, parents, teachers, health professionals, Gardai and all those working in the drinks industry.

KEY POINTS

SMOKING

- A fall from 31% in 1999 to 27% in 2003
- Exposure to environmental smoke at work is at 29% for men and 10% for women, while exposure in pubs is 47% for men and 32% for women (data pre-smoking ban)
- Sharp drop in reported smoking among 12-14 year olds from 20% in 1999 to 11% in 2003

OBESITY

- Obesity rates rise by 3% overall, 11% to 14% in men and 9% to 12% in women
- Decrease in level of consumption of recommended carbohydrates from 40% in 1999 to 34% in 2003
- Sharp decline in fruit consumption among children by almost 50%
- High level of fried food consumption by young men and women with socio-economic disadvantage

PHYSICAL ACTIVITY

- 51% of adults take some form of moderate exercise three times weekly
- 30% men and 25% women report no exercise at all and this level has increased by 7% since 1999
- Inactivity levels at age 15 are much higher in girls (22%) than boys (8%)



SECTION B

health protection

4 Communicable Diseases

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Meningitis and other Vaccine Preventable Diseases page 48

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5 Emergency Planning

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4 Communicable Diseases

Infectious Diseases

NEW LEGISLATION ON INFECTIOUS DISEASE NOTIFICATIONS

Certain infectious diseases are "notifiable". This means that doctors who see cases of these diseases are required by law to report them to the Medical Officer of Health. This system has been in place for over 100 years, under various infectious disease regulations.

Notifications are vital for the control of infections locally, for instance tracing close contacts of meningococcal disease and follow up of reports of food poisoning limits spread of these infections.

On the first of January 2004 a major revision of the Infectious Disease Regulations came into law. The list of notifiable diseases has been revised and there is now a requirement for laboratory directors to report infectious disease identified in their laboratories. This new legislation is a major step forward in the surveillance of infectious diseases in Ireland, as it expands both the diseases covered and those required to notify them.

The changes to the legislation are based on recommendations of the Scientific Advisory Committee of the National Disease Surveillance Centre (NDSC). A subgroup of this committee carried out a review, which involved extensive consultation with key parties, at the request of the Department of Health and Children. The changes are also consistent with a European Commission Decision on the communicable diseases to be progressively covered by the Community network.

The amendment introduces the use of case definitions for infectious diseases for the first time in Ireland. A set of case definitions has been drawn up, in line with standardised European case definitions.

The main changes to the list of notifiable infectious diseases are:

- Food- borne and waterborne illnesses are now specified individually, e.g. campylobacteriosis and cryptosporidiosis
- The addition of possible biological threat agents such as botulism and tularaemia
- Several organisms that are important in the monitoring of antimicrobial resistance are now notifiable

This report contains information on infectious diseases up to the end of 2003 and, therefore, presents information on those diseases included in the previous legislation.

INFECTIOUS DISEASE SURVEILLANCE

Surveillance is defined as the ongoing systematic collection, collation and analysis of data and the prompt dissemination of the resulting information to those who need to know so that an action can result. The principle objectives of surveillance are to:

- Give early warning of changes of incidence
- Detect outbreaks early
- Evaluate the effectiveness of interventions e.g. introduction of Men C vaccine
- Identify at-risk groups — data can help inform policy makers
- Help set priorities for resource allocation

Infectious disease surveillance informs practitioners on which infections are the most important causes of illness, disability and death, so that decisions on priorities for control and prevention can be made. It shows which parts of the population are most affected (e.g. children or the elderly, males or females, people living in particular areas of the country) so that control and prevention efforts can be focussed. An important purpose of infectious disease surveillance is also to detect the occurrence of outbreaks or epidemics so that immediate action can be taken to identify and control the source (e.g. outbreaks of food poisoning) or so that the health authority is prepared to deal with increased numbers of patients (e.g. in a flu epidemic). By monitoring how the number of cases of an infection changes over time, control and prevention activities can be assessed, for example, whether vaccination programmes are being effective in reducing the frequency of disease and its consequences.

A surveillance system needs to be simple, ongoing, fast and standardised. Most importantly it needs to provide feedback, which distinguishes a surveillance system from a database. Feedback of surveillance includes periodic reports — weekly infectious disease notifications, quarterly reports, annual reports, health status reports, newsletters such as ID News, scientific papers and alerts via email or fax.

Surveillance of infectious diseases requires integration, analysis and interpretation of data from several different sources. This increases the complexity of the surveillance process. Surveillance makes an important contribution for assessing the health of populations.

COMPUTERISED INFECTIOUS DISEASE REPORTING (CIDR)

One of the exciting developments in infectious disease surveillance is the new national Computerised Infectious Disease Reporting System (CIDR). This is a new information system developed to manage the surveillance and control of infectious diseases in Ireland. It also monitors an organism's ability to resist antibiotic drugs (anti microbial resistance).

CIDR is a shared national information system for the CIDR partners - the health boards, the National Disease Surveillance Centre, the Food Safety Authority of Ireland, the Food Safety Promotion Board and the Department of Health and Children.

The emergence of SARS and other new or re-occurring infectious diseases worldwide has highlighted the importance of early detection and monitoring of infectious diseases. Up to now there has been no national information system for infectious diseases. This has limited the ability to detect cases early and to prevent further illness occurring.

When fully implemented CIDR will:

- Provide timely and comprehensive information to facilitate public health action in individual cases of infectious disease.
- Provide standard reports on the incidence and burden of infectious diseases and antimicrobial resistance nationally, regionally, and locally.
- Allow users to build reports defined by their needs.
- Evaluate the effectiveness of prevention and control programmes nationally, regionally and locally.

CIDR is a web-based system. All information in CIDR is held in a single shared national information repository. Information from laboratories is sent electronically and manually to CIDR. This information is then linked to clinical and epidemiological information, provided by public health professionals. On-line access to the information in CIDR is controlled so that personally identifiable information is visible only to those with a need to manage the individual case. All CIDR information is protected by appropriate security and confidentiality mechanisms. CIDR has a powerful reporting tool, which allows easy web access to standard reports.

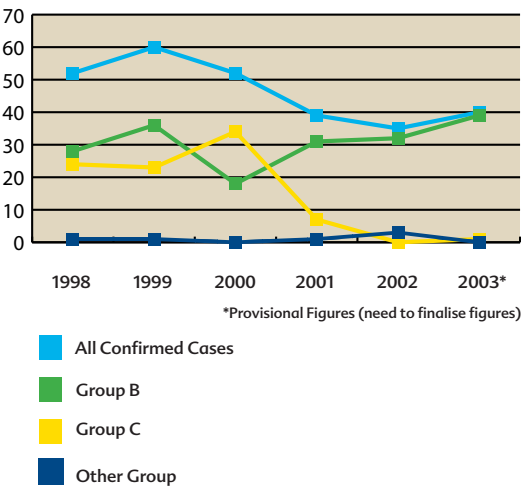
Pilot implementation commenced in May 2004, with a view to extending to all areas, including Cork and Kerry, in 2005.

Meningitis and other Vaccine Preventable Diseases

Meningococcal Disease: The Good News Story Continues

Last year we reported on the dramatic reduction in Group C meningococcal disease, following the introduction of the Men C vaccine. This reduction has continued, with no cases of Group C disease in Cork and Kerry in 2002 and only one case in 2003.

Fig 4.0
Meningococcal Disease in Cork and Kerry 1998-2003



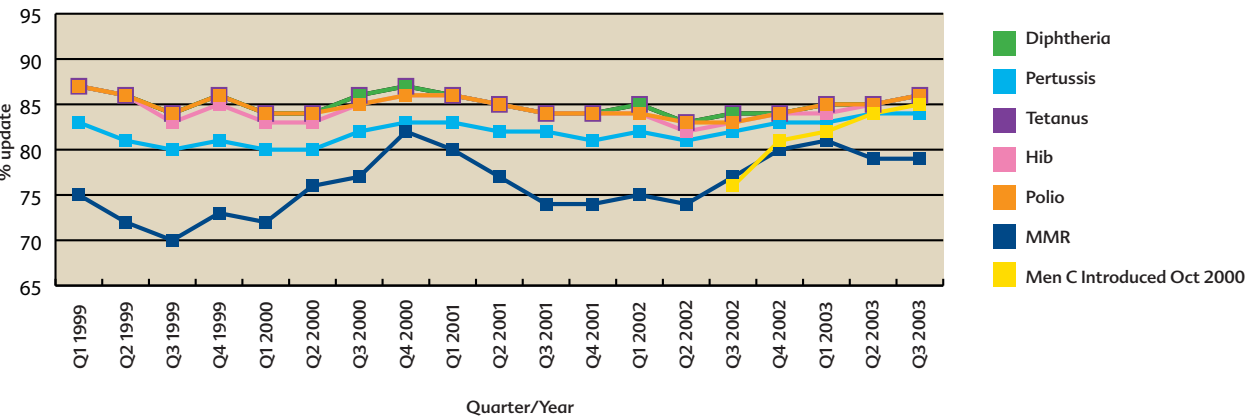
However, cases of meningococcal disease due to other strains continue to occur. Overall, there was a slight increase in meningococcal disease in Cork and Kerry in 2003, with 40 confirmed cases, compared to 35 in 2002 (Fig 4.0). Of those 40 cases, 39 were group B and one Group C. Tragically there were three deaths in 2003, but none in 2002.

The reduction in Group C disease has been dramatic since the introduction of the Men C vaccine. However, high vaccine uptake levels need to be maintained if this reduction is to be sustained.

IMMUNISATION UPTAKE LEVELS

Disease prevention is the key to public health. It is always better to prevent a disease than to treat it. Vaccines help prevent infectious diseases and save lives. Vaccines are responsible for the control of many infectious diseases that were once common in Ireland. The current national recommendation in Ireland is that children are vaccinated against ten infectious diseases: diphtheria, pertussis (whooping cough), tetanus, polio, *Haemophilus influenza* type b, meningococcal group C, measles, mumps, rubella (German measles) and tuberculosis. The national target for vaccine uptake is 95%, the level needed to prevent outbreaks of disease. At present the uptake of childhood vaccinations, both nationally and in Cork and Kerry, falls far short of this target, especially for the measles, mumps and rubella (MMR) vaccine (Fig 4.1).

Fig 4.1
Percentage uptake of primary immunisations at 24 months by quarter in SHB 1999-2003



Vaccine Preventable Diseases

MEASLES

There was an increase in measles cases nationally in 2003, with 587 cases compared to 243 cases in 2002. Most of the cases occurred in the Midland Health Board and Eastern Regional Health Authority areas. In both these areas an outbreak was confirmed, with definite cases of measles.

Measles is a difficult disease to diagnose, as in the early stages or in milder forms it can resemble other, less serious viral illnesses. It can be confirmed by a blood test. However, in Ireland we now have a laboratory test available which allows us to check for measles illness by taking a swab from the inside of the mouth. This is much less distressing for a sick child and allows us to differentiate true measles from other viral illnesses.

In Cork and Kerry, where possible, swabs are taken from cases notified as measles illness. In 2003, 18 cases of possible measles were notified to public health. Eleven of these children had swabs taken and all were found to be negative, ruling out the diagnosis of measles. Of the remaining seven cases, two were found to have another cause for their illness, leaving five possible cases of measles, none of whom had been vaccinated. Therefore, in Cork and Kerry in 2003 we had five notifications of possible measles cases and no definite cases (Fig 4.11).

Fortunately, the outbreaks in the Midlands and East of Ireland did not spread to the Southern area. However, if the uptake of MMR vaccine continues at the present low levels further outbreaks are inevitable.

PERTUSSIS (WHOOPING COUGH)

The number of pertussis cases decreased last year from 12 notifications in 2002 to 7 in 2003 (Fig 4.12).

Fig 4.11
Measles Notifications,
Southern Health Board 1988-2003

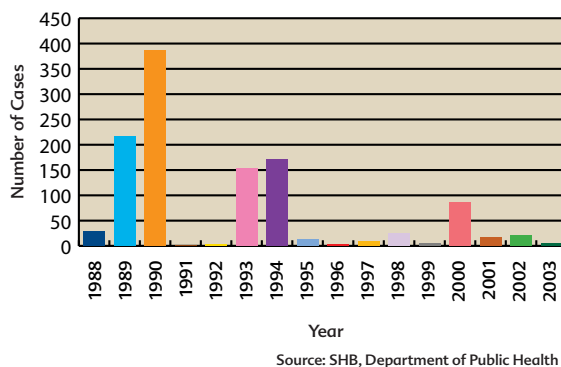
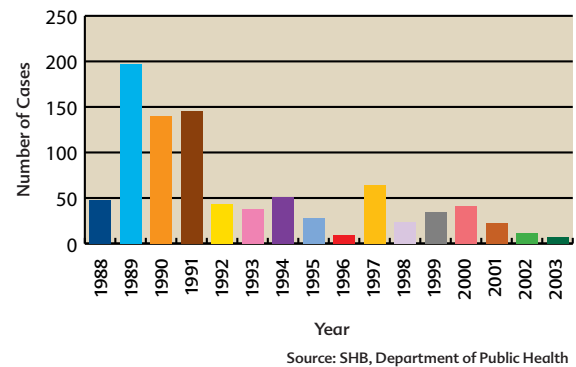


Fig 4.12
Pertussis (Whooping Cough) Notifications,
Southern Health Board 1988-2003



MUMPS

There were 5 Mumps notifications in 2003 compared to 9 in 2002 (Fig 4.13).

RUBELLA

There were 2 notifications of Rubella in the Southern Health Board in 2003 (Fig 4.14).

Fig 4.13
Mumps Notifications,
Southern Health Board 1988-2003

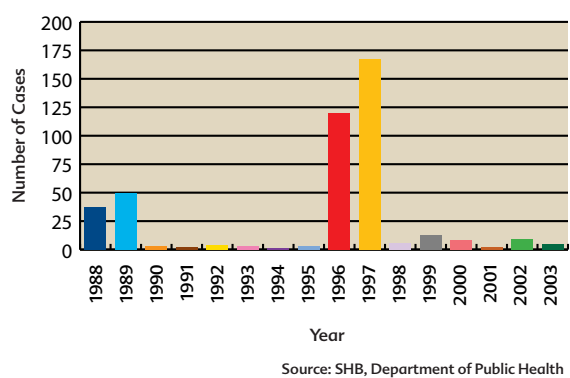
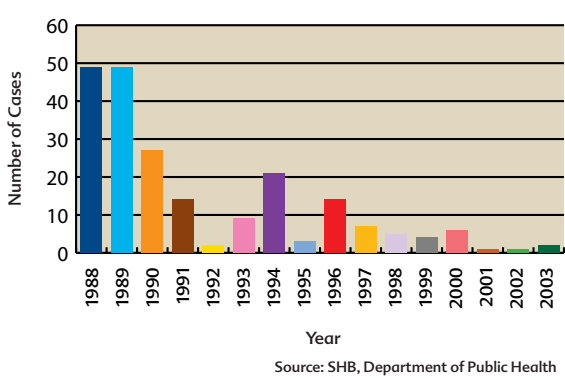


Fig 4.14
Rubella Notifications,
Southern Health Board 1988-2003



Infectious Intestinal Disease (IID) 2003: An Overview

KEY POINTS

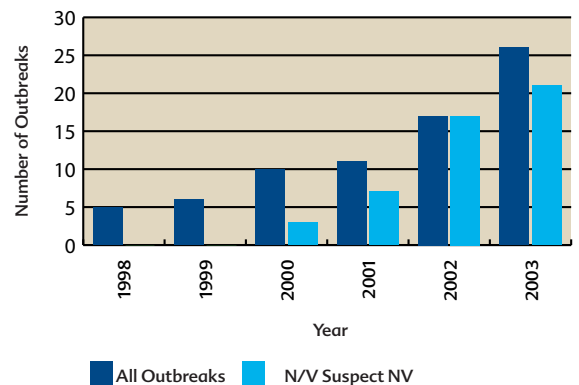
- *IID outbreaks now mainly viral*
- *Foodborne outbreaks rare*
- *New Infectious Disease Legislation*
- *Changing Salmonella trends*
- *Campylobacter cases common*
- *E.coli 0157 remains a worry*

IID OUTBREAKS A CHANGING LANDSCAPE

The Infectious Intestinal Disease (IID) outbreak landscape has changed dramatically in recent years. Two features are particularly notable regionally and reflect what is happening on the national front. Firstly, there has been a substantial increase in the number of reported outbreaks annually. Secondly, the proportion of foodborne outbreaks has fallen and has been superseded by a plethora of outbreaks due or suspected as being due to Norovirus (NV), the virus responsible for Winter Vomiting Disease (Fig 4.15).

Norovirus is highly infectious, capable of being spread directly from person-to-person, through the air, by food and by water. It is very resilient and can survive for long periods in the environment and on surfaces such as door handles or worktops. Because of these features, noroviruses can cause widespread outbreaks, especially where people are gathered closely together.

Fig 4.15
Reported IID Outbreaks SHB 1998 – 2003



(2003 = includes 1 geographical cluster of VTEC)

REGIONAL FACTFILE

Twenty-six IID outbreaks were reported in the Southern Health Board region in 2003. In excess of 473 individuals were ill as a result. Most of the outbreaks investigated (81%) were suspected or confirmed to be due to Norovirus (Table 4.0).

Twelve outbreaks (46%) were in health care settings, mainly community hospitals and nursing homes. Seven outbreaks were linked to hotels. Other settings included restaurants (2), private households (2), a special needs centre (1) and a hostel (1). One geographical cluster of *E.coli* O157 was also investigated. The bulk of reported outbreaks (42%) occurred over the Spring period.

It is to be remarked that, while the leisure industry (hotels and tour buses) was most prominently affected by Norovirus in 2002, health care settings featured heavily in 2003. Of particular relevance, are the *National Guidelines on the Management of Outbreaks of Norovirus Infection in Healthcare Settings* that were launched by the Minister for Health & Children at the beginning of 2004. These guidelines draw on best international evidence and national expertise, providing a framework to address the challenge of outbreaks of illness in hospitals and other settings caused by noroviruses.

Table 4.0. IID Outbreaks SHB 2003

Month	County	Location	No. ill	Pathogen
Jan	Cork	Chinese Restaurant	17	S.Rissen
Feb	Cork	Community Hospital	63	Norovirus
	Cork	Nursing Home	12	Suspect Norovirus
	Kerry	Hotel	9	Suspect Norovirus
	Kerry	Hotel	50+	Norovirus
	Kerry	Long-stay Unit	51	Suspect Norovirus
	Kerry	Community Hospital	21	Suspect Norovirus
Mar	Cork	Nursing Home	7	Suspect Norovirus
	Cork	Community Hospital	19	Suspect Norovirus
	Cork	Day Centre	13	Suspect Norovirus
Apr	Kerry	Hotel	10	Suspect Norovirus
	Cork	Special Needs Centre	29	Suspect Norovirus
May	Cork	Nursing Home	15	Suspect Norovirus
	Cork	Nursing Home	7+	Suspect Norovirus
	Cork	Household	4	S.Enteritidis
	Kerry	Household	3	Suspect Norovirus
Jun	Cork	Long Stay Unit	22	Suspect Norovirus
Aug	Kerry	Hostel	22	Suspect Norovirus
	Cork	Geographical Cluster	4	E.coli O157:H7
Sept	Cork	Golf Club restaurant	9	Unknown
	Kerry	Hotel	7+	Suspect Norovirus
	Kerry	Hotel	4	Norovirus
Oct	Kerry	Community Hospital	5+	Clostridium difficile
Dec	Cork	Community Hospital	32	Norovirus
	Cork	Hotel	8	Suspect Norovirus
	Kerry	Hotel	30	Suspect Norovirus

FOOD SAFETY CONTROLS

With the advent of the Food Safety Authority of Ireland (FSAI) in 1998 and, more recently, the Food Safety Promotion Board (SafeFood), trojan efforts have been made to reduce the burden of illness due to foodborne disease in Ireland. There can be little doubt that the fall-off in foodborne outbreaks is witness to raised awareness, standards and enforcement right along the food chain.

SPORADIC IID

A SIGNIFICANT CASELOAD

IID outbreaks, because of the numbers of cases involved, often reach public attention. While sporadic (isolated, unlinked) cases of IID rarely hit the headlines, the associated caseload accounts for a significant amount of illness each year. Yet we are only seeing the tip of the iceberg. Most of those who suffer from acute gastrointestinal illness do not even seek medical attention. Of those who do, only a proportion have a stool specimen submitted for laboratory testing. All confirmed cases are not reported or notified. Much sporadic IID therefore escapes inclusion in public health surveillance systems.

RECENT LEGISLATIVE CHANGE

As previously noted, changes to Irish infectious disease legislation has extended the list of notifiable diseases. In particular, food-borne and waterborne illnesses are now specified individually. Case definitions for these notifiable diseases have been circulated by the National Disease Surveillance Centre to facilitate interpretation. Those relevant to infectious gastroenteritis are outlined (Table 4.1).

Table 4.1. Notifiable Infectious Intestinal Diseases, Ireland 2004

Acute infectious gastroenteritis	Listeriosis
<i>Bacillus cereus</i>	Noroviral infection
Botulism	Paratyphoid
<i>Campylobacter</i> infection	Salmonellosis
Cholera	Shigellosis
<i>Clostridium perfringens</i>	Staphylococcal food poisoning
Cryptosporidiosis	Trichinosis
<i>Escherichia coli</i> infection	Typhoid
Giardiasis	Yersiniosis
Hepatitis A	

Source: Infectious Disease (Amendment)
(No.3) Regulations 2003 (SI No.707 of 2003)

Currently, the most commonly reported sporadic infectious intestinal diseases in this region include acute infectious gastroenteritis (mostly rotavirus), campylobacteriosis, cryptosporidiosis and salmonellosis. Campylobacteriosis and salmonellosis are here examined in some detail – the former in view of its frequency, the latter in view of changing trends.

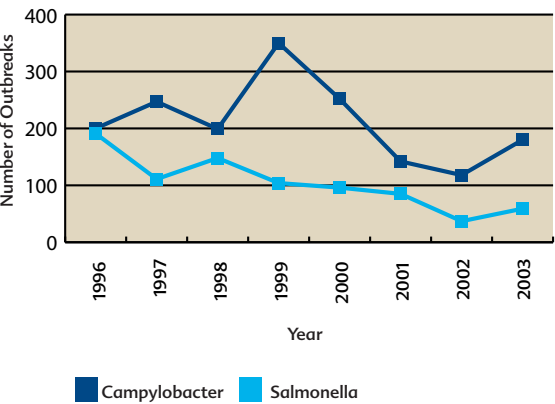
SALMONELLA

AN OVERALL DECLINE

Salmonella species - a bacterial zoonotic pathogen — has, hitherto, been a relatively common cause of foodborne illness in Ireland. Two serotypes, *S.Enteritidis* and *S.Typhimurium* have accounted for the majority of human cases in Ireland. The main animal sources of *S.Typhimurium* are cattle and pigs while that of *S.Enteritidis* is poultry.

Nationally, the overall incidence of human salmonellosis notifications rose in the 1990s to peak in 1998, and has been steadily decreasing since then. A broadly similar pattern of decline has been occurring in this region (Fig 4.16). The fall-off is in line with very significant advances that have been made with salmonella control programmes in the poultry/egg and pig production agri-sectors of the Irish economy.

Fig 4.16
Trends in Human *Salmonella* & *Campylobacter* Infection SHB 1996 – 2003



Other points of note in relation to salmonellosis notifications currently are the changing serotype and the proportion that are suspected to be travel-related.

FOREIGN TRAVEL

In 2003, 61 cases of *Salmonella* infection were notified in this region. Nearly one-third (30%) were considered to be travel-associated. Most of these cases would have been visitors to Iberian resorts or the Canary Islands within the incubation period. The National Disease Surveillance Centre (NDSC), in its 2002 annual report, remarked on the emergence of travel-associated cases of *Salmonella*, most of which cases were associated with travel to Spain (the serotype most commonly linked with Spain was *S.Enteritidis*). It is quite probable that the overall proportion of travel-associated cases will increase further in coming years.

CHANGING SEROTYPE

The NDSC has also noted that the national trend that began in 2001 of *S.Enteritidis* taking over from *S.Typhimurium* as the predominant serotype continued through 2002. In this region in 2003, thirty cases (49%) were *S.Enteritidis*. Just eleven cases overall (18%) were *S.Typhimurium*. The remainder were *S.Paul*, *S.Rissen*, *S.Sandiego*, *S.Typhi*, *S.Paratyphi*, *S.Brandenberg*, *S.Agona*, *S.Havana* and serotype unclassified. Most of the travel-related cases (13/18) were *S.Enteritidis*.

CAMPYLOBACTER

A COMMON PATHOGEN

Infections due to *Campylobacter spp* are the most commonly isolated bacterial cause of human gastrointestinal illness in Ireland, the UK and many countries globally with temperate climates. Most cases are sporadic. It is thought that the primary mode of transmission is foodborne. Although many foods may be contaminated, poultry and poultry products are of particular importance as a source of human infection.

Regional trends of *Campylobacter* are shown in Fig 4.16. In total, 180 cases of laboratory confirmed campylobacteriosis were reported in 2003 in this region. *Campylobacter* is known to have a well-characterised seasonal distribution, with a peak seen in late spring/early summer each year. By far the

highest burden of illness is seen in children in the 0-4 year age-group (34% in 2003), and has been documented as a feature of the illness worldwide. Male cases predominate.

CONTROL EFFORTS

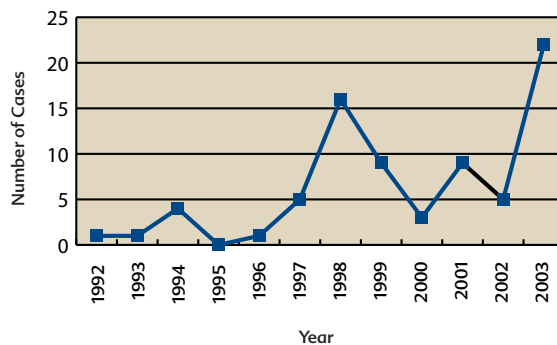
Despite the reduction in reported cases nationally since 2000, campylobacteriosis remains a problem. Work towards the control of *Campylobacter* has been identified as a priority. In 2002, a report entitled '*Control of Campylobacter species in the food chain*' was published by the FSAI, and included recommendations to reduce opportunities for *Campylobacter* colonisation of poultry in Ireland and the proper handling and preparation of meat, particularly poultry meat. A case-control study is currently being conducted to examine risk factors for human cases of *Campylobacter* infection, coordinated by the NDSC.

***E. COLI* O157: KEEPING A WATCHFUL EYE**

REGIONAL FACTFILE

The year 2003 saw the highest number of recorded cases of *E.coli* O157 in the Southern Health Board region (22 cases provisionally) since surveillance of the pathogen began over a decade ago. The identification of infected household contacts accounted for some of this increase.

Fig 4.17
***E.coli* O157 Notifications SHB**
1992-2003



Ongoing awareness is urged. The infection presents as a mild to severe form of gastroenteritis. Bloody diarrhoea (haemorrhagic colitis) may occur. The most feared clinical manifestations are haemolytic uraemic syndrome (2-7% progress to develop HUS) and thrombotic thrombocytopenic purpura (TTP).

TRANSMISSION

E.coli O157 is commonly found in the intestines of healthy livestock. Transmission occurs mainly by eating contaminated food (usually inadequately cooked beef), unpasteurised milk, or contaminated raw fruit/vegetables. It may also be present in unchlorinated water supplies. It can be passed from person to person via the faecal-oral route.

CRUCIAL PREVENTIVE ASPECTS

- Thorough cooking of meat
- Safe drinking water provision
- Non-consumption of unpasteurised milk/milk products by vulnerable individuals
- Scrupulous attention to hand washing after toilet use & before handling food. As the pathogen can pass from an infected individual to another, this is a most crucial aspect of prevention of spread within households.

The exclusion of infected risk groups from work/ crèche/pre-school may be necessary. Risk groups include certain categories of food handler, health care workers, pre-school children and those unable to implement good personal hygiene.

The Level of Sexually Transmitted Infections

The rising trend in Sexually Transmitted Infection (STI) notifications has continued since 1994. The number of cases increased nationally by 86% between 1995 and 2000 and by 29% between 1989 and 2000.

It is, however, now recognised that there is an urgent need for a review of the current system of surveillance of STIs. A number of limitations to the present methods have been identified:

- data is mainly collected from STI clinics in the Health Boards;
- many patients travel from their area of residence to clinics outside their area;
- the burden of STIs presenting to General Practice is largely unknown;
- the data that is collected at STI clinics is a composite report as distinct from person based data;
- data management/entry has not been adequately supported in STI clinics;
- highly sensitive personal based data must be dealt with by sufficiently senior surveillance staff and there is a need for timely user-friendly feedback to health promoters and clinicians at STI clinics and in General Practice.

The National Disease Surveillance Centre (NDSC) is currently addressing these issues by means of several sub-committees and feasibility studies.

A summary of available data for 2000 has been published by NDSC. A total of 905 infections were notified by the Southern Health Board and the three most commonly notified infectious were ano-genital warts, chlamydia trachomatis and non-specific urethritis. Although age data was missing on a high proportion of cases, the majority of cases where age was recorded was in the 20-29 year group followed by the 0-19 group.

An enhanced surveillance system of Hepatitis B has been in place in the Southern Health Board since 2000.

KEY POINTS

- *Sexual contact is the main mode of transmission of Hepatitis B in Ireland.*
- *Hepatitis B notifications in SHB have risen from 1-3 cases annually before the year 2000 to 264 cases in 2003.*
- *An unprecedented outbreak of acute Hepatitis B infection in Cork started in June 2002 and is ongoing.*
- *Hepatitis B is vaccine preventable and vaccination together with sexual health promotion are the keys to prevention.*
- *There is a rising trend in sexually transmitted infections in Ireland since 1994, the most common infections being ano-genital warts and chlamydia. Young people 20-29 years form the biggest age category.*

Hepatitis B

Hepatitis B is a serious communicable disease of global distribution. The severity of acute Hepatitis B ranges from vague or inapparent infection to fulminant liver failure. Approximately 2-10% of acutely infected persons become chronic carriers and, of these, up to 25% develop progressive liver disease with the substantial risk of cirrhosis and/or primary hepatocellular carcinoma.

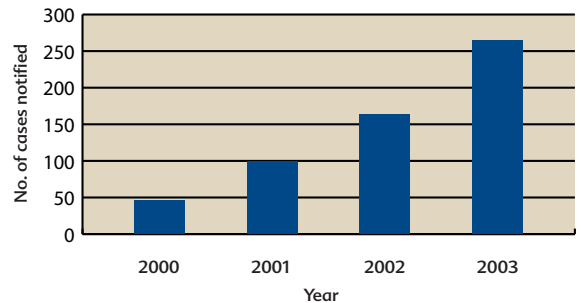
Hepatitis B is vaccine preventable. In 1992 the World Health Organisation (WHO) set a goal for all countries to integrate Hepatitis B vaccination into their universal childhood vaccination programme by 1997.

Current recommendations in Ireland, as outlined in the Immunisation Guidelines for Ireland 2002, are that only high-risk populations should be offered vaccination. These recommendations are based on the low prevalence of Hepatitis B here. The proportion of the general population with evidence of past exposure to Hepatitis B is estimated to be 0.5%, though the prevalence rises among high-risk populations.

Sexual contact is the main mode of transmission of Hepatitis B in Ireland. As such, it is the only vaccine preventable sexually transmitted infection. Gay men are at increased risk of Hepatitis B by sexual transmission and are considered a high-risk group as per the Immunisation Guidelines 2002. A recent survey of gay men in Ireland, Vital Statistics Ireland, found less than half (44%) were vaccinated against Hepatitis B with even lower levels among younger men and men residing outside Dublin.

Up to 2000, Hepatitis B was a rare infection in Ireland and the SHB region (usually 1-3 cases annually in SHB). However, the epidemiology of this infection has fundamentally changed in the past 4 years (Fig. 4.18).

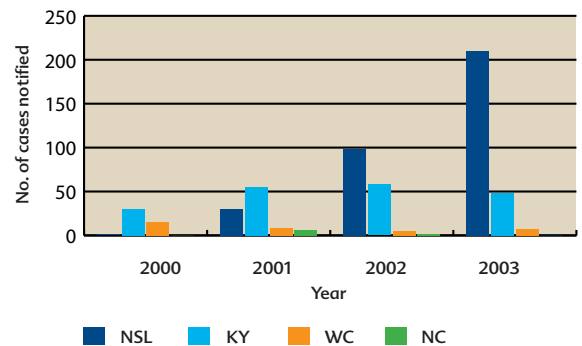
Fig 4.18
Hepatitis B Notifications in SHB 2000-2003



Source: SHB Dept. of Public Health

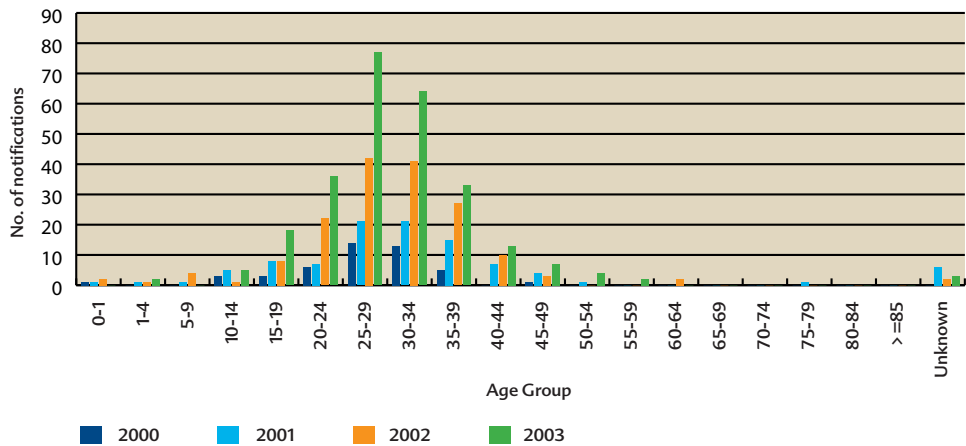
The level of Hepatitis B notifications is particularly high in the Cork City and surrounding area (North/South Lee (NSL) in Fig. 4.19).

Fig 4.19
Hepatitis B Notifications by CCA in SHB 2002-2003



Source: SHB Dept. of Public Health

Fig 4.2
Hepatitis B Notifications by Age Group in SHB, 2000-2003



Source: SHB Dept. of Public Health

This relates principally to the identification of past and chronic infection amongst immigrants residing in the Cork area from countries where Hepatitis B is endemic. Approximately equal numbers of notifications relate to men (53%) and women (47%). The age distribution (Fig. 4.2) indicates a clear peak in early adulthood, once again reflecting the age distribution of immigrants into Ireland over the past 4 years.

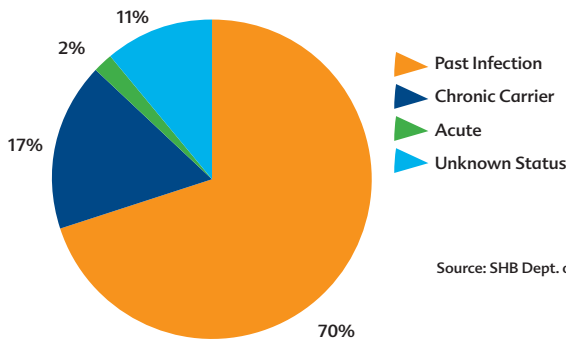
Hepatitis B is a frequently occurring infection in many parts of the world (Africa, Asia and Eastern Europe). The majority of cases in the SHB area are identified as a result of the screening service provided for those seeking asylum here.

The majority of these are notifications of past-infection in the non-national population, most of whom are non-infectious (Fig. 4.21).

Additionally, in 2002-2003 an outbreak of acute Hepatitis B infection occurred in the Cork City area. An unprecedented 18 acute cases were notified, 16 were men and most have been involved in homosexual activity. Of the 18 cases, 16 are Irish nationals, with a mean age of 34 years. Although a common source of exposure has not yet been identified, this outbreak indicates that there is a high level of unsafe sexual practices and a considerable pool of infection in our community.

Sexual Health promotion and vaccination campaigns are ongoing and are targeted at those at particular risk. Gay and bisexual men are an invisible inaccessible group and present particular challenges in terms of infection control.

Fig 4.21
Hepatitis B Notifications by Patient Status in SHB 2003 (n=264)



Source: SHB Dept. of Public Health

Tuberculosis: Touching Base

AN ONGOING THREAT?

The belief by some that Tuberculosis (TB) is ‘a thing of the past’ is misguided. More than two billion people - about a third of humanity – are infected with the TB bacillus, and each year two million die. Along with AIDS and Malaria, TB currently ranks among the top three infectious disease killers globally. A most menacing threat is that of multi-drug resistant TB, with potentially untreatable strains, in parts of the world such as Russia, Eastern Europe and elsewhere. We live in a time of unprecedented travel and people movement. The TB bacillus needs no visa.

It is encouraging that Irish TB notification rates continue a general downward decline. Overall, the Cork-Kerry region reflects this trend (data for 2003 as yet provisional), with rates falling by about one-third over the last decade. However, we become complacent at our peril. These data conceal the ongoing, rigorous public health control measures so essential to the prevention of spread of this often-silent marauder. The maintenance of efficient and effective public health systems, with optimal surveillance and control measures, is key.

REGIONAL FACT FILE

In 2002, 78 cases of TB were notified in this region, with men outnumbering women by more than 2:1 (Table 4.2). The bulk of cases were Irish born (81%). Among the 19% non-indigenous cases, just four were from among our refugee/asylum seeker population. About one-third of all cases were infectious i.e. with the TB bacillus being visible on sputum microscopy. Such cases pose a risk to their close contacts until satisfactorily responding to anti-tuberculous treatment.

Table 4.2. TB: SHB 2002

Summary	No.
Total cases	78 (13.4/100,000)
Male:Female	54: 24
Indigenous vs non-nationals	63 (81%): 15 (19%)
Infectious (sputum smear positive)	24 (31% overall)
Culture positive cases	52 (67% overall)
All MTB apart from one <i>M.bovis</i>	
Drug resistance	No case of Multi-Drug Resistance

PUBLIC HEALTH SYSTEMS

TB cases in this region are treated by hospital-based clinicians. Public health systems ensure the follow up of contacts by a process of speedy identification and screening. Following screening, any newly identified cases are referred for specialist attention. For other contacts, preventive antibiotic treatment (prophylaxis) is prescribed where indicated and chest x-ray follow up is arranged as appropriate.

Treatment of TB cases takes a minimum of six months. Not surprisingly, problems with compliance can arise. In such instances, the treating clinician generally alerts public health professionals. Directly observed therapy needs to be undertaken sensitively and supportively. Trust needs to be fostered between all involved. It is offered and coordinated by public health professionals in the community, necessitating intensive cooperation over extended periods with the patient, family members, treating clinician and family doctor. In 2002, seven TB cases (and one patient prescribed prophylaxis) had their treatment observed daily for periods of six months and more.

TB control efforts such as directly observed therapy are conducted ‘behind the scenes’. Headlines are rarely made. They are, however, cornerstones in protecting our population’s health from this once dreaded disease.

SARS

In early 2003 SARS emerged as the first major infectious disease of the 21st century.

With origins in China it spread across the globe over the course of a few weeks in February / March 2003 (Fig. 2.22). About 8,500 persons worldwide were diagnosed with probable SARS during the epidemic and there were over 900 deaths. Notably 21% of cases were healthcare workers.

SARS is now known to be a droplet spread viral illness caused by a novel coronavirus. SARS was, and continues to be, a challenge to diagnose and manage because its symptoms resemble those of many other respiratory infections.

Diagnosis rests on the clinical syndrome, a link to known cases of SARS, and a process of exclusion. Available laboratory tests have not been consistently helpful during the acute phase of the illness.

SARS was managed primarily by supportive measures for those affected with isolation and infection control precautions in hospital, as well as tracing and quarantining of contacts.

The epidemic was successfully contained within 5 months and on July 5th 2003, WHO announced that the last human chain of transmission of SARS had been broken.

HOW WAS SARS CONTAINED?

“SARS has been contained, at least temporarily, not by the genomic revolution, not by advanced pharmaceuticals, but by old fashioned public health measures like hand washing, infection control procedures, isolation of cases and tracing and quarantining of contacts”

REF: HEALTH CANADA

SITUATION IN IRELAND

In Ireland, SARS became notifiable in March 2003. Some 50 cases were investigated of whom 17 fitted the case definition of "SARS" with 1 "probable" case and 16 "suspect" cases.

Of the 17 cases, 60% were male. The age ranged from 1 - 47 years. In terms of distribution 12 occurred in the Eastern Regional Health Authority area; 2 in the North Western Health Board; 1 each in the Western Health Board and Southern Health Board areas and the one probable case in the Western Health Board area. An alternative diagnosis - Influenza A(2) or B(1), RSV(1) or Atypical pneumonia - was made in 8 cases. In a further 8 cases (included the case that presented in SHB) no alternative microbiological diagnosis was made but epidemiological and clinical assessment ruled out SARS. The probable single case made a full recovery and there were no deaths.

While much has been learned about SARS including its causation by the virus SARS-CoV, there is still limited knowledge about the epidemiology of SARS and its potential to re-emerge.

It is therefore imperative that health authorities worldwide remain alert for its recurrence and improve preparedness to detect and respond should SARS re-emerge.

Fig. 2.22
SARS Global Spread



5 Emergency Planning

Health emergencies such as outbreaks of disease and chemical incidents have the potential to cause disruption for communities on a large scale and present operational problems for the health services. Because disease outbreaks and chemical incidents can develop very rapidly — preparedness and emergency planning are essential components in minimising the impact on the public. Responding effectively means organisations working together to minimise the impact and achieving a return to normality as quickly as possible.

Public health emergencies include:

- Outbreaks of disease such as SARS, pandemic influenza.
- Natural disasters
- Chemical incidents
- Biological threats
- Radio-nuclear incidents

Action on Major Emergency Planning is taking place at national, regional and local levels.

The Southern Health Board has convened a multidisciplinary Major Emergency Planning Group to develop and maintain effective emergency management arrangements within the region. It will ensure that appropriate sub-plans are prepared and that all staff who may be involved in a major emergency response are adequately trained, prepared and resourced.

BIOLOGICAL THREATS

September 11th 2001, with the series of airliner attacks in the US, marked an ugly new dawn in global terrorism. The events on that historic date and subsequently, including the mailing of finely milled

anthrax spores to agencies and individuals in the US (with copycat incidents elsewhere), and terrorist episodes in Iraq and Spain, have made us acutely aware that provocation of a bioterrorism-type scare is no longer a remote possibility. Many countries have rightly made preparedness planning for biological threat agents (whether hoax or actual) a priority. Biological threat agents include smallpox, anthrax, plague, botulism, tularaemia and viral haemorrhagic fevers. These are termed Category A agents as they are the most disturbing of all — being easily transmitted, having high mortality rates and with the potential to cause public panic and social disruption on a mammoth scale. No nation can regard itself as safe from the threat. Biological threat preparedness is now key.

Here at home, an Expert Committee on Contingency Planning for Biological Threats (established after 9/11) continues its work with regard to a health response for Ireland. The National Disease Surveillance Centre (NDSC) has produced 'Biological Threat Agents', a document giving an overview of the clinical management and public health implications of selected biological threat agents. The Department of Public Health in this region has reviewed its own emergency procedures in the event of such a threat, in preparation for engagement with other stakeholders both within and outside of the Health Board.

CHEMICAL HAZARDS AND INCIDENTS:

We live in a complex environment. "The growth of the global market has dramatically increased the range of chemicals and routes by which our population can be exposed to potentially toxic hazards. It has been estimated that 600 new chemicals enter the market

each month in addition to the 11 million plus already known and 70,000 in regular use" (HPA). Most in controlled use, benefit us environmentally. However, we must be prepared for inadvertent use. We need to develop the skills and capacity to detect, assess and deal effectively with the public health impact of acute and chronic chemical exposures, such as those from landfill sites, incinerators and industrial emissions. In addition the Southern Health Board region has a number of facilities with the known potential for hazardous substance release. Under new EU legislation, (Seveso II directive) external emergency plans to cover all issues arising for Emergency Response Services in the event of an accidental release of a hazardous substance, are required. Public health is involved in preparing these plans conjointly with all the statutory emergency response services.

PANDEMIC INFLUENZA

Influenza A viruses periodically cause worldwide epidemics (pandemic) with high rates of illness and death. Historic evidence suggests that these pandemics occurred three to four times per century, the worst in 1918-1919 killed up to 40 million people worldwide. It is thought that 'new' influenza viruses capable of causing pandemics arise through genetic mixing (re-assortment) between human and avian influenza viruses, and past experience indicates that this new virus will probably arise in China. Experts agree that future influenza pandemics are inevitable but the timing of the next pandemic cannot be predicted. With today's crowded conditions and rapid transportation there may be little warning. Contingency planning is required to minimise serious illness and overall deaths and to alleviate societal disruption.

KEY POINTS

- *Major Emergency Planning is an important activity to develop the competence to deal with untoward events.*
- *A concerted interagency push is on to develop robust plans to safeguard the health and welfare of the population in the event of natural, accidental or deliberate hazardous events occurring.*

appendices

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i Infectious Disease Notifications SHB 2003

List of revised notifiable diseases

Infectious Disease Notifications in 2003 in SHB (National Weekly Infectious Disease Reporting System)					
Infectious Disease	Kerry	North Cork	North South Lee	West Cork	Total
Bacterial Meningitis [^]	11	5	22	8	46
Brucellosis	1				1
Creutzfeldt Jakob disease			1		1
Food poisoning (bacterial other than salmonella)	11	29	160	31	231
Gastroenteritis (when contracted by children under 2 years of age)	10	62	277	20	369
Hepatitis A (acute)	2		1		3
Hepatitis B (acute and chronic)	47		210	7	264
Infectious mononucleosis		1	20		21
Malaria	1				1
Measles	1		4		5
Mumps			5		5
Not Notifiable**	21	46	227	15	309
Pertussis	1		5	1	7
Rubella			1	1	2
Salmonellosis	5	7	40	7	59
Shigellosis			2	1	3
Tuberculosis*	16	8	70	1	95
Viral encephalitis	1				1
Viral hepatitis unspecified	1		11		12
Viral meningitis	2			1	3
Total	131	158	1056	93	1438

[^] data taken from the Enhanced Surveillance System for Bacterial Meningitis

* Taken from the Enhanced TB Surveillance System, figure provisional

** Not notifiable category: includes non-notifiable diseases not listed in 1981 ID Regulations; cases of gastroenteritis when over 2 years of age; denotified cases; STIs which are collected through a different system on a quarterly basis (aggregated data)

ii Key Health Data

Death Rate per 100,000 Population for 2002

	Area	Cases 2002	Rate 2002
Male	SHB	2440	844.62
Female	SHB	2278	781.56
Male	Ireland	15217	781.9
Female	Ireland	14131	716.93

Birth Data for 2002

	SHB	Ireland
Total Births	8567	60521
Crude Birth Rate *	14.76	15.45
Total Fertility Rate **	1.97	1.97
Birth Rates of Women (Aged 15-19 Years)	14.49	18.11
Birth Rates of Single Mothers (All Ages)	16.48	19.07

* Live births during a specific period per 1,000 population during the same period

** Average number of children born to a woman throughout her childbearing period subject to prevailing age specific fertility rates

Mortality Data for 2002

	SHB	Ireland
Total Deaths	4718	29348
Deaths Rates per 1,000	812.95	749.21

Standardised Mortality Ratios 2002

Disease Categories	SHB	Ireland
All Causes of Mortality (All Ages)	102.81	100
All Causes of Mortality (0-64 Years)	100.17	100
All Causes of Mortality (Over 64 Years)	103.49	100
Circulatory Disease ICD 390-459 (All Ages)	107.8	100
Cancer ICD 140-208 (All Ages)	98.78	100
Respiratory Disease ICD 460-519 (All Ages)	97.55	100
All Infectious and Parasitic Disease ICD 001-139 (All Ages)	92.02	100
All Injuries and Poisonings ICD 800-999	111.64	100

Years of Potential Life Lost up to Age 65 (YPLL65)

	SHB	Ireland
All Causes of Mortality, Males (0-64 Years)	10636	73388
All Causes of Mortality, Females (0-64 Years)	6588	40704

Childhood Mortality Data 2002

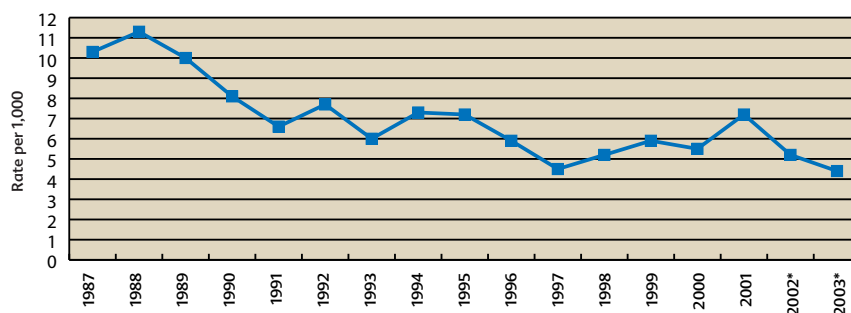
	SHB	Ireland
All Causes of Neonatal Mortality *	3.5	3.54
Sudden Infant Death Rate (ICD 798) **	0.7	0.45
Congenital Anomalies Death Rate (ICD 740-759) ***	1.28	.98

* Deaths under 28 days per 1,000 live births during the same period

** Deaths due to Sudden Infant Death Syndrome (ICD 789) in the first year of life per 1,000 live births

*** Deaths due to Congenital Anomalies (ICD 740-759) in the first year of life per 1,000 live births

Infant Mortality Rates in the SHB region, 1987-2003*



* denotes provsional data



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The above is not an exhaustive list. Other references are available on request from the Department of Public Health.

Useful Websites

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Food Safety Promotion Board.	www.safefoodonline.com
Health Research Board (HRB).	www.hrb.ie
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World Health Organisation.	www.who.int