

The Impact of Demographic Change on Demand for and Delivery of
Health Services in Ireland 2006-2021

Report 1: Recent Demographic Trends and their Impact
on the Delivery of Health Care in Ireland

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NOTE: This report is an interim statement of developments in the project.
Empirical analyses and results may therefore change in the final report.

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Chapter 1: Setting The Context

Introduction

- 1.1 The Health Strategy, *Quality and Fairness: A Health System for You* (2001), provides an outline for the reform and development of health services in Ireland up to the year 2011. Three of its central objectives are equity of access to services for all categories of patient, appropriate care in the appropriate setting, and adequate service capacity to deliver timely and appropriate services. In order to deliver on these objectives up to 2011 and plan the further development of the health services in the decade after that date, it is necessary to examine future trends in the demographic and spatial distribution of the Irish population and how these are likely to affect demand for health care. This project has been commissioned by the Health Research Board to develop and apply the analyses necessary to examine demographic trends and their impact on health service demand and delivery up to 2021 and to draw implications for the future planning of the health services in Ireland.
- 1.2 This project defines health services as including health and social services, such as the long-term community and institutional care of dependent older people, here abbreviated as LTC (long-term care). Although the OECD excludes such social services from its System of Health Accounts (SHA), in Ireland this distinction is not made in the funding and administration of health and social services. Social services are funded from the Votes of the Department of Health and Health Service Executive (HSE) and administered by the HSE.

The Objectives of the Project

- 1.2 The project has four specific objectives:
 - 1.2.1 To examine recent experience of population change in Ireland and assess its effects on demand for health services, focusing in particular on the period 2001-2006. This analysis will be set in the context of international research on the influence of population change on demand for health services and will

draw conclusions on the main drivers of overall and sectoral demand for health services in developed societies.

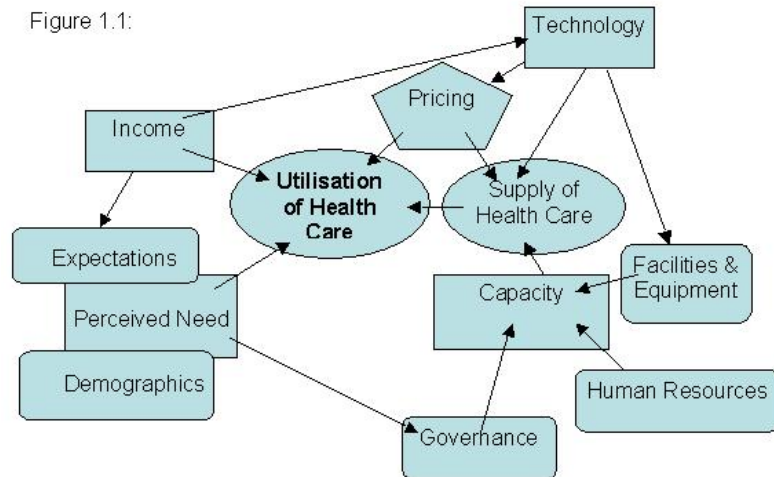
- 1.2.2 To develop and set out population projections for Ireland for the period 2006-2021, disaggregated by five-year age-group, sex and county, with additional dis-aggregations by migrant/ethnic status, family status and household size.
- 1.2.3 Applying the analysis developed in 1 to the projections set out in 2, to examine likely population-driven trends both in overall and regional-level demand for health services in Ireland up to 2021, and in the sectoral distribution of demand within the health system, that is, in regard to hospital inpatient, hospital outpatient, GP services, pharmaceuticals, and long term health and social care services.
- 1.2.4 To set the population effects on health service demand in the context of other drivers of demand and draw overall implications for trends in health service demand up to 2021.

This report, the first deliverable of the project has the more limited task of outlining the project overall and reviewing the manner in which change in the delivery of health care in Ireland is related to demographic change over the last decade. To understand the effects of demographic change on health care we first need to understand the context within which demographic change impacts on health care delivery and in particular, the wider drivers of health service utilisation. As such the next section reviews some literature on the wider drivers of utilisation and shows that the concepts of health ‘need’, ‘supply’ and ‘demand’ are rather complex in the area of health care. The following section returns to the issue of the manner in which demographic change impacts on health care utilisation and examines in particular the effects of the size and spatial distribution of the population, population ageing, migration and ethnicity, family status and household composition. In the fourth and final section we examine demographic trends in Ireland since 1991.

The Drivers of Health Care Utilisation

1.3 The aim of this project is to assess the effects of demographic change on the health sector in Ireland. It is important to understand that changing size and make up of the population is only one of many drivers of utilisation of health services. These

drivers operate on both demand and supply sides. In order to isolate the pure effects of demographic factors it is necessary to hold constant other changes (although it is inevitably artificial to do this). Figure 1.1 characterises the different drivers of utilisation.



1.4 To the left of the diagram there are the mainly demand side factors, and to the right supply factors. Even this is a simplification since higher incomes (and increased resources available for health services) increase research and development and the related uptake of new technologies, but once in place these act as supply factors. All health systems are (to some extent) supply constrained, so that utilisation may be largely explained by the available supply. This can have the effect that increases in demand may not be visible in any changes in utilisation. Long waiting lists and waiting times for non urgent (or even for urgent) treatment can be another way in which constrained supply can manifest itself, but there are problems in using such data to assess excess demand since there are other factors that affect how long people wait, and such measures can sometimes be manipulated (Street and Duckett 1996, Langham et al 1997).

1.5 The fact that current levels of utilisation are constrained is very important for this project overall since it will be attempting to quantify the levels of health care required in the future (to 2021) given a certain set of demographic changes. The project requires a baseline from which to work, but in the absence of a measure of ‘appropriate’ level of utilisation for a given population most projects of this type fall back on current levels of utilisation as the baseline. This project attempts to get round

this problem by examining international levels of care provision among different population groups and using these as an indicator of the 'proper' level of provision. This approach does not entirely circumvent the problem since provision in other countries is also constrained, but the range in provision does provide an alternative to simply accepting the historic provision levels in Ireland.

1.6 In focussing on the pure effects of demographic change it is assumed that thresholds for access to treatment will remain the same – that is a person with any particular need will have the same chance of treatment in the future as they do today. This does not suggest that thresholds are currently appropriate – indeed it may be clear that some highly cost-effective treatments are not being provided. In this case additional service delivery may be easy to justify. A decision to increase availability of services is not directly caused by demographic change, so it is assumed in this study that, except where there is good evidence, patterns of service use by age and gender will remain the same. An exception is in needs for treatment and care near the end of life, and in this case projections are based on the extensive evidence from many countries of more complex patterns. The assumption that all other factors are held constant is common in research on the effects of population ageing on health care utilisation and costs (McGrail et al 2000; Polder, Barendregt and van Oers 2006; Werblow, Felder and Zweifel 2007)

1.7 It is worth making some brief comments on those factors that will in general be assumed to remain constant. First, studies suggest that demand for health care is income elastic – that is to say demand (and in general utilisation) increases more than in proportion to income growth (Getzen 2000). This accounts for the general finding that proportion of GNP spent on health services tends to be higher in countries with higher incomes. There is no single definition of need for health care. A common approach is to define need as a capacity to benefit from treatment or care – that is someone has a need when they have a problem, and when there is an available treatment that will reduce or remove that problem (Matthews 1971). This is not the popular use of the term, which would often equate need with there being a problem even if there is no feasible way of reducing it (McPake, Kumaranayake and Normand 2002).

1.8 Taking this definition of need it is known that need is related to social class. People on lower incomes have greater needs than those on higher incomes (Marmot and Wilkinson 2006). There is some evidence suggesting that *relative* rather than *absolute* deprivation is important in patterns of need. However, it is also known that utilisation relative to need is higher in those on higher incomes (irrespective of the system of financing care) (Langham et al 2003). As the population in Ireland becomes more prosperous (albeit with some wide disparities in incomes) the need for care should go down, but demand is likely to increase. Although the changing socioeconomic status is clearly important in determining future patterns of needs and demands, since it is not strictly a demographic factor it is not explored in depth in this study.

The Role of Demographic Factors

1.9 The particular concern of this project is with the impact of *demographic* change on trends in demand for and delivery of health services. Much of the international interest in this topic is prompted by concern about the impact of population ageing on demand for health services and consequent implications for health expenditures. In Ireland, however, where population ageing has taken place only to a limited degree to date and will advance only slowly over the period covered by this study, a more significant demographic change from a health service point of view is the increase in the *size* of the population. As it outlined further below, there is some doubt in the international research literature that changes in the age-structure or any other compositional feature of modern populations are significant drivers of health service demand. But there is no doubt that population growth, where it occurs, does drive demand. Furthermore, because population growth is often spatially uneven, it has spatial consequences for those aspects of health services that are delivered on a spatial basis. In the Irish context, where population growth is now occurring at an exceptional rate by present-day developed country standards, the increasing size of the population is likely to be the main demographic influence on health service demand up to 2021, and therefore will be a central concern of the present study.

1.10 Changing compositional characteristics of the population, which encompass not only age-structure but also factors such as family circumstances, household status and

ethnicity, are unlikely to be major influences on the overall level of demand for health services, but they could have a significant influence on the mix of health services that are required. They too need to be taken into account for that reason. Thus the aspects of demographic trends that are relevant for this project can be grouped under two headings: (1) the *size and spatial distribution* of the population, and (2) the *composition* of the population, with particular reference to composition by age, migrant/ethnic status, family status, and household structure.

Size and spatial distribution of population

1.11 A growing population needs more health services, and since population growth typically occurs unevenly across regions, the increase in demand for health services will be greater in some parts of the country than in others. According to CSO projections, the population of Ireland is likely to grow by between a fifth and a quarter over the fifteen-year period 2006-2021 (CSO 2004a)¹. An increase of this magnitude will necessitate a corresponding increase in health services, apart from any increase that might arise from higher levels of provision per head. *Thus, as a rough indication, it is likely that population growth on its own will lead to an increase of about 25% in the overall demand for health services between now and 2021.*

1.12 The spatial distribution of population was traditionally dominated by trends towards urbanisation but as will be set out further in this study, the more recent trend is towards ex-urbanisation, the dispersal of population in the rural hinterlands of urban centres. Given that many health services are delivered on a regional or local rather than national basis, analysis of the regional distribution of future population growth is as important for future health service planning as is forecasting of overall population growth.

1.13 The basic spatial unit that will be used in the analysis of regional distribution of population in this study is the county (or country borough in city areas). Major health service administrative units (such as Health Board areas) and the spatial boundaries within which many health services were provided were formerly wholly based on aggregations of counties and county boroughs. Today, with the creation of the Health Service Regions under the Health Services Executive, this is slightly less so than in

¹ This project will be providing a new set of projections based on Census 2006,

the past: Dublin city borough is divided in two, with the north city included in the Dublin North East region and the south city included in the Dublin Mid-Leinster region. In the population data available to the present project, this bifurcation of Dublin city cannot be replicated and so the data cannot be matched exactly with the HSE's major administrative boundaries.

Composition of the population: the significance of ageing

1.14 In much of the discussion of the impact of demographic trends on health service demand, the main focus is not on population growth but on the changing composition of the population, particularly in regard to age. The key issue here is the growing share of older people and the declining share of both active age adults and children in the population. However, although concerns about the health service impact of population ageing are intuitively compelling, it is easy to overstate them both in countries where serious population ageing is well underway and even more in Ireland where population ageing has yet to arrive and will be slight until about two decades time. Experience in developed countries over recent decades suggests that the impacts of population ageing are more complex and possibly less pressing than they first appear.

1.15 Significant population ageing has emerged in most developed countries, apart from Ireland, over the past three decades. Ireland, uniquely among developed countries, experienced a slight juvenation of the population during the 1970s and 1980s and today the proportion of elderly (those aged over 65 years or over) in the population is about the same as it was in the 1960s (and only marginally higher than it was in the 1920s): the elderly amounted to 11% of the population in 2006, compared to 11.2% in 1961 and 9.1% in 1926. In the EU-15, by contrast, the proportion of elderly in the population has increased sharply in recent decades, rising from 12% in 1970 to 17% in 2004. In the UK, the elderly breached the threshold of 15% of the population in 1985 and in Germany did so in 1992. This is the threshold Ireland is likely to reach in the early 2020s. In certain individual EU countries, the pace of population ageing has been especially rapid. In Italy, for example, the elderly were 12.9% of the population in 1985 but had reached 18.7% by 2001. It should be kept in mind that within those over 65 the high users of services tend to be the 'older old', and in Ireland, as elsewhere, the proportion of those over 65 in the older age groups

has grown and will grow relative to those aged between 65 and 74. Although people in the oldest age categories are high users of services, and these age categories are increasing, the absolute numbers are relatively small, and this limits the effect on overall use of health care.

1.16 Ireland's population ageing, therefore, has not yet got underway and over the next 15 years is likely to follow a trajectory that will lie well within the range of what has happened in the rest of the developed world at various periods over the last three decades or so. It is therefore helpful to look at how population ageing has affected demand for health and long-term care (LTC) services in the developed world generally over recent decades as a means to arrive at a first indication of its likely effect in Ireland over the coming 15 years. Drawing on recent analysis of this issue by the OECD (OECD, 2006), the following key points emerge:

1.16.1 Population ageing to date has been a relatively modest driver of growth in health care expenditures, as opposed to LTC expenditures. Between 1970 and 2002, public health spending per head of population rose by 4.3% per year over all OECD countries, of which 0.4% was accounted for by population ageing (OECD, 2006: 33).² Thus, population ageing accounted for less than one-tenth of the total increase in per capita public health expenditure over the past three decades in the OECD. The share accounted for by population ageing is similar when the time period examined is reduced to the past two rather than three decades (OECD, 2006: 32). In countries with particularly high rates of population ageing, the ageing effect on public health expenditure was still modest. In Germany, for example, out of a per capita total public health expenditure growth rate of 3.7 per cent per year in the period 1970-2002, 0.3% per year was accounted for by population ageing. In Japan, the corresponding percentage was 0.6% per year and in Italy (which apart from the exceptional case of Korea had the highest level of population ageing) the corresponding percentage was 0.7%. Thus, population ageing contributed to growth in health expenditure in a way

² Note that because these data refer to spending *per capita*, they do not take account of population size effects but refer only to population composition effects (that is, primarily in regard to population ageing).

that was non-trivial but was of modest significance compared to other influences. Projecting forward for the next 15 years in the case of Ireland, a rough preliminary assumption could be made that population ageing will increase per capita health expenditure by 0.5% per cent per year, which is slightly above the mid-point of the population ageing effect experienced by other countries over the past two to three decades and is likely to be a small proportion of total expenditure growth on health.

1.16.2 The main drivers of expansion in health expenditures up to now have been income growth, medical technology and medical inflation, all of which operate independently of population ageing. When we compare individuals, those with higher incomes do not always absorb more health services than those with lower incomes, but when we compare countries, the pattern is that the richer the country, the more of its national income it devotes to health, irrespective of its population structure (Getzen 2000). The latter is a complex effect, the elements of which are difficult to disentangle. In particular, technological change and economic growth are inter-related. For example, the apparent effect of national income on health spending may in part be a technological effect (OECD 2006: 74-76). Hall and Jones (2007), on the other hand, argue that rising affluence is the fundamental driver and that other factors are secondary. Their thesis is that the added utility of most kinds of consumption declines at the margins – the more one consumes the less added benefit one gets with each additional unit of consumption. However, they say, this is not true of health, particularly when ‘extra’ health comes in the form of added years of life: each extra year of life is just as valued by most people as the one that went before, particularly when the added year is enjoyed in good health. Thus, as people become wealthier, they are motivated to shift their spending into goods and services that they hope will give them most added utility, namely, those that they believe will help preserve or improve their health. Thus, the inexorable rise in health spending as a share of total spending as countries become wealthier. This

interpretation also leads to a view of the technological driver of rising health spending as secondary: it arises because affluence-driven demand for health care is so strong and consistent over the long-term that investment in technological innovation in medicine (in fields such as pharmaceuticals and high-tech medical equipment) is hugely profitable and thus occurs to a degree that constantly churns out new (and expensive) developments in health care (Hall and Jones, 2007).

1.16.3 Long-term care expenditures are more sensitive to ageing than conventional health spending. They are necessarily driven by growth in the population of dependent older people. The need for long-term care implies the need for permanent personal help and nursing care in the long term, possibly until mortality (Schulz, 2004: 55). Projection of LTC demand is sensitive to population growth, developments in life expectancy, and to assumptions about the years of additional life lived in good health, which the literature describes as disability-free life expectancy (DFLE). Further significant drivers of LTC spending are: female labour force participation rates, which determine the size of the available pool of informal carers; the nature of formal care delivery; and the wage rates prevailing among professional carers. Distinguishing between the effect of ageing on health and LTC expenditures, the OECD analysis cited above (OECD, 2006) finds that the greater pressure on public expenditure arises from LTC. This study projects that whereas under certain assumptions, ageing would increase health care spending on average across the OECD by 0.6% of GDP over the years 2005-2050, this effect would be doubled in the case of LTC spending, which under the same assumptions is projected to increase on average by 1.2% of GDP over the same period (OECD, 2006: 35, 39). This study forecasts greater growth in public spending on LTC for countries such as Ireland, Greece, Italy and Spain, where female labour force participation rates are projected to increase significantly for the 50-64 year old cohort, whose parents are most likely to become disabled by ageing (OECD, 2006: 23). A European Commission assessment of the budgetary challenges posed by ageing (European Commission, 2001), which distinguished between EU

member states' health and long-term care spending, found that considerable differences in LTC spending levels per head reflected radically different traditions in the provision of care for older people. The authors commented that where care is largely formal and in an institutional rather than community setting, this leads to high levels of public LTC spending. Where the care is more often informal and provided by family members, some long-term care is likely to be provided through the health system, and thus is included in data on health care expenditure (European Commission, 2001: 37). The persistent problem of "bed-blocking" in Irish acute hospitals, which occurs when timely, appropriate, non-acute care is not available for older patients, could be regarded as one such manifestation in the Irish health and social care system.

The key point of concern here is that whatever the precise causal mechanisms involved, non-demographic effects are the dominant influence on trends in health care demand and therefore need to be kept in mind as the backdrop against which demographic effects should be viewed.

1.17 Although ageing will appreciably affect demand for LTC services in Ireland over the period to 2021, population ageing effects are unlikely to add significantly to health service demand. However, it is possible that changing age composition will affect the mix of services that is required. Here there is an interest in the child population as the adult population, since the very young as well as the old place heavier demands on the health services than do the rest of the population. In developed societies, this age structure effect is more heavily weighted towards the old than the young: the very young are above-average consumers of health care only for a short segment of the life-span (the first few months of life), whereas the elderly are above average consumers for a longer period. Furthermore, the 'excess' level of health-service consumption is considerably less among the very young than the old, especially when the latter are in the last two years of life. Nevertheless, falling birth rates mean that in developed societies the numbers of the very young are declining in relative and sometimes in absolute terms, so that health services for the very young would be expected to account for a smaller *relative* share of the total, even though absolute service delivery and associated expenditure may increase as a consequence of economic growth.

1.18 In Ireland, the number in the youngest age groups is likely to grow somewhat in absolute terms over the next 15 years (by around 10 per cent or so) but will fall as a proportion of the total population. Thus, what might be called the child effect on health service demand is likely to be small. The number of older people, by contrast, is likely to grow rapidly. The CSO projects that the number of people in Ireland aged 65 and over will increase by about 57% between 2006 and 2021 (rising from 465,500 to around 730,000), with the population proportion aged 65 and over increasing from 11% to almost 15% (CSO 2004a). The proportion of the population made up by those aged 75 or over is forecast to increase by 67%. As already noted, however, this level of growth is from a low base in relative terms and will lead to a comparatively modest increase in the elderly as a share of total population. Thus the growing number of older people in Ireland should be thought of in part as a population ageing process and in part as an element of the overall population growth process referred to earlier.

Other population composition effects

1.19 Apart from age composition, four other aspects of population composition will be considered in this study (i) migrant/ethnic status, (ii) family status, (iii) female participation rate and (iv) household structure. A fourth factor, gender, will also be considered, since men and women differ in some aspects of health service usage, and gender is a variable that is built into all population forecasting models. However, gender composition is unlikely to *change* significantly over time and therefore is unlikely to arise as an influence on trends in demand for health services. Thus it will feature as a concern at certain points in the analysis, but not as a central concern.

1.19.1 Migrant/ethnic status

About half of Ireland's current rate of population growth is accounted for by net inward migration (the balance being accounted for by natural increase). Annual net inward migration increased from around 8000 in 1996 to over 41,000 by 2003. The primary effect of inward migration on health service demand arises through its impact on population size and spatial distribution and thus can be treated under that heading, as outlined earlier. However, there may also be population composition effects, in that health service demand

among immigrants (or perhaps among certain ethnic categories of immigrants) may differ from that of the rest of the population. That effect could tend to dampen health service demand to some degree because of the so-called ‘healthy migrant’ syndrome: migrants tend to be younger and healthier, on average, than both the population they leave behind and the indigenous population of the host country, though they may have a higher propensity to have children and thus increase demand for maternity services. In any event, the population composition effect of inward migration is worth taking into account, although it is unlikely to have as significant an effect on health care demand as that which operates through its impact on population size and spatial distribution.

1.19.2 Family status

Family status affects health service demand in two ways. First, marital status is a determinant of health: the married are healthier than all other marital status categories (Waite and Gallagher, 2000; Hu and Goldman 1990). Second, spouses and children are important sources of informal care for dependent elderly people. Thus the marital status composition of the elderly population and the degree to which the elderly have children affect the supply of informal health and social care for older people and thus influence the demand for formal care. These factors are particularly significant in Ireland since the proportion of the never-married among the elderly population, and thus of the elderly who are childless, traditionally has been high in this country (Fahey, 1998). In 1991, for example, 23% of the population aged over 65 had never married, by far the largest such proportion in any western country. It can be assumed that the majority of these were childless (or had no contact with any children they might have had).

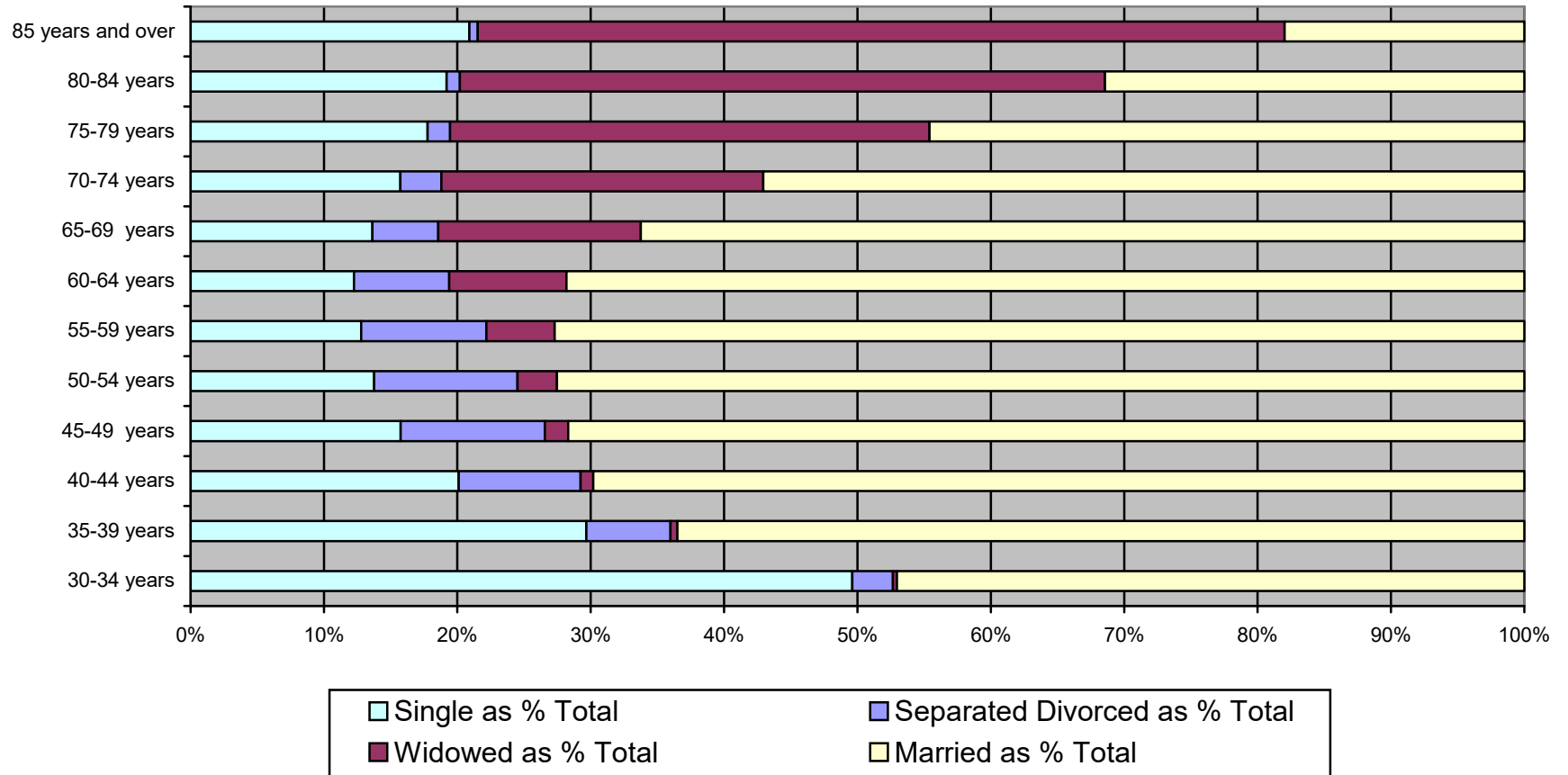
The marriage boom of the 1970s means that the proportion never-married among the population in Ireland now entering old age is falling steadily and this trend is projected to continue over the coming years. Connell and Pringle (2004) project that among 65-74 year olds, over the period 2002-2021, the proportion single among men will decline from 19.4% to 12.6% and among

women will decline from 13.3% to 9.7% (similar declines are projected to occur among those aged 75 and over). Improved longevity also means that co-survival of spouses is increasing and the incidence of widowhood among those aged over 65 is declining, though only by a small amount (except among women aged 65-74, where the decline in widowhood is quite substantial (Connell and Pringle, 2004).

Changes in the marital status profile of the elderly population of this order of magnitude, especially in regard to the never-married, are unusual in developed countries and therefore have attracted little attention in international research as drivers of demand for health care. In the Irish case, however, the combination of the health status and health care effects could be significant and therefore needs to be taken account of in analyses of future health service demand.

While the proportion of the population who have never married has fallen among older age cohorts, the proportion who have separated or divorced has risen significantly. In 2006 the proportion of never-married was at its lowest among the 60-64 year old age cohort at 12.3% compared to 20.9% among people aged 85 and over, and 20.1% in the 40-44 year old age cohort. However, whereas only 2.8% of people in Ireland aged 65 and over were separated or divorced, 9.3% of 50-64 year olds were separated or divorced (Census 2006). The highest rate of separation and divorce in 2006 was in the 45-54 age cohorts at 10.8%. The separation and divorce rate effectively eclipses the effect of the decline in the number of never married with single, divorced and separated people combined accounting for between 19-22% of the population for all cohorts aged 55 and over (Figure 1.2). A longitudinal study in Germany of the determinants of institutionalisation in old age found the institutionalisation rate of single people to be 6 times higher than for the married, of divorced people to be five times higher and of the widowed to be 1.7% higher (Klein,1996).

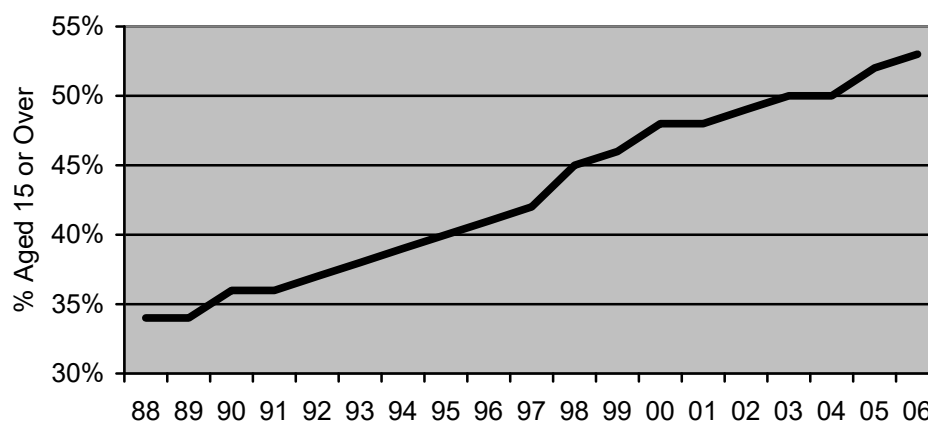
Figure 1.2: Marital Status 2006 Population Aged 30 plus



1.19.3 Female labour force participation rate

A further countervailing effect to the decline in numbers of never married and widowed is the steep increase in female labour force participation, which reduces the potential supply of informal carers. Labour force participation has risen significantly from 34.4 per cent of women in Ireland aged 15 and over in 1988 to 53 per cent in 2006 (Figure 1.3).

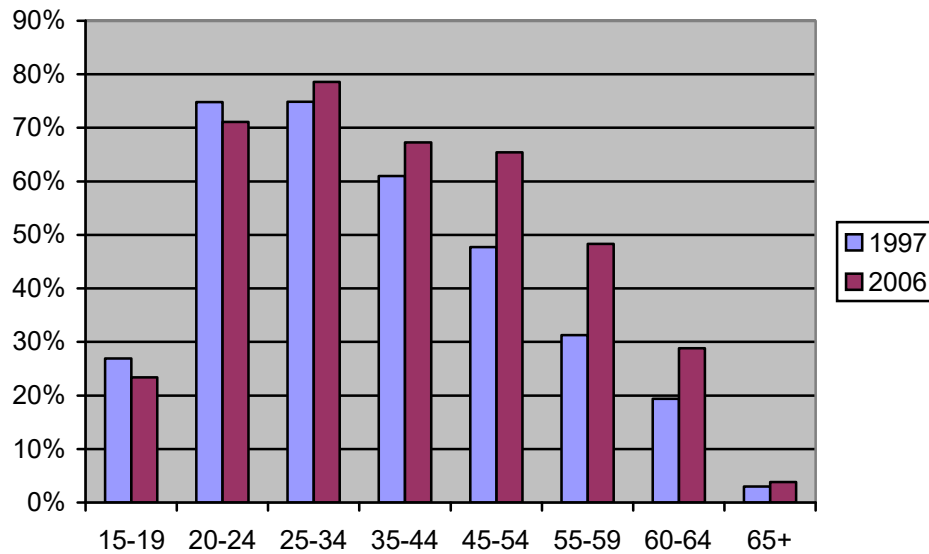
Figure 1.3: Female Labour Force Participation 1988-2006



Source: Central Statistics Office

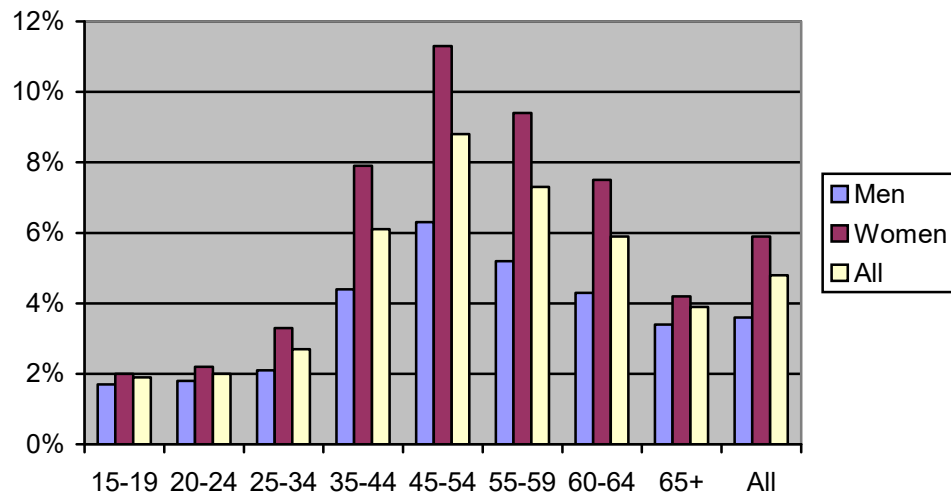
The full significance of this increase is revealed by examining increases in labour force participation by cohort (Figure 1.4). While the cohort aged 20-24 shows a marginal decline in participation in the years 1997-2006, the rate nonetheless remains high at over 71 per cent. In 2006 the 25-34 year old cohort has the highest participation rate of nearly 79 per cent, which falls to 67 per cent for the 35-44 year old age cohort, who are most likely to have family-rearing demands. Their participation rate contrasts with rates of 48 per cent for the cohort aged 55-59 and 29 per cent for women aged 60-64, many of whom may have abandoned formal remunerated employment on marriage or parenthood. If these younger cohorts maintain participation rates of close to 70 per cent in their later years, as seems probable, the supply of potential carers will be very much diminished.

Figure. 1.4: Female Labour Force Participation Rate by Age Cohort 1997-2006



Reliance on unpaid carers for the care at home of older ill and disabled people is common in Ireland and internationally (Schultz, 2006: 57). In 2006 4.8% of the total population aged 15 and over provided some unpaid care, according to the 2006 Census. This represents 160,900 people who in that year were engaged in unpaid care of friends or family members with long-term illness, or disability.

Figure 1.5: Unpaid Carers by Age Cohort as Percentage of Population Census 2006



Of these, nearly 41,000 (1.2% of the population) were providing 43 or more hours care per week; almost 10,000 were providing between 29 to 42 hours; and a further 17,000 were providing 15 to 28 hours care weekly. More women than men provided this informal care (Figure 1.5). Over 11% of women aged 45-54 were providing unpaid care in 2006. Nearly 5% of this cohort of women were providing 15 or more unpaid hours of care each week. The proportion of the Irish population and the peak cohort engaged in unpaid care fall within the EU average. In 2001 across the EU (excluding Luxembourg and Sweden) 4% of the population aged over 15 looked after the old and disabled, and this peaked at 9% of women aged 45-59 (Schulz, 2004: 78).

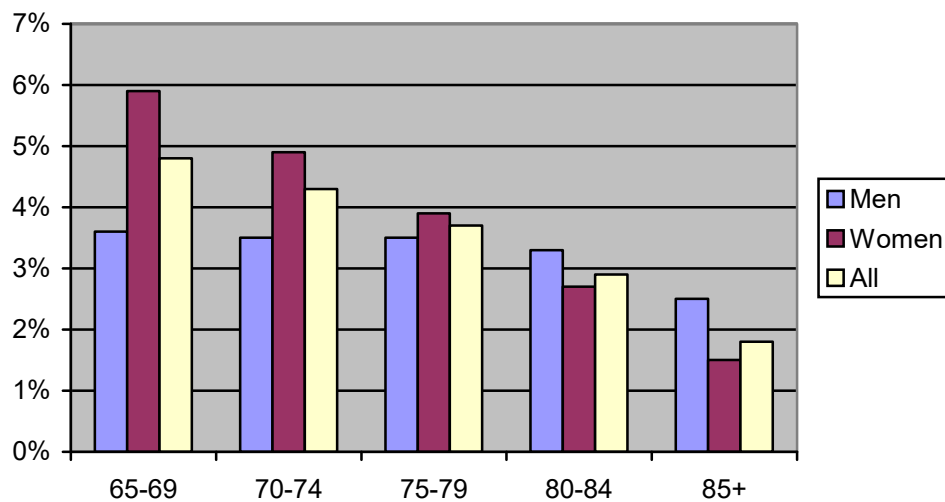
The potential pool of unpaid carers is diminishing rapidly in Ireland. The Irish cohort of 25-34 year old women, who in 2006 show the highest labour force participation rate, will over the 19 years to 2026 become the cohort of 45-54 year old women, on whom the burden of unpaid care falls most heavily (Figure 1.4 and Figure 1.5). Already, over the years since 1997 increased labour force participation among women aged 45-59 will have contributed to demand for formal care of older people (Figure 1.4).

While women and men in late middle age care for ageing parents, due to increased life expectancy, many older people also care for their ill or disabled spouses. Thus 4.2% of women and 3.4% of men aged 65 and over were in caring roles in 2006. There are significant numbers of carers even amongst the oldest old, with proportionately more men than women in these roles at ages of 80 and above, reflecting the much higher proportion of women than men who live alone due to widowhood at these ages, and conversely the much higher proportion of men than women who may live with an ill or disabled spouse at these ages (Figure 1.6). Even at advanced age some carers carry heavy burdens. Of the nearly 40,000 Irish men aged 80 and over in 2006, nearly 1,200 (3%) were carers, of whom nearly 700 (1.7%) were providing 29 or more hours unpaid care a week. In absolute terms there were still more women than men at these ages in caring roles. Of the 73,400 women aged 80

and over in 2006, nearly 1,600 (2.2%) were carers, of whom 900 (1.2%) were providing 29 or more hours unpaid care a week.

Although these carers at advanced age are few in proportion to the population of their age, without their unpaid labours there could conceivably have been an additional 1,588 people requiring nursing home care, increasing the estimated population of 22,500 people aged 65 and over receiving care in institutions by 7% in 2006.

Figure 1.6: Unpaid Carers as Percentage of Population in Older Age Cohorts, Census 2006



1.19.4 Household composition

Populations in developed countries display a growing propensity to live alone, and this trend is found among the elderly in particular as the incidence of multi-generation households declines. The effect of living alone either on health status or on demand for health or social care is difficult to disentangle from the effect of family status, since the two are often bound up with each other. Nevertheless, the expectation would be that increased numbers of older people living alone would necessitate increased provision of social care and long-term formal care. In Ireland, the number of older people living alone has increased only slowly in recent years, and according to Connell and Pringle's (2004) projection is likely to increase somewhat faster than the growth of the

elderly population up to 2021. Their estimate is that 30% of older people will be living alone in 2021, compared to 24.5 per cent in 2002.

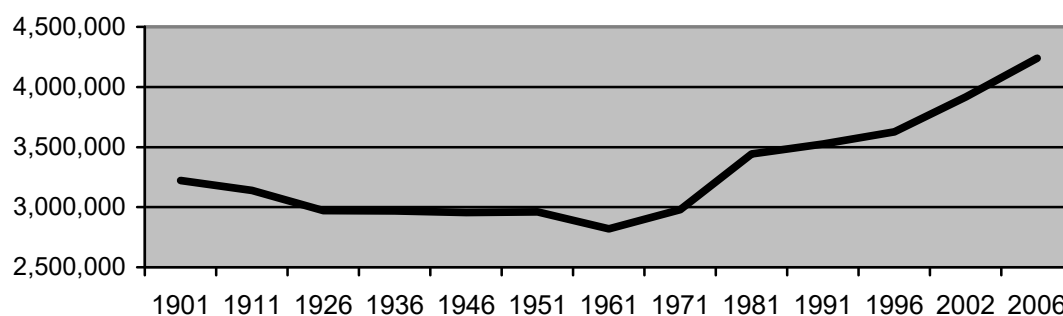
Recent Demographic Trends

1.20 Along with the remarkable economic transition, the 1990's has also witnessed a substantial demographic change in Ireland. This section seeks to outline the major changes that have occurred focusing on both the national and county levels. The section focuses on the period from 1991 to 2006, but also makes reference to longer time frames where appropriate. Sub-national change in demographic patterns are as important as national changes since health care services are delivered at a local and regional level for the most part, thus this section examines county demographic change. These county patterns will also be used in the population and health care provision projections to 2021 which will form deliverables two and three in this project. This disaggregation is important since there are significant differences in terms of the important demographic variables across the country. Indeed, demographic trends also differ substantially across counties.

National Trends

1.21 Ireland suffered a long-run population decline over the period from 1851 to 1961. Over that period the population declined by over two million (45%). Since 1961 the population has increased strongly such that it is again above four million, and half of the long-run decline has been reversed.

Figure 1.7: Total Population of the 26 Counties 1901-2006

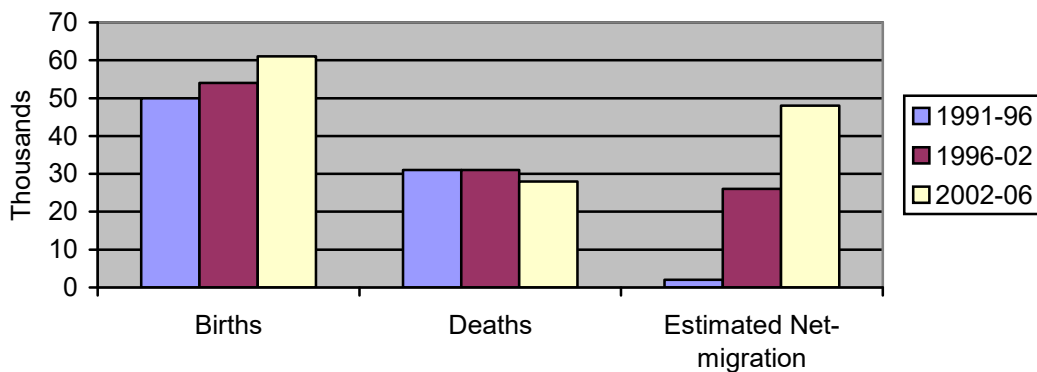


As Figure 1.7 shows, the population has grown since 1961, but growth has been particularly strong since 1996 with a period average growth rate of 1.7 percent per

year between 1996 and 2006 and a particularly high average annual increase of over 2 percent between 2002 and 2006. Interestingly, if the population projections published by the Central Statistics Office (CSO) are realised the decline of the population by two million persons, which took over a century will have been turned around in a period of about 60 years (from 1961 to 2026).

1.22 Population change comprises three components namely births, deaths and net-migration and the magnitude of each of these has important implications for the provision of health services. Consequently, the trends in these components will be outlined in more detail below. In that context it is useful to first consider the broad trends in the components of population change together in order to provide an assessment of the relative contributions of each. As figure 1.8 shows, births have been the largest contributor to population change since 1991 and the total number of births has been increasing. Deaths have been falling over the period while net-migration has increased strongly from a very low level in 1991. Indeed over the most recent intercensal period, net-migration will have reached levels similar to births in individual years.

Figure 1.8: Components of Population Change, Average Annual Births, Deaths and Net-Migration for the period 1991-2006



Source: CSO Census of Population 2006, Principal Demographic Results.

1.23 The substantial population growth at the national level is mirrored at the county level, where some interesting trends in terms of the spatial distribution of the population have emerged (see Table 1.1). While nationally population growth has averaged at 1.35 percent per annum over the period 1991 to 2006 the range of growth

rates across counties is quite wide with Cork City losing on average 0.41 percent of its population while the population of Fingal grew by just over 3.8 percent.

Table 1.1. County Population, 1991 and 2006

<i>Area</i>	Persons 1991	Share 1991	Persons 2006	Share 2006	Average Annual Growth 1991-2006
Carlow	40,942	1.2%	50,349	1.2%	1.5%
Dublin City	478,389	13.6%	506,211	11.9%	0.4%
Dun Laoghaire-Rathdown	185,410	5.3%	194,038	4.6%	0.3%
Fingal	152,766	4.3%	239,992	5.7%	3.8%
South Dublin	208,739	5.9%	246,935	5.8%	1.2%
Kildare	122,656	3.5%	186,335	4.4%	3.5%
Kilkenny	73,635	2.1%	87,558	2.1%	1.3%
Laois	52,314	1.5%	67,059	1.6%	1.9%
Longford	30,296	0.9%	34,391	0.8%	0.9%
Louth	90,724	2.6%	111,267	2.6%	1.5%
Meath	105,370	3.0%	162,831	3.8%	3.6%
Offaly	58,494	1.7%	70,868	1.7%	1.4%
Westmeath	61,880	1.8%	79,346	1.9%	1.9%
Wexford	102,069	2.9%	131,749	3.1%	1.9%
Wicklow	97,265	2.8%	126,194	3.0%	2.0%
Clare	90,918	2.6%	110,950	2.6%	1.5%
Cork City	127,253	3.6%	119,418	2.8%	-0.4%
Cork County	283,116	8.0%	361,877	8.5%	1.9%
Kerry	121,894	3.5%	139,835	3.3%	1.0%
Limerick City	52,083	1.5%	52,539	1.2%	0.1%
Limerick County	109,873	3.1%	131,516	3.1%	1.3%
Tipperary, N.R.	57,854	1.6%	66,023	1.6%	0.9%
Tipperary, S.R.	74,918	2.1%	83,221	2.0%	0.7%
Waterford City	40,328	1.1%	45,748	1.1%	0.9%
Waterford County	51,296	1.5%	62,213	1.5%	1.4%
Galway City	50,853	1.4%	72,414	1.7%	2.8%
Galway County	129,511	3.7%	159,256	3.8%	1.5%
Leitrim	25,301	0.7%	28,950	0.7%	1.0%
Mayo	110,713	3.1%	123,839	2.9%	0.8%
Roscommon	51,897	1.5%	58,768	1.4%	0.9%
Sligo	54,756	1.6%	60,894	1.4%	0.7%
Cavan	52,796	1.5%	64,003	1.5%	1.4%
Donegal	128,117	3.6%	147,264	3.5%	1.0%
Monaghan	51,293	1.5%	55,997	1.3%	0.6%
State	3,525,719	100%	4,239,848	100%	1.4%

Source: CSO Census of Population 1991 and 2006.

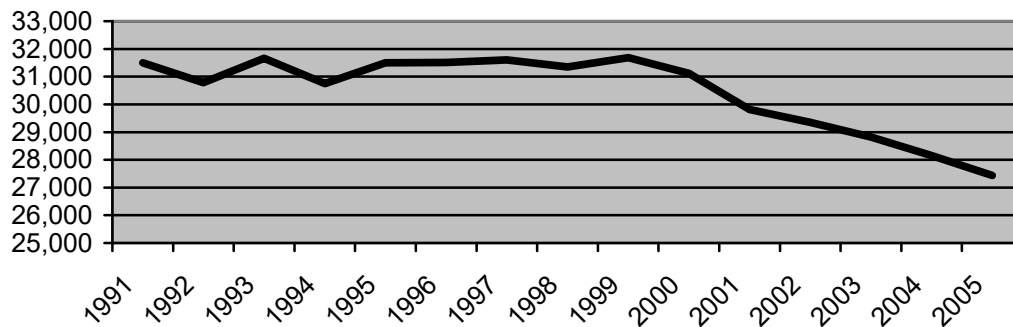
Counties in the greater metropolitan areas such as Meath, Kildare and Wicklow recorded particularly strong growth, while the major city areas such as Dublin City and Limerick city recorded very modest growth rates, reflecting the fact that these

contain little space for further development. Correspondingly the population shares have also changed.

Trends in Mortality

1.24 As was highlighted above, the number of deaths occurring within the State has been declining over time. This is more clearly seen in Figure 1.8 which shows that the number of deaths that occurred in 2005 was about 4,000 lower than the number that occurred during the 1990's, which given the growth of the population implies a substantial drop in the crude rate of deaths, which declined from 9 per 1000 in 1991 to 6.6 per 1000 in 2005.

Figure 1.8: Total Number of Deaths Recorded in Each Year From 1991 to 2005



Source: CSO Vital Statistics

There has been a remarkable improvement in life expectancy over the last decade and a half. For example for males, the life expectancy at birth has increased from 72.3 years in 1990 to 75.1 years in 2002, with further improvements expected over the last four years. Age specific mortality rates have changed dramatically. For example that of 55 and 60 year olds has halved since 1986, while that for 80 year olds has improved by a third. At the county level the most readily available indicator is the crude death rate that is the number of deaths per 1000 of the population. Clearly this measure may give somewhat misleading results as it does not reflect the age structure of the population in each county. A county that has a disproportionately older population will have more deaths and thus a higher crude death rate, even if for a given age group it has a lower mortality than other counties. However, if one is particularly interested in overall patterns of mortality then this indicator is nevertheless useful. As Table 1.2 shows the crude death rates are declining and

further analysis of the data reveals that they are also converging towards the national average.

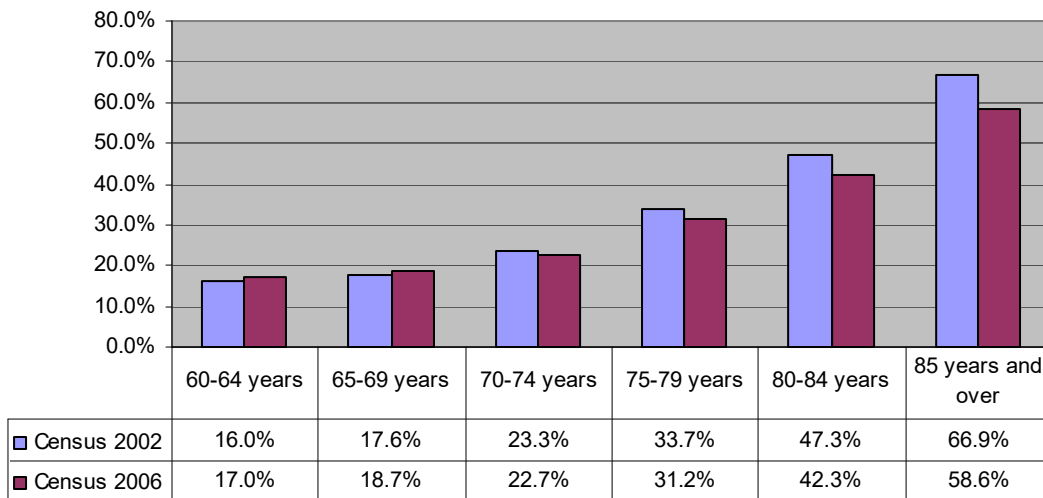
County	1991-96	1996-02	2002-06	County	1991-96	1996-02	2002-06
Carlow	9.3	8.7	7.2	Louth	8.5	8.1	6.6
Cavan	10.7	9.8	8.7	Mayo	12.4	11.8	9.4
Clare	9.2	8.7	7.5	Meath	7.1	6.3	5
Cork	9.2	8.6	7.3	Monaghan	9.6	8.9	7.6
Donegal	10.1	9.5	8	Offaly	9.2	8.3	9.1
Dublin	7.4	7.2	6.2	Roscommon	11.5	11.2	7.2
Galway	9	8.5	7	Sligo	10.8	10.2	8.5
Kerry	11.3	10.4	8.7	Tipperary NR	10.5	10.5	8.2
Kildare	6.1	5.4	4.6	Tipperary SR	10	9.2	7.8
Kilkenny	8.6	8	6.8	Waterford	8.8	8	7
Laois	9	8.1	6.1	Westmeath	9.4	9	7.3
Leitrim	15.1	13.5	11	Wexford	9.6	8.5	7.3
Limerick	8.8	8.3	7.5	Wicklow	7.8	7.8	6.5
Longford	10.8	10.6	9	State	8.8	8.3	7

Source: CSO Census of Population, various issues.

Trends in Age-Related Disability

National longitudinal data on disability prevalence are available for the first time for Ireland from the Censuses of Population for 2002 and 2006. These give a clear picture of reduced disability prevalence in older age cohorts (Figure 1.Y; analysed in detail in Appendix A, Layte et al, 2009).

**Fig. 1.Y: Disability prevalence in people aged 60 and over
Ireland 2002 and 2006**



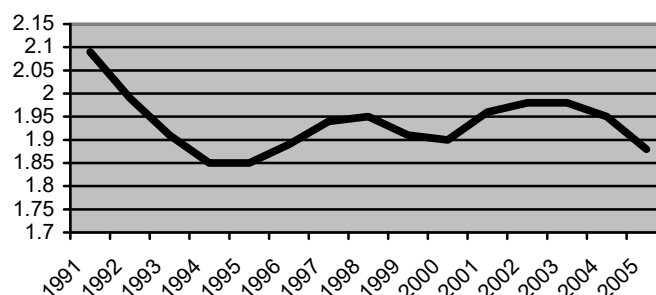
Trends in Fertility

1.25 Ireland maintained a high fertility rate until approximately 1980, after which fertility declined markedly (in 1965 it peaked at 4.03). Fertility has been below replacement (2.1) since 1991. As Figure 1.9 shows, there was a further significant decline in fertility in the early 1990's, which was followed by an increase until 2003 but more recently it has been declining again. Considering the period from 1960 to the present there is a clear long-term downward trend in fertility. Thus, the substantial decline, which was followed by an increase that was not sustained is likely to have been a short-term deviation from that trend. This is likely to be explained by a trend to an increased age at first childbirth, which is reflected in an increase in the average age at childbirth, which rose 28.5 in 1991 to 30.8 in 2004³. Indeed an analysis of age specific fertility rates reveals that the decline in fertility in the early 1990's was primarily driven by a decline in fertility among woman aged 20-29 for which age specific fertility rates have continued to decline to the present. On the other hand age specific fertility rates for woman aged 30 to 34 and particularly those aged 35-39 have increased. This may be explained by changing economic and sociological factors. The economic factors relate to the marked increase in labour market participation by

³ Accurate comparisons of the age at first birth are not possible as data for 1991 is only available for first births within marriage (83% of all births) and for mothers aged above 29 years only for age groups rather than single year of age.

woman, which is in part driven by the increasing educational attainment among females.

Figure 1.9: Total Fertility Rate, 1991 to 2005



Source: CSO Vital Statistics.

1.26 At the County level a number of interesting trends emerge (see Table 1.3). Firstly, crude birth rates have increased over time. Furthermore, in relation to crude rates at least there appears to be some divergence across counties. Secondly, there appears to be a pattern of lower rates in more remote counties and high rates in the chief commuting counties particularly around Dublin. However, once one calculates the total period fertility rates (TPFR), which indicate the total number of children a woman will have over her lifetime based on age specific fertility rates this pattern changes (see Table 1.4). While commuting counties have high rates of fertility, counties that contain a large city tend to have lower fertility and a mixed picture emerges for the remainder of the counties. For example while Monaghan has a low crude birth rate and a low TPFR, Leitrim has a low crude rate but a relatively high TPFR. These patterns are likely to be related to the age structure within each county.

Table 1.3: Crude Birth Rate (Rates per 1000 persons)

County	1991-96	1996-02	2002-06	County	1991-96	1996-02	2002-06
Carlow	15	14.8	17.2	Louth	13.4	15	15.7
Cavan	13.9	13.6	13.8	Mayo	12.5	12.5	13.1
Clare	13.1	14	15.7	Meath	13.7	14.9	17.5
Cork	13.8	13.9	14.7	Monaghan	12.7	12.4	12.7
Donegal	13.7	13.6	13.5	Offaly	13.6	14.1	15.8
Dublin	14.5	14.9	15.3	Roscommon	11.1	10.2	14.8
Galway	13.8	13.7	14.9	Sligo	13.1	12.9	11.3
Kerry	12.1	12.3	12.8	Tipperary NR	14.6	14.8	12.9
Kildare	16.1	17.7	18.6	Tipperary SR	13	13	13.2

Kilkenny	13.2	13	13.4	Waterford	13.5	14.5	15.4
Laois	13.3	13.8	15.2	Westmeath	15.4	15.5	16.2
Leitrim	11.9	11.4	12.9	Wexford	14.6	14.8	16
Limerick	14.2	14.3	14.3	Wicklow	15.2	15.9	16.1
Longford	13.3	13.9	15.2	State	14.0	14.3	15

Source: CSO Census of Population, various issues.

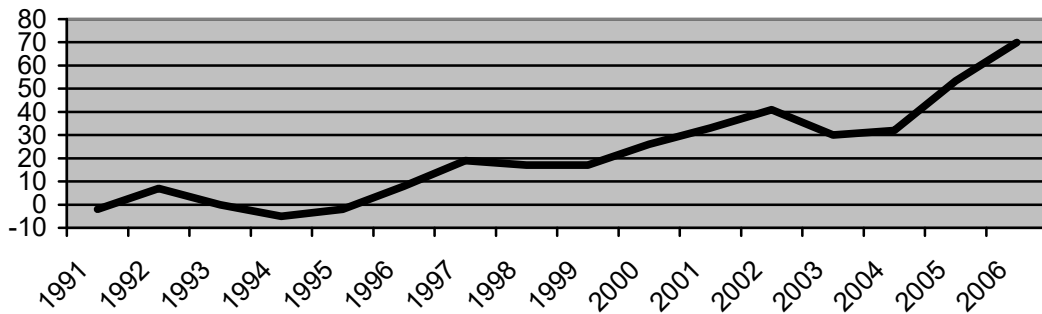
County	2002	County	2002-06
Carlow	2.41	Louth	2.07
Cavan	2.20	Mayo	2.07
Clare	2.36	Meath	2.21
Cork	1.95	Monaghan	1.89
Donegal	2.02	Offaly	2.25
Dublin	1.77	Roscommon	1.95
Galway	1.96	Sligo	1.89
Kerry	1.95	Tipperary NR	2.28
Kildare	2.35	Tipperary SR	1.90
Kilkenny	1.97	Waterford	2.19
Laois	2.27	Westmeath	2.22
Leitrim	2.35	Wexford	2.22
Limerick	1.84	Wicklow	2.16
Longford	2.77	State	1.98

Source: CSO Report on Vital Statistics 2004 and Own Calculations

Trends in Migration

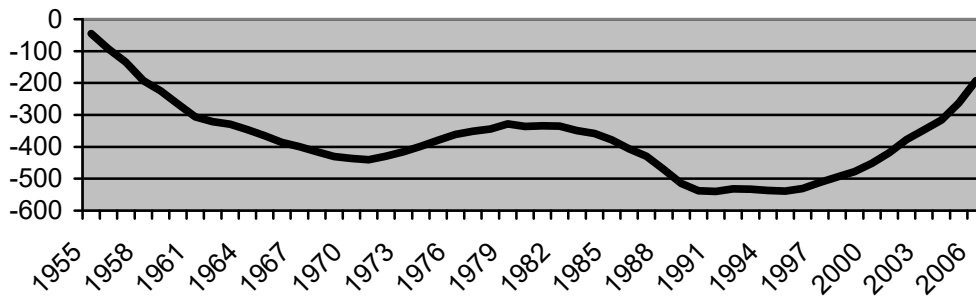
1.27 One of the most remarkable features of demographic change over the last 15 years has been the turnaround in migration. While there was some positive net immigration in the 1970's the recent trends which are shown in Figure 1.10 differ from that period in that Ireland has received significant numbers of immigrants with no previous connection too Ireland. What the figure does not show clearly is the significance of the net flows, which is better demonstrated through the cumulative flows shown in Figure 1.11. Here the net flows for each year are cumulatively aggregated starting in 1955. The figure clearly shows that even following the very strong recent immigration in cumulative terms there is still a large 'deficit' of around 200,000 persons. Of course this finding is dependent on the starting date from which one accumulates the totals. Thus, if one started at 1980 when net migration turned negative again, then a positive cumulative net migration emerges in 2004. Thus, there is a higher likelihood that many of the original emigrants, i.e those that emigrated during the 1980s came back.

Figure 1.10: Net Migration (1000s) for the period 1955 to 2004



Source: Central Statistics Office

Figure 1.11: Cumulative Net-migration from 1955



Source: Central Statistics Office

1.28 Given that immigration has contributed substantially to population growth it is important to consider the geographic distribution of immigration. Of course at a spatially disaggregated level migration refers to internal and international migration. Unfortunately detailed migration data at the county levels are not yet available for the 2006 Census. However given the details from the preliminary release it is possible to construct the components of change including net-migration which incorporates both internal and external migration⁴. Table 1.5 shows that the remarkable change in national migration statistics is largely echoed at the county level that rates of immigration have increased, but that there are also some interesting differences. For example some counties have recorded very low rates of net-immigration. These include Dublin, which may be somewhat surprising. However, if one considers the internal migration patterns which for 2001/2002 show that Dublin lost a substantial

⁴ The figure for 2006 differ slightly from those published in the CSO Preliminary Census Results publication as they are calculated using the final numbers regarding total persons rather than the preliminary figures.

number of persons to other counties within Ireland then the figures for Dublin are still consistent with substantial international immigration⁵. Likewise some counties that have benefited substantially from internal migration have received only a small number of international migrants.

Table 1.5: Average Annual Rate of Net Migration (per 1000)

County	1991-96			County	1996-2002-		
	1991-96	1996-02	2002-06		96	02	06
Carlow	-2.4	10.6	13.1	Louth	-1.7	9.7	12.2
Cavan	-2.6	7.2	25.6	Mayo	1.4	8	9.2
Clare	2.7	10.4	9.4	Meath	1.5	24.6	35.7
Cork	0.2	5.2	10.4	Monaghan	-3.1	0.7	9.8
Donegal	-0.7	5.3	11.0	Offaly	-2.2	6.6	13.0
Dublin	-0.7	2.1	4.7	Roscommon	0.7	6.7	18.3
Galway	4.5	11.7	17.0	Sligo	1.6	4.2	19.0
Kerry	6	6.3	8.9	Tipperary NR	-3.5	4.1	6.4
Kildare	9.2	20	17.6	Tipperary SR	-1.3	4	6.7
Kilkenny	0	5.7	14.4	Waterford	1.8	5.2	6.9
Laois	-1.9	11.7	23.6	Westmeath	-1.5	14.5	16.1
Leitrim	1.3	6.9	25.8	Wexford	-0.6	12.2	21.5
Limerick	-1.6	4	5.1	Wicklow	3.4	10.3	14.6
Longford	-3.4	1.6	18.9	State	0.5	6.8	11.4

Source: CSO Census of Population, various issues.

Overall Age Trends

The last three sections have shown substantial changes in mortality, fertility and migration over the last decade. Death rates have continued to fall, particularly since the year 2000 and fertility has once again begun to fall after roughly a decade of growth (although the absolute number of births continues to increase). High levels of fertility in the recent past mean that Ireland has been in the fortunate position of not having significant population ageing, but the position will change considerably in the next three decades if total fertility rates remain at their current levels or fall further. However, the upsurge in migration into Ireland over the last five year in particular will have increased the proportion of younger age groups. Table 1.6 shows the overall effect that these developments have had on the age profile of the population 1991 to 2006.

⁵ Data for 2005/06 are not yet available.

Table 1.6: Age distribution by Census Year 1991-2006

Age Group	1991	1996	2002	2006
0 to 14	26.7	23.7	21.1	20.4
15 to 24	17.1	17.5	16.4	14.9
25 to 44	27.2	28.0	30.1	31.7
45 to 64	17.6	19.4	21.2	21.9
65 to 69	3.7	3.5	3.4	3.4
70 to 74	3.1	3.1	2.9	2.8
75 to 79	2.4	2.3	2.3	2.2
80 to 84	1.4	1.5	1.5	1.5
85+	0.8	1.0	1.1	1.1
Total	100%	100%	100%	100%
0 to 24	43.7	41.2	37.5	35.3
25 to 64	44.8	47.4	51.4	53.7
65 to 74	6.8	6.6	6.3	6.2
75+	4.6	4.8	4.9	4.8
Total	100%	100%	100%	100%

Table 1.6 shows that the proportion of the population aged under 25 has fallen significantly since 1991 from 44% to 35%. The proportion aged 0 to 14 has fallen from 27% to just over 20% and the proportion aged 15 to 24 has fallen from 17% to 15%. On the other hand, the proportion aged 25 to 64 has increased from 45% to 54%. The proportion of the population aged 65 or more has been roughly stable at 11%.

Summary

1.29 This section has outlined some of the main demographic trends. It has shown that the strong growth in the population is due not just to immigration, which has become an increasing factor but primarily due to the high number of births and to a lesser extent to an improvement in life expectancy. Clearly the two aspects of natural increase play a particular role in the provision of health services. The large number of births implies a higher need for ante-natal, post-natal and neo-natal facilities while the improvement in life expectancy will result in an increase in the number of older people and particularly those at a very high age.

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Chapter 2: In Patient Hospital Services

Introduction

- 2.1 The purpose of this chapter is to examine the utilisation of acute public hospital services over the period 1995 to 2004 inclusive. Hospital services are the single largest component of the Irish health system, accounting for almost half of total non-capital health expenditure in 2004 (Department of Health and Children, 2006a) and recording nearly 1 million contacts with day and in-patients in the same year, not counting attendances at emergency departments and out-patient clinics. Nevertheless, perhaps more than any other part of the Irish health care system, hospital services are heavily influenced by practices elsewhere in the sector. Such dependence is, most notably, apparent in the process of gaining access to hospital services in Ireland, which is typically through a referral by a general practitioner. Thus, any consideration of the future utilisation of hospital services must have regard not only for the profile of the population, but also for influences from the wider health care sector.
- 2.2 In Ireland, hospital services are provided publicly or privately. Within the public hospitals, which are the focus of this chapter, approximately 20 per cent of beds are designated for use by private patients (Department of Health and Children, 2001). Public hospital discharges may therefore be public or private patients. In addition, public hospitals may be general or single specialty, e.g. paediatrics, orthopaedic, etc. As the objective for the analysis presented here is to provide an overview of utilisation within the public hospital system, this presentation will not distinguish between hospital types. Private hospitals are outside the scope of this review.
- 2.3 This chapter draws on data from the Hospital In-Patient Enquiry (HIPE) System to review past utilisation of services in acute public hospitals. Within this context, and in the absence of a formal definition, acute hospitals are generally taken as those treating discharges with a length of stay of 30 days or

less.⁶ HIPE collects information on discharges from and deaths in acute hospitals, and does not capture visits to emergency departments or out-patient clinics.

- 2.4 To take account of the wider determinants of health and consequently health care utilisation (Dahlgren, 1995), this chapter considers the influence of several factors on hospital discharge activity, including the type of treatment, the reasons for hospitalisation, patient demographic variables, geography and structural parameters relating particularly to medical card status and the public/private patient mix. The next section starts with an overview of acute public hospitals services during the period 1995 to 2004.⁷

Hospital Services, 1995-2004: An Overview

- 2.5 The number of discharges from the 60 public hospitals that participated in HIPE in 2004 was 987,439. This figure was more than 62 per cent higher than the level of discharges reported to HIPE a decade earlier in 1995 (see Figure 2.1). The number of discharges grew continuously over the period with an average growth rate of 5.6 per cent per annum. This increase in the volume of discharges over the period may be attributed to a number of factors, including improvements in coverage, the inclusion of obstetric data within the HIPE system in 1999 and very substantial increases in the number of discharges treated on a day basis within the acute hospital system. Over this ten-year period, the proportion of total discharges from acute public hospitals that were reported to HIPE is estimated at around 95 per cent. Throughout this chapter, the term ‘discharges’ is used to refer to discharges reported to HIPE.

⁶ Three long stay public hospitals, treating discharges typically with a length of stay in excess of the 30-day threshold, also report to HIPE. While these hospitals are included in the following analysis, they account for only a small proportion of discharges (for example, less than 1 per cent of discharges reported to HIPE in 2004) captured by HIPE.

⁷ Data for 2004 are provisional and may be subject to minor change.

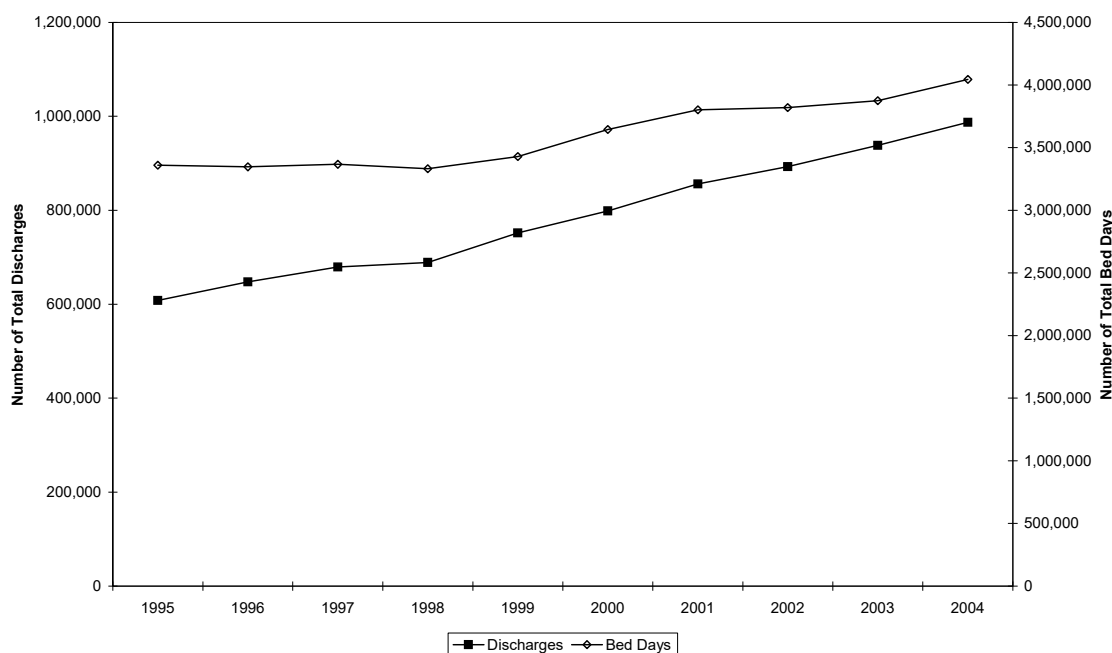


Figure 2.1: Discharges and Bed Days in Acute Public Hospitals, 1995-2004

2.6 Comparing the number of HIPE-reported discharges to the population in a given year (the discharge rate) provides an indication of the growth in discharges relative to that of the population. In 2004, 244.2 discharges occurred for every 1,000 members of the population.⁸ This represented an increase of 44.6 per cent relative to the comparable figure for 1995 of 168.9 discharges per 1,000 population. Thus, over the ten-year period, growth in discharges surpassed that of the population.

2.7 Discharges spent a total of over 4.0 million days in acute public hospitals in 2004. This was over 20 per cent higher than the 3.4 million bed days recorded in 1995 (see Figure 2.1). Hence, the number of bed days grew over the ten-year period, albeit at about a third of the rate of discharges.

⁸ Data on the population for intercensal years were obtained from estimates calculated by the Information Management Unit, Department of Health and Children (available from <http://www.inispho.org/>). Data on the population for census years were obtained from the relevant Census, prepared by the Central Statistics Office.

2.8 While more discharges are being treated in the acute public hospital sector, there has not been a commensurate increase in capacity. The number of beds in acute public hospitals was 12,273 in 1995, reaching over 13,000 by 2004.⁹ As this expansion in bed capacity alone would not have been sufficient to accommodate the rise in discharges observed between 1995 and 2004, growth in the number of day patients treated combined with a reduction in mean duration of hospital stay for in-patients can reasonably be assumed to have contributed substantially to the increase in hospital throughput (or patient turnover) over this period. Total discharges were spending, on average, one day less in hospital in 2004 (4.5 days) compared to 1995 (5.5 days).¹⁰ Changes in the distribution of day and in-patient activity will be considered in the next section.

Site of Care: Day and In-Patient Activity

2.9 Recent advances in medical technology and treatment have meant that, for certain procedures, an overnight stay in hospital is no longer necessary. This change in the provision of hospital services has resulted in an expansion in the number of discharges treated on a day patient basis with an associated reduction in the average length of stay per discharge, as highlighted in the previous section.¹¹

2.10 As shown in Figure 2.2, the number of day patients has more than doubled between 1995 and 2004, from 161,535 to 425,825. In contrast, in-patient discharges experienced lower levels of growth with the number of such discharges in 2004 being 25.7 per cent higher than in 1995. As a result of the substantial growth in day patients, the share of total

⁹ Bed data for HIPE hospitals are based on estimates which were kindly provided by the Department of Health and Children. These figures exclude beds in long stay hospitals which are not reported to the Department of Health and Children.

¹⁰ A more thorough analysis of changes in average length of stay would address the impact of such factors as age and complexity, which will be considered in subsequent reports. Throughout this chapter, average length of stay refers to mean length of stay.

¹¹ In HIPE, a day patient is admitted and discharged on the same day, as planned. In contrast, in-patients may be treated on either a planned or emergency basis, and treatment may entail an overnight stay in hospital.

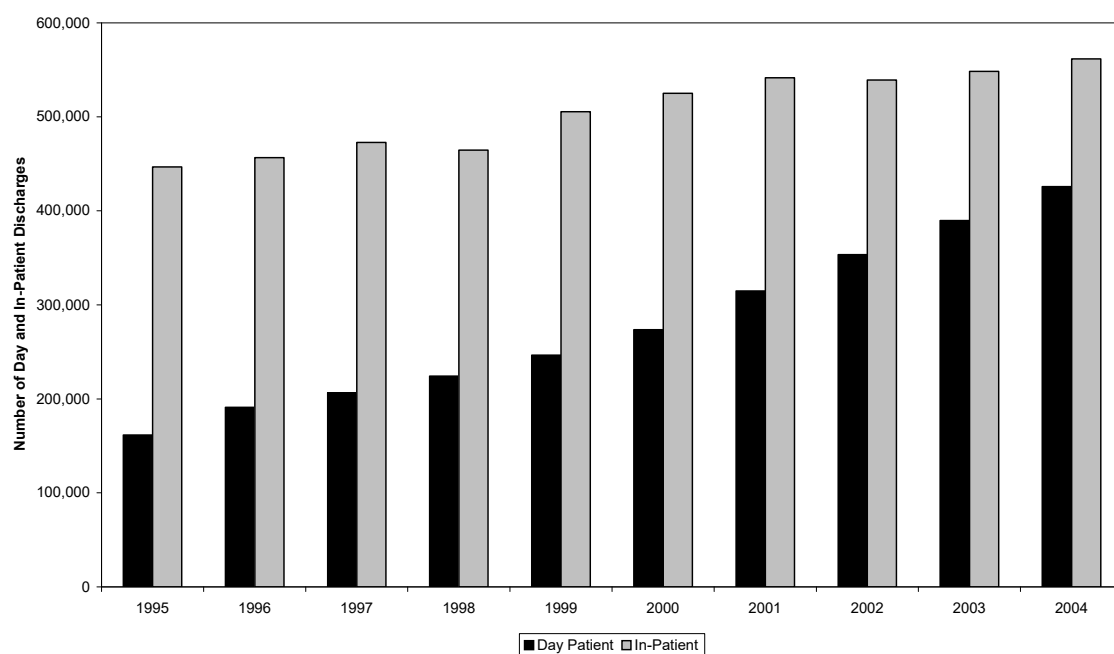


Figure 2.2: Number of Day and In-Patient Discharges, 1995-2004

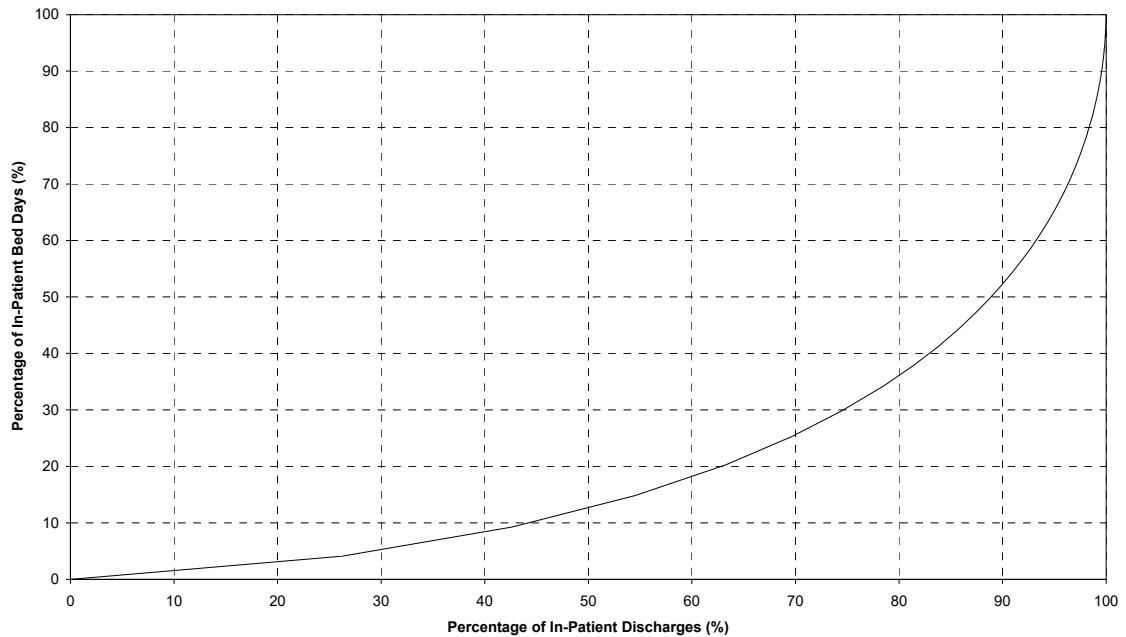
discharges (day and in- patients) accounted for by day patients increased from 26.6 per cent in 1995 to 43.1 per cent in 2004, with a commensurate decline in the proportion of in-patients. Notwithstanding this shift toward day patient activity, the majority of discharges continue to be treated on an in-patient basis.

2.11 Concomitant with this growth in the volume of day patient discharges has been a substantial growth in the number of hospital beds available for the treatment of such patients. Over 900 beds in acute public hospitals were allocated for the treatment of day patients in 2004, less than one in every ten, which was almost double the number available in 1995.

2.12 As Figure 2.3 shows, the 2004 distribution of bed days among in-patient discharges from acute public hospitals, excluding long stay hospitals, was not represented by a linear, one-to-one relationship. Around 5 per cent of in-patient discharges in acute public hospitals may be categorised as high users accounting for a disproportionately large share (35.5 per cent) of in-patient bed days. Similarly, the top 10 per cent of high users accounted for just under half of in-patient bed days, while 1 per cent of in-patients used 15.7 per cent of bed days.

Figure 2.3: Distribution of Bed Days among In-Patient Discharges from Acute Public Hospitals, 2004

Note: Excludes long stay hospitals.



2.12 According to Figure 2.4, older age groups were overrepresented in high user groups. While less than 5 per cent of the population were aged 75 years and older in 2004, this age group made up 43.9 per cent of the top 1 per cent of high users. This finding is consistent with the evidence that age is associated with high usage of health services.

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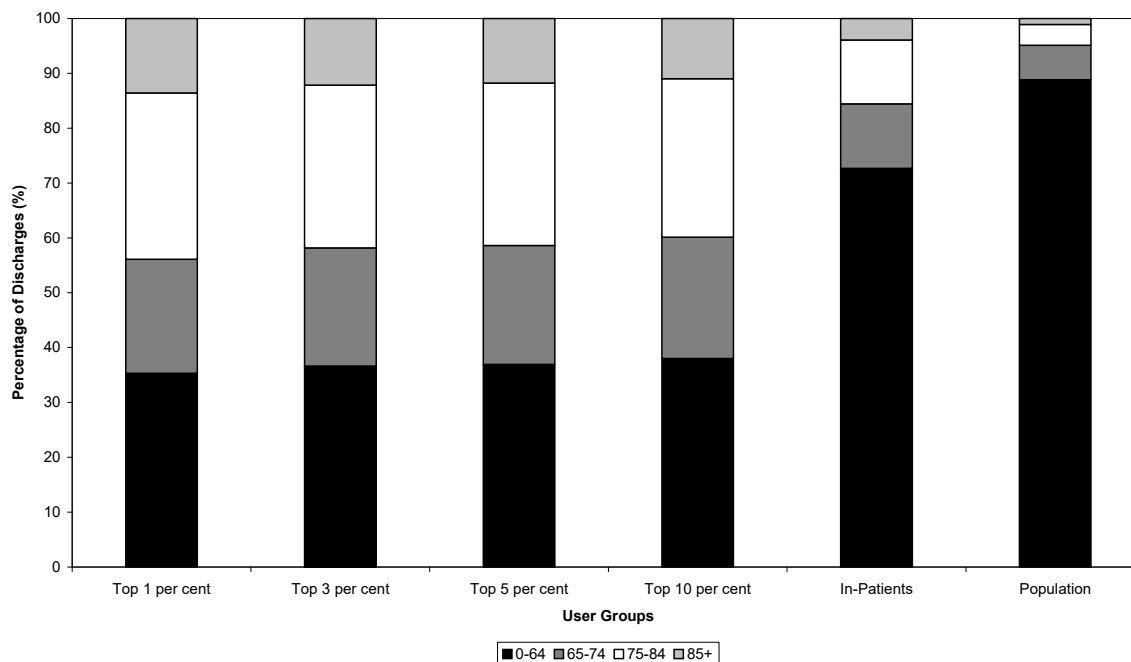


Figure 2.4: Distribution of User Groups by Age Group, 2004

Note: As per Figure 2.3.

Source: Population data are based on estimates calculated by the Information Management Unit, Department of Health and Children.

Reasons for Hospitalisation: Conditions and Interventions

2.14 The most common conditions treated in hospitals will reflect the underlying health status and demographic profile of the population. The increasing prevalence of obesity in the Irish population, for example, will be associated with an increase in the incidence of diseases, such as diabetes, heart disease and certain types of cancer, for which obesity is a risk factor. This section examines the common conditions treated in hospitals on a day and in-patient basis in 2004.

2.15 The top 20 causes of hospitalisation for day patients in 2004 are reported in Table 2.1. Almost one out of every two day patients had one of the top 20 principal diagnoses.¹² The most common reason for hospitalisation among day patients was “encounter for other and unspecified procedures and aftercare”, which includes radiotherapy and chemotherapy. This diagnosis

¹² A principal diagnosis is “the diagnosis established after study to be chiefly responsible for occasioning the patient’s episode of care in hospital” (National Centre for Classification in Health, 2004).

accounted for 37.3 per cent of day patient discharges in the top 20 and 18.3 per cent of total day patients.

Table 2.1: Top 20 Principal Diagnoses for Day Patients, 2004

Ran k	Principal Diagnosis	ICD- 9- CM	Number of Day Patient Discharges	As % of Top 20	As % of Day Patient Discharges
1	Encounter for other and unspecified procedures and aftercare ^a	V58	77,719	37.3	18.3
2	Follow-up examination	V67	13,706	6.6	3.2
3	Gastritis and duodenitis	535	11,529	5.5	2.7
4	Disorders of mineral metabolism	275	10,902	5.2	2.6
5	Diseases of oesophagus	530	10,304	4.9	2.4
6	Benign neoplasm of skin	216	8,231	3.9	1.9
7	Psoriasis and similar disorders	696	7,836	3.8	1.8
8	Cataract	366	6,498	3.1	1.5
9	Haemorrhoids	455	6,226	3.0	1.5
10	Other symptoms involving abdomen and pelvis	789	5,968	2.9	1.4
11	Symptoms involving respiratory system and other chest symptoms	786	5,934	2.8	1.4
12	Symptoms involving digestive system	787	5,400	2.6	1.3
13	Other forms of chronic ischaemic heart disease	414	5,248	2.5	1.2
14	Benign neoplasm of other parts of digestive system	211	5,210	2.5	1.2
15	Diverticula of intestine	562	5,085	2.4	1.2
16	Other malignant neoplasm of skin	173	4,824	2.3	1.1
17	Other and unspecified disorders of back	724	4,761	2.3	1.1
18	Other hernia of abdominal cavity without mention of obstruction or gangrene	553	4,608	2.2	1.1
19	Other dermatoses	702	4,357	2.1	1.0
20	Diseases of sebaceous glands	706	4,283	2.1	1.0
	Top 20 – Total	–	208,629	100	49.0
	Day Patients – Total	–	425,825	–	100

Notes: ICD-9-CM, *Ninth edition of the International Classification of Diseases, Clinical Modification*, refers to the scheme used to code diagnoses and procedures in HIPE between 1990 and 2004.

^a Includes chemotherapy and radiotherapy encounters. The volume of activity reported here should be treated with caution as one HIPE hospital significantly under-reported radiotherapy activity.

2.16 Similarly, the top 20 principal diagnoses among in-patients are presented in Table 2.2. Comparing Tables 2.1 and 2.2, as would be expected, there was a distinct difference between the type of conditions treated on a day patient basis and those on an in-patient basis. Moreover, the top 20 principal diagnoses for in-patients were not as common as the equivalent top 20 among day patients, accounting for less than 30 per cent of total in-patient discharges. The top in-patient principal diagnosis was “trauma to perineum and vulva during delivery”, and was one of six diagnoses listed in the top 20 relating to pregnancy and childbirth. Although the most common principal diagnosis accounted for the largest volume of in-patients, the associated average length of stay was 2.8 days, which was lower than that for in-patients in total (6.4 days in 2004). In contrast, a principal diagnosis of “heart failure” was associated with an average length of stay of 12.1 days, which was more than four times that of the most common principal diagnosis.¹³

Rank	Principal Diagnosis	ICD-9-CM	Number of In-Patient Discharges	As % of Top 20	As % of Total In-Patient Discharges	In-Patient Average Length of Stay (Days)
1	Trauma to perineum and vulva during delivery	664*	14,332	8.9	2.6	2.8
2	Symptoms involving respiratory system and other chest symptoms	786	14,138	8.7	2.5	3.5
3	General symptoms ^a	780	12,085	7.5	2.2	4.6
4	Other complications of pregnancy, not elsewhere classified	646*	10,555	6.5	1.9	2.0
5	Other symptoms involving abdomen and pelvis	789	10,369	6.4	1.8	3.1
6	Other diseases of respiratory system	519	9,914	6.1	1.8	7.0
7	Other forms of chronic ischaemic heart disease	414	8,680	5.4	1.5	7.8
8	Chronic bronchitis	491	7,339	4.5	1.3	9.5

¹³ This analysis of average length of stay does not take account of the status of the patient on discharge. For example, a patient with a diagnosis of chronic ischaemic heart disease may be transferred from one hospital to another after one day. In HIPE, the total length of stay for this entire episode would not be captured because this transfer would be recorded as two discharges for this patient.

9	Cardiac dysrhythmias	427	7,330	4.5	1.3	6.5
10	Early or threatened labour	644*	7,186	4.4	1.3	1.6
11	Other disorders of urethra and urinary tract	599	7,107	4.4	1.3	6.7
12	Normal delivery	650*	6,667	4.1	1.2	2.4
13	Other indications for care or intervention related to labour and delivery, not elsewhere classified	659*	6,428	4.0	1.1	4.0
14	Cholelithiasis	574	6,379	3.9	1.1	6.0
15	Osteoarthritis and allied disorders	715	5,980	3.7	1.1	11.3
16	Heart failure	428	5,736	3.5	1.0	12.1
17	Other foetal and placental problems affecting management of mother	656*	5,552	3.4	1.0	3.6
18	Acute myocardial infarction	410	5,341	3.3	1.0	11.0
19	Chronic disease of tonsils and adenoids	474	5,332	3.3	0.9	2.2
20	Fracture of radius and ulna	813	5,262	3.3	0.9	2.3
	Top 20 In-Patients – Total	–	161,712	100	28.8	5.1
	In-Patients – Total	–	561,614	–	100	6.4

Notes: ICD-9-CM, *Ninth edition of the International Classification of Diseases, Clinical Modification*.

* denotes diagnoses relating to pregnancy, childbirth and the puerperium.

^a Includes alteration of consciousness, hallucinations, syncope and collapse, convulsions, dizziness and giddiness, sleep disturbances, fever, malaise and fatigue, hyperhidrosis, and other general symptoms.

2.17 The age and gender profile of discharges treated for the conditions listed in Tables 2.1 and 2.2 will vary depending on the particular diagnosis. For instance, 83.9 per cent of the 6,498 day patients treated for “cataract” were aged 65 years and over. In contrast, day patients with a principal diagnosis of “gastritis and duodenitis” had a much younger age profile, with over two-thirds of these discharges aged between 25 and 64 years. In addition, certain conditions may be more prevalent among males or females. For example, a principal diagnosis of “heart failure” was more common among males, with this group accounting for 53.4 per cent of all in-patient discharges with this condition.

2.17 As well as diagnoses, HIPE records the principal procedure, where one has been performed.¹⁴ In 2004, almost all day patients (96.3 per cent) underwent at least a principal procedure (see Table 2.3). Over three-quarters of day patients underwent one of the top 20 principal procedures. The most common was “other non-operative procedures”, including transfusions, injections and prophylactic vaccinations. Such procedures are regarded as minor. In addition to this principal procedure, five others listed in the top 20 could be classified as minor.

Table 2.3: Top 20 Principal Procedures for Day Patients, 2004

Rank	Principal Procedure	ICD-9-CM	Number of Day Patient Discharges	As % of Top 20	As % of Day Patient Discharges
1	Other non-operative procedures	99*	88,745	26.6	20.8
2	Incision, excision, and anastomosis of intestine	45	61,662	18.5	14.5
3	Operations on skin and subcutaneous tissue	86	35,435	10.6	8.3
4	Incision, excision, and occlusion of vessels	38	33,674	10.1	7.9
5	Nuclear medicine	92*	21,059	6.3	4.9
6	Interview, evaluation, consultation, and examination	89*	13,550	4.1	3.2
7	Operations on urinary bladder	57	12,676	3.8	3.0
8	Other diagnostic radiology and related techniques	88*	10,086	3.0	2.4
9	Other operations on middle and inner ear	20	5,920	1.8	1.4
10	Other operations on heart and pericardium	37	5,750	1.7	1.4
11	Removal and restoration of teeth	23	5,444	1.6	1.3
12	Operations on lens	13	5,339	1.6	1.3
13	Other operations on stomach	44	4,766	1.4	1.1
14	Repair and plastic operations on joint structures	81	4,649	1.4	1.1
15	Other operations on uterus and supporting structures	69	4,598	1.4	1.1
16	Operations on nose	21	4,251	1.3	1.0
17	Operations on the breast	85	4,151	1.2	1.0
18	Physical therapy, respiratory therapy, rehabilitation, and related procedures	93*	3,936	1.2	0.9
19	Operations on spinal cord and spinal canal structures	03	3,863	1.2	0.9
20	Ophthalmologic and otologic diagnosis and treatment	95*	3,809	1.1	0.9
	Top 20 Day Patients – Total	–	333,363	100	78.3
	Day Patients with a Principal Procedure	–	409,958	–	96.3
	Day Patients – Total	–	425,825	–	100

¹⁴ A principal procedure is defined as one for which definitive treatment is performed (as opposed to one performed for diagnostic or exploratory purposes) (HIPE Unit, 2002).

Notes: ICD-9-CM, *Ninth edition of the International Classification of Diseases, Clinical Modification*.

* denotes minor procedures.

2.19 According to Table 2.4, almost nine out of every ten in-patient discharges underwent a principal procedure. The 20 most common principal procedures accounted for 70.9 per cent of in-patient discharges. The most frequently performed principal procedure for in-patients, “other non-operative procedures”, was the same as that for day patients. This procedure was one of five minor procedures in the in-patient top 20. Together, the four obstetrical procedures listed in the top 20 accounted for 11.1 per cent of total in-patient discharges.

2.20 There was considerable variability in the average length of stay by in-patient procedure. This ranged from 1.5 days for “other operations on uterus and supporting structures” (including dilation and curettage of uterus) to 12.9 days for “repair and plastic operations on joint structures”. The mean duration of hospitalisation for the most common principal procedure was 6.6 days.

Rank	Principal Procedure	ICD-9-CM	Number of In-Patient Discharges	As % of Top 20	As % of Total In-Patient Discharges	In-Patient Average Length of Stay (Days)
1	Other non-operative procedures	99*	104,515	26.3	18.6	6.6
2	Other diagnostic radiology and related techniques	88*	43,661	11.0	7.8	6.2
3	Diagnostic radiology	87*	38,579	9.7	6.9	7.7
4	Interview, evaluation, consultation, and examination	89*	27,534	6.9	4.9	4.8
5	Other obstetric operations	75^	26,602	6.7	4.7	2.2
6	Incision, excision, and anastomosis of intestine	45	17,547	4.4	3.1	10.9
7	Physical therapy, respiratory therapy,	93*	17,413	4.4	3.1	12.7

	rehabilitation, and related procedures					
8	Other procedures inducing or assisting delivery	73 [^]	15,076	3.8	2.7	3.1
9	Reduction of fracture and dislocation	79	14,594	3.7	2.6	5.6
10	Caesarean section and removal of foetus	74 [^]	13,676	3.4	2.4	6.1
11	Incision, excision, and occlusion of vessels	38	13,497	3.4	2.4	4.8
12	Operations on skin and subcutaneous tissue	86	12,533	3.1	2.2	5.8
13	Repair and plastic operations on joint structures	81	9,433	2.4	1.7	12.9
14	Forceps, vacuum, and breech delivery	72 [^]	7,199	1.8	1.3	3.7
15	Operations on spinal cord and spinal canal structures	03	6,828	1.7	1.2	5.8
16	Other operations on uterus and supporting structures	69	6,283	1.6	1.1	1.5
17	Operations on appendix	47	5,953	1.5	1.1	4.4
18	Operations on tonsils and adenoids	28	5,911	1.5	1.1	2.4
19	Operations on gallbladder and biliary tract	51	5,770	1.4	1.0	6.9
20	Operations on urinary bladder	57	5,435	1.4	1.0	7.6
	Top 20 In-Patients – Total	–	398,039	100	70.9	6.3
	In-Patients with a Principal Procedure – Total	–	502,804	–	89.5	6.7
	In-Patients – Total	–	561,614	–	100	6.4

Notes: ICD-9-CM, *Ninth edition of the International Classification of Diseases, Clinical Modification*.

* denotes minor procedures.

[^] denotes obstetrical procedures.

The Influence of Patient Demographic Characteristics on Hospital Discharges

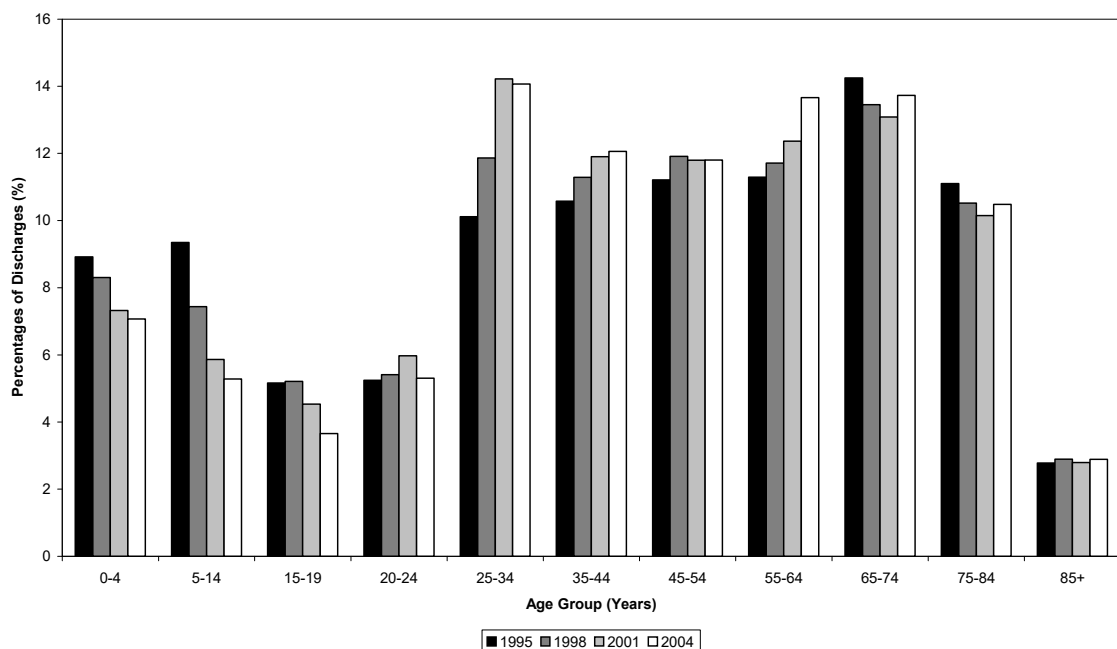
2.21 This section examines the demographic profile of those who use hospital services, concentrating in particular on age, sex, and marital status.

Age

2.22 The distribution of total discharges by age group is shown in Figure 2.5 for selected years. The proportion of discharges aged 19 years or under has declined between 1995 and 2004, especially in the 5 to 14 year age group,

where the share of the total fell from 9.3 per cent in 1995 to 5.3 per cent in 2004. Discharges aged between 20 and 24 years accounted for very similar proportions of the total in 2004 as in 1995, although there was a slight increase in their share in the intervening years. The 25 to 34 year age group experienced the largest increase in their share of total discharges – from 10.1 per cent in 1995 to 14.1 per cent in 2004. The inclusion of obstetric data in HIPE from 1999 onwards would be expected to have contributed to the changed position of this age group over this period. The proportion of discharges aged between 35 and 64 years also increased on trend between 1995 and 2004, albeit to a lesser extent. There were marginal reductions in the proportion of discharges aged between 65 and 84 years, while the proportion of discharges in the age group 85 years and over was relatively constant throughout the period under consideration.

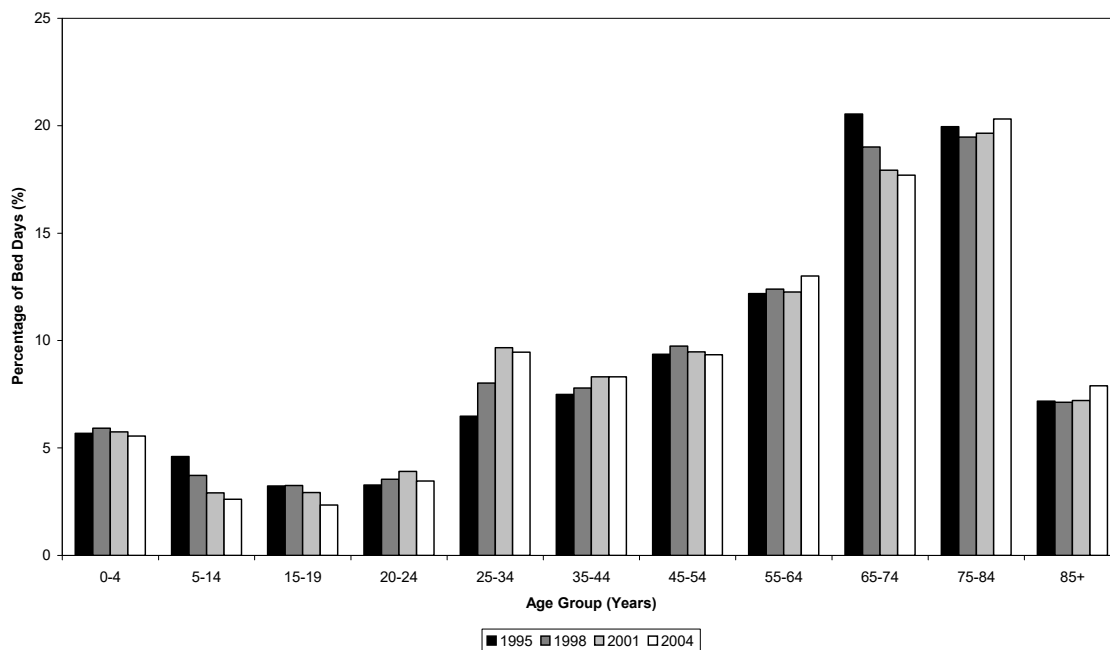
Figure 2.5: Distribution of Total Discharges by Age Group, 1995, 1998, 2001, and 2004



2.23 The distribution of total bed days by age group in Figure 2.6 differs from the pattern for total discharges. Almost half of total bed days were utilised by discharges aged 65 years and over, even though this group accounted for a disproportionately lower share of total discharges (27.1 per cent in 2004),

which implies that this age group had a long average length of stay. Approximately 14 per cent of discharges were aged between 25 and 34 years, but this group used less than 10 per cent of bed days.

Figure 2.6: Distribution of Total Bed Days by Age Group, 1995, 1998, 2001, and 2004

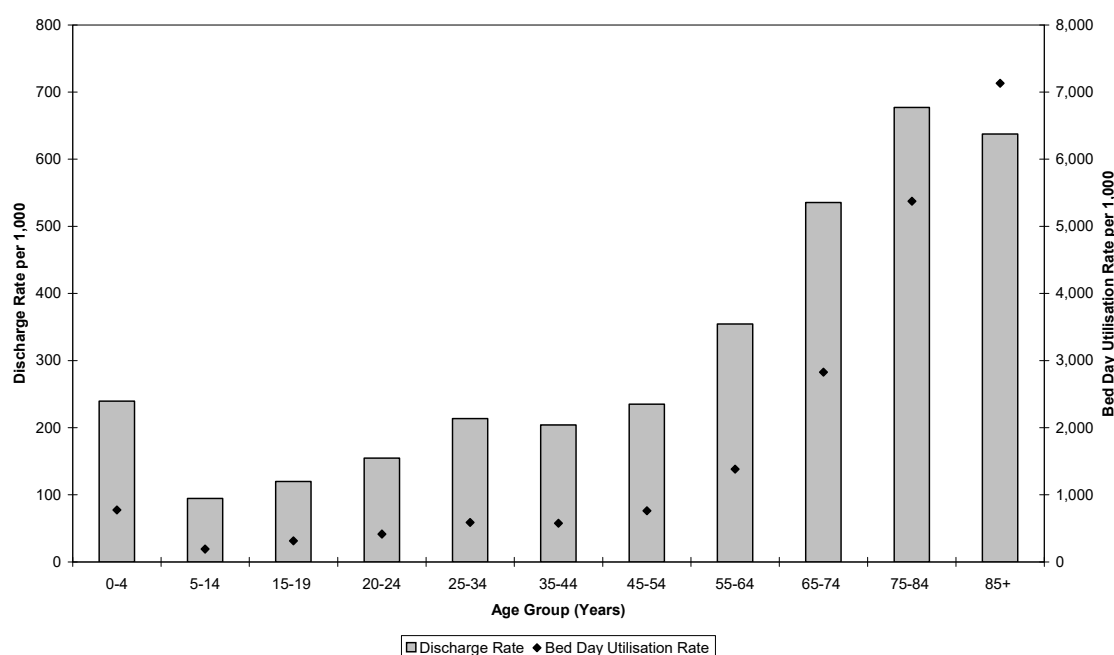


2.24 Age-specific rates for discharges and bed days are shown in Figure 2.7. These rates adjust the number of discharges and bed days in each age group for the age structure of the population.¹⁵ While Figure 2.5 showed that the 25 to 34 year age group accounted for the highest proportion of discharges, this group did not record the highest age-specific discharge rate because of the large numbers of people of that age in the population as a whole who were not discharged from hospital. As would be expected, the discharge rates generally increased with age so that while there were roughly 214 discharges for every 1,000 members of the population aged between 25 and 34 years, there were three times this number of discharges per 1,000 population aged between 75 and 84 years (the age group with the highest discharge rate).

¹⁵ Age-specific discharge rates are calculated as the number of discharges within a particular age group divided by the population within that particular age group multiplied by 1,000. The formula for calculating the age-specific discharge rate for age group i is:

$$\frac{\text{Discharges in age group } i}{\text{Population of age group } i} \times 1,000.$$

Figure 2.7: Age-Specific Discharge and Bed Day Utilisation Rates Per 1,000 Population, 2004



Source: Data on the age distribution of the population are based on estimates calculated by the Information Management Unit, Department of Health and Children.

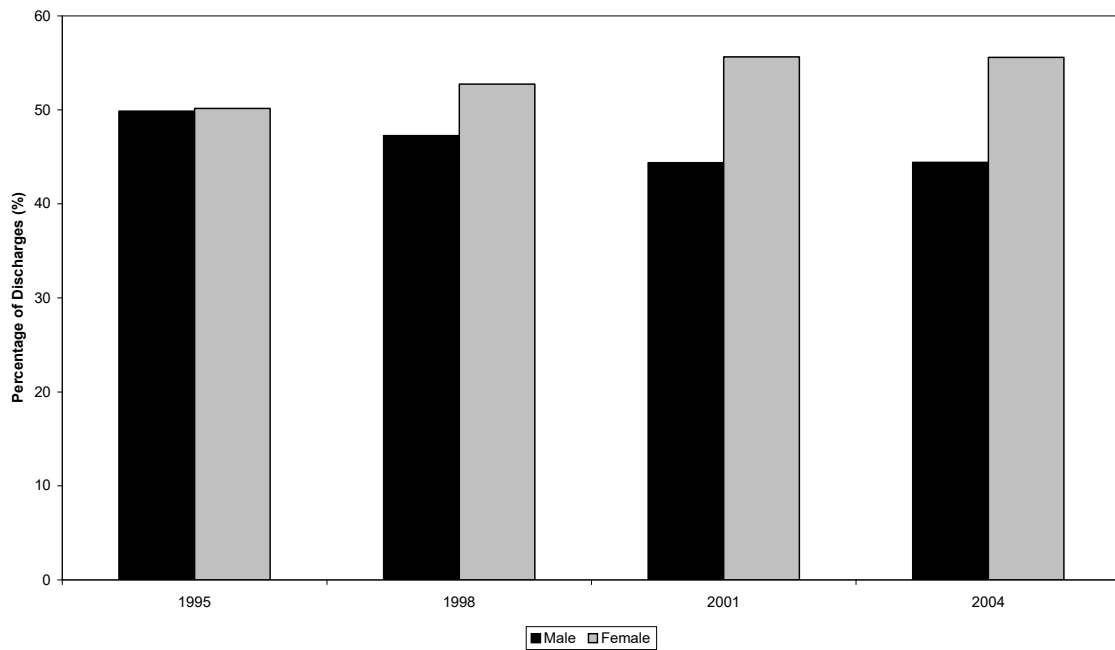
2.25 As with discharge rates, the age-specific rate of bed day utilisation generally increased with age. For every 1,000 members of the population aged between 25 and 34, the 214 discharges spent a total of approximately 588 days in hospital in 2004. In contrast, the number of bed days used by the 85 years and over age group was substantially greater with more than 7,100 days in hospital per 1,000 population in that age group. In short, these data on age-specific discharge and bed day utilisation rates highlight the importance of the age factor in understanding patterns of utilisation of hospital services.

Sex

2.26 As shown in Figure 2.8, the distribution of total discharges between males and females changed between 1995 and 2004. In 1995, the division of discharges between males and females was roughly equal. However, by 2004, the proportion of total discharges who were female had increased to 55.6 per cent, implying that the female share of discharges was disproportionately large

relative to their share in the overall population (which in 2004 was 50.3 per cent). This change in discharge activity may reflect the introduction of mandatory reporting to HIPE of obstetric data in 1999.¹⁶ Adjusting for the sizes of the female and male populations, females recorded a higher rate of discharge. In 2004, there were approximately 270 discharges for every 1,000 females in the population, while males recorded 218 discharges per 1,000 population.

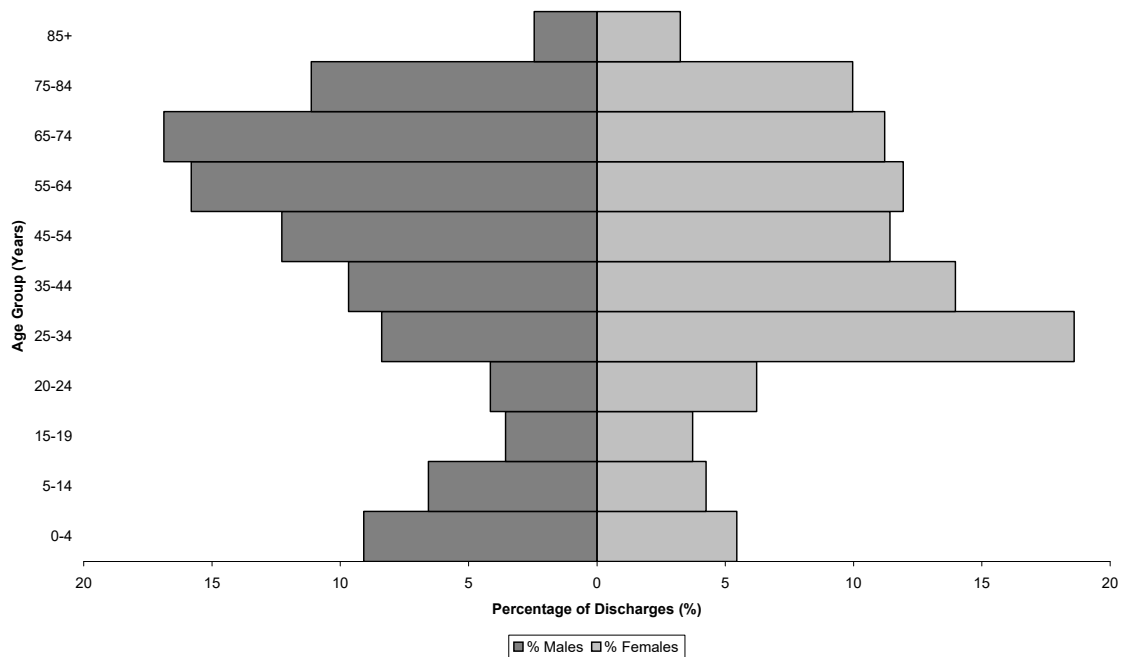
Figure 2.8: Distribution of Total Discharges by Sex, 1995, 1998, 2001, and 2004



2.27 As Figure 2.9 shows, the proportion of female discharges aged between 15 and 44 years was greater than the proportion of male discharges in this age group. The converse was true for the 45 to 84 year age group.

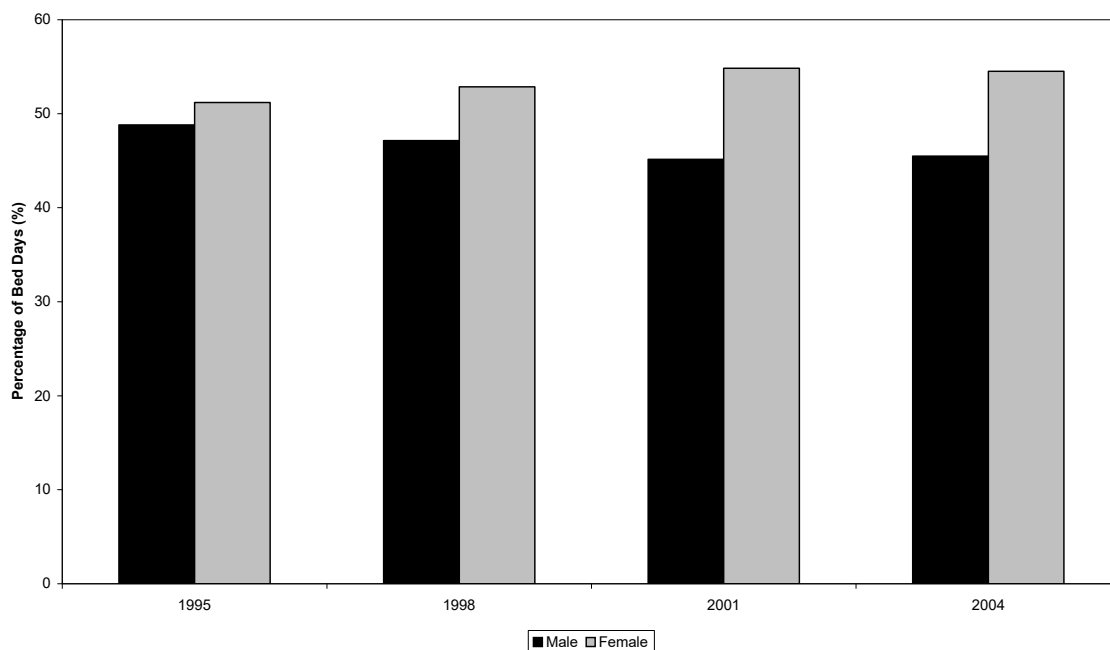
¹⁶ The fact that the percentages of female discharges in 2001 and 2004 were similar may lend some support to this interpretation. The increase in the percentage of female discharges between 1995 and 1998 may reflect a phased approach to the introduction of mandatory reporting of obstetric data to HIPE.

Figure 2.9: Distribution of Total Discharges by Age and Sex, 2004



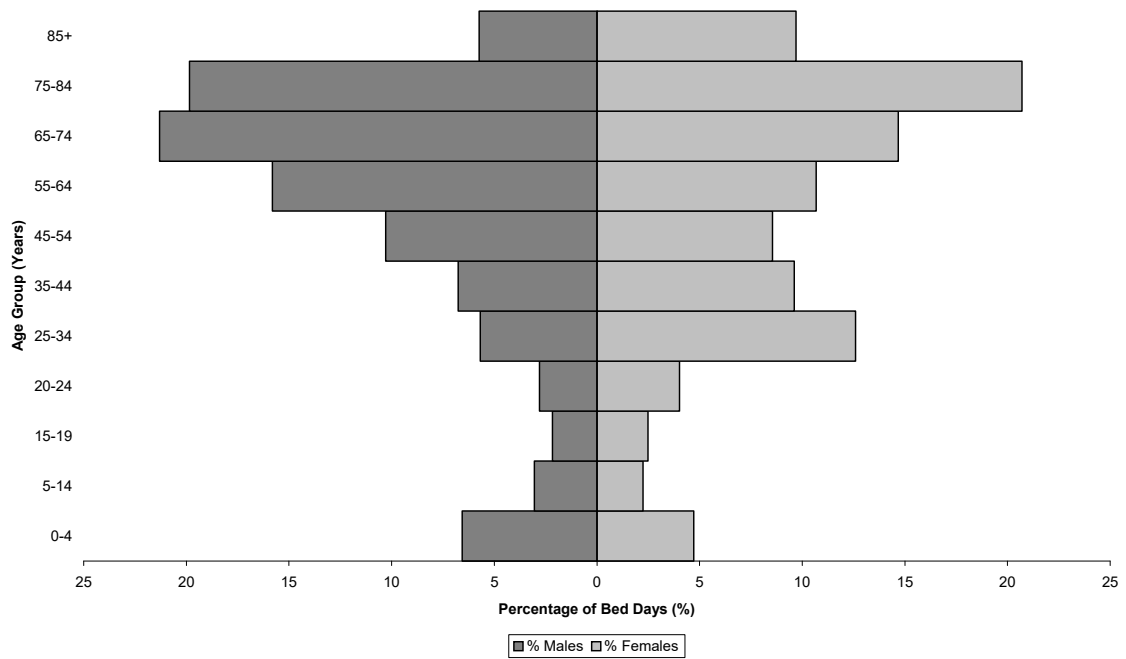
2.28 The distribution of bed days by sex is shown in Figure 2.10 for 1995, 1998, 2001 and 2004. The pattern is similar to that for discharges, with the proportion of bed days used by female discharges rising over the period, reaching 54.5 per cent in 2004. The greater utilisation of health services by females was once again confirmed by the higher bed day utilisation rate recorded for this group. In 2004, the sex-specific bed day utilisation rate for females was 1,085 per 1,000 population which was almost 20 per cent higher than that for males (915 per 1,000).

Figure 2.10: Distribution of Total Bed Days by Sex, 1995, 1998, 2001, and 2004



2.29 The age and sex distribution of total bed days, in Figure 2.11, shows many similarities to that for discharges, although the distribution of bed days was a little more skewed towards older age groups for both males and females. The proportion of bed days used by female discharges exceeded that used by male discharges in the age groups between 15 and 44 years. The reverse was observed for the younger age groups and the 45 to 74 year age groups. The proportion of bed days used by female discharges in the two older age groups was higher than that for males. This is consistent with older female discharges having a longer average hospital stay than their male counterparts.

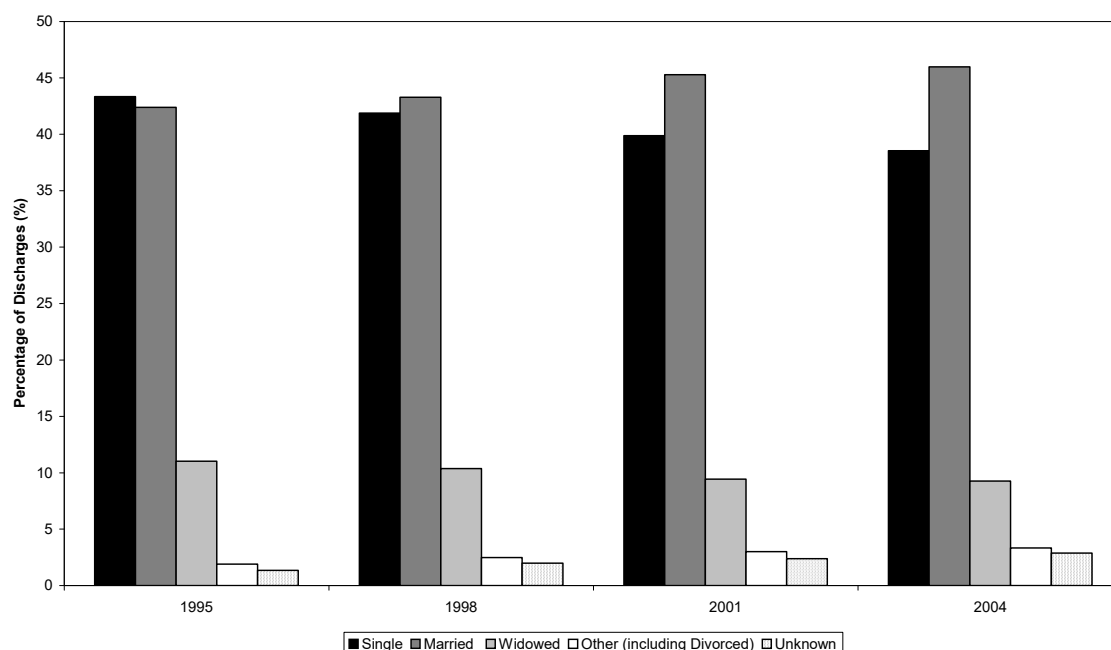
Figure 2.11: Distribution of Total Bed Days by Age Group and Sex, 2004



Marital Status

2.30 Research has found evidence that marriage and health are positively related. Internationally, married people, both men and women, use less health care than their non-married counterparts other things being equal (Prior & Hayes, 2001). More than eight out of every ten discharges from acute public hospitals were either married or single in each year shown in Figure 2.12. While the proportion of single discharges has slightly declined between 1995 and 2004, the proportion of married discharges has grown.

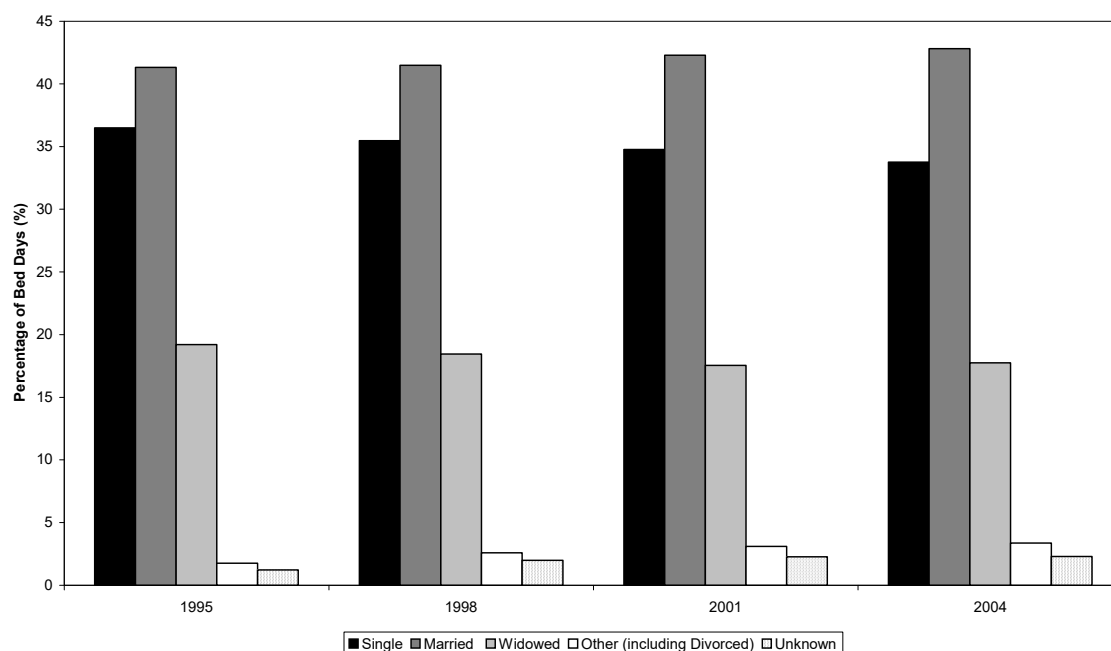
Figure 2.12: Distribution of Total Discharges by Marital Status, 1995, 1998, 2001, and 2004



Note: A separate code for ‘divorced’ was included in HIPE in 2001. Prior to this, ‘divorced’ was included in the category ‘other’. Therefore, to facilitate comparison across the years reported in Figure 2.12, ‘other’ encapsulates ‘divorced’ for both 2001 and 2004.

2.31 The distribution of total bed days by marital status is shown in Figure 2.13. Together, single and married discharges utilised the vast majority of bed days between 1995 and 2004, although in proportional terms, these groups accounted for a higher share of discharges than bed days. For instance, in 2004, 46.0 per cent of discharges were married, but this group used only 42.8 per cent of bed days. In contrast, the proportion of bed days used by widowed discharges (17.8 per cent of total bed days in 2004) was greater than this group’s share of total discharges (9.3 per cent of total discharges in 2004). The disproportionately large share of bed days used by widowed discharges implies that the average length of stay for discharges in this group was longer than that for other groups. This higher utilisation of bed days among widowed discharges may be associated with the fact that their age profile is likely to be older.

Figure 2.13: Distribution of Total Bed Days by Marital Status, 1995, 1998, 2001, and 2004



Note: As per Figure 2.12.

The Influence of Medical Card and Insurance Status on Hospital Discharges

2.32 This section examines how the structure of the Irish health care system has impacted on the utilisation of acute public hospital services. All residents in Ireland are entitled to access the public hospital system. In spite of this universal entitlement, the hospital system is characterised by a mix of public and private provision. A public patient is entitled to free consultant treatment, but may face hospital charges at a rate of €60 a day up to a maximum of €600 per annum (Department of Health and Children, 2007). Holders of medical cards are exempt from these charges (the eligibility criteria for medical cards is discussed in detail in Chapter 3). Private patients in a public hospital are liable for the cost of consultant services and per diem charges, which vary according to the type of accommodation and hospital.¹⁷ Maintenance fees vary according to the type of hospital and accommodation, while consultant

¹⁷ From 1 January 2007, the daily rates for private (respectively, semi-private) accommodation ranged from €460 (€370) in county hospitals and voluntary non-teaching hospitals to €689 (€540) in regional hospitals and voluntary teaching hospitals (Department of Health and Children, 2007).

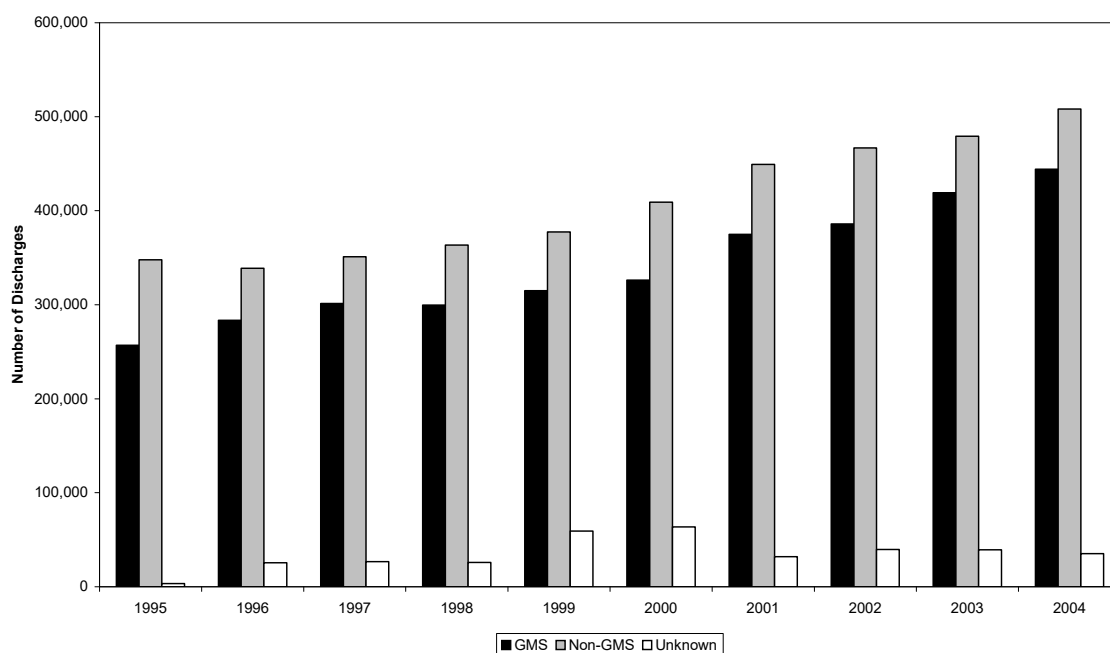
fees depend on the condition and the type of treatment provided. All these charges may be paid directly by the patient or through their private health insurance.

- 2.33 By reducing or eliminating the financial cost of hospital care at the point of use, medical cards and private health insurance may be associated with changes in the utilisation of health care services (Manning et al., 1987; Nolan & Wiley, 2000; Harmon & Nolan, 2001; McGregor et al., 2006). The remainder of this section examines the past utilisation of acute public hospital services by medical card status and public/private status in turn.

Medical Card Status

- 2.34 In recent years, the proportion of the population covered by a medical card has been falling and stood at 29.4 per cent in 2004 (Department of Health and Children, 2006b). In spite of this trend, Figure 2.14 shows that the number of discharges with a medical card (henceforth referred to as ‘GMS discharges’) has been increasing over the period 1995 to 2004. Over this ten-year period, the number of discharges with a medical card increased by 72.9 per cent (from 256,922 in 1995 to 444,101 in 2004), while growth in non-GMS discharges was not as strong (46.1 per cent between 1995 and 2004). In absolute terms, the number of non-GMS discharges has consistently exceeded GMS discharges.

Figure 2.14: Total Discharges by GMS Status, 1995-2004



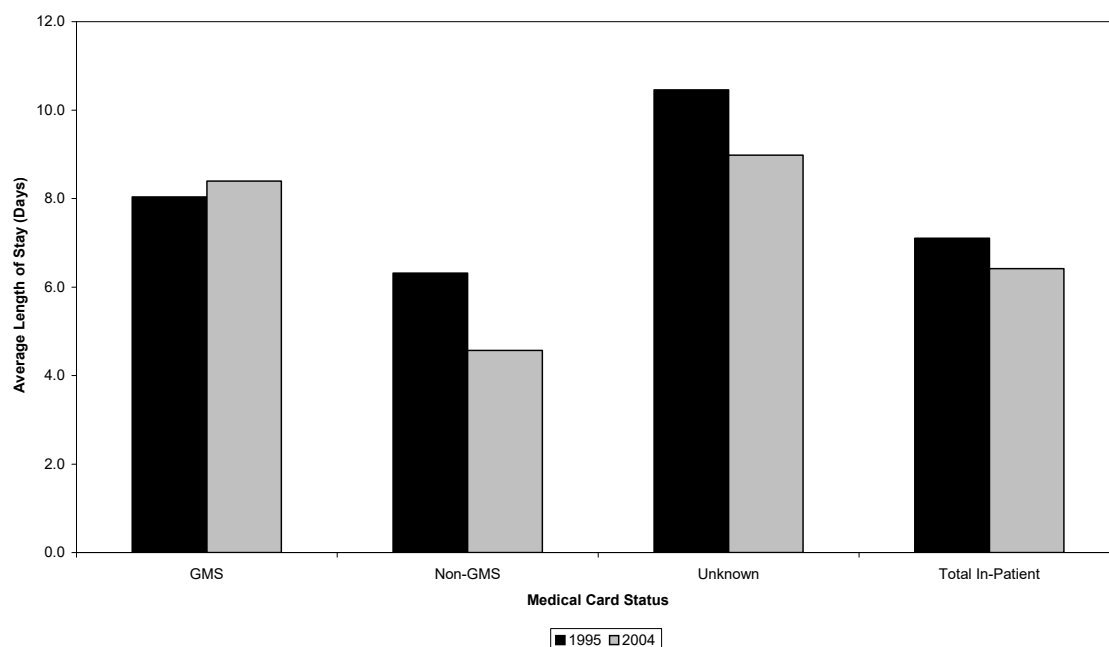
Note: 'Unknown' are discharges for whom GMS status was not known.

2.35 During the ten-year period under consideration, the eligibility criteria for a medical card were changed. Before July 2001, medical cards were issued on the basis of a means test. Subsequently, all those aged 70 years and over were entitled to a medical card, irrespective of income, with means testing continuing for those aged under 70 years. This change may have impacted on discharges in at least two ways. First, there may have been a shift from non-GMS to GMS status for discharges who have previously used the system. Second, there may have been an increase in the absolute number of GMS discharges as newly-qualified medical card holders benefited from accessing these services free at the point of use, while previously the financial cost may have acted as a deterrent to seeking health care.

2.36 In 2001, the number of GMS discharges was 374,969, which was 15 per cent higher than that in 2000. Such a high year-on-year increase never occurred in the years preceding or following the change in entitlement.

2.37 Consistent with the overall downward trend in average length of stay for in-patients, both non-GMS discharges and those with unknown GMS status experienced reductions in their mean duration of in-patient hospitalisation over 1995 to 2004 (see Figure 2.15). Non-GMS in-patient discharges experienced the largest fall of 27.7 per cent in average length of stay during that ten-year period. In contrast, the average length of stay actually slightly increased for GMS in-patient discharges from 8.0 days in 1995 to 8.4 days in 2004.

Figure 2.15: In-Patient Average Length of Stay (Days) by GMS Status, 1995 and 2004

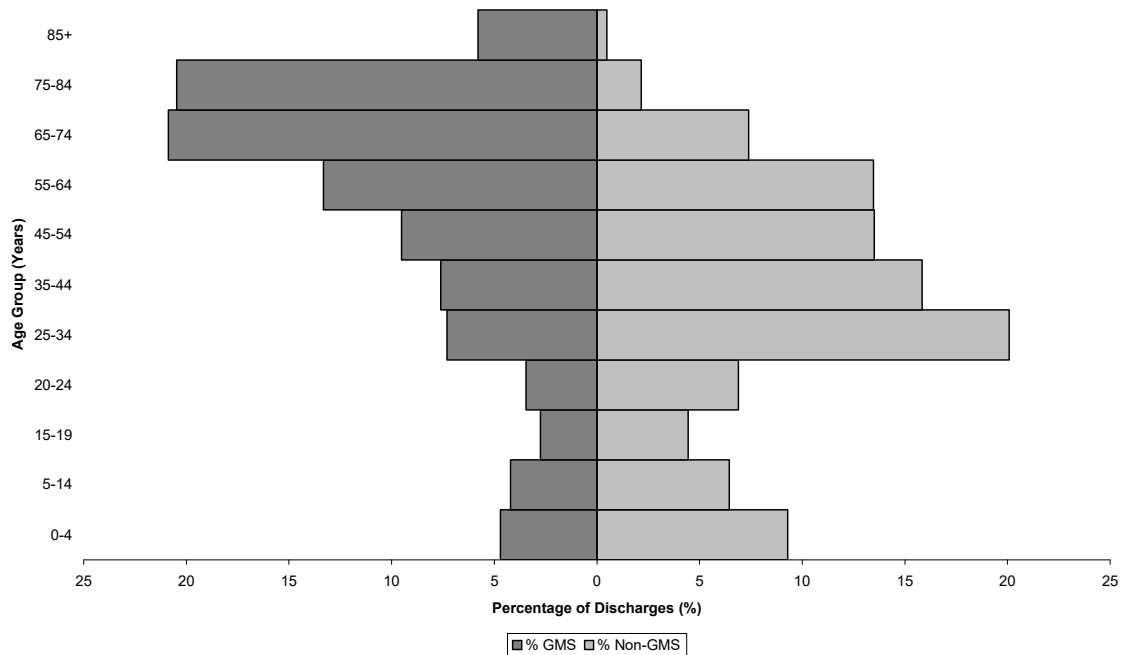


Note: As per Figure 2.14.

2.38 As a key eligibility criterion for a medical card is age, it would be expected that the age profile of medical card holders would differ from that of non-medical card holders. Figure 2.16 confirms the stark differences in the age profile of GMS and non-GMS discharges in 2004. In all but the three oldest age groups, the proportion of non-GMS discharges was larger than GMS discharges. The highest proportions of non-GMS discharges were recorded for the middle age groups and particularly the 25 to 34 year age group, whereas the age distribution of GMS discharges was highly skewed toward the

older age groups. Overall, the mean age of GMS discharges was 55.4 years, which was more than 18 years older than that for non-GMS discharges (37.0 years).

Figure 2.16: Distribution of GMS and Non-GMS Discharges by Age Group, 2004



Note: Excludes those discharges for whom GMS status was unknown.

Public/Private Status

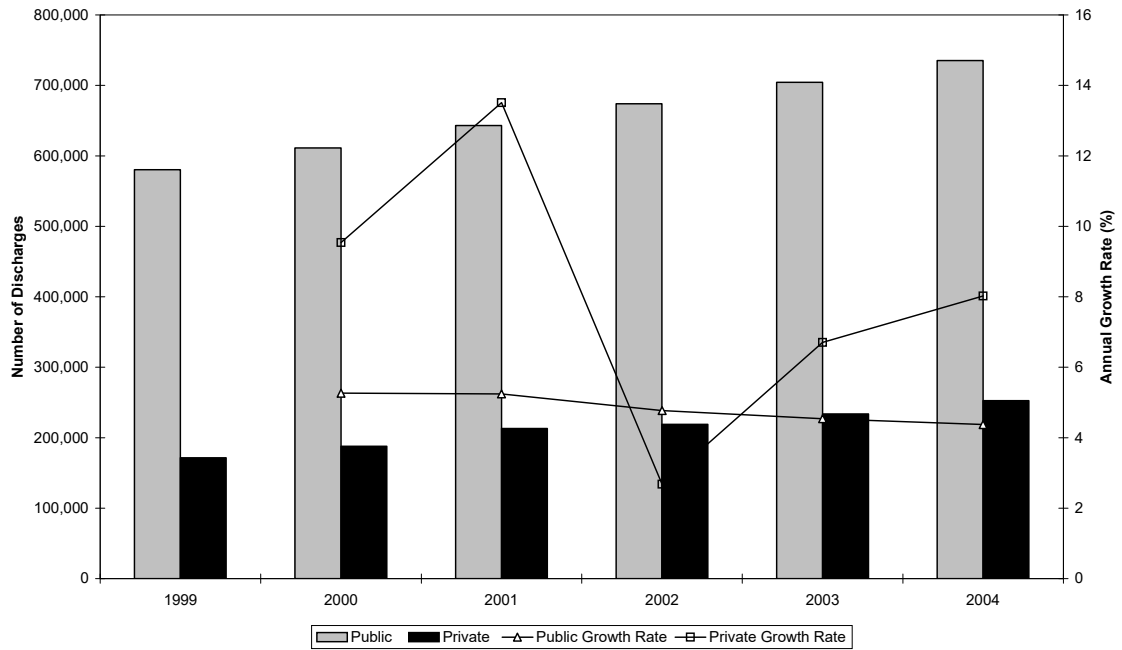
2.39 In 1995, 37.9 per cent of the population subscribed to private health insurance (Department of Health and Children, 1999). By 2004, this proportion had increased substantially such that one in every two members of the population had private health insurance cover (Health Insurance Authority, 2005a). Surveys have suggested that the main drivers of demand for health insurance in Ireland appear to be related to gaining better access to hospital services, choice of consultant and perceptions regarding quality of care (Nolan and Wiley, 2000; Harmon and Nolan, 2001; Nolan, 2004). Moreover, tax relief on premiums would also be expected to have contributed to increased uptake.¹⁸

¹⁸ The results of a consumer survey suggest that the demand for private health insurance is relatively insensitive to changes in the level of premiums. Indeed, premiums would have to increase by 30 per cent to prompt consumers to discontinue their cover (Health Insurance Authority, 2005b).

- 2.40 Data on public/private status have been collected in HIPE since 1999. This variable relates to the public/private status of the patient on discharge, and therefore, does not capture any changes in their status during their hospital stay. Furthermore, public/private status as recorded by HIPE does not refer to the type of bed occupied by the patient during their hospital stay, but instead to the type of consultant care received. HIPE does not distinguish between whether the private consultant care was funded through private health insurance or directly by the patient.
- 2.41 In all years reported in Figure 2.17, the substantial majority of discharges were classified as public. However, while the annual rate of growth in public discharges was declining throughout the period, there was almost always much stronger growth in private discharges. The average annual growth rate for public discharges during the 5-year period, 4.8 per cent, was significantly lower than that for private discharges (8.1 per cent). As a result of these differential growth rates, the share of total discharges who were private increased from 22.8 per cent in 1999 to 25.6 per cent in 2004.¹⁹

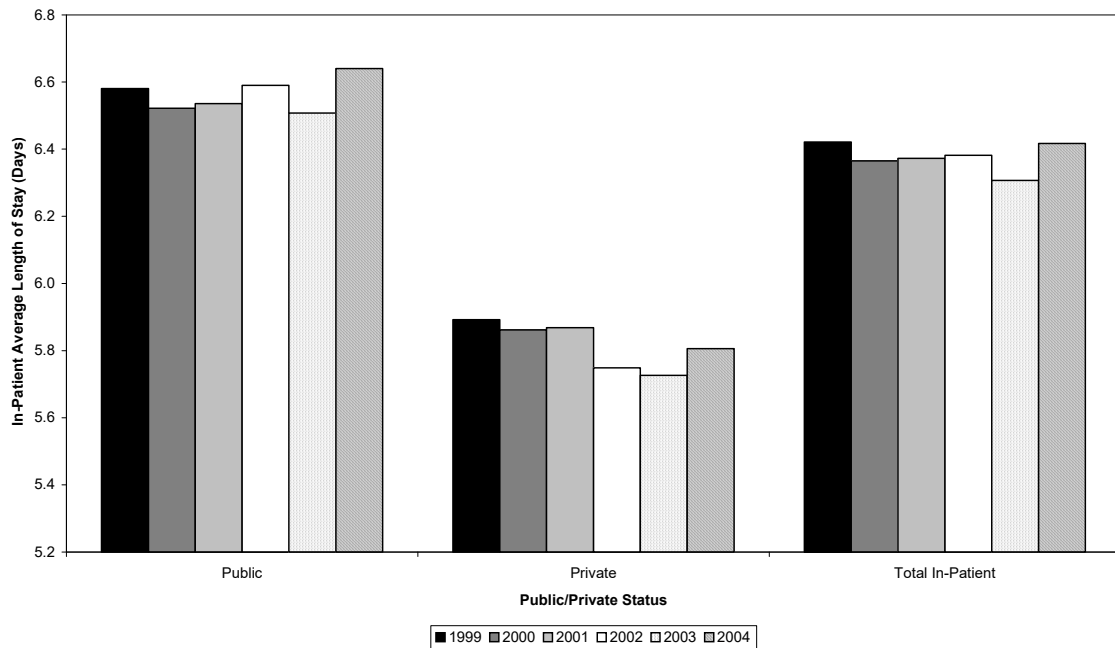
Figure 2.17: Total Discharges by Public/Private Status, 1999-2004

¹⁹ The differential growth rates between public and private discharges are examined in more detail in O'Reilly & Wiley (forthcoming).



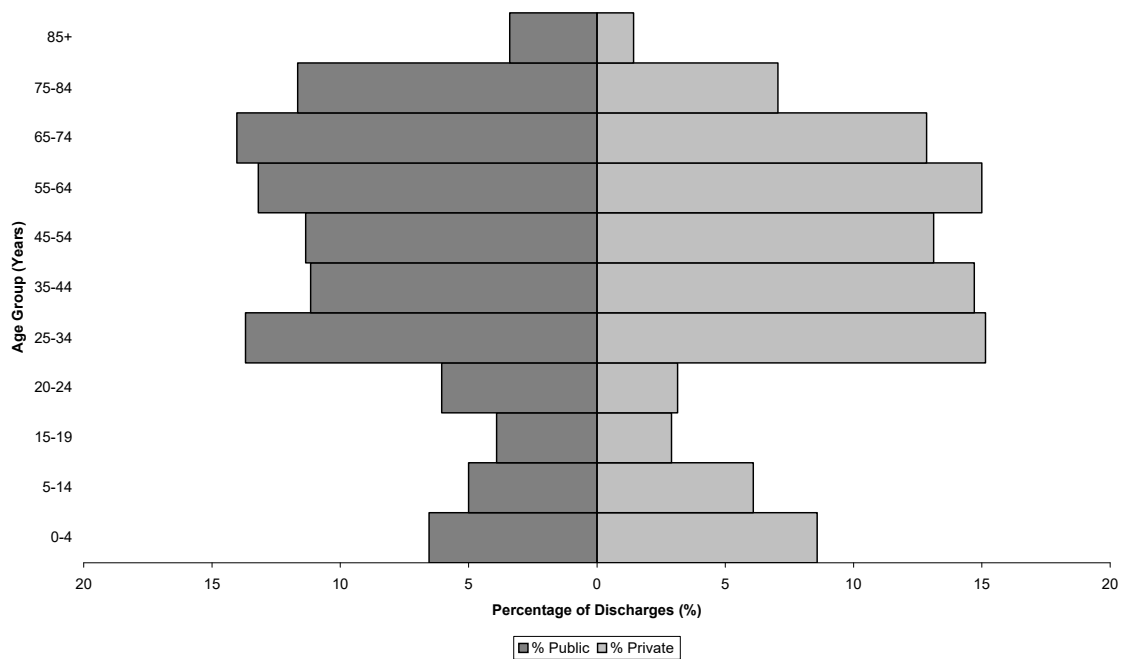
2.42 The average length of stay for public in-patient discharges has been consistently higher than that for private in-patients, as shown in Figure 2.18. Furthermore, public in-patients stayed in hospital for slightly longer on average in 2004 than in 1999. Conversely, the average length of stay for private in-patient discharges fell marginally by 1.5 per cent. The difference in average length of stay between public and private in-patient discharges therefore widened between 1999 and 2004.

Figure 2.18: Average Length of Stay for Public and Private In-Patient Discharges, 1999-2004



2.43 The age profile of public and private discharges (including day and in-patients) in 2004 is shown in Figure 2.19. For both public and private discharges, the majority of observations are concentrated in the 25 to 74 year age group. The proportion of private discharges in the 25 to 64 year age group was slightly greater than the corresponding proportion of public discharges. However, a higher proportion of public discharges were aged 75 years and over compared to the figures for private discharges.

Figure 2.19: Distribution of Total Public and Private Discharges by Age Group, 2004



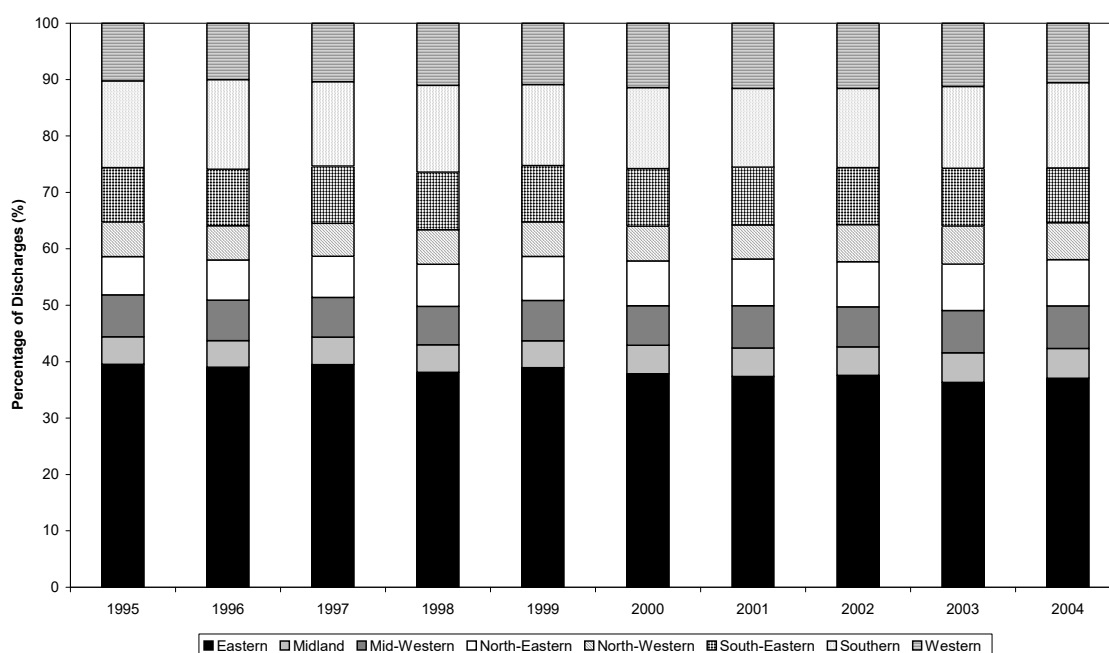
Geographical Distribution of Hospital Discharges by Areas of Hospitalisation and Residence

2.44 Analysis of the geographical distribution of hospital discharges provides a useful insight into the areas where there is a high demand for hospital services and where the supply of services is concentrated. Both of these issues are essential in the planning of future health service provision. This section examines the patterns of hospital discharges between 1995 and 2004 by the area where the discharge was treated (health board of hospitalisation) and by area of residence (health board where the patient resided).

Health Board of Hospitalisation

2.45 The distribution of discharges by health board of hospitalisation is presented in Figure 2.20. Throughout the ten-year period, the highest proportion of discharges (consistently nearly two-fifths) was treated in the Eastern Regional Health Authority (ERHA), although this proportion has been declining in recent years. The next largest proportion of discharges were hospitalised in the Southern Health Board (SHB). Although as with the ERHA, the proportion discharged from hospitals in the SHB also fell slightly over the period from 15.4 per cent in 1995 to 15.1 per cent in 2004. The proportion of discharges from hospitals in the other six health boards increased over the period. Of these, the North-Eastern Health Board (NEHB) recorded the largest increase in proportional terms from 6.8 per cent in 1995 to 8.2 per cent in 2004.

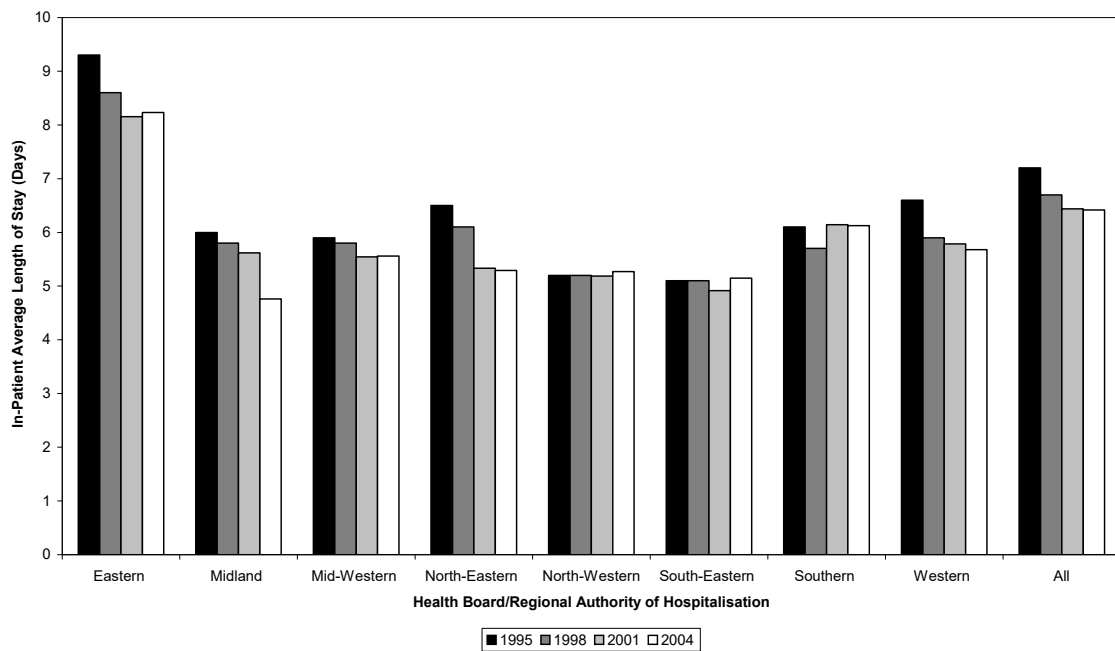
Figure 2.20: Distribution of Total Discharges by Health Board of Hospitalisation, 1995-2004



2.46 The average length of stay for in-patient discharges by health board of hospitalisation in selected years between 1995 and 2004 is reported in Figure 2.21. In-patient discharges treated in the ERHA recorded the longest average duration of hospitalisation. Despite a reduction of just over 1 day during the

ten-year period, in 2004 in-patient discharges in the ERHA were staying in hospital for more than 8 days on average, which was approximately 28 per cent longer than the figure across all health boards. In contrast to the trend decline in average length of stay recorded nationally, the mean duration of hospitalisation remained relatively constant in the SHB and North-Western Health Board (NWHB).

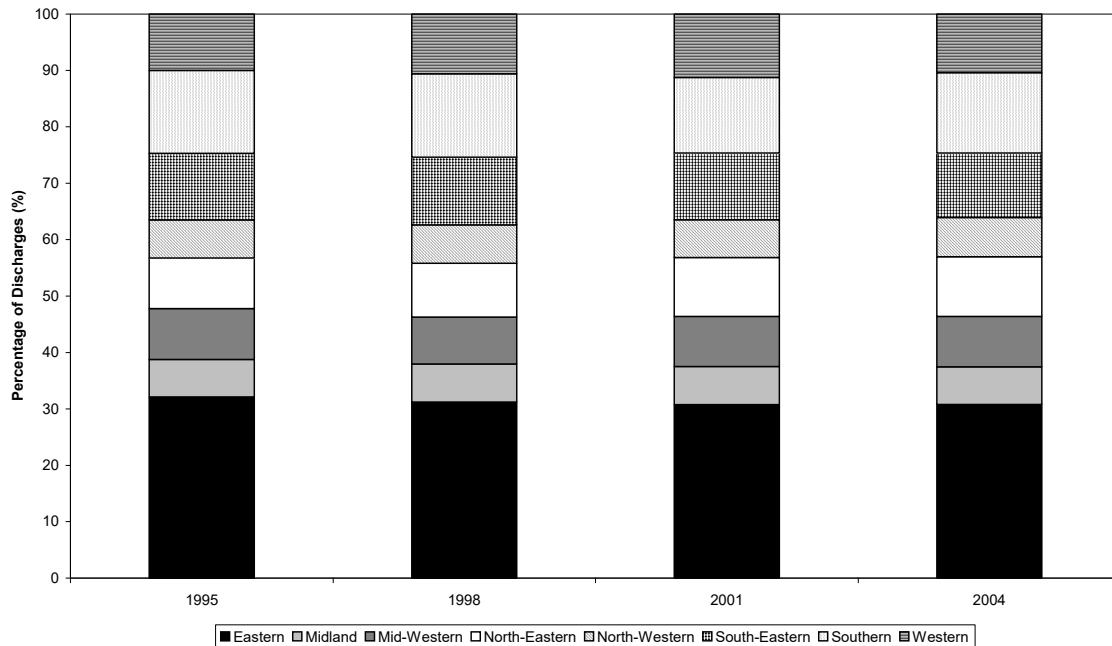
Figure 2.21: In-Patient Average Length of Stay by Health Board/Regional Authority of Hospitalisation, 1995, 1998, 2001, and 2004



Health Board of Residence

2.47 As with health board of hospitalisation, the majority of discharges were resident in the ERHA (see Figure 2.22), this proportion has also been declining over time. After the ERHA, the SHB and the Western Health Board (WHB) accounted for the next highest proportion of residential discharges, the two together amounting to almost one-quarter of total discharges in 2004. The proportions of discharges resident in five of the eight health boards/regional authorities fell between 1995 and 2004; only the Midland Health Board (MHB), the NEHB and the WHB experienced increases.

Figure 2.22: Distribution of Discharges by Health Board/Regional Authority of Residence, 1995, 1998, 2001 and 2004



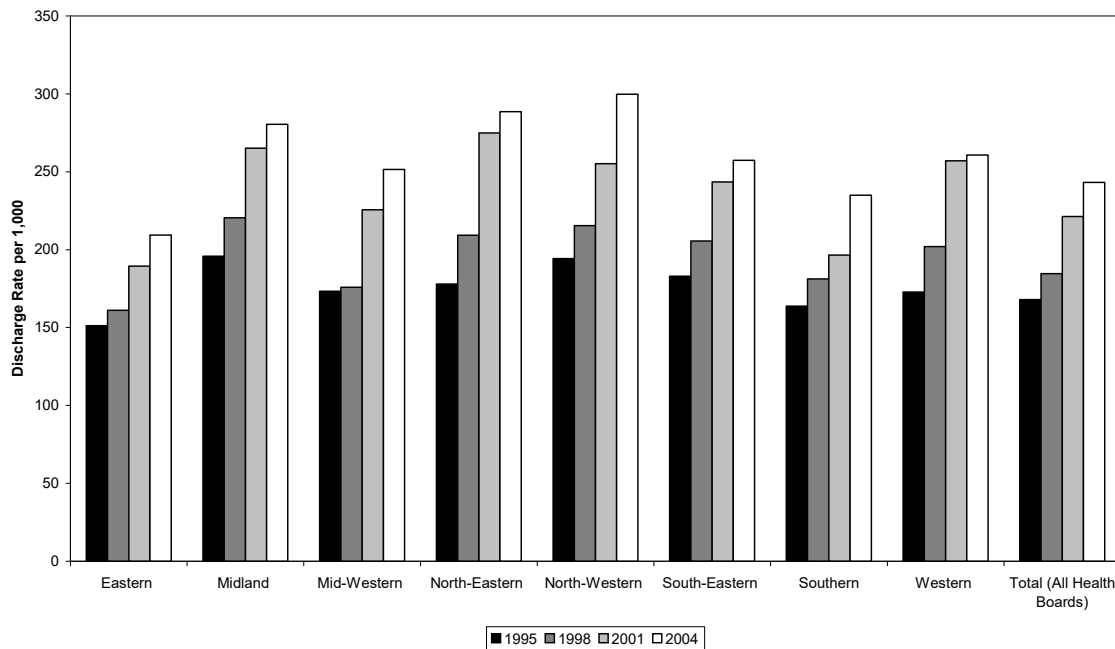
Note: Excludes those discharges with no health board/regional authority of residence (that is, those with no fixed abode or usually resident outside Ireland).

2.48 The finding from Figure 2.22 that the highest proportion of discharges was resident in the ERHA may be expected given the high proportion of the general population resident in this area. Consequently, to ensure direct and consistent comparability, it is important to control for the size of the population in each health board/regional authority by calculating discharge rates per 1,000 head of area population.

2.49 Figure 2.23 shows the discharge rates for each health board/regional authority of residence in 1995, 1998, 2001, and 2004. Although the highest proportion of discharges were living and treated in the ERHA, the number of discharges in this health authority, relative to the size of the resident population, was actually low compared to that for other health boards. The NWHB recorded the highest discharge rate per 1,000 members of that region's population in 2004, followed by the NEHB and the MHB. To nullify the effects of differing

age structures of the populations in each health board/regional authority, age-standardised discharge rates were estimated.²⁰ The NWHB, the NEHB and the MHB continued to report the highest age-standardised discharges rates, with the lowest in the ERHA.

Figure 2.23: Discharge Rates Per 1,000 Population by Health Board/Regional Authority of Residence, 1995, 1998, 2001, 2004



Note: As per Figure 2.22.

Source: Data on population in each health board/regional authority were obtained from estimates calculated by the Information Management Unit, Department of Health and Children.

2.50 Each health board/regional authority recorded an increase in their discharge rate over the years reported in Figure 2.23. In the ERHA, the number of discharges per 1,000 increased by 38.4 per cent from 151.2 in 1995 to 209.3 in 2004. The NEHB experienced the strongest growth in discharge rates of 62.2 per cent (from 177.9 discharges per 1,000 residents in 1995 to 288.6 discharges per 1,000 residents). Nationally, the discharge rate increased by

²⁰ To facilitate direct comparison across health boards/regional authorities, the method of direct standardisation was used. The population of Ireland as a whole was used as the standard population.

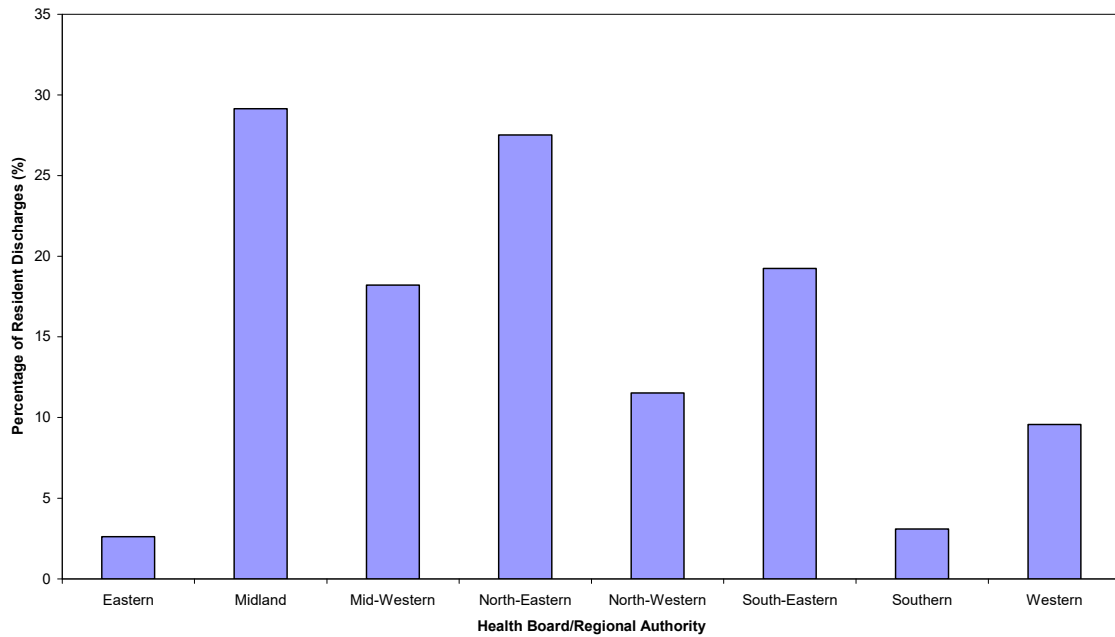
44.8 per cent from 167.9 discharges per 1,000 in 1995 to 243.2 per 1,000 in 2004.²¹

Inter-Regional Flow of Discharges

- 2.51 As identified by the analysis of areas of hospitalisation and residence, discharges may be treated outside their area of residence. A number of factors may influence the flow of discharges across health boards/regional authorities, including the local availability and accessibility of adequate and appropriate services and resources and patient choice.
- 2.52 The magnitude of flows out of and into each health board/regional authority in 2004 are shown in Figures 2.24 and 2.25 respectively. The term ‘outflow’ is used to describe the proportion of resident discharges treated outside their area of residence, and ‘inflow’ captures the proportion of discharges treated within a particular health board/regional authority who are resident in areas outside that in which they were treated.
- 2.53 The outflow in the ERHA was comparatively small, with only 2.6 per cent of discharges resident in that health authority being treated in other health board areas. Conversely, there was a large inflow of discharges into the ERHA for treatment from patients resident in other health boards. No other health board recorded such a large inflow of discharges for treatment. Outflows of resident discharges were highest in the MHB, followed by the NEHB.

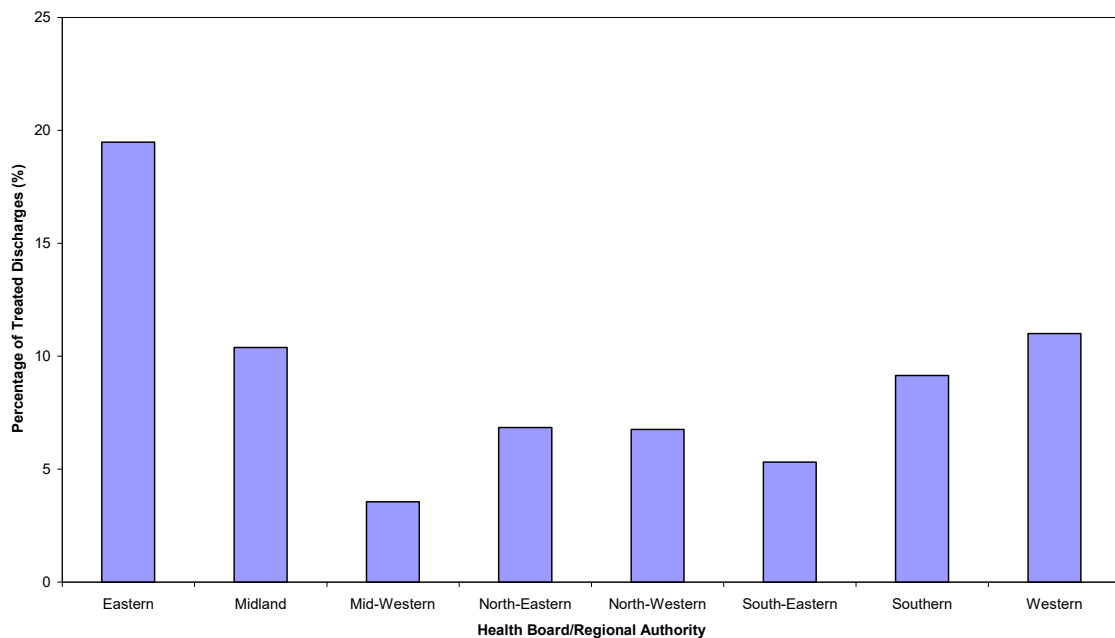
²¹ For the purposes of this analysis, discharges with no fixed abode or usually living outside Ireland were excluded. This explains the slight difference between the national discharge rate quoted earlier of 244.2 per 1,000 and 243.2 per 1,000 which was estimated following the exclusion of these subgroups of discharges.

Figure 2.24: Outflows of Discharges for Each Health Board/Regional Authority, 2004



Note: Outflow relates to the percentage of resident discharges treated outside their area of residence. Thus, discharges with no health board/regional authority of residence are not included in the outflow measure.

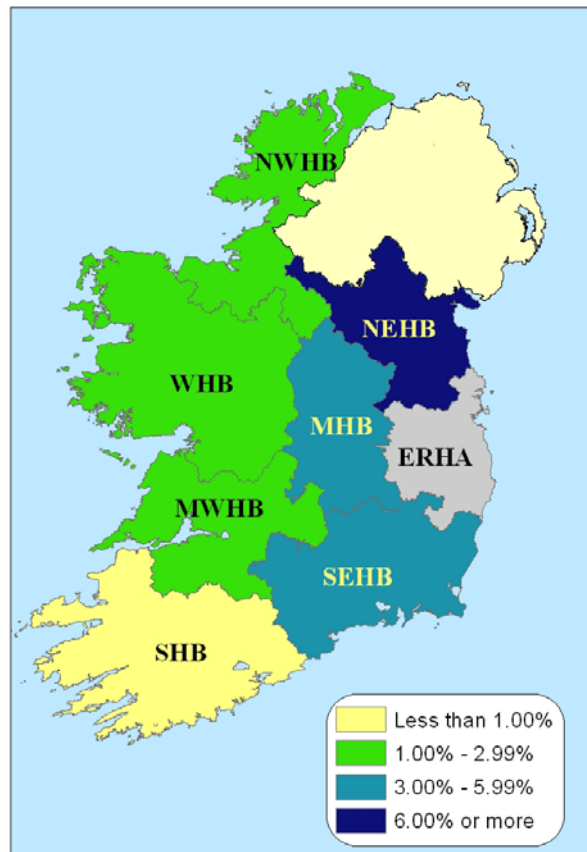
Figure 2.25: Inflows of Discharges for Each Health Board/Regional Authority, 2004



Notes: Inflow relates to the percentage of discharges treated in a particular health board/regional authority who are resident outside this area. The inflow measure includes those discharges treated in one of the eight health boards/regional authorities who had no fixed abode or were usually resident outside Ireland.

2.54 As the ERHA recorded the largest inflow of non-resident discharges, Figure 2.26 explores the source of these discharges who travelled to the ERHA for treatment. The majority of non-resident discharges treated in the ERHA were resident in the three neighbouring health boards. Smaller proportions of discharges resident in the health boards along the west coast of Ireland travelled to the ERHA for treatment.

Figure 2.26: Percentage of Total Discharges Hospitalised in the Eastern Regional Health Authority who were Resident in Other Health Boards, 2004



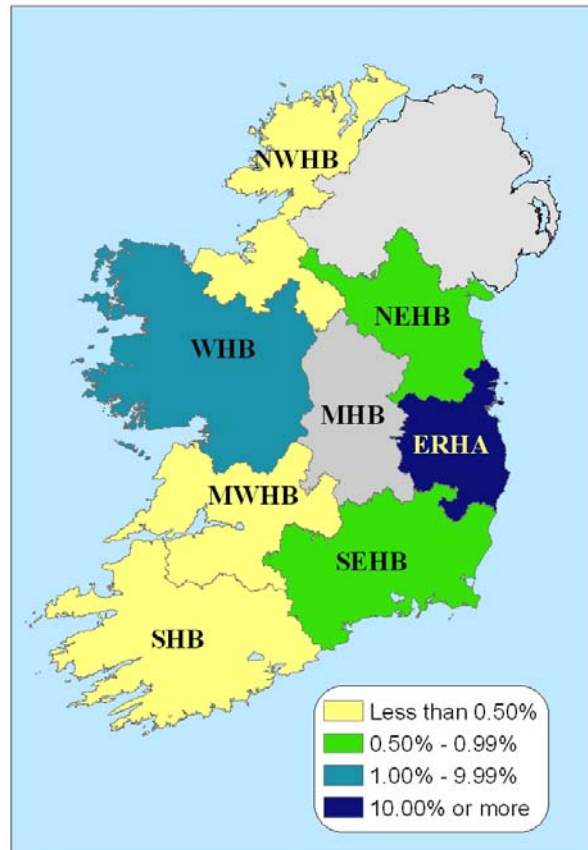
Notes: ERHA, Eastern Regional Health Authority; MHB, Midland Health Board, MWHB, Mid-Western Health Board; NEHB, North-Eastern Health Board; NWHB, North-Western Health Board; SEHB, South-Eastern Health Board; SHB, Southern Health Board; WHB, Western Health Board.

Percentages are based on the total number of discharges treated in the ERHA with a health board/regional authority of residence.

2.55 The outflow of residential discharges to other health boards/regional authorities for treatment was largest in the MHB. According to Figure 2.27, the most common treatment destination for MHB resident discharges treated outside the area was the ERHA, with almost six out of every ten such

discharges travelling to this health authority for treatment. A further third were treated in the WHB.

Figure 2.27: Percentage of Total Discharges Resident in the Midland Health Board and Hospitalised in Other Health Boards/Regional Authorities, 2004



Note: ERHA, Eastern Regional Health Authority; MHB, Midland Health Board, MWHB, Mid-Western Health Board; NEHB, North-Eastern Health Board; NWHB, North-Western Health Board; SEHB, South-Eastern Health Board; SHB, Southern Health Board; WHB, Western Health Board.

Summary

2.56 Acute hospital services are an important component of the Irish health care system. Utilisation of these services are influenced by a variety of factors both within and outside the health care sector, including the demographic profile and health status of the population, epidemiology, health seeking behaviour by patients, clinical practice, health care resources, and government policy. Predicting how these factors will impact on the acute hospital system

is challenging and complex not least because these influences are wide-ranging and not independent.

2.57 The primary purpose of this chapter was to provide an overview of the use of acute public hospital services over the ten years between 1995 and 2004. This analysis serves as a basic foundation for predicting the future utilisation of these services and highlights the broad range of parameters that need to be taken into account.

2.58 The decade between 1995 and 2004 has seen a significant change in how treatment is provided in acute public hospitals. Due to advances in clinical practice, there has been a reduction in mean length of stay. Furthermore, innovation and an increase in dedicated resources have resulted in a shift towards day patient activity, which has been advantageous for both hospitals and patients. For hospitals, treating patients as day patients helps to alleviate some of the pressures on in-patient beds. From the patient's perspective, such treatment reduces the risk of hospital acquired infection and any stress associated with overnight hospital stays. In the future, there is further potential for continued expansion of day surgery in areas such as soft tissue and orthopaedic procedures, with the consequent requirements for dedicated facilities. The latest government Health Strategy expressed a commitment to increasing treatment on a day case basis (Department of Health and Children, 2001).

2.59 Although only univariate analysis has been undertaken here, characteristics of the population, particularly the age profile, have been found to be important factors influencing utilisation of hospital services. On the basis of the trends identified between 1995 and 2004, it may be expected that faced with an ageing population, utilisation of hospital services in Ireland would be expected to increase in the absence of off-setting factors, such as enhancements in primary and community care, advances in the efficiency of hospital services, and improvements in health status. Age was found to be a key factor for categorisation as a high user of in-patient services. For

example, those aged 75 years and over comprise almost 5 per cent of the population, but accounted for just under 45 per cent of high users of in-patient bed days in acute public hospitals.

2.60 Aspects of the structure of the Irish health care system were also found to affect utilisation of hospital services. Medical card holders accounted for a disproportionately large share of total discharges, which is unarguably confounded by underlying factors such as their age profile and socio-economic status. The impact of medical card status on the volume of discharges became even more apparent in 2001 when entitlement to a medical card was broadened to include all those aged 70 years and over. Any such change in public policy will inevitably have consequences for the provision of acute public hospitals services in the future, particularly as the average length of stay for medical card holders marginally increased between 1995 and 2004, contrary to the overall trend.

2.61 While the majority of discharges from acute public hospitals were classified as public, there has been rapid growth in the number of private discharges treated in acute public hospitals, with their share of total discharges increasing (albeit slightly) over the period between 1999 and 2004. The future of public hospital services will undoubtedly be affected by any change in the role of private sector involvement in health care. For instance, the National Treatment Purchase Fund currently uses capacity in the private sector to treat public patients who are waiting for treatment in public hospitals. Thus, a change in the financing and provision of private health care may impact on the use of public hospital services.

2.62 An analysis of the areas of hospitalisation and residence for discharges highlighted that, although a high proportion of discharges are treated in their area of residence, inflows and outflows of resident discharges are particularly strong in some areas. The Hanly Report (2003) argued that a critical volume of patients is required to provide the full range of acute care services safely and effectively. Under current proposals from the Health Service Executive

(HSE), planned restructuring of local services in a number of areas will undoubtedly have an impact on patient flows within and between health boards/regional authorities.

2.63 In conclusion, together the characteristics of the population and the programmes governing the structure and provision of health care are key factors in driving the demand for and supply of acute hospital services. The interaction between projected demand and supply will determine the shape of future hospital services. In undertaking this assessment for future reports, this project will be informed by analyses forthcoming from the HSE on the appropriateness of bed utilisation and projections for acute hospital bed capacity.

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Chapter 3: Primary Care

Introduction

3.1 Primary care is usually the first point of contact that people have with health care services. Primary care is often thought synonymous with general practitioners, but actually encompasses a large range of different professionals and services including nurses/midwives, physiotherapists, occupational therapists, dentists, opticians, chiropodists, psychologists and pharmacists. The list is not exhaustive, but still gives an indication of the wide range of services that can be grouped under the general heading of primary care.

3.2 This chapter has two main objectives. The first is to review the level of primary care provision across different fields in recent years in Ireland and how this relates to change in population levels. The second objective is to examine the factors that shape the pattern of primary care use in Ireland today. By understanding what shapes primary care today we will be in a better position to understand the changes in patterns that may occur into the future and the main drivers of these developments. The manner in which primary care is delivered has an enormous impact on the way in which it is taken up. In the first section of the chapter we examine the structure of primary care both currently and into the future and how this has limited both the take-up and effectiveness of care to date. In the second section we examine the impact of policies that control the pricing of primary care in Ireland on the take-up of care. Ireland is fairly unique in Europe in its mix of private and public financing and this has a considerable impact on the pattern of utilisation found at present. In the third section we examine how the demand for primary care varies across the population. By analysing the socio-demographic drivers of primary care utilisation we will be better able to understand the impact which demographic change over the period to 2020 may have on the provision of primary health care. However, the data available in Ireland only cover a small number of the service areas listed previously and this puts practical limits on the analyses that we can perform in this chapter. We will be limited to an examination of the drivers for general practitioner, dentist and optician care. In the fourth section we examine emergency department utilisation in Ireland. Although emergency departments are located in hospitals they currently treat patients with

conditions that could and should be dealt with in primary care, but who, for a number of reasons, choose to attend the emergency department. A review of primary care in Ireland would be incomplete without an examination of the extent of emergency department use and the demographic characteristics of those using emergency departments.

The Current and Future Structure of Primary Care in Ireland

The Number and Distribution of General Practitioners in Ireland

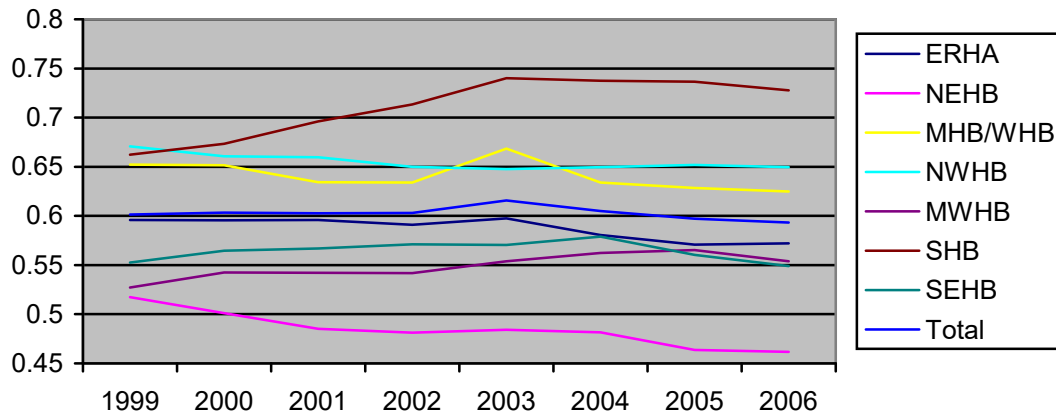
3.3 Figures from the Irish College of General Practitioners show that the number of physicians registered with the college increased from 2266 in 1999 to 2515 in 2006.

Health Board Area	Year							
	1999	2000	2001	2002	2003	2004	2005	2006
ERHA	803	813	824	828	852	842	842	858
NEHB	168	166	164	166	173	178	177	182
MHB/WHB	379	384	379	384	415	403	409	416
NWHB	145	144	145	144	146	149	152	154
MWHB	173	180	182	184	191	197	201	200
SHB	373	383	400	414	437	443	450	452
SEHB	225	233	237	242	247	256	253	253
Total	2266	2303	2331	2362	2461	2468	2484	2515

Table 3.1 shows that the old Eastern Region Health Authority has the largest number of GPs registered with the ICGP, followed by the Southern Health Board and the combined Midland and Western Health Boards. This largely reflects the higher levels of population in these areas. The numbers of GPs registered increased in all areas between 1999 and 2006 leading to a national increase of 11% in the number of GPs. However, the Irish population increased by 14% during this period and this led to a decrease overall in the number of GPs per 1000 population from 0.60 per 1000 in 1999 to 0.59 per 1000 in 2006 as can be seen in Figure 3.1. In 2006, the number of GPs per 1000 population varied significantly across health boards from 0.73 in the Southern Health Board to a low of 0.46 in the North-Eastern Health Board. Figure 3.1 shows that the decrease in number per 1000 was not uniform across the country or across the period within regions. The rate in the Southern Health Board, for example, increased from 0.66 in 1999 to 0.74 between 2003 and 2005 before decreasing again

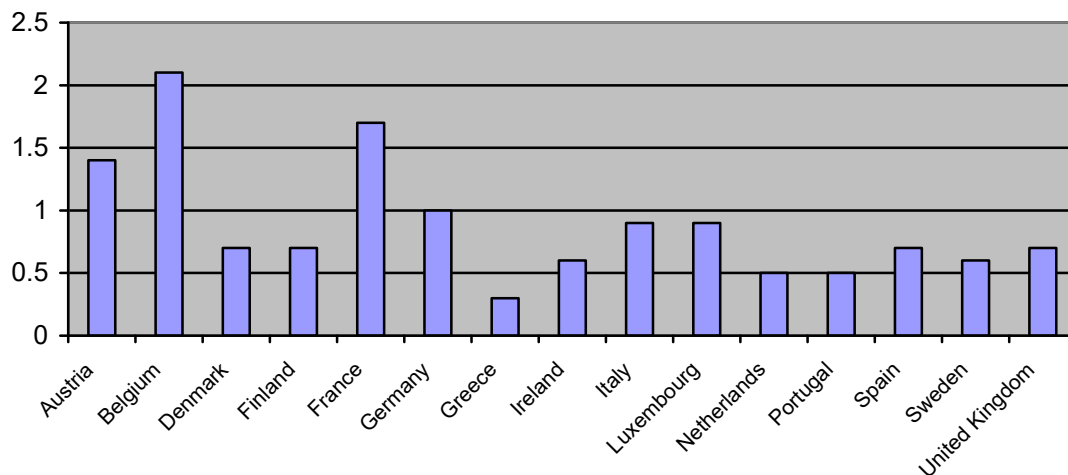
to 0.73 in 2006. The rate in the North-Eastern Health Board decreased most quickly over the period from 0.52 to 0.46.

Figure 3.1: Number of GPs Per 1000 Population by Old Health Board Region 1999-2006



3.4 It is useful to compare the provision of GPs in the Republic of Ireland to that in other European countries. Figure 3.2 compares the provision of GPs in the 15 countries in the EU preceding May 2003. Ireland's value of 0.6²² is well below the average of 0.89 across these countries.

Figure 3.2: Number of GPs Per 1000 Population by Country 2004



²² These figures are drawn from OECD Health Statistics 2006. Irish figures however are drawn from successive year books from the ICGP. These include registered GPs over 70s whereas the OECD figures do not. This means that the provision in Ireland increases by 0.1 GP per 1000 population compared to OECD figures.

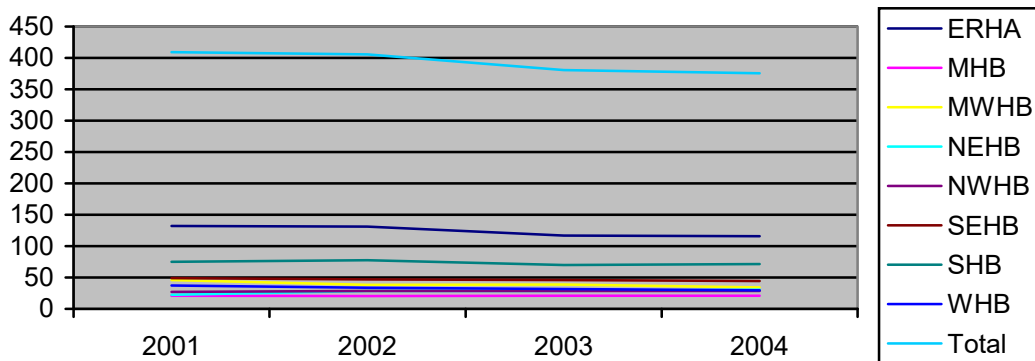
The Number and Distribution of Dentists in Ireland

3.5 Table 3.2 shows that the number of dentists practicing in the Republic of Ireland increased from 1568 in 1995 to 2327 in 2005 an increase of 48%. This increase easily out-paced the population increase over the period of 14% leading to an overall increase in the number of dentists per 1000 population from 0.43 in 1995 to 0.56 in 2005.

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Per 000	0.43	0.44	0.45	0.46	0.48	0.50	0.52	0.54	0.55	0.55	0.56
Number	1568	1609	1671	1713	1794	1899	2006	2102	2171	2237	2327

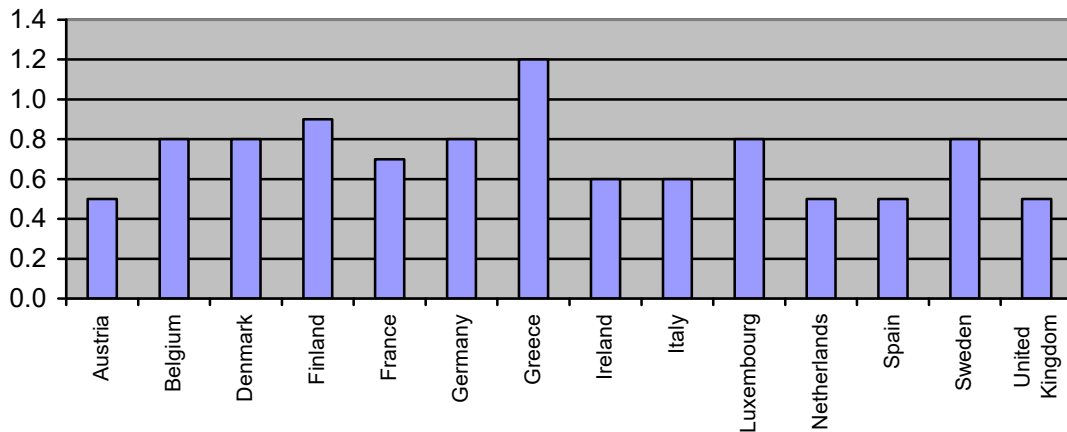
The majority of dentists are self-employed and provide services to private patients on a fee for service basis. A proportion of these also receive capitation payments from the state for provision of care to medical card holders. There are also a number of dentists who work directly for the state and provide public dental care under the Dental Treatment Services Scheme. [I'm not sure I've got this right, but some more clarification on the different ways in which dental care is delivered is needed] However, Figure 3.3 shows that the number of whole time equivalent dentists working directly for the health boards/regional authorities decreased substantially between 2001 and 2004 from 409 to 375. The only areas to experience an increase in the number of dentists employed over this period are the North-Eastern and North-Western Health Boards with numbers decreasing overall by 8%. The decrease in numbers of dentists directly employed does not however, mean that the volume of free treatments under the medical card scheme have decreased as the Dental Treatment Services Scheme has provided fee per service arrangements between dentists and the General Medical Services Board since 1994.

Figure 3.3: Numbers of Dentists Working for Health Boards/Regional Authorities 2001-2004 (Full-Time Equivalents)



3.6 Figure 3.4 gives comparative figures for the EU15 countries before May 2003 for the number of dentists per 1000 population. The Irish rate of 0.6 is below the EU15 average of 0.8 and substantially behind provision in Greece, Belgium and the Scandinavian countries.

Figure 3.4: Dentists Per 1000 Population by EU15 Country 2004

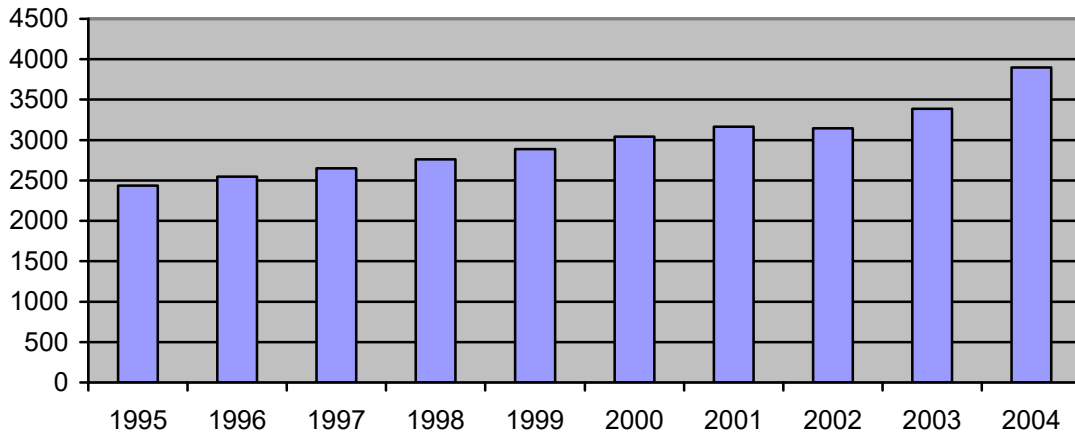


The Number and Distribution of Pharmacists in Ireland

3.7 Figure 3.5 shows the number of pharmacists practicing in Ireland 1995 to 2004. This shows a significant increase in the period with the absolute number increasing from 2438 to 3898. This 60% increase outpaced population growth

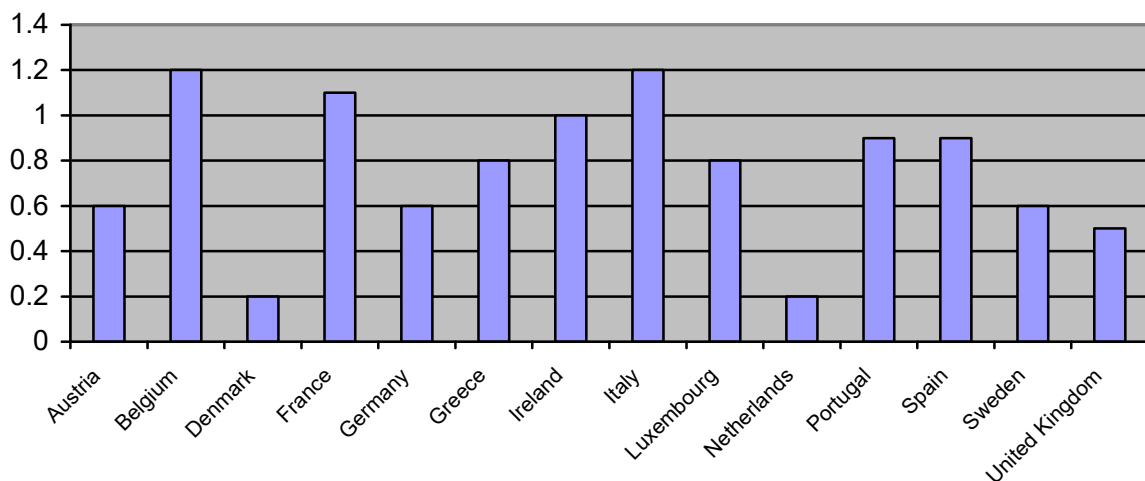
over the same period leading to an increase in the number of pharmacists per 1000 head of population from 0.68 to 0.96.

Figure 3.5: Number of Pharmacists in Ireland by Year



3.8 Figure 3.6 gives the number of pharmacists working per 1000 population across 14 of the EU 15 countries in 2004. The average across these countries is 0.78 leaving Ireland with the fourth highest density of pharmacists across this selection of countries.

Figure 3.6: Pharmacists Per 1000 Population by Country 2004

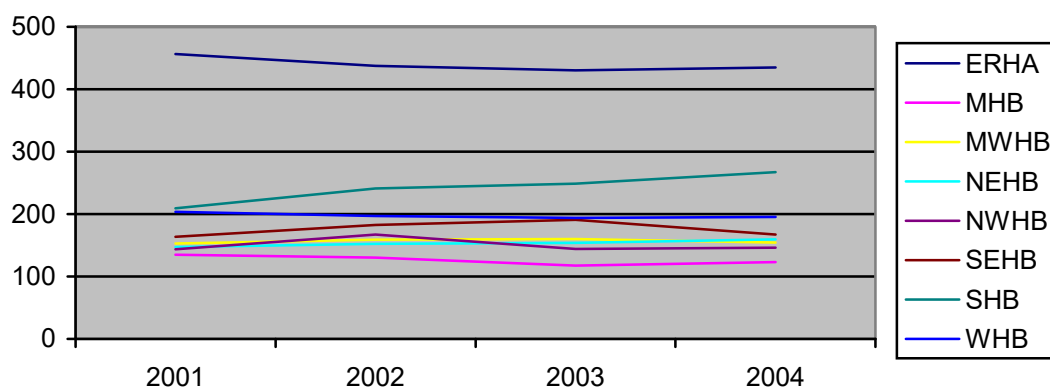


The Number and Distribution of Public Health Nurses in Ireland

Figure 3.7 shows the numbers of public health nurses (full-time equivalents) working in Ireland by year and old health board region. Nationally the numbers of public

health nurses working remained roughly stable between 2001 and 2004, increasing only marginally from 1611 to 1645, but this national increase disguises different patterns within health board regions. The North-Eastern and Southern Health Boards both experienced increases over this period whereas the Eastern Region Health Board experienced a decrease of from 456 to 434.

Figure 3.7: Number of Public Health Nurses by Old Health Board Region 2001-2004



3.10 The needs and demands of the population may well be a significant determinant of change in the provision of primary care in Ireland over the next decade or so, but present government policy may also have a profound impact if implemented. The Primary Care Strategy, “Primary Care: A New Direction” makes it clear that the current system of primary care in Ireland is inadequate. Primary care has the potential to supply 90 to 95% of all health and personal social care services (Department of Health and Children 2001), yet at present primary care falls significantly short of this target because the current system has a number of structural problems. First and foremost, primary care infrastructure has developed in a fragmented and unsystematic fashion so services are delivered by different disciplines and agencies in an uncoordinated fashion.

3.11 O’Dowd et al (O’Dowd, O’Kelly, & O’Kelly 2006) found that although only 35% of GPs now work in single handed GP practices, over 60% work either alone or with just another GP. Less than 20% of GPs work with more than four GP colleagues in the same practice. Users often find it difficult to access GP services out of office hours and this means that they are more likely to attend already busy accident and emergency departments.

3.12 Use of information technology has increased over the last decade and a half from 27% of practices to 89% in 2005 (O'Dowd et al 2006), but there is no centralised and harmonised record system and it is still rare for GP practice computer systems to be connected to hospital databases, although this is now beginning to occur.

3.13 Although over 70% of practices now employ a nurse either full-time or part-time, it is still rare for GPs to work alongside other health professionals to provide an integrated primary care system.

3.14 The Primary care strategy proposes that primary care be delivered through 'primary care teams' which are to include:

- GPs
- Nurse/midwives
- Health care assistants
- Home helps
- Physiotherapists
- Occupational therapists
- Social Workers
- Receptionists
- Clerical officers
- Administrators

These inter-disciplinary teams will come together, preferably in a single location, to serve a population of 3000 to 7000 people and will be integrated into a wider 'primary care network' made up of chiropodists, pharmacists, dieticians, psychologist and other health professionals. These integrated care teams will have access to effective information and communications technology which will provide a single patient record that can be accessed in a controlled fashion by eligible health professionals across the care system.

3.15 Although the strategy envisages 600 to 1000 primary care teams nationally under the life of the current health strategy, in fact development has been very slow and only a fraction of that number have come into existence (around ten by early 2007). If this rate of development continues then the degree of change in the delivery of primary care by 2020 will be modest and the present fragmented system will largely remain. If, however, the proposed system were to be developed it would have a major impact on the delivery of care. Bringing services together within a 'network of care' could theoretically increase the demand for care across the population because access would be improved. As we will go onto discuss in a moment however, the impact of greater access to a range of medical services in these structures may be negated by the pricing of services for those without a medical card.

3.16 The greater efficiency and coordination provided by care teams and better information technology could also significantly improve the health and well-being of the population. This may reduce the demand for primary health care over the long-term. A reformed primary care would also have profound implications for the hospital sector. Improved health promotion and a better integration of health professionals may improve health overall and reduce the overall need for secondary care by treating illness before it becomes serious enough to warrant hospital care. The availability of sophisticated diagnostic services in primary care would mean that patients do not need to attend hospitals for these services.

The Influence of Pricing Structure on the Use of Primary Care

3.17 Another factor that impacts on the present utilisation patterns of primary health care is the pricing structure. GP, dental, optician and aural services are only free for the 30% of the population who qualify for a medical card under an income means test (known as medical card patients). While the majority of those who are granted a medical card qualify on the basis on an income means test, individuals may also qualify on the basis of age, particular health needs and participation in approved Government training and employment schemes. Since July 1st 2001, all over 70s are also eligible for a medical card regardless of income.

3.18 The income thresholds for a medical card are set nationally and updated annually by the Health Service Executive (HSE). Currently (as at December 2006), the (gross) weekly income thresholds are €184.00 for a single person living alone, €266.50 for a married couple and €342.50 for a married couple with two children. The thresholds are higher for individuals aged between 66 years and 69 years, and there are additional allowances available for rent/mortgage, childcare and commuting costs (see www.medicalcard.ie/guide/). A GP consultation fee of €40-45 (without adding any associated prescription costs), which would not be unusual (although there are no national figures on visiting costs at present), would constitute 20-22.5 per cent of the weekly disposable income of a single individual earning €200 per week (i.e., above the threshold for a medical card). To put the thresholds in context, the average gross weekly industrial wage in Ireland in 2006 was about €600 (CSO, 2006). Since 2005, individuals whose means are above the standard medical card threshold can avail of a doctor only medical card which gives free access to GPs, but does not cover prescriptions. The means test for this card is 50% higher than for the standard medical card.

3.19 The remaining 70 per cent are entitled to public hospital services at a nominal charge (€60 per night up to an annual maximum of €600) and prescription medicines over a monthly limit, but must pay in full for GP services, although they are eligible for subsidised dental and optical treatment under the Treatment Benefit Scheme administered by the Department of Social and Family Affairs (provided they have the necessary PRSI (social insurance) contributions). Private patients are also entitled to tax relief on certain medical expenses at their marginal rate of tax (they must however pay the first €125 per annum) and in addition, the three main private insurers (VHI, BUPA (now Quinn Healthcare) and VIVAS) have recently introduced new plans that provide limited cover for primary care expenses. Providers are free to set the level of charges levied on private patients. However, the majority of private patients pay the full cost of their GP services (as they do not visit frequently enough to avail of tax relief and/or partial reimbursement under private health insurance), while the majority of those visiting their dentist or optician will receive some assistance from the state, although not to the same extent as that afforded to medical card patients. Table 3.1 sets out the current entitlements to free or subsidised GP, dentist and optician services for medical card and private patients in Ireland.

3.20 While the income thresholds for a medical card increase annually in line with inflation, rising employment and average incomes in recent years have meant that the proportion of the population eligible for a medical card has fallen steadily, from 35.8 per cent of the population in 1993 to 30 per cent in 2003 (General Medical Services Payments Board, various issues). It is in this context that recent discussion has focused on the affordability of GP services, and in particular the situation of those just above the income threshold for a medical card.

3.21 In part in response to such concerns, a GP visit card was introduced in October 2005, with income guidelines initially 25 per cent higher, and now 50 per cent higher, than for the standard medical card, but which only covers the cost of a GP visit, and not the associated prescription costs.

Table 3.1 Eligibility for Free Primary Care Health Services in Ireland

		GP Services	Dentist Services	Optician Services
Medical patients	card	Free	Free	Free
Private patients		<p>Full cost, but may also be eligible for:</p> <p>(1) Tax relief on medical expenses over €125 per annum</p> <p>(2) parital reimbursement if privately insured and GP fees exceed a large annual deductible*</p> <p>(3) partial reimbursement if privately insured under a dedicated primary care health insurance plans</p>	<p>Full cost, but may also be eligible for:</p> <p>(1) Tax relief on medical expenses over €125 per annum</p> <p>(2) parital reimbursement of cost if privately insured and dental fees exceed a large annual deductible*</p> <p>(3) partial reimbursement if privately insured under a dedicated primary care health insurance plan</p> <p>(4) free or subsidised routine dental treatment under the Treatment Benefit Scheme</p>	<p>Full cost, but may also be eligible for:</p> <p>(1) Tax relief on medical expenses over €125 per annum</p> <p>(2) partial reimbursement of cost if privately insured and optician fees exceed a large annual deductible*</p> <p>(3) partial reimbursement if privately insured under a dedicated primary care health insurance plan</p> <p>(4) free or subsidised routine optician services (e.g. eye examination, glasses) under the Treatment Benefit Scheme</p>

*For example, under the Essential BUPA plan, GP expenses in excess of €250 per annum are reimbursed at €20 per subsequent visit.

** For example, under the Health Manager BUPA plan, half the cost of GP expenses are reimbursed, up to a maximum of €7,650 per annum.

Currently, the income thresholds for a GP visit card are €276.00 per week for a single individual, €400.00 for a married couple with no dependents and €514.00 for a married couple with two children under 16 years. Again, the thresholds are higher for those aged 66-69 years, and the same allowances as for the standard medical card are available (see www.medicalcard.ie/guide/). By end-2006 about 50,000 GP visit cards had been issued (compared with the figure of 200,000 mentioned when the scheme was being introduced). Unlike those covered by the standard medical card, those who hold a GP visit card have to pay not only charges for hospital care, but at primary level also have to pay the cost of prescribed medicines (up to a monthly ceiling of €85).

3.15 This mix of universal provision for specific groups and a fee-based system for the majority may well contribute to the quite unique pattern of GP utilisation found across the income distribution in the Republic of Ireland compared to other European countries. Research (Layte & Nolan 2004) has shown that lower income groups in Ireland are far more likely than those higher up the income range to use GP services. This is similar to other European countries and is the result of the greater need for health care among those with lower income. However, in Ireland the difference in the frequency of GP visiting between the lowest income groups (i.e. those who qualify for a medical card) and all others is far larger than in other countries (Nolan & Nolan 2004). Even controlling for the fact that those lower down the income distribution are more likely to be older, analyses show that there is a large difference between the GP utilisation patterns of those with and without a medical card.

3.16 However, the pricing structure of primary care in Ireland does not influence all forms of care in the same way. Layte and Nolan (2004) found that dental services are far more likely to be used by those with higher levels of income and the lowest visit rate is among those in the medical card group, even though the same basic structure of charges applies. This suggests that other factors may be important other than income alone. It may be for instance that higher income groups put a greater value on dental health, perhaps as a result of their higher levels of education. This could have significant implications for the future provision of dental services as levels of education are increasing substantially year on year. We discuss the impact of other socio-demographic influences on dental and optician utilisation below.

3.17 The impact of pricing on the use of health care may limit the gains achieved through a reform of the primary care system. It is not possible to say whether medical card recipients ‘over use’ GP services or whether non-medical card patients ‘under-utilise’ services, but it is reasonably clear that the structure of pricing does artificially increase visiting among one group and lower for the other. This suggests that the reform of the pricing structure of care in the future may have a significant impact on the patterns of utilisation.

The Socio-Demographic Drivers of GP Utilisation

3.17 In this section we examine the way in which use of general practitioner services varies across the population. It is important to understand these patterns since change in the composition of the population, say through population ageing may lead to very different levels of need for care and levels of use.

3.18 As outlined in the introduction to this report, the level of demand for primary care is the outcome of a complex mixture of the ‘need’ for care across different groups and the supply of care. The ‘need’ for care is itself complex since adequate functioning for one group can be perceived as totally unacceptable to another. Similarly, what is perceived as a normal or pathological or requiring treatment varies dramatically across the population as does the expectation of what treatment is available. It may be that the perception of what can or should be treated has changed enormously over time and will continue to do so (because of changes in technology for instance). Whether someone will seek out care also depends on their own context and characteristics. Aside from the obvious cost of gaining treatment in Ireland, there are the foregone costs of taking time off work, travelling to the care facility or buying childcare. All these issues and more may influence the level of utilisation of GP services.

3.19 The supply of primary care will also vary due to variations in the level, type and quality of health care facilities available and this will interact with the personal characteristics of the individual (do they have transport available for example). There is some evidence for example that there is a lower density of GPs in more deprived

areas of Ireland, particularly in the large cities (see Layte et al 2007) and this may influence the availability of GP care to more deprived population groups. Variation in the factors influencing supply and demand may well lead to very different levels of utilisation in primary care across the population.

The Influence of Age and Sex on GP Visiting

3.20 Two of the primary determinants of the frequency with which a person uses GP care is their age and sex as shown in Figure 3.1. Women are more likely to have visited the GP in the last year across all age groups and we see a steady progression in the probability of visiting as age increases (with the exception of women in the 25-34 year age group which coincides with the period when women are most likely to have a child). Whereas 52% of men had seen their GP in the last year among those aged 16 to 24, this increases to over 90% of men aged over 65. Among women the rise is less steep with 73% women in the youngest age group visiting the GP in the last year compared to 94% of those aged 65 to 74. The rise in the overall probability of seeing a GP by age and sex is matched by an increase in the rates of visiting. Figure 3.2 shows how the average number of visits to the GP increases even more strongly with age than the overall probability of attending.

Figure 3.1: Proportion Visiting at Least Once in The Last Year by Age and Sex (Living in Ireland Survey 2001)

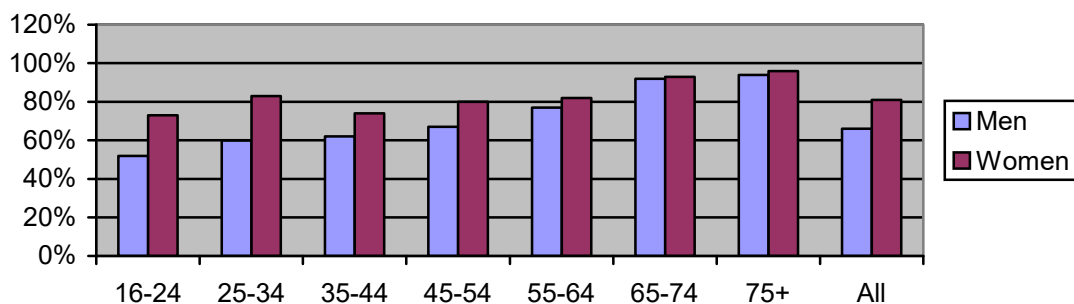
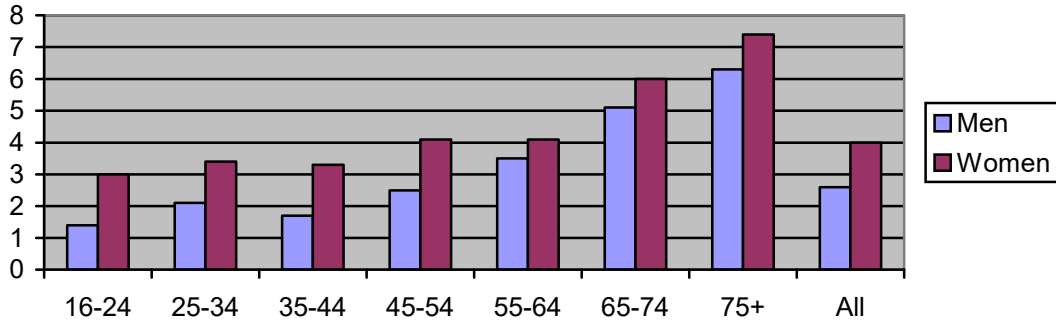
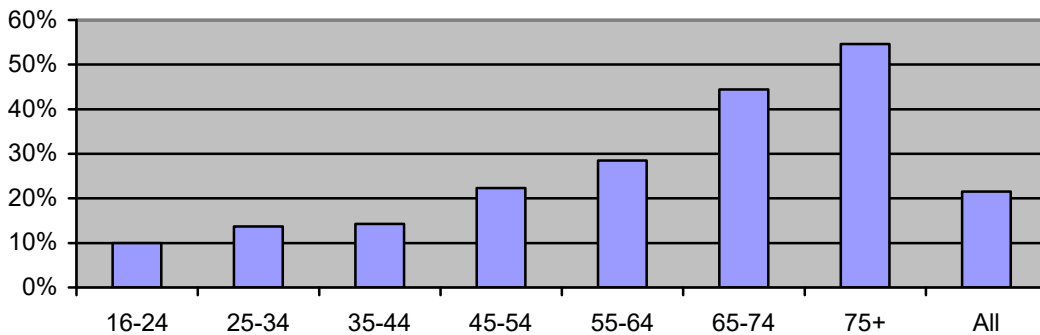


Figure 3.2: Number of Visits to the GP in the Last Year by Age and Sex
(Living in Ireland Survey 2001)



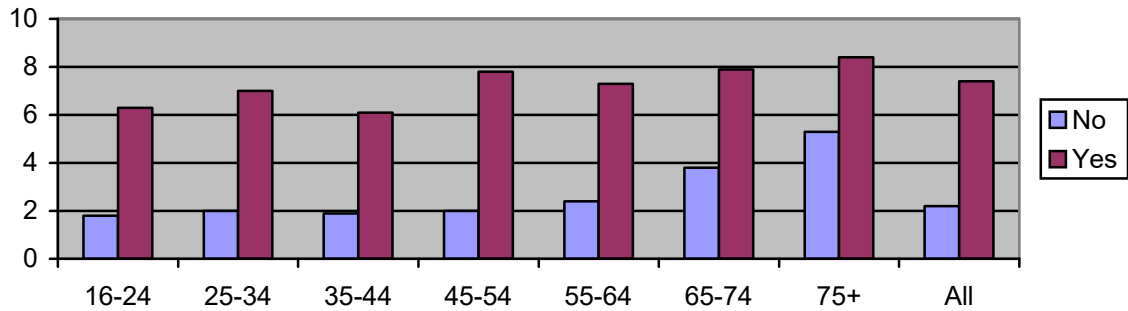
3.21 This rise in the probability of visiting the GP with age is largely due to the increased probability of illness with age as shown in Figure 3.3.

Figure 3.3: Proportion with a Chronic Illness by Age
(Living in Ireland Survey 2001)



Whereas 10% of men and women aged 16 to 24 report a chronic illness, this increases to more than half among those aged 75 or more. Figure 3.4 shows that those reporting a chronic illness have a higher level of GP visits at any age, but do have more visits as age increases. Although the number of reported GP visits rises as age increases among those who do not report a chronic illness, the increase is negligible until after age 65.

Figure 3.4: Number of GP Visits in the last Year by Whether Report a Chronic Illness
(Living in Ireland Survey 2001)

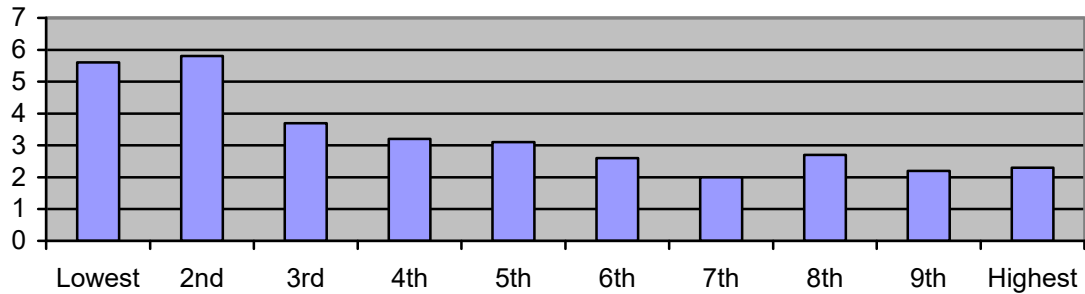


3.22 Figures 3.1 to 3.4 suggest that an increase in the size of the population in older age groups may have a profound impact on the demand of GP care as older people are significantly higher users of GP services compared to younger age groups. This increase in need may be off-set to a certain degree by possible improvements in health in the population over the next three decades, although this improvement in health is by no means certain given recent increases in the level of obesity in Irish society and its attendant health effects.

The Impact of Income and Medical Card Status on GP Visiting

3.23 As discussed in the second section of this report, income and medical card status are very important determinants of GP visiting in Ireland. The influence of income can be seen very clearly in Figure 3.5 which gives the average number of GP visits by income ‘decile’, i.e. ten groups defined by their level of income ranked from the lowest (decile 1) to the highest (decile 10).

Figure 3.5: Average Number of GP Visits in the Last Year by
Income Decile
(Living in Ireland Survey 2001)



This shows that the average number of visits to the GP falls as income increases with a particularly large fall between the second and third deciles. The first and second deciles are much more likely to be in receipt of a medical card and this has been shown to be a significant influence on both the decision to see the GP and the frequency of GP visiting (Madden, Nolan, & Nolan 2005) even controlling for other factors such as age, sex and health status. The higher rate of visiting among lower income groups is also influenced however by the lower levels of health in these groups compared to higher income groups.

Change in Levels of GP Visiting Over the Last Decade

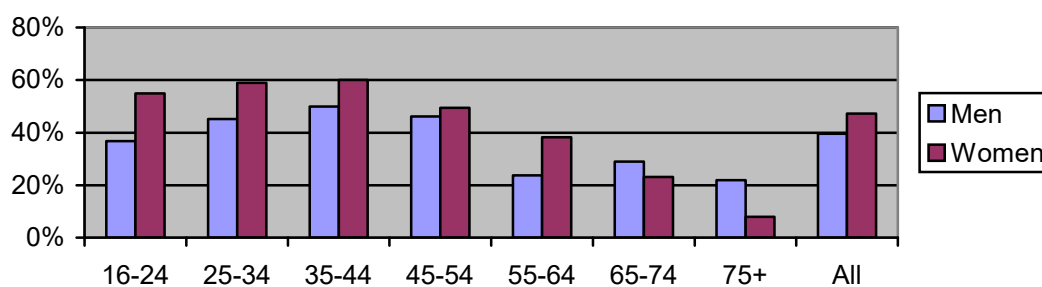
3.24 A change in the composition of the population, through population ageing for example, is one way in which the demand for GP services may increase, but it is also possible that changing expectations about the need for health care will also increase demand. This could happen if perceptions about what can or should be treated change or if the relative cost of visiting the GP were to change. Unfortunately, evidence on change in GP visiting behaviour over the last decade or so is not available on a consistent basis. Data from the Living in Ireland Survey is available for the period from 1994 to 2001, but after 2001, the main data source is the EU-SILC survey (EU Survey of Income and Living Conditions) and unfortunately this asks only for the number of free visits to the GP (e.g. by those with a medical card). Data from the Living in Ireland Surveys show that GP visiting did not change significantly between 1995 and 2001 with the average person having 3.5 visits in 1994 and 3.3 visits in the year 2000. The proportion having at least one visit did increase over this period

though from just over 70% to 74%. This expansion in the proportion of the population visiting the GP at least once is likely to be the reason why the average number of visits for those who visited at least once actually went down from 5 visits per year in 1995 to 4.7 visits in 2001.

The Influence of Socio-Demographic Factors on Dental Visits in Ireland

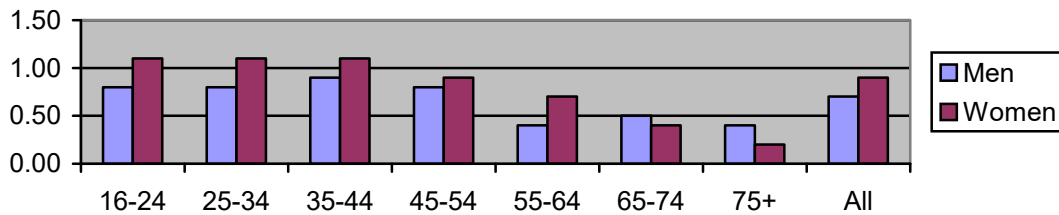
3.25 The last section showed that GP visitation was highly influenced by the combination of age, health status and level of income and resources. Other factors also have a role, but research has shown that income/medical card status and, age and health are by far the best predictors of a person's level of GP use. Dental care is covered by roughly the same system of pricing in Ireland (see Table 3.1) although routine dental care can be obtained for free or for a subsidised rate for all with PRSI contributions under the Treatment Benefit Scheme. However, as Figure 3.6 shows, the proportion visiting their dentist once or more in the last 12 months decreases among older age groups rather than increases as it does for GP care.

Figure 3.6: Proportion Visiting the Dentist At Least Once in the Last 12 Months by Age and Sex
(Living in Ireland Survey 2001)



The probability of having a visit in the last year rises with age before peaking in the 35 to 44 year age group and then decreasing. As shown for GP visiting, women are more likely to visit their dentist than men at all age groups, except for those aged over 65. Figure 3.7 shows that this pattern is maintained for the average number of visits per year with women having more visits than men and middle aged individuals more visits than both older and younger individuals, although there is no dip in visiting among younger women.

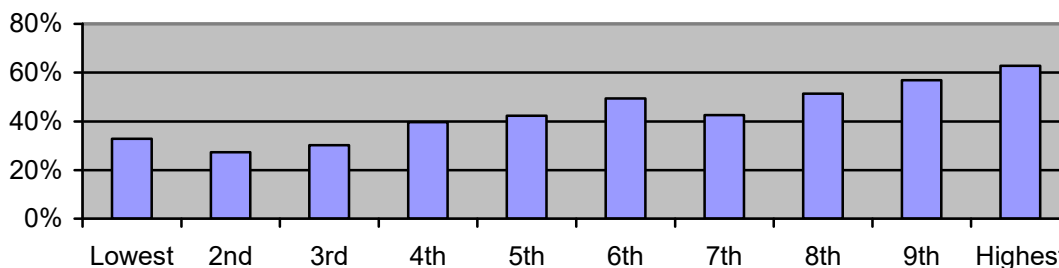
Figure 3.7: Average Number of Visits to the Dentist in the Last Year by Age and Sex
(Living in Ireland Survey 2001)



The Influence of Income, Medical Card Status and Education on Dental Visits

3.26 Level of income is also significantly associated with visits to the dentist, but unlike GP services there is a positive relationship between the probability of visiting the dentist in the last year and household income (see Figure 3.8), i.e. those with higher levels of income visit the dentist more often.

Figure 3.8: Proportion Visiting Dentist in the Last 12 Months by Income Decile
(Living in Ireland Survey 2001)



It is not entirely clear why the free access to dental care afforded to medical card recipients does not lead to the same pattern that we see for GP visits. Research suggests (Centre for Health Promotion Studies 2003; O'Mullane, Whelton, & Sadlier 1999) that dental health, like general health status, is inversely related to income (i.e. lower income groups have worse dental health) and this would be expected to lead to lower income groups using dental services more intensively if the cost of these services is covered by the medical card. It may be that that dental care is seen as more important by higher income groups or that dental care is less available to medical card patients, but research is not clear on this issue at present.

Possible Changes in the demand for and Utilisation of Dental Services

3.27 Over time, the average level of education among the Irish people has increased substantially. This is partly due to the ageing of cohorts educated before the establishment of free secondary education in 1967, a large proportion of whom would only have had primary or lower second level education. It also reflects the growing proportion of Irish people who opt for third level qualifications. This increase in average educational level may be reflected over time in a growing demand for dental services.

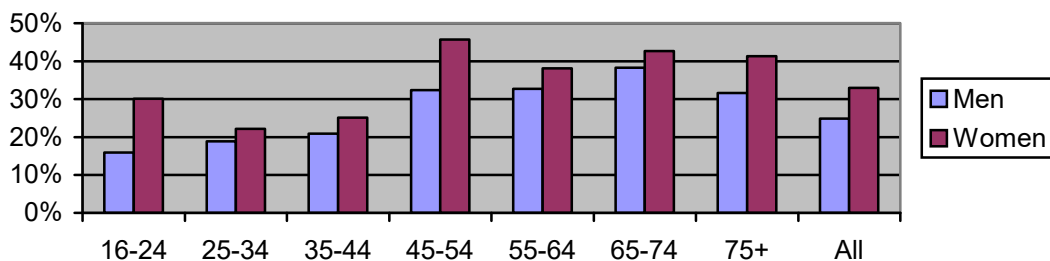
3.28 The lower levels of use of dental services among lower income groups actually reflects a lower availability of dentists in less affluent areas. This may be due either to a lower density of dental practices in those areas or because dentists are less likely to take on patients with a medical card. If so, it is possible that a change in government policy in the future may alter either the distribution of dentists or the scale of payments to them, thus making public patients a more attractive proposition. This may happen for instance if the schedule of fees for services agreed with the General Medical Services Board (GMS) is changed significantly, or if the GMS scheme is widened to encompass more of the population than at present. This would, theoretically lead to an increase in the level of demand for dental services in the future. It is possible that a policy change, or slow growth in the agreed charges for care in the future may actually make public clients less attractive to dentists and this would lead to a lower supply of services and thus lower rates of utilisation.

The Socio-Demographic Drivers of Optician Services in Ireland

3.29 As with GP and dental care, use of optician services in Ireland is strongly shaped by socio-demographic factors with the pattern of visiting relatively similar to that found for dental services. Figure 3.9 shows, as with dental care, that the proportion visiting the optician in the last year rises with age reaching a peak for men in those aged 65 to 74 before falling once again. Among women the pattern is a little more complex with peaks in the 16 to 24, 45 to 54 and 65 to 74 year groups. Those in the 45 to 54 year age group are actually the most likely to use optician services in the last

year, but the proportion then falls back, before peaking again in the 65 to 74 year age group.

Figure 3.9: Proportion Visiting Optician in the Last Year by Age and Sex
(Living In Ireland Survey 2001)



It is not clear whether the fall in utilisation in the oldest age groups comes about as a result of a fall in the need for optical care in these groups or whether other factors such as lower access, say through decreased physical mobility begin to play a role. It could be for instance that individuals accept a lower level of functioning in higher age groups or adapt their lifestyle or compensate in some other fashion for deteriorating sight, rather than seeking further care (Baltes & Baltes 1990).

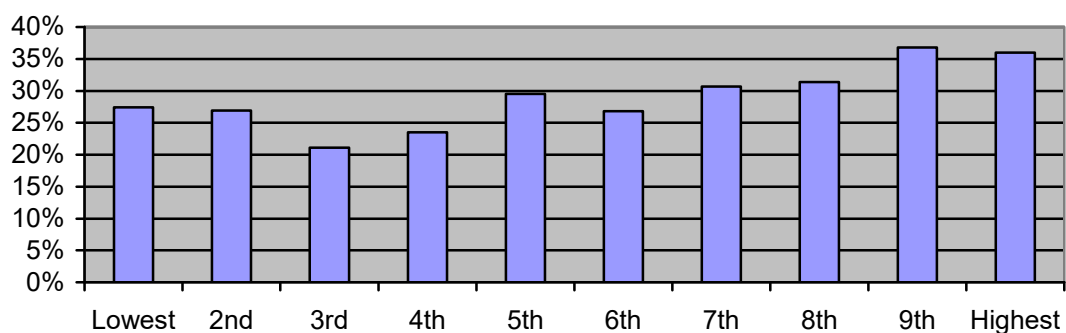
3.30 As found for other types of primary care, women are more likely than men to visit their optician at all age groups and this differential is highest in the three age groups where utilisation among women peaks. The differential also appears to widen in the oldest age groups. As previously suggested, this differential may be largely due to the higher propensity of women to seek optician care rather than reflecting gender based differentials in access.

The Influence of Income and Medical Card Status on Optician Utilisation Patterns

3.31 Optical care in Ireland is free to the 30% of the population with a medical card and charged at full market cost to all other groups, although the latter can claim tax relief on medical expenses over €125 a year and get free or subsidised routine optician services under the Treatment Benefit Scheme (as with dental services). Figure 3.10 shows that income is an important influence on use of optician services with the proportion attending the optician in the last 12 months increasing as income increases. However, a higher proportion of those in the first two income deciles report a visit to

the optician in the last year than those in the 3rd and 4th deciles and this may suggest that access to a medical card may increase visiting among these groups relative to higher income groups. Figure 3.10 shows that higher income among those without a medical card is also influential as the proportion who visited the optician in the last year increases with income after the two lowest income deciles. Detailed statistical analysis of these patterns (Layte, Nolan, & Nolan 2007) controlling for age and other influences suggests that the effect of the medical card is actually statistically insignificant once we control for other effects.

Figure 3.10: Proportion Visiting Optician in the Last Year by
Income Decile
(Living In Ireland Survey 2001)



Use of Primary Care by Non-Nationals

3.32 The rate of immigration to Ireland has increased dramatically over the last decade, but particularly in the last 5 years. Census 2006 showed that there are now over 465,000 non-nationals living in Ireland. The largest group among these non-nationals by far are those from the UK (Britain and NI) at 113,000. There are now substantial proportions from further afield with over 63,000 from Poland and 24,000 from Lithuania. Grouped together, there were 35,000 immigrants from Africa in Census 2006 and almost 50,000 from Asia. Together non-nationals now represent over 11% of the Irish population (CSO 2007).

3.33 Very little is known about use of health care among these non-national groups. The main survey investigating these issues, EU-SILC, asks only for the number of free visits to a GP (i.e. using a medical card). The proportion with a medical card among non-national groups is lower than among Irish nationals and this means that an

analysis of GP utilisation among non-nationals would be extremely limited in the conclusions it could draw.

3.34 It is likely however that non-nationals are both younger and healthier than Irish nationals (see discussion of the 'healthy migrant effect' in Chapter One) and this is likely to mean that they are less likely to use GP care at present than Irish nationals. However, if a substantial proportion of migrants to Ireland stay in Ireland over the long-term, it is likely that their average level of health would decrease. This happens for two reasons. First, recent migrants are disproportionately young as the young have fewer ties in their country of origin and are more likely to move for work. As we have seen, level of health worsens with age. Second, migrant communities tend to have lower incomes than indigenous populations, although there is a great deal of variation in this depending on a number of factors (Asian groups fleeing Uganda in the 1970's for instance were largely professional and affluent). As shown in section two, lower income is associated with lower health and life-expectancy. Over the longer term this mean

Emergency Department Utilisation in Ireland

3.35 Emergency departments (EDs) and general practitioners (GPs) form the two main gateways into the Irish health care system. Access to consultant specialists and other health specialists, and from there to elective procedures, typically involve referral from a GP or from the ED. Admission to an in-patient bed requires referral via the elective route, or via the emergency route. Thus it is important to consider the impact of trends in demographic and other factors on the delivery of emergency as well as primary care.

3.36 In recent years overcrowding at EDs throughout the country has received widespread media and popular attention. There is particular concern with the increasing proportion of in-patient admissions originating from the ED. The proportion of in-patients admitted as emergencies increased from 67.2% in 1995 to 71.2% in 2000 (DOHC, 2002) and there is evidence that elective procedures are being cancelled to make room for these emergency cases (DOHC, 2002). The factors

causing the increase in emergency admissions are complex. There is anecdotal evidence that the ED is seen as the main route through which a patient can secure an in-patient bed. GPs and other health professionals may choose to refer a patient to the ED who might otherwise have been admitted through the elective process (DOHC, 2002).

3.37 These patterns suggest that bottlenecks and incentive structures within the health care system are likely to be influencing the use of ED services in the country. Analysis of the role of demographic factors needs to be seen within this broader context. This is also reflected in the wider international literature on emergency care. In health systems around the world, utilisation of emergency services has been increasing. In response to the unending growth in demand for emergency services, much of the international literature in this area focuses on the characteristics of ED patients and on the factors that influence decisions to attend EDs. While these factors include demographics (i.e. age, gender etc.), they also include availability and accessibility of alternative sources of care, cost issues (e.g. cost of care, insurance coverage etc.) and health status (e.g. Weber et al., 2005).

3.38 There are also important inter-linkages between emergency and primary care that influence the patterns of their utilisation, regardless of demographic factors. There are similarities in the ways in which these services are used. For both services, in the majority of cases, patients choose what to present for and when to present, based on their own perceptions of what they need and what the services provide²³. Availability of alternative services can influence patients' decisions on where to present for treatment. It is therefore more sensible to assess utilisation patterns of ED services in the context of availability of alternative sources of care. The next section provides background to how the emergency department services are organised in Ireland, national utilisation trends, and presents recent evidence on demographic and socio-economic factors influencing ED utilisation.

Current structure of emergency care in Ireland

²³ In the case of immediate emergencies such as cardiac arrest there is little/no scope for any deliberate choices by the patient on where to present for care.

3.39 Emergency care in Ireland has followed the so-called ‘Anglo-American model’ where patients are transported to the hospital in order to receive a higher level of care. There is a specific emergency department where specially trained hospital doctors deliver a wide range of services to patients presenting to the department. Emergency medicine is a recognised independent specialty and specialised training is required.

3.40 Until recently, emergency care was provided solely within the public system. In 2000 there were 40 emergency departments (EDs) located in public acute hospitals throughout the country. In 2005 (VHI Healthcare, 2005) Vhi Healthcare opened the first private minor injury unit in Dublin and others are in the pipeline.

3.41 As with other out-patient care, a statutory charge applies to an emergency department visit (currently €60). This fee is waived for medical card holders, for patients who present a letter of referral from a GP or other health professional, and for patients who are subsequently admitted. The charge has been steadily increasing over time and was designed to discourage unnecessary utilisation of the emergency services. The charge is high relative to average GP charges. Published estimates of GP charges range from €35 to €36 (Indecon, 2003), although anecdotal estimates are much higher than these²⁴. However, there is evidence that while the costs associated with GP visits are well established in the public mind, the charges for ED care are not as well established (e.g. Red C, 2004). In practice, emergency care may continue to be perceived the cheaper option in cases where cost influences the decision on where to seek care.

3.42 At a policy level, the main concern has been to bring the levels of overcrowding under control. By 2005, overcrowding in EDs reached ‘crisis’ levels and utilisation did not abate even during the traditionally quieter summer months. Problems of overcrowding at the ED are well-recognised to be directly linked to bottlenecks elsewhere in the public hospital system. In 2005, the Minister for Health and Children announced a €70 million package for emergency services. Some of the steps are aimed at minimising the need for people to go to the ED and others are designed to free up in-patient beds for people awaiting admission. Measures include: additional

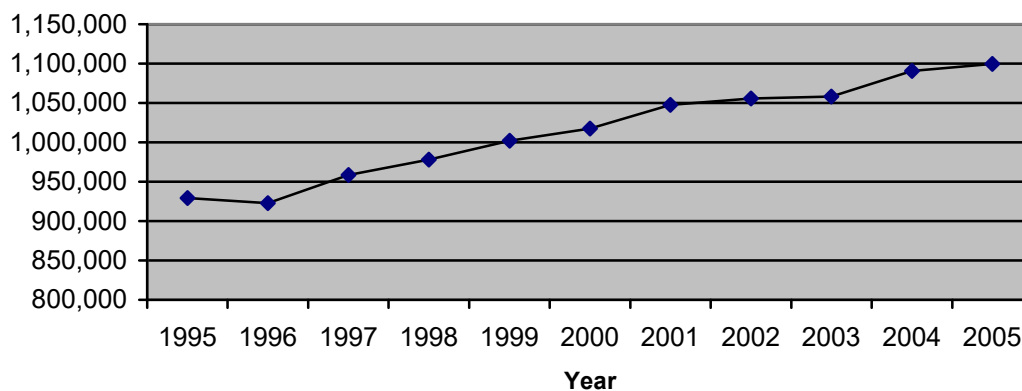
²⁴ GP out-of-hours co-operatives in the Dublin area charge €50 per visit suggesting this is closer to the average GP charge for Dublin.

acute hospital beds, new medical assessment units, increases in nursing home places, expanded home care packages, extended out-of-hours GP services and measures to enhance direct access for GPs to diagnostic services.

National utilisation trends

3.43 Consistent with international trends, demand for emergency care has been increasing over time (Figure 3.11). From 1995 to 2005 the number of new attendances at EDs around the country increased by 18% (the population grew by 15% over the same period).

Figure 3.11: New Emergency Department Attendances
1995-2005 (National)



3.44 However, this hides some variations in regional trends. Looking at the former Health Board regions, attendances at EDs in the Eastern Region show a downward trend from 1999 to 2005 (Figure 3.12). By contrast, attendances at EDs in the other regions have been increasing over time although the rise in some areas is steeper than in others (Figure 3.13).

Figure 3.12: New Emergency Department Attendances 1995-2005 (Eastern Region)

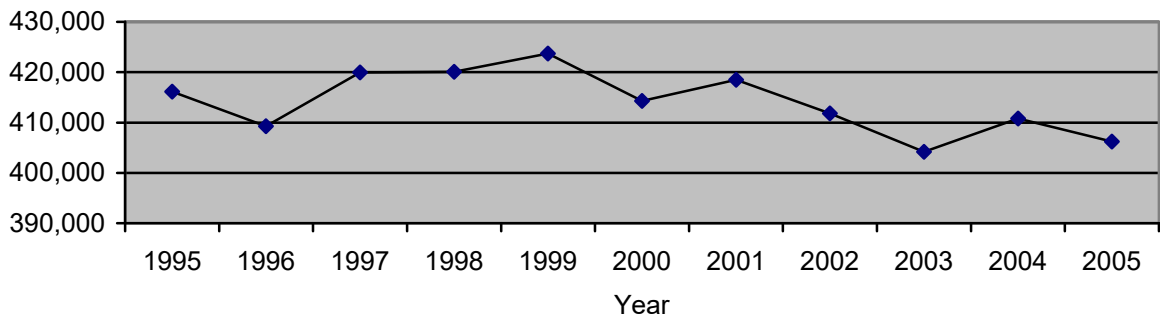
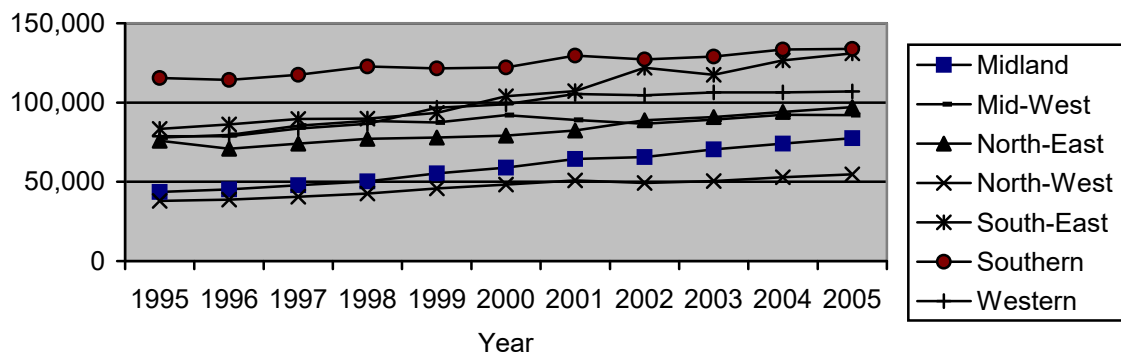


Figure 3.13: New Emergency Department Attendances 1995-2005 (Excl. Eastern Region)



Demographic drivers of utilisation

3.45 Demographic, socio-economic or clinical data on emergency department attendances are not collected on a national scale in Ireland. The need to improve the availability of these baseline data has been recognised as a priority for improving decision making processes in emergency services (Comhairle na nOspidéal, 2002). Thus analysis of demographic and other drivers of emergency care utilisation relies on case study data. Analysis presented here draws on a recent study of four large emergency departments located in the Dublin area (Smith, 2007b, Smith, 2007a).

3.46 Males tend to be higher users of emergency services relative to females. The number of patients per 1,000 persons having at least one visit to an emergency department is higher for males than for females (Figure 3.14). However, this gender

gap is not consistent across all ages and tends to be more pronounced at younger age groups. This is illustrated in Figure 3.15 using data from one of the hospitals. For middle and older age groups (age 45 and older), the gender difference declines.

Figure 3.14: Emergency department attenders by gender (Number per 1,000 population)

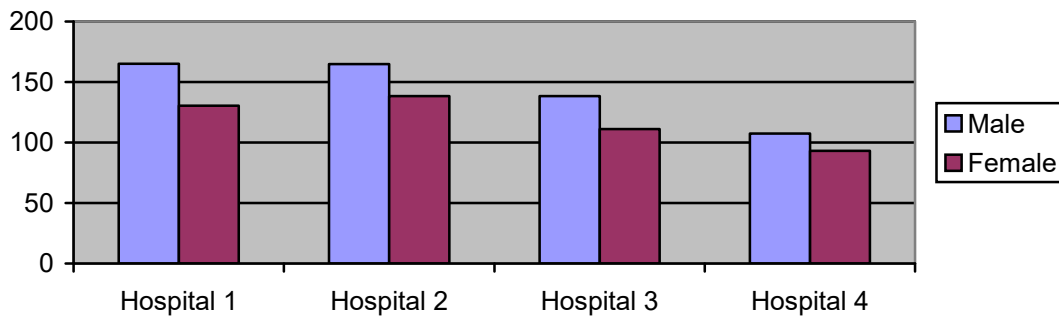
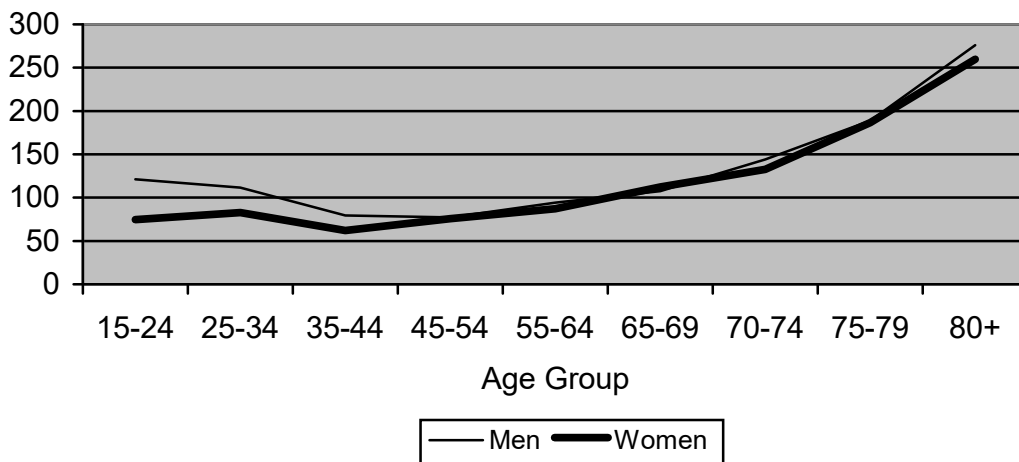
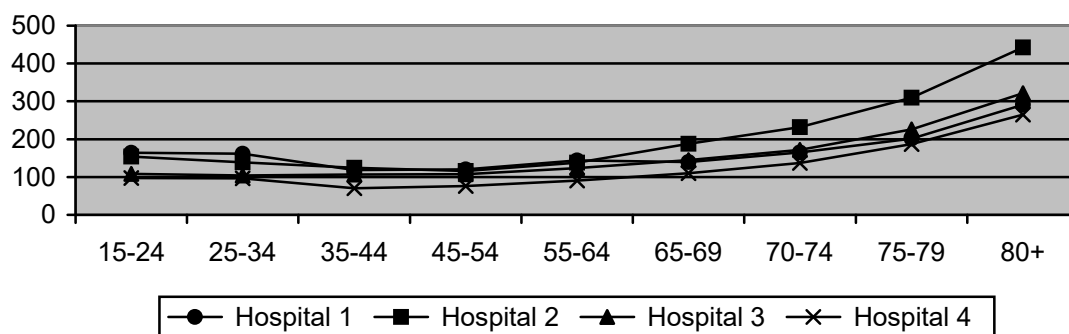


Figure 3.15: Emergency department attenders by age and gender (Hospital 4)



3.47 The influence of older age on emergency department utilisation is pronounced. Utilisation increases with age from the age 55 upwards. Utilisation rates for those aged 80 and above can be as much as 3-4 times the rates for younger age groups. The age distribution for utilisation is slightly concave and utilisation is lowest for individuals aged 25-54.

Figure 3.16: Emergency department attenders by age group and Hospital (Number per 1,000 population)

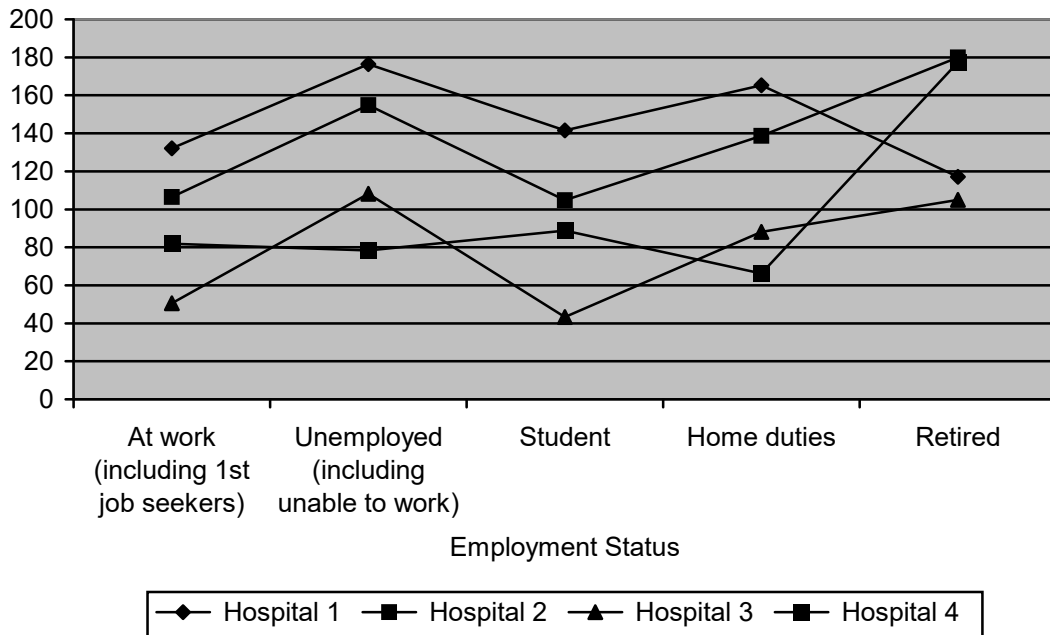


3.48 As illustrated for primary care, the influence of age on ED utilisation is consistent with the increased probability of ill health in older age groups. These patterns suggest that an increase in the proportion of older age groups in the population will contribute to an increase in demand for ED services. However, as already noted, there are many other factors that influence utilisation of emergency services. In particular, there is evidence to suggest that variations in the level of ED utilisation across these four hospital sites are linked to availability of GPs in the local areas (Smith, 2007c). Improvements in availability of alternatives to emergency care, and the removal of other bottlenecks elsewhere in the health system may serve to dampen the impact of any demographic driver of ED utilisation.

Socio-economic drivers of utilisation

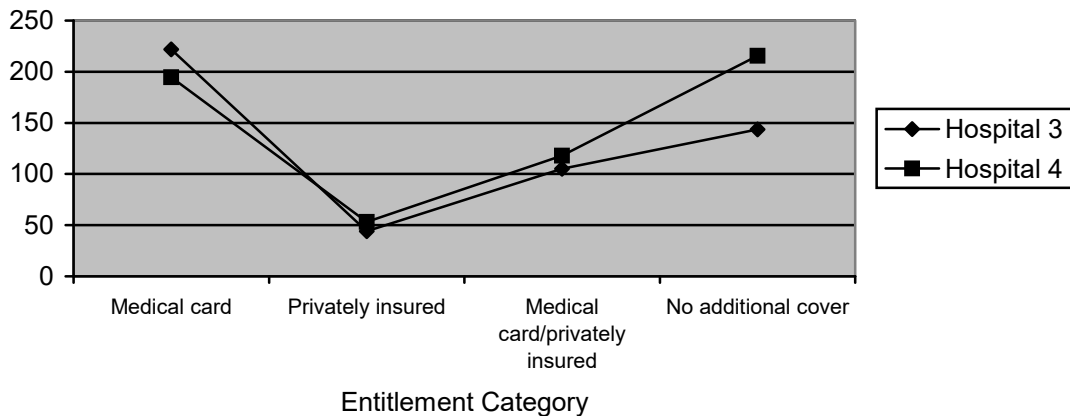
3.49 Data on the socio-economic drivers of ED utilisation are less reliable but nevertheless identify potentially important factors. Figure 3.17 presents the relationship between ED utilisation and employment status. Consistent with the demographic trends, retirement is a key socio-economic factor associated with high emergency department utilisation. Utilisation rates are also consistently high for unemployed individuals, particularly for males.

Figure 3.17: Emergency department attenders by employment status (Number per 1,000 population)



3.50 Another proxy for socio-economic status is given by health care entitlement status (Figure 3.18). Preliminary data indicate that a medical card is an important driver of emergency department utilisation. Utilisation rates are also relatively high for those without a medical card or private health insurance.

Figure 3.18: Emergency department attenders by entitlement category (Number per 1,000 population)



3.51 The role of medical card is consistent with health status. The health status of medical card holders is low relative to the rest of the population. However, there is less distinction in health status between individuals with private health insurance and those with no additional cover (Watson and Williams 2001). There is thus some indication that relatively poor socio-economic status may be an important driver of ED utilisation.

Summary

3.52 This chapter has examined the provision of primary care in Ireland and discussed some of the factors in the Irish context that may contribute to change in the future. We discussed three areas that may contribute to change in the demand for and delivery of primary care in Ireland in the future: changing primary care structures, the influence of health policy through pricing and lastly, the changing socio-demographic structure of Irish society.

3.53 Although a large proportion of the population would have some dealings with primary care at some point every year, Irish primary care is often experienced as a fragmented and incoherent service by users themselves. The lack of primary care teams and networks means that individuals often have to decide and seek out the types of care that they require individually rather than being guided by a 'joined up' primary care system. The Primary Care Strategy offers a new model of primary care in Ireland that, properly funded and implemented could significantly increase the quality and quantity of services available to Irish people. The impact of this change on demand and delivery of care is however equivocal. On the one hand such change could dramatically increase the demand for care since users will experience a coherent service which is proactive in offering options. On the other hand however, such a care model may also improve levels of health and could feasibly reduce the demand for care over the longer run by improving prevention and rehabilitation.

3.54 Irish primary care is unique in its mix of public and private care. Although 30% of the population receive free GP, dental, optician and aural services through the General Medical Services Board, the vast majority need to pay for services at the

point of delivery, although some of this expense can be claimed back (and some routine dental and optician services can be accessed for free). This pricing structure has a significant impact on utilisation patterns, but the impact is not uniform across different service areas and pricing may interact strongly with other characteristics such as age, sex and education. The threshold of the medical card scheme has dramatic effects for GP care where those on low income covered by the GMS scheme are much more likely than groups further up the income range to visit the GP, even once we control for age and other factors. This could suggest that there is a significant level of unmet need for care among those above the medical card threshold and this means that a change in policy that extended the medical card scheme or which increased the level of subsidisation to the non-medical card population could substantially increase the level of demand for GP care.

3.55 Utilisation of primary care varies significantly across the population. Data on use only cover GP, dental and optician visits across the adult population up to 2001, but these show that those aged over 65 are over 50% more likely to have seen their GP in the last year than those aged 16 to 24 and have over three times the number of GP visits. As the Irish population will be ageing over the next two and half decades, this could suggest that the need for GP services will increase significantly, but there is not a necessary relationship between age and GP utilisation. Although the higher level of utilisation among older age groups is largely because of a worse health with older age, it may be that improving health in Ireland will mean that Irish people at the same age will be healthier and thus in less need of medical care in the decades to come. This is one reading of current developments in levels of mortality and morbidity. As this analysis has shown, any understanding of what happens in the decades to come needs to take into account future patterns in the wide range of factors that influence primary care utilisation.

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Chapter 4: Out Patient Services

Introduction

4.1 Out patient hospital services act as an important point of interaction between primary care services and in patient hospital services. Within the Irish hospital system, 32% of hospital in patient admissions are elective and the vast majority of these admissions would have occurred as a result of out patient consultations. This chapter has two main aims. The first is to examine the patterning of out patient consultations in Ireland and how the number of consultations has changed since 2001. This task is complicated somewhat by the extent of private specialist services in the Irish context. Although data on public out patient consultations is available from the Performance Monitoring Unit of the National Hospitals Office of the Health Services Executive, no data on private consultations is available and this will mean that we will not get a complete breakdown of current service delivery. Although complete data are not available, public out patient consultations still make up the vast bulk of out patient services in Ireland. This means that our analyses will not be seriously biased. The second aim of the chapter is to understand how demographic and socio-economic factors influence the utilisation of out patient services. This is possible through the use of data from the Living in Ireland Panel Survey 1995-2001 although these data are not directly comparable with those from the NHO. Understanding the factors influencing use of out patient services is crucial if we are to be in a position to project the demand for and delivery of care out to 2020. In the next section we move onto an examination of public out patient services in Ireland in 2006 and change over time since the year 2001.

The Number and Distribution of Out Patient Consultations in Ireland

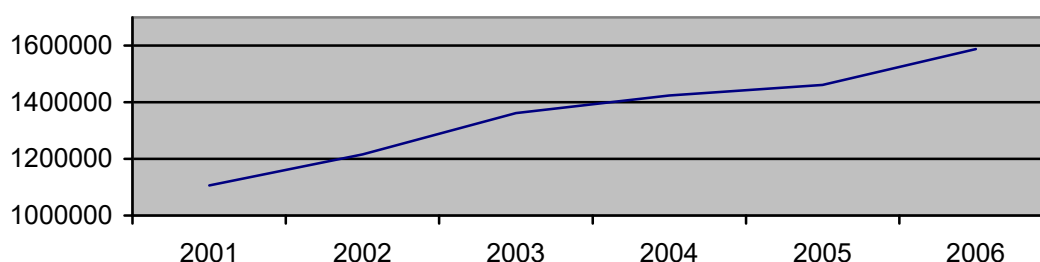
4.2 As shown in Table 4.1, HSE data sources show that there were almost 2.8 million out patient consultations in Irish hospitals in 2006, the latest year for which figures are available. These figures were composed of 734,000 (26%) new consultations and just over 2 million (74%) returning patients. The extent of return verses new consultations is a function of a number of clinical and service factors, but it is likely that the present level of returns is higher than would be the case were primary care services more developed in Ireland. Clearly specific conditions may need on-going

monitoring by specialists and several consultations may be required before conditions can be improved, particularly if surgery is necessary. However, as discussed in the last chapter, primary care services in Ireland are very under developed and fragmented compared to services in other European countries and this means that conditions that could be monitored in primary care often end up returning to out patient services.

Status	Number	Proportion
New	734,479	26.4
Return	2,044,816	73.6
Total	2,779,295	100.0

4.3 No national data on the number of out patient consultations before 2006 are available and this means that it is not possible to examine whether the absolute number has changed over recent years. However, data is available from 2001 to 2006 for the Dublin hospitals in the Eastern Region Health Authority. These hospitals carried out over 57% of all public out patient consultations nationally in 2006 and so they are likely to closely approximate national developments. Figure 4.1 shows that out patient consultations in these hospitals have increased from 1, 106,163 in 2001 to 1,588,582 in 2006. This is a 44% increase in total volume.

Figure 4.1: Number of Out Patient Consultations in the Eastern Region Health Authority 2001-2006



If we extrapolate these figures to the national situation, such an increase in volume easily outstrips the population increase between 2001 and 2006 of 10.2%.

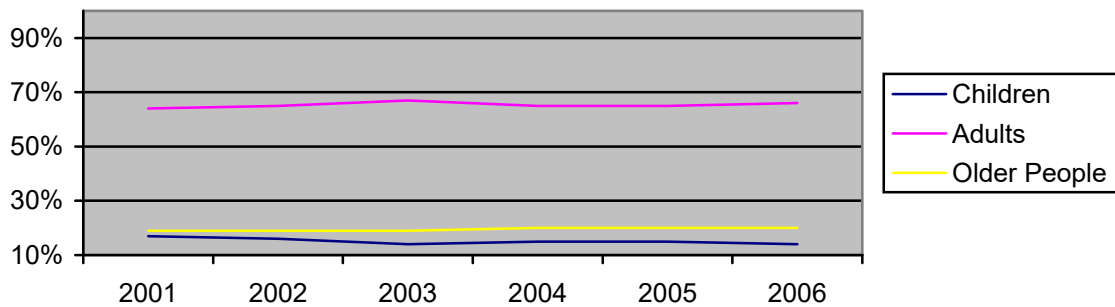
4.4 Table 4.2 breaks down out patient visits by three broad age groups, child aged less than 18, adults 18 to 64 and adults aged 65 or more. This shows that children aged under 18 make up just under 10% of out patient visits, adults over 18, but under 65 74% and the older population just over 16%.

Age Group	Number	Proportion
Children Aged <18	275,581	9.9
Adults 18-64	2,053,403	73.9
Older People 65+	450,311	16.2
Total	2,779,295	100.0

If we compare these proportions to the population totals, children under 18 make up a substantially smaller proportion of out patient visits than their share of the population. Children under 18 make up just under 27% of the population, almost three times the proportion of out patient visits made up by under 18s. This under representation of younger age groups is largely due to their better health status. As shown in Chapter Three, health tends to worsen significantly with age. At 74%, the population aged between 18 and 64 make up a higher proportion (18.8%) of the out patient load than their population share of 62%, but it is among older people that the demand for out patient care increases most. Older people aged 65 or more make up 11.1% of the population, but make up 16.2% of the out patient load, i.e. 45.9% more than their population share. Again, this largely reflects worse health status among older age groups and indicates the important influence which population ageing may have on health service demand.

4.5 Figure 4.2 gives the proportion of out patient consultations in Dublin hospitals by age group between 2001 and 2006 and shows that the proportion of consultations given to adults aged 15 or more and those aged 65+ increased across the period (by 2% and 1% respectively) whilst those given to children under age 15 decreased (by 3%).

Figure 4.2: Numbers of Out Patient Consultations in ERHA by Age Group
2001-2006



4.6 The geographic distribution of out patient consultations will mirror the distribution of the population and out patient services. However, the concentration of specialists in Dublin hospitals means that large numbers of patients travel to the capital for out patient services.

Table 4.3: Out Patient Visits in Irish Public Hospitals 2006 by Health Board

Health Board	%
Eastern Region Health Authority	47.8
Midland Health Board	4.5
Mid-Western Health Board	6.9
North-Eastern Health Board	6.9
North-Western Health Board	5.2
South Eastern Health Board	7.9
Southern Health Board	11.7
Western Health Board	9.0
Total	100.0

Table 4.3 shows that these processes are reflected in the distribution of out patient consultations across the old health board areas with almost 48% of all consultations occurring with the Eastern Region Health Authority. The next highest proportion is in the Southern Health Board area at almost 12% followed by the Western Region at 9%.

4.7 Table 4.4 gives a breakdown of out patient consultations across medical speciality. The frequency of consultation by speciality depends on a number of different factors including the size and makeup of the population (and thus the diseases that occur) and the level of services available. Table 4.4 gives the proportions

for the twenty most frequent specialities which together constitute 85.5% of all consultations.

Specialty	%
Orthopaedics	12.8
General Surgery	10.1
Obstetrics	9.2
Ophthalmology	6.5
General Medicine	6.5
Cardiology	4.3
Otolaryngology (ENT)	4.2
Gynaecology	4.0
Warfarin	3.8
Paediatrics	3.4
Dermatology	2.6
Nurse Led Clinics	2.6
Oncology	2.4
Endocrinology	2.1
Gastro-Enterology	2.0
Other	2.0
Plastic Surgery	1.9
Haematology	1.8
Radiotherapy	1.7
Urology	1.6

The figures presented are made slightly problematic by the fact that clinics are defined according to the specialty of the consultant leading the clinic and this is not necessarily the speciality of the clinic being run. This is more often the case in smaller hospitals outside of the main urban areas. Clinics may also be defined under a general heading such ‘general surgery’ or ‘general medicine’ even though the clinician carrying out the consultations may themselves have a specialty. Table 4.4 shows that orthopaedics is the most common out-patient clinic followed by general surgery, obstetrics and ophthalmology. Together with ‘general medicine’, these five specialities account for over 45% of all out patient clinics.

4.8 As previously stated, the frequency and mix of types of out patient clinics run depends on the prevalence of specific conditions and level of services for these. Table 4.2 showed that older people attend out patient clinics more frequently than other age groups, but age groups also vary in the types of specialties that they require. Table 4.5

shows that among those under 18, the general category of paediatrics, orthopaedics and ophthalmology are most common accounting for 56.5% of all consultations.

Specialty	%
Paediatrics	27.2
Orthopaedics	16.7
Ophthalmology	12.6
Otolaryngology (ENT)	8.9
General Surgery	6.4
General Medicine	3.9
Dermatology	3.6
Plastic Surgery	3.2
Endocrinology	1.8
Haematology	1.7
Other	14.1

Among adults aged 18 to 64 on the other hand, Table 4.6 shows that orthopaedics, obstetrics and general surgery are the most common specialities. The top three most common specialities among adults 18 to 64 account for 36% of all clinics for this age group, showing a more diverse range of disease groups among this age group compared to children where the three most frequent specialities accounted for 57% of consultations.

Specialty	%
Orthopaedics	13.1
Obstetrics	11.9
General Surgery	11.0
General Medicine	6.9
Gynaecology	5.4
Ophthalmology	5.2
Otolaryngology (ENT)	3.9
Cardiology	3.6
Nurse Led Clinics	2.9
Dermatology	2.7
Other	33.4

Table 4.7 shows a different pattern of specialities among older adults aged 65 or more. Here general surgery is the most common speciality accounting for over 10% followed by ophthalmology and attendance at Warfarin clinics. There is greater heterogeneity in the specialities found among this age group compared to younger age groups with the top three most common consultations accounting for 29.4% of all consultations in the age group suggesting a more diverse range of diseases among this group.

Specialty	%
General Surgery	10.2
Ophthalmology	10.0
Warfarin	9.2
Orthopaedics	8.5
Cardiology	8.4
General Medicine	7.7
Geriatric Medicine	6.6
Vascular Surgery	3.8
Urology	3.8
Haematology	3.2
Other	28.6

As the distribution of age groups in the population changes the mix of different specialities needed will change and this should be reflected in the clinics offered. With population ageing and the concomitant increase in the proportion and number of older people in the population, it would seem likely that the specialities contained in Table 4.7 will go on to have greater prominence.

4.7 It has already been shown that the Dublin hospitals account for the largest proportion of out patient consultations in the public sector.

Hospital	%
Adelaide & Meath Hospital Inc NCH	7.7
St. James Hospital	6.2
Mater Misericordiae Hospital	5.8
Cork University Hospital	5.0
Beaumont Hospital	4.8
Galway University Hospitals	4.3
Waterford Regional Hospital	4.3

St. Vincents Hospital Elm Park	3.9
Regional Hospital - Dooradoyle	3.4
Our Lady of Lourdes	2.9
Sligo General Hospital	2.8
Our Lady's Hospital For Sick Children	2.6
Coombe Womens Hospital	2.6
Letterkenny General Hospital	2.4
National Maternity Hospital	2.3
Midland Regional Hospital - Tullamore	2.1
Wexford General Hospital	2.0
Rotunda Hospital	2.0
St. Lukes Hospital - Dublin	1.9
Cavan General Hospital	1.9

Table 4.8 shows that between them the Adelaide and Meath, St James and Mater hospitals together account for 20% of all out patient consultations in the state with two other Dublin hospitals appearing in the top ten.

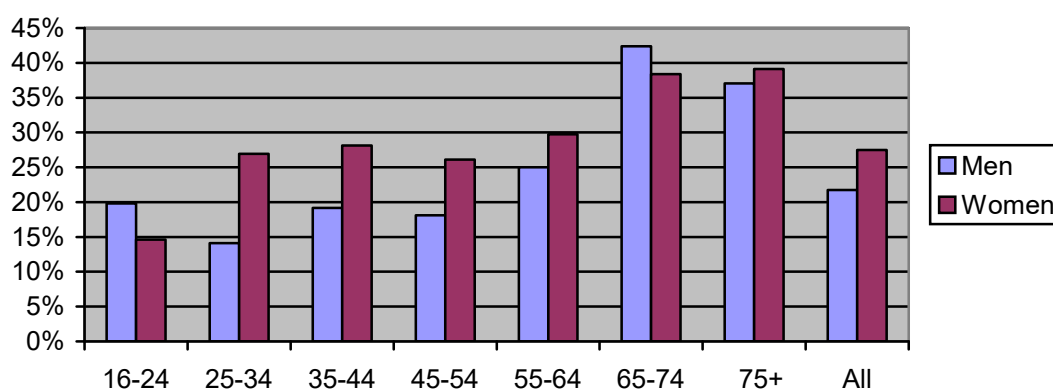
The Impact of Age and Sex on Demand for Out Patient Services

4.9 The last section showed the number and distribution of public out patient consultations in Ireland, but limitations in the data meant that we could not examine the factors that predict demand for these secondary services. This is important, since the successful projection of the demand for and delivery of out patient services into the future will depend in large measure upon accurate knowledge of the factors that predict utilisation. Levels of utilisation are not necessarily a good measure of the populations 'need' for such services since levels of utilisation also depend upon levels of provision. It is well known for instance that there are long waiting times for out patient appointments in Ireland for patients in the public system and this would suggest an undersupply of services. The extent of this under supply is not well understood as there are no systematic data on the numbers waiting. However, some data for those aged 65 or more are available from the 'Health and Social Services for Older People Survey' (HeSSOP²⁵) which was carried out in 2004. This shows that 7.1% of those aged 65 or more (32,838 people) were waiting for an out patient appointment in 2004. Those who were waiting had been on the waiting list for an average of 16 weeks, but 27% had been waiting more than a year and 10% had been waiting more than three years.

²⁵ See (O'Hanlon et al. 2005).

4.10 Fortunately the Living in Ireland Panel Survey provides information on use of outpatient services for the population aged 16 or more from 1995 to 2001. Figure 4.1 shows that the probability of one or more out patient visits in the last year increase significantly with age, peaking among those aged 65 to 74 among men and 75+ among women.

Figure 4.1: Proportion Having One or More Out Patient Visits in the Last Year by Sex and Age (2001)

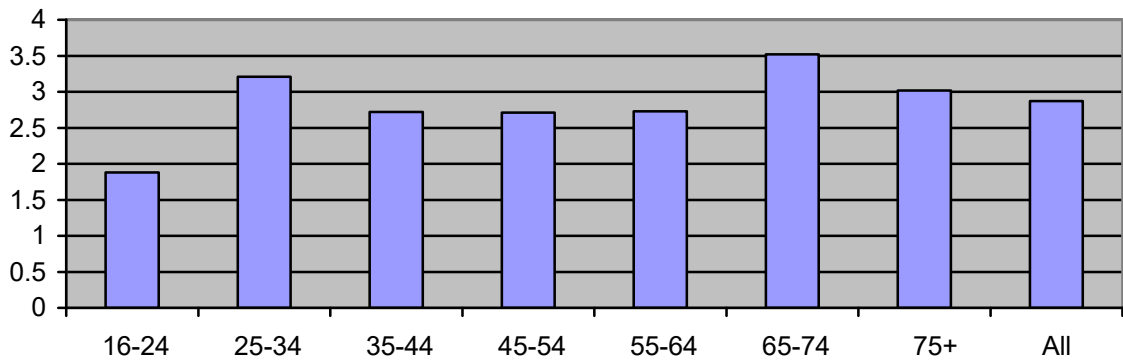


Source: Living in Ireland Panel Survey (2001)

Out patient visiting is more likely among women overall, but the distribution by sex varies across age groups with men more likely in the youngest age group and among those and 65 to 74. Research shows that women are more likely to visit their GP than men and this will be a major contributor to higher levels of visiting to out patient services since out patient services are only available with referral from a general practitioner. The differential between men and women in visiting is particularly pronounced among those aged 25 to 34 where there is a 13% difference in the probability.

4.11 The overall probability of attending out patient services gives one measure of utilisation patterns, but a complementary dimension is the frequency of visiting. The overall probability of visiting is likely to strongly reflect the characteristics of patients and their interaction with their GP, whereas the frequency of visiting will also be influenced by the decisions of out patient consultants and the availability of out patient services.

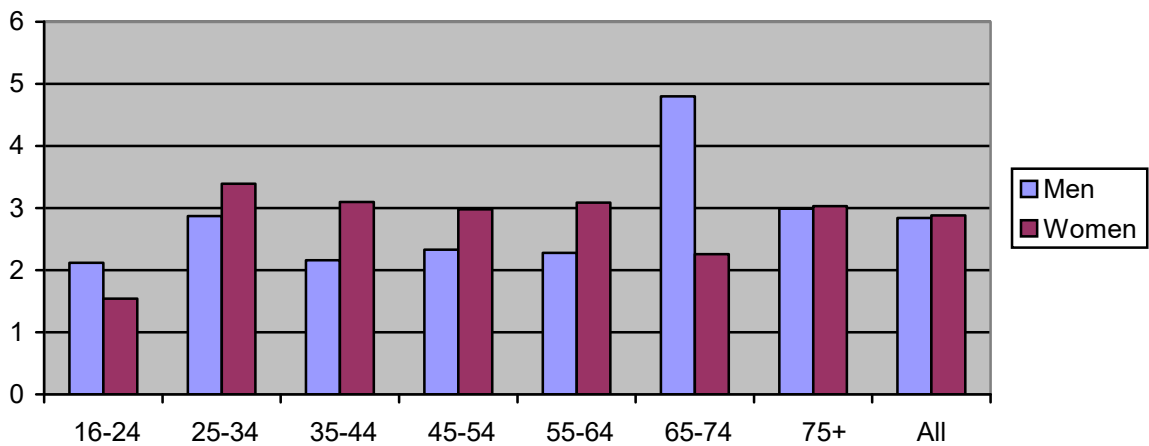
Figure 4.2: Mean Number of Out Patient Visits in the Last Year (for those having 1+ visits) 2001



Source: Living in Ireland Panel Survey (2001)

Figure 4.2 shows that the patterning of visit frequency is substantially different from the patterning of the overall probability of using out patient services. The frequency of visiting rises initially to a peak among those aged 25 to 34 before falling and then rising again to a peak among those aged 65 to 74. This latter peak in frequency of visiting replicates that found for the overall probability of visiting one or more times in the last year, but masks differences between men and women within age groups as shown by Figure 4.3. The peak in the 65 to 74 year age group is found only among men as can be seen from Figure 4.3.

Figure 4.3: Number of Out Patient Visits in the Last Year by Sex and Age 2001 (for those visiting at least once)



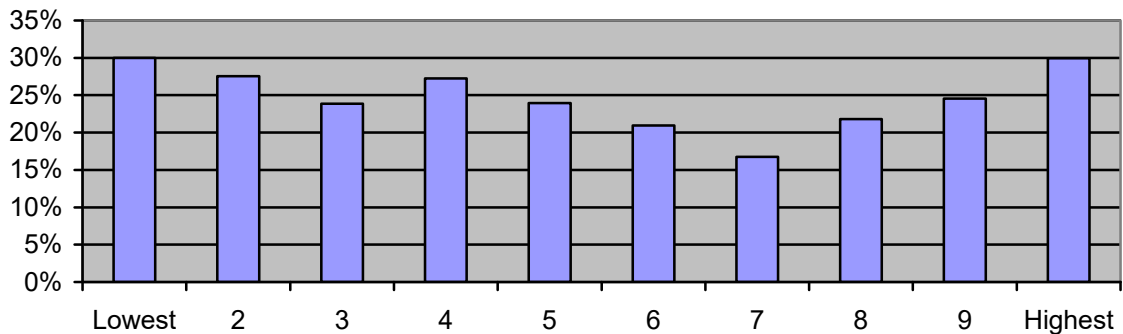
Source: Living in Ireland Panel Survey (2001)

The Influence of Income, Medical Card and Medical Insurance

4.12 As discussed in the last chapter, the structure of pricing of medical care in the Republic of Ireland has an important effect on utilisation patterns. Thirty-percent of the population are covered by the medical card system by virtue of an income means test and these individuals receive free GP care. As seen in the last chapter, this has important consequences for rates of GP visiting, with card-holders having a higher rate of visiting. Since GPs act as gate keepers for out patient care, medical card status will necessarily have a strong influence on use of out patient care. However, this picture is complicated by the fact that around half of the population have private medical insurance and this allows those insured to bypass the long waits experienced by public patients for out patient appointments. Research (Layte 2007) shows that controlling for age, sex and health status, those with lower income levels (i.e. medical card holders) are no more likely to visit their GP in the last year, but are significantly less likely to visit a specialist physician. Moreover, low income groups have significantly higher levels of GP visiting controlling for other factors suggesting that lower income groups are less likely to be passed onto secondary care, or are less likely to have seen a specialist because of higher waiting times for public patients.

4.13 Figure 4.4 gives an indication of the interaction between income, medical card, and medical insurance status. It is clear for instance that the probability of using out patient services is highest in the lowest and highest income deciles (i.e. the bottom and top 10% of the income distribution).

Figure 4.4: Probability of Using Out Patient Services One or More Times in the Last Year by Income Decile (2001)



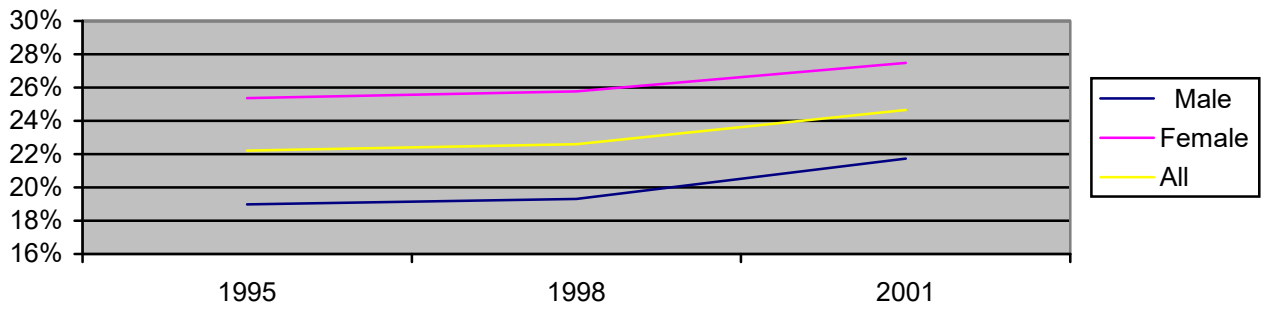
Source: Living in Ireland Panel Survey (2001)

After the first decile, the probability of use falls to its lowest point in the seventh decile before rising again as income increases. Since the probability of having at least out patient visit in the last year is a function of the patients decision to visit their GP and their GP's referral, this pattern largely reflects the higher likelihood of medical card patients to visit their GP and speed and ease of access of medically insured patients to out patient care. In fact, once medical card and insurance status are controlled for, one's position in the income distribution has no independent impact on utilisation of out patient care.

Change in Use of Out Patient Services 1995-2001

4.14 Using social survey data we can examine whether the propensity to use out patient services has increased in the last decade. It could be for instance that individuals are now more likely seek more specialist health care or that doctors are more likely to refer their patients to secondary services. We saw in the last chapter that the propensity of individuals to attend their GP has increased, although there has not been an overall increase in the average frequency of visiting. This could be due to a number of factors, but increasing health awareness and access to higher levels of medical information through the media and the internet definitely have a role. This increase in the propensity to attend may itself feed through into an increase in attendance at out patient services. Figure 4.5 shows that the proportion of individuals having one or more out patient visits increased between 1995 and 2001 from 22.2% to 24.6%. There was an increase in the propensity to visit among both men and women.

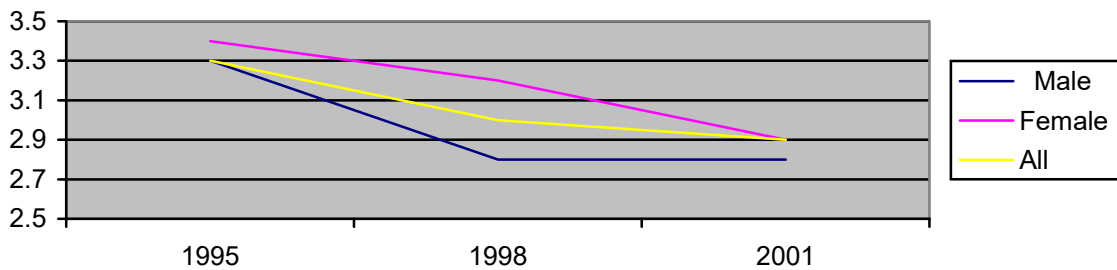
Figure 4.5: Proportion Having 1+ Out Patient Visits in the Last Year by Sex and Year



Source: Living in Ireland Panel Survey (1995, 1998, 2001)

4.15 Figure 4.6 on the other hand shows that the frequency of visiting for those who had one or more out patient visits in the last year has fallen for both men and women between 1995 and 2001. The overall frequency of visiting per individual has fallen from 3.3 to 2.9

Figure 4.6: Average Number of Out Patient Visits for Those Visiting 1+ Times in the Last Year by Sex and Year



Source: Living in Ireland Panel Survey (1995, 1998, 2001)

The pattern of change in out patient utilisation parallels the pattern of change in GP visits with an overall increase in the proportion using out patient services at least once, but a reduction in the overall frequency of visiting. These parallel developments may well be linked as GPs act as gate keepers for out patient care. An increase in the probability of visiting the GP could then feed directly into an increase in out patient utilisation. It is difficult to pin point the exact reason for the change in GP and out patient utilisation, but it may reflect an increasing propensity to use health care (say through increasing health awareness and the benefits of care) coupled with an increase

in time pressure due to economic growth that has the effect of decreasing overall visiting frequency.

Summary

4.16 This chapter had two main aims. The first was to examine the patterning of out patient consultations in Ireland and how this has changed since 2001. The second is to examine the demographic and socio-economic factors that influence out patient utilisation. The first objective provides an overview of the total extent of delivery in out patient services and the second the determinants of utilisation patterns at the individual level.

4.17 The second section of the chapter showed that there were almost 2.8 million public out patient consultations in Irish hospitals in 2006. Around three-quarters of these consultations were return visits. Analysis of the distribution of these consultations across age groups shows that children under 18 receive a lower proportion of consultations than would be expected given the population of children, whereas adults and older adults (65 plus) receive a substantially higher proportion than we would expect from the age structure of the population alone. This is not unexpected since the level of health need increases with age and older people in particular are much more likely to report an illness that will bring them into contact with a GP and thence onto out patient services.

4.18 The second section of the chapter showed that out patient consultations are not distributed evenly across the country. Forty-Eight percent of all public consultations occur in the (old) Eastern Region Health Authority area, the next highest proportion being 12% in the Southern Health Board. The first figure reflects the distribution of the population to some extent (one third of the population live within this region), but also reflects the substantial numbers of individuals who travel to Dublin hospitals for out patient services. If we rank hospitals according to the proportion of national out patient consultations run it is no surprise to see three Dublin hospitals (Adelaide and Meath, St James and Mater) topping the list and five Dublin hospitals in the top ten.

4.19 Analysis of the specialities most frequently attended shows that orthopaedics and obstetrics as well as a category of ‘general surgery’ are the three most frequent. However, the patterning of specialties varies significantly across age groups. This is important since demographic change (and population ageing in particular) may mean that the need for certain specialities changes substantially over the coming decades. If so, the data on public out patient clinics would suggest that ophthalmology and Warfarin as well as orthopaedics and cardiology will become far more important.

4.20 Analysis of the main demographic drivers of out patient consultation show that age and sex are the primary determinants. As shown in the last chapter, the need for health care increases with age and this is reflected in the utilisation of out patient services with the probability of having at least one consultation in the last year increasing until age 80 before falling there after. However, the frequency of visiting does not increase uniformly with age. Although the initial probability of visiting is influenced largely by the patients choice to seek care and to a certain extent, the GPs decision to refer, the frequency of visiting depends on the decision of the out patient specialist.

4.21 As with the pattern of utilisation in GP care, the structure of pricing in Ireland for primary care and the ubiquity of health insurance means that out patient attendance is substantially influenced by an individual’s level of income and the correlated issue of whether they have a medical card or medical insurance. The need for health care is highest among low income groups and so the prevalence of out patient care is highest among the lowest income groups. But, higher income groups are more likely to have health insurance and thus quicker access to out patient specialists and this means that we also see a peak in the probability of visiting among those in the highest income groups.

References

O'Hanlon, A., McGee, H., Barker, M., Garavan, R., Hickey, A., Conroy, R., & O'Neil, D. 2005, *Health and Social Services for Older People II (HeSSOP II): Changing Profiles from 2000 to 2004*, National Council on Ageing and Older People, Dublin, 91.

Chapter 5: Pharmaceuticals

Introduction

5.1 As is the case for the costs of GP services, most people in Ireland pay out-of-pocket for prescription expenses. However, through a variety of schemes, those who tend to be high users of prescription drugs can have a large proportion of their costs paid by government. The largest group who receive free prescriptions through the Community Drug Schemes (CDS) are those in the General Medical Services scheme (GMS or ‘medical care holders’) and these account for nearly three quarters of publicly funded prescriptions. The other categories who receive their medicines for free or on a subsidised basis are those with long term illnesses and those whose drug costs exceed specified limits in the Drug Payments (DP) scheme. Medical cards are now available to all people over 70 years of age as well as for people on low incomes. This has important implications for the likely future costs since the population of people over 70 is growing relatively rapidly in both absolute and relative terms.

5.2 Over 50.5 million prescription items were paid for by the Primary Care Reimbursement Service in 2005. This represents an increase of over 3.3 million on 2004. The General Medical Services (GMS) scheme (medical card scheme) accounted for 37.43 million prescription items in 2005 i.e. 74% of all items prescribed that year. There were 10.58 million prescriptions items issued under the Drug Payment (DP) scheme and 1.93 million items under the Long Term Illness (LTI) scheme. These three drug schemes accounted for 99% of all prescriptions issued under the Community Drugs Schemes in 2005. The GMS scheme includes persons who are unable without undue hardship to arrange general practitioner medical and surgical services for themselves and their dependents and all persons aged 70 years and over. Eligible persons receive a free general medical service including medicines and appliances provided through retail pharmacies.

Overview of Prescribing under the GMS Scheme

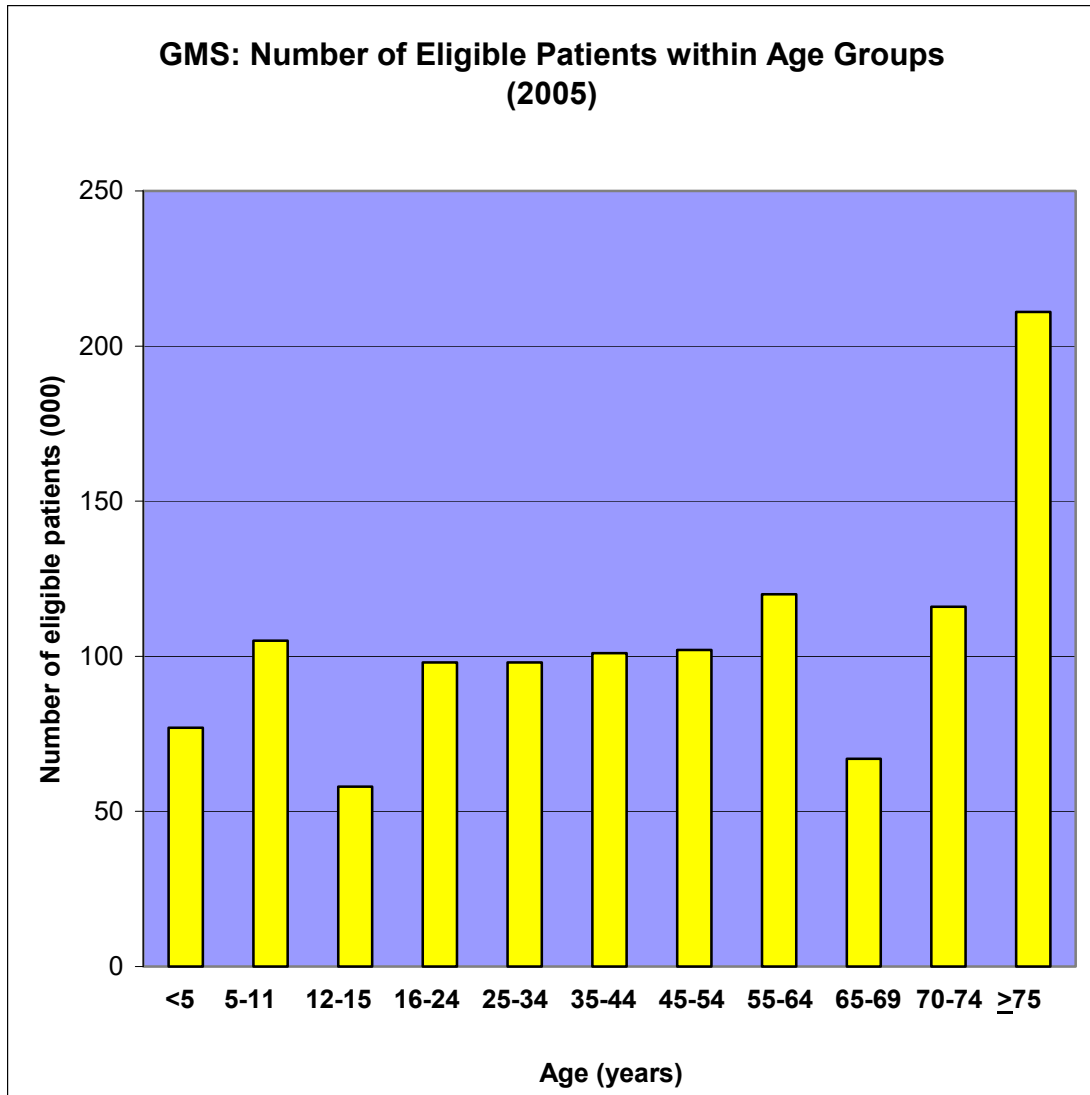
5.3 There were 1,155,727 eligible persons under the GMS scheme by the year end 2005 i.e. 29.5% of the population. On approval by the Health Service Executive

persons who suffer from one or more of a schedule of illness's (epilepsy, diabetes etc.) are entitled to obtain, without charge, irrespective of income necessary medicines and appliances under the LTI scheme. By the year end 2005 some 99,280 persons were eligible under the scheme i.e. 2.46% of the population. Under the DP Scheme persons who are ordinarily resident in the state and who do not have a current medical card can benefit from the scheme. An individual or family will not have to pay more than €85 in a calendar month for approved drugs and appliances for themselves or their families. On the 31st December 2005 some 1,478,650 persons were eligible under the DP scheme (36.57% of the population).

Age and Prescribing under the GMS Scheme

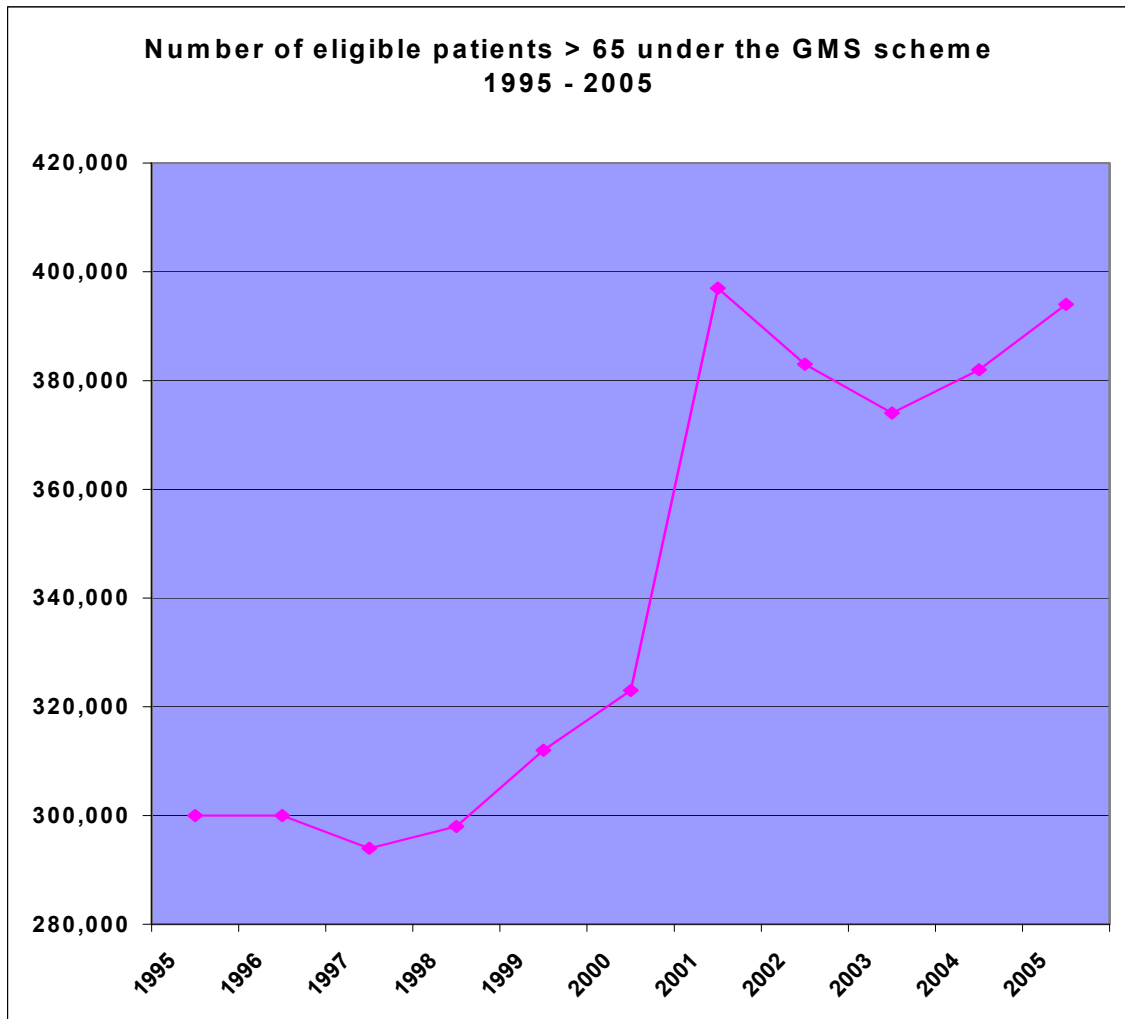
5.4 On the 1st of July 2001 all persons aged 70 years and over were eligible for the GMS scheme thereby receiving medications free of charge. Over 95% of eligible GMS persons availed of the scheme in 2005. In that year there were 67,022 persons aged between 65 and 69 years (5.8% of total number of eligible patients), 116,218 persons between the ages of 70 to 74 years (10.06% of total) and 211,220 persons over the age of 75 years (18.28% of eligible persons). In 2005 over one third of all patients covered by the GMS scheme (34.14%) were 65 years and over and 28.3% of eligible persons were 70 years and over (Figure 5.1).

Figure 5.1.



The number of eligible patients under the GMS scheme increased significantly following the alteration in eligibility criteria on the 1st July 2001. The numbers eligible increased from 323,000 in 2000 to 397,000 in 2001 (Figure 5.2).

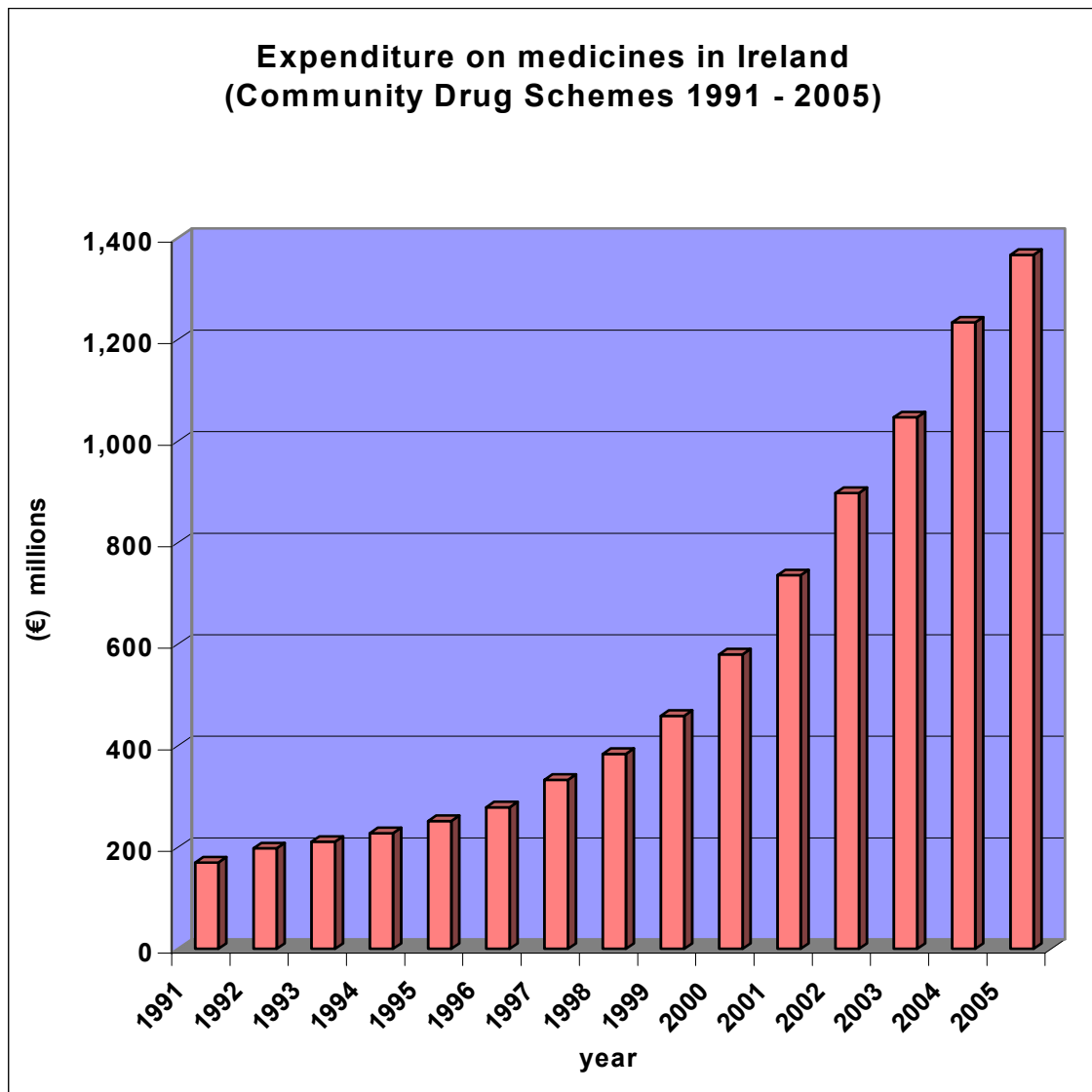
Figure 5.2.



Growth in Prescription Volumes and Cost

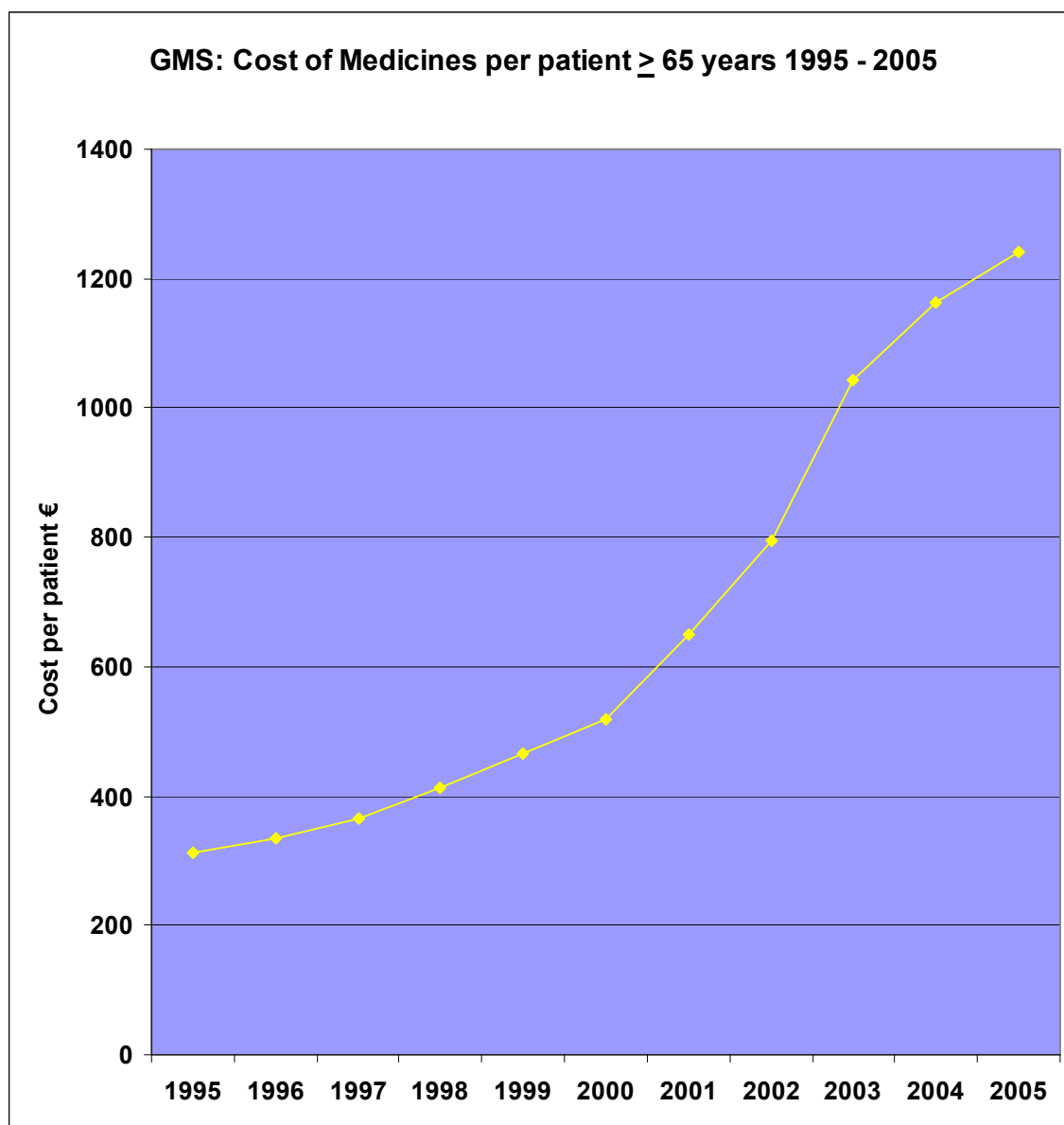
5.5 The double-digit year-on-year increase in drug expenditure under the Community Drug Schemes is amongst the highest in Europe. The main reasons for such an increase include the prescribing of newer more expensive medications (i.e. product mix), the increased volume of prescribing (i.e. volume effect) as well as the changes which have occurred in terms of eligibility criteria. Demographic changes such as the increase in the elderly population may also have contributed to this increase (Figure 5.3).

Figure 5.3.



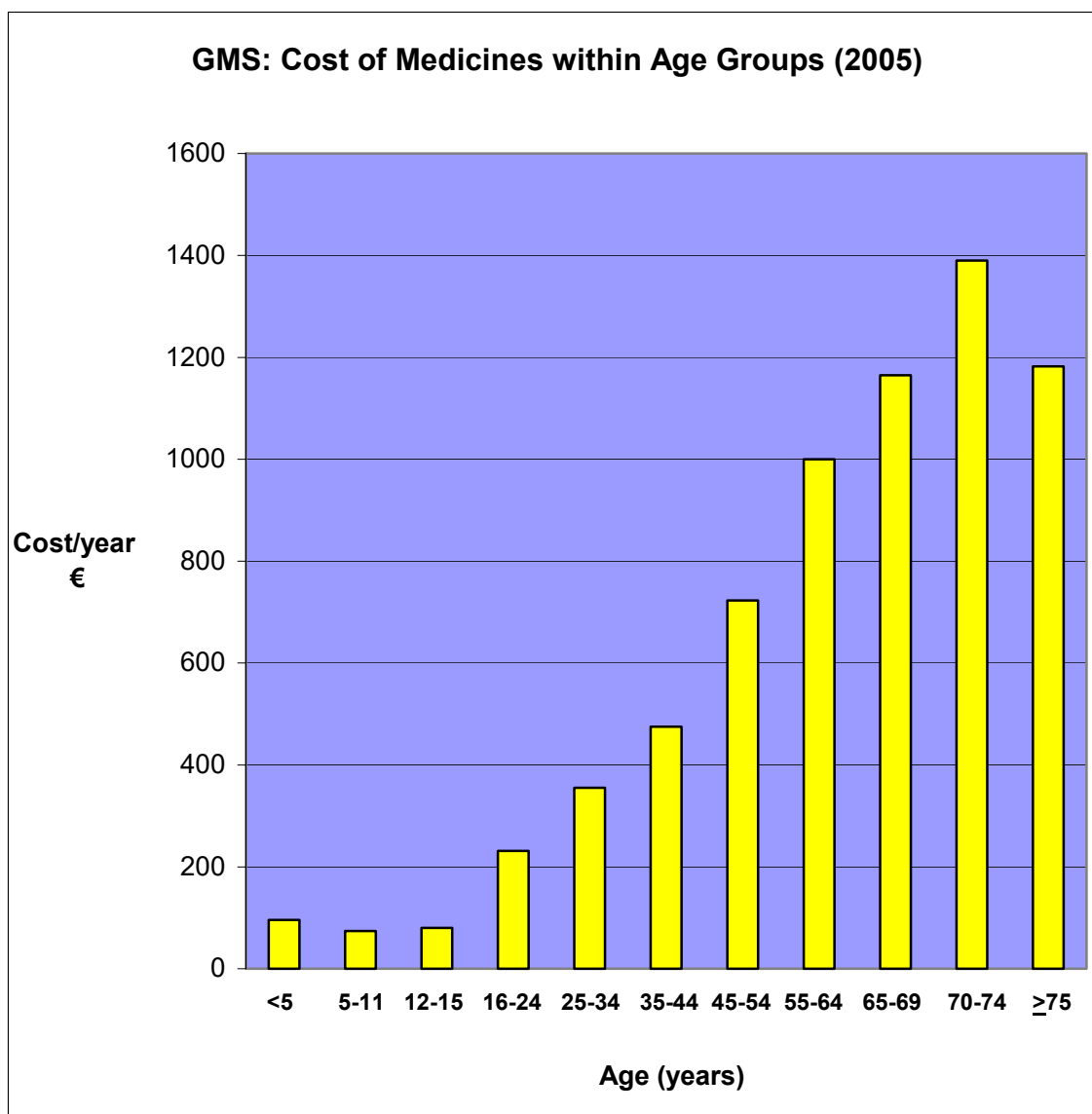
Not surprisingly the cost of medications increases significantly in elderly patients, with the cost of medicines per patient over 65 years increasing from €312 in 1995 to approximately €1240 in 2005 (Figure 5.4).

Figure 5.4.



5.6 Analysis of the 2005 GMS database indicates that the cost of medicines for persons aged 65–69 years was €1,167.52 or 163% of the national average. For persons between the ages of 70 and 74 years the average cost of medicines was €1390.94 or 194.19% of the national average. Interestingly, the cost of medicines for patients 75 years and over was slightly lower at €182.98 or 165.16% of the national average (Figure 5.5).

Figure 5.5.



5.7 In 2004 a population based study of prescribing for chronic disease using the GMS database was conducted for all individuals aged 70 years and over. In the study population (271,518) 86% of those over 70 years received a minimum of 3 drug items for a chronic condition that year. The most prevalent condition across all 8 Health Board regions was cardiovascular disease with over 60% of the elderly population receiving regular cardiovascular medication. Over 30% of persons received regular central nervous system medications and 20 to 30% of patients received musculoskeletal and upper gastrointestinal medicines. Diabetes, respiratory and thyroid conditions had a prevalence of between 7 and 17% (Table 5.1).

Table 5.1: Prevalence of chronic conditions among elderly population across health board regions

Region	Pop ≥ 70 Years	CVD	CNS	Musculo-skeletal	Upper GI	Respiratory	Diabetes	Thyroid	Glaucoma	Cancer
	N	%	%	%	%	%	%	%	%	%
ERHA	99,350	73	38	28	27	15	7	8	5	4
MHB	18,810	78	40	32	24	17	9	8	5	5
MWHB	28,271	72	37	30	25	14	8	7	5	4
NEHB	26,687	72	39	28	25	14	9	7	4	4
NWHB	21,636	68	33	24	19	13	7	8	4	4
SEHB	36,301	64	34	25	22	12	8	8	5	3
SHB	49,456	76	38	30	23	14	7	7	6	4
WHB	36,417	70	37	30	20	14	7	7	4	5

There were persistent trends across the health boards with the ERHA, MHB, NEHB, and MWHB having similar or above average prescribing for the majority of conditions examined while the NWHB, SEHB and WHB had below average prescribing for many of the conditions.

5.8 The performance based on quality prescribing indicators for cardiovascular disease, diabetes and central nervous system across the health board regions adjusted for the effects of age and gender are shown in Table 2. For ischaemic heart disease and diabetes, persons aged 70 to 74 years were more likely to receive a statin as compared to those aged 75 years and older. Statin and anti platelet prescribing tended to be higher in males but this did not always reach statistical significance. The ERHA, MHB, SEHB and WHB had similar or above average statin prescribing in cardiovascular disease. Higher co-prescribing of anti platelet drugs and statins in diabetes was seen in the ERHA and MHB. In contrast the NEHB, MWHB, NWHB and SHB had consistently lower levels of prescribing of these therapies in the elderly population after standardising for different gender and age structures within the regions.

Table 5.2: Odds ratios and 95% CI for quality prescribing indicators in CVD, Diabetes & CNS

	Cardiovascular Disease				Diabetes		Central Nervous System			
	Statins in ischaemic CVD		Antiplatelet with coronary dilators		Antiplatelet & statin		Long acting benzodiazepines		Anticholinergin antidepressants	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
70-74 yrs	2.17	2.12-2.22	1.23	1.16-1.30	1.62	1.53-1.70	1.35	1.28-1.42	1.30	1.23-1.37
Male	1.10	1.08-1.12	1.04	0.98-1.09	1.02	0.97-1.08	1.01	0.96-1.06	0.99	0.94-1.04
ERHA	1.11	1.09-1.14	1.04	0.98-1.09	1.37	1.30-1.45	1.16	1.10-1.21	0.85	0.80-0.89
MHB	1.47	1.41-1.54	0.98	0.88-1.09	1.98	1.79-2.19	0.93	0.84-1.02	1.14	1.04-1.25
MWHB	0.82	0.79-0.85	0.83	0.76-0.91	0.72	0.66-0.79	1.27	1.18-1.37	0.71	0.64-0.78
NEHB	0.81	0.78-0.84	0.81	0.74-0.89	0.72	0.66-0.79	1.16	1.07-1.25	0.91	0.83-1.0
NWHB	0.86	0.83-0.90	1.08	0.98-1.20	0.73	0.66-0.82	0.69	0.62-0.77	1.15	1.04-1.27
SEHB	1.12	1.07-1.16	1.06	0.97-1.16	0.95	0.88-1.03	1.01	0.93-1.09	1.13	1.05-1.22
SHB	0.86	0.83-0.88	1.18	1.09-1.27	0.78	0.73-0.84	0.85	0.79-0.91	1.21	1.13-1.29
WHB	1.04	1.00-1.08	0.95	0.87-1.03	0.95	0.88-1.03	0.78	0.72-0.85	1.10	1.03-1.19

1. Ischaemic conditions = patient receiving antiplatelet or coronary artery vasodilators; 2. Coronary vasodilators e.g. nitrates are used as a surrogate marker for angina;

3. Reference group = age > 75 years & female gender;

4. Individual regions are compared to all other regions.

5.9 The quality of prescribing indicators related to the central nervous system show that the 70 to 74 year age group are more likely to receive long acting benzodiazepines or antidepressants with anticholinergic side effects than those aged 75 years and older. There were no gender differences. Long acting benzodiazepines were more likely to be prescribed in the ERHA, MWHB, NEHB, while anticholinergic antidepressants were more likely to be prescribed in the MHB, MWHB, SEHB, SHB and WHB. There is thus a high prevalence of prescribing for chronic conditions in the elderly in Ireland and there is evidence of inequalities in prescribing across gender, age and health board regions.

Summary

5.9 This chapter has examined prescribing behaviour in the Irish Primary Care Reimbursement Service and how this has changed since the early 1990s. The Primary Care Reimbursement Service covers prescribing under three schemes: the General Medical Services scheme, the Long-term illness scheme and the Drug Payment Scheme. Over 50 million items were prescribed under these three schemes in 2005. Although the proportion of the population covered by the medical card scheme had been falling over time, the inclusion of all aged over 70, irrespective of income, in

2001 increased the number covered by the GMS scheme from 323,000 in 2000 to 397,000 in 2001.

5.10 The increase in the number covered by the GMS scheme has increased total expenditure under the scheme, but costs were increasing strongly before 2001 anyway. The costs of medicines per patient aged 65 or more for example has increased from €312 in 1995 to €1240 in 2005.

5.11 Prescription costs under the Primary Care Reimbursement Service increase strongly with age reaching a peak among those aged 70 to 74, but falling thereafter. Much of this extra expenditure results from the increased prevalence of chronic health conditions among older age groups such as cardiovascular disease, respiratory and thyroid conditions. Population ageing in future decades may increase expenditure on such diseases nationally, but developments will depend upon trends in population health.

5.12 Some interesting issues arise from this analysis of public sector costs and patterns of prescribing for older people. First, the eligibility of all people over 70 for free prescriptions has increased costs, and the costs now all fall on the public sector. Second, since the population is growing disproportionately in the eligible age groups this growth is likely to persist. As with other health services, a key driver of change is changing expectations. Since those over 75 have lower costs for prescriptions than those between 70 and 75, it is likely that changing expectations will lead to higher growth in costs for this older population.

Chapter 6: Long-term Care

Introduction

6.1 The purpose of this chapter is to examine the demand for and supply of long-term care (LTC). The need for long-term care is distinct from the need for acute health care. People in need of LTC have impairments which make them dependent on personal help and nursing care in the long-term and possibly until death. No general, internationally comparable definition of LTC need exists. In Germany, the social dependency insurance act includes a definition of people in need of long-term care: “persons with a physical or mental disability, who need assistance in normally and regularly recurring activities of daily living on a longterm basis, prospectively for at least 6 months, to a substantial or exceeding degree”. (Schulz, 2004:55)

6.2 The OECD publishes data on long-term care recipients in institutions and at home and defines long-term care as: “a range of services required by persons suffering from a reduced degree of functional capacity, physical or cognitive, and who are consequently dependent on help with basic activities of daily living (ADL), such as bathing, dressing, eating, getting in and out of bed or chair, moving around and using the bathroom. This personal care component is frequently provided in combination with basic medical services such as wound dressing, pain management, medication, health monitoring, prevention, rehabilitation or services of palliative care. Depending on the setting in which long-term care is provided and national programme design, long-term care services can also include lower-level care related to help with instrumental activities of daily living (IADL), such as help with housework, meals shopping and transportation.” (OECD, 2007: *Sources and Methods*).

6.3 In Ireland, the Mercer Report defined long-term care as “care provided to those who are unable to look after themselves without support due to long-term physical disability or cognitive impairment disability” (Department of Social and Family Affairs, 2002:32). Long-term care could include:

- Assistance with the instrumental activities of daily living i.e. activities such as cooking, cleaning and shopping (personal help);

- Assistance with the activities of daily living such as eating, dressing and bathing (personal care);
- Paramedical services such as chiropody, physiotherapy, speech therapy and occupational therapy;
- Medical services, including skilled nursing care and services provided by general practitioners and consultant geriatricians and encompassing assessment and rehabilitation as well as ongoing medical care. (*ibid*: 55)

6.4 Assistance with activities of daily living are considered social care services whereas paramedical and medical services are considered health services, delivered in the community by primary care practitioners or in hospitals, and discussed already in other chapters in this report. The OECD's System of Health Accounts (SHA) excludes social services from accounting for health care expenditure. However, OECD and other analysis recognises the importance of social care services and their close relationship to the health care system (OECD, 2006; European Commission, 2001). This chapter primarily examines the demand for and delivery of social care services but refers also to those nursing and paramedical services which are most closely linked with social care. The majority (92%) of recipients of LTC in institutions in Ireland are aged 65 and over and require care because of disabilities associated with ageing. This chapter discusses factors influencing the demand for care by such older people rather than demand for care for younger people with disabilities.

6.5 The demand for LTC is most immediately driven by: population growth, developments in life expectancy, disability trends, and trends in household composition. In addition, rising expectations may convert hitherto unmet need into active demand for care. Requirements for a higher standard of care may increase the cost of care and, in particular, the staffing levels required to deliver care. Developments in the acute sector, such as reduced length of stay, may translate into increased demand for long-term care. Severe disability is generally considered a reasonable proxy for the need of long-term care, thus defining and measuring disability is important in assessing LTC demand (Schulz, 2004).

6.6 Long-term care can be provided either at home or in institutions, including nursing homes and long-stay hospitals. As new forms of residential arrangements for older people have emerged in many OECD countries over the past 15 years, the OECD observes that it is increasingly difficult to distinguish home care from institutional care within countries. Cross-country comparisons encounter difficulties because the same term may describe a different kind of institution in different countries (OECD, 2007: *Sources and Methods*). On occasion long-term care is provided in acute hospitals due to the unavailability of care in appropriate long-term institutions or the community. In the community, long-term care may be supplied by informal carers, typically family members, or by formal carers. It may be delivered publicly, privately or by the voluntary sector, with a greater or lesser degree of state subsidy. Female labour force participation rates are critical to determining the availability of informal carers.

6.7 The supply of long-term care is therefore influenced by: the supply of institutional care places, whether public, non-profit or private; government investment in or subsidy of such places; the market for private care; the institutional arrangements and policy approach which determines the mix between institutional and home care; the availability of informal carers; and the availability and accessibility of formal care in the community. This chapter examines the available data on demand for and supply of long-term care in Ireland.

Factors influencing the demand for long-term care

Demography of older people

6.8 The almost static proportion of people aged 65 and over in the Irish population over the last decade cloaks a considerable increase in the absolute numbers in these age groups (Table 6.1). Over the ten years 1996-2006 the number of people aged 85 and over increased by nearly 39%, reflecting increased life expectancy (discussed in Chapter 1). While this increase was from a low base, the absolute addition of over 13,000 people aged 85 and over, and of nearly 37,500 people aged 70 and over, is not

insignificant, particularly when over the same decade the supply of public long stay beds showed virtually no change.

	1996	2002	2006	Increase 1996- 2006	% growth rate
65 - 69 years	126809	133474	143396	16587	13.1%
70 - 74 years	112542	112129	119152	6610	5.9%
75 - 79 years	84097	89815	92466	8369	10.0%
80 - 84 years	55771	58857	64884	9113	16.3%
85 +	34663	41726	48028	13365	38.6%
65 +	413882	436001	467926	54044	13.1%
70 +	287073	302527	324530	37457	13.0%
Total population	3626087	3917203	4239848	613761	16.9%

6.9 Whereas numbers of people aged 85 and over have increased in greater proportion than the population, the 70-79 year old cohorts show low percentage increases, reflecting the ageing of a generation depleted by a very high emigration rate in the 1950s when they reached adulthood.

Disability trends

6.10 The degree to which the increases in absolute numbers of people in older age brackets will translate into demand for long-term care will largely be determined by developments in the disability rate. Evidence from the Census of Population in 2002 and 2006 shows declining disability prevalence in people aged 72 and over (analysed in detail in Appendix A, Layte et al, 2009). The most influential recent assessment of demand for long-term care, the Mercer report, did not have the benefit of the Census 2002 findings on disability and therefore estimated disability prevalence in Ireland by adapting a UK study (Department of Social and Family Affairs, 2002).

Household composition

6.11 Accompanying the absolute growth in numbers of older people has been an increase in the proportion of older people living alone. The proportion of the population aged 70 and over who were living alone rose from 22.5% in 1986 to 29% in 2006. The increase in the proportion of people living alone over the years 1986-2006 largely occurred in the first decade with the rate stabilising in the 1996-2006 period. More women than men live alone. The proportion of women aged 70 and over who were living alone increased from 32.8% in 1996 to 34.1% in 2006 (Figures 6.1-6.3). The high incidence of women living alone may explain why older women have a higher average length of stay in acute hospitals than men of the same age (Chapter 2: 2.29). Such women have no one at home to provide informal care during a period of convalescence or disability following discharge from hospital.

6.12 Combined with the increase in absolute numbers of people living to older ages in Ireland, the growth in the proportion living alone implies significantly increased demand for professionally delivered long-term care services in the community or in institutions. While 81,121 people aged 70 and over lived alone in 1996, this had risen to 94,137 by 2006, an additional 13,016 people or 16 per cent increase over 10 years. Over the same period the number of people aged 70 and over who did not live in private homes (i.e. were resident in nursing homes, hospitals or other institutions on Census night) increased from 30,416 to 38,336, a 26% increase.

Figure 6.1: Persons Aged 70 and Over Living Alone or Not in Private Households 1986-2006

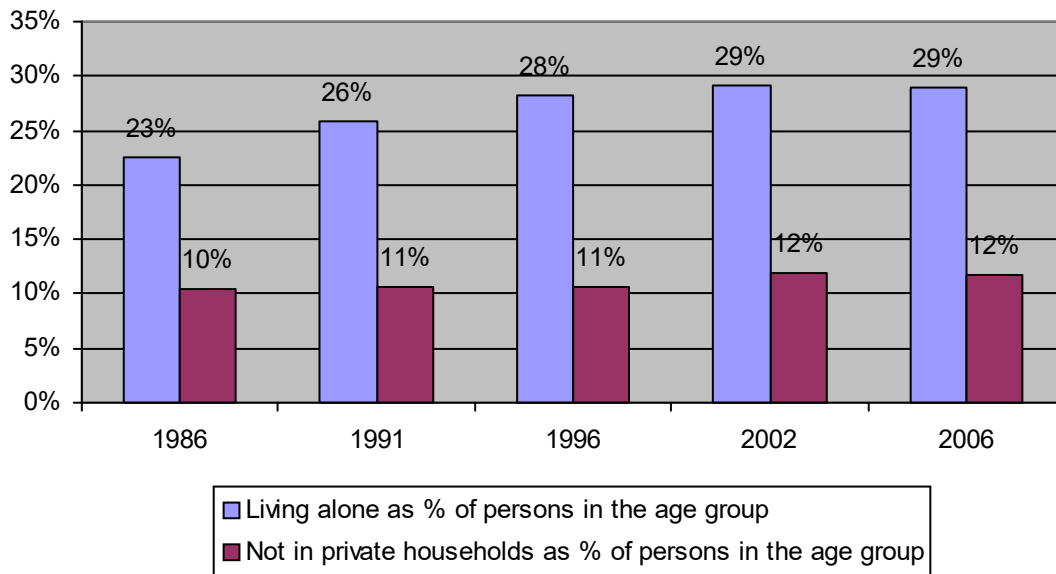


Figure 6.2: Women aged 70 and over living alone or not in private households 1986-2006

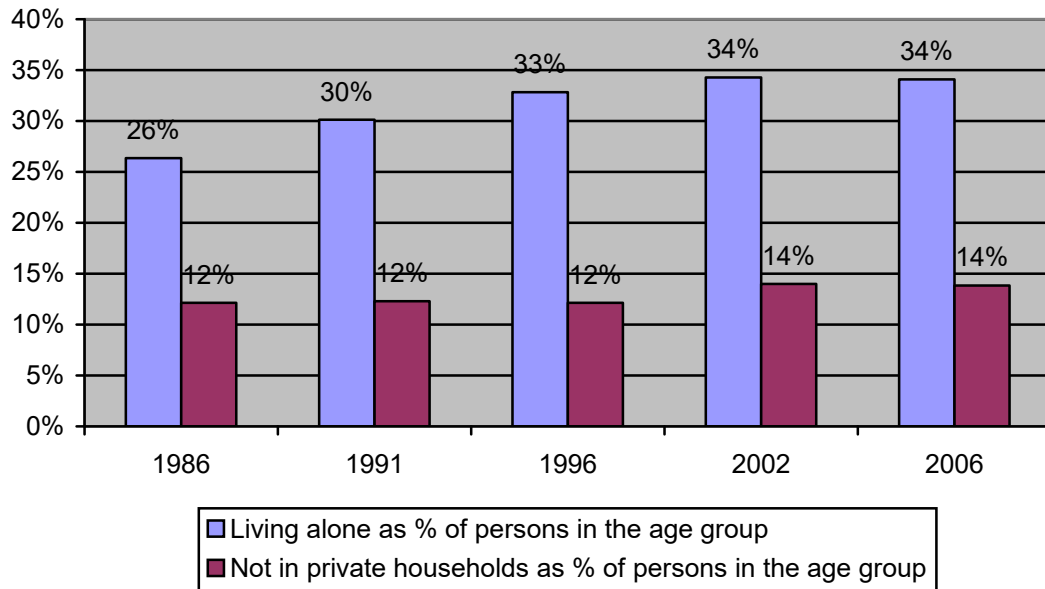
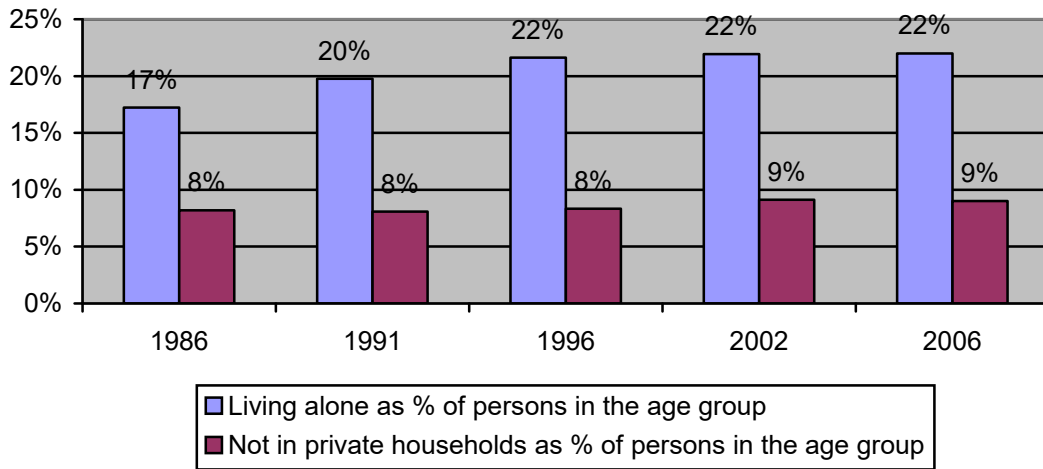


Figure 6.3: Men aged 70 and over living alone or not in private households 1986-2006



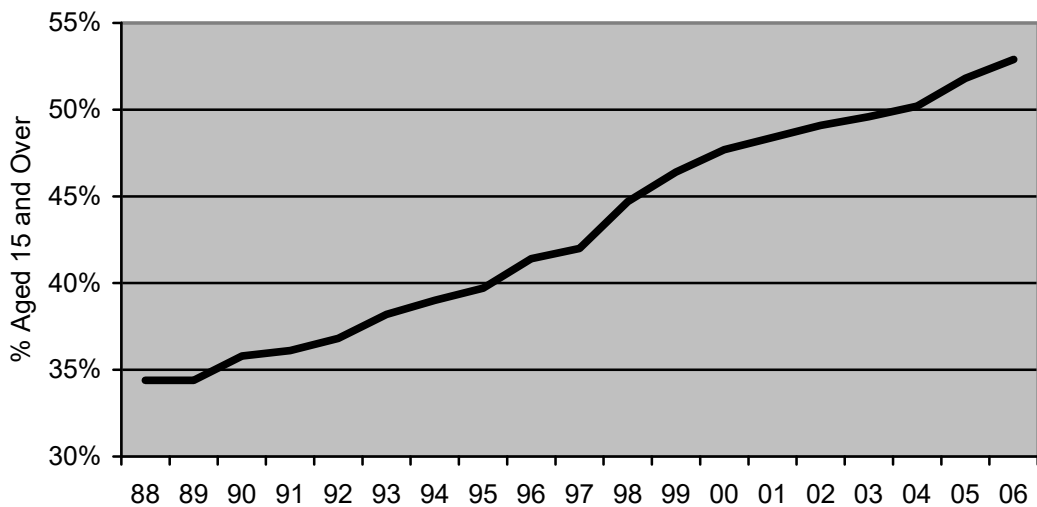
Source Figures 6.1-6.3: Census of Population for relevant years.

The supply of long-term care

Female labour force participation/Supply of informal carers

6.13 The steep increase in female labour force participation reduces the potential supply of informal carers. Labour force participation has risen from 34.4 per cent of women in Ireland aged 15 and over in 1988 to 53 per cent in 2006 (Figure 6.4).

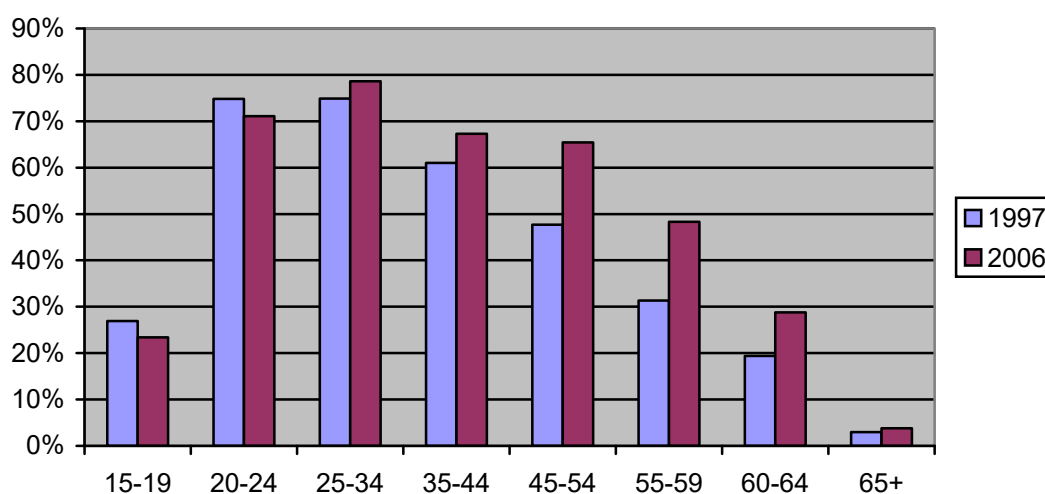
Figure 6.4: Female Labour Force Participation 1988-2006



Source: ILO Participation Rates (1988-1997) 1998-2006 annual average calculated from quarterly rates.

6.14 The full significance of this increase is revealed by examining increases in labour force participation by cohort (Figure 6.5). While the cohort aged 20-24 shows a marginal decline in participation in the years 1997-2006, the rate nonetheless remains high at over 71 per cent. In 2006 the 25-34 year old cohort has the highest participation rate of nearly 79 per cent, compared to 67 per cent for the 35-44 year old age cohort, who are most likely to have family-rearing demands. Their participation rate contrasts with rates of 48 per cent for the cohort aged 55-59 and 29 per cent for women aged 60-64, many of whom may have abandoned formal remunerated employment on marriage or parenthood. If younger cohorts maintain participation rates of close to 70 per cent in their later years, as seems probable, the supply of potential carers will be much diminished.

Fig. 6.5 :Female Labour Force Participation Rate by Age Cohort 1997-2006

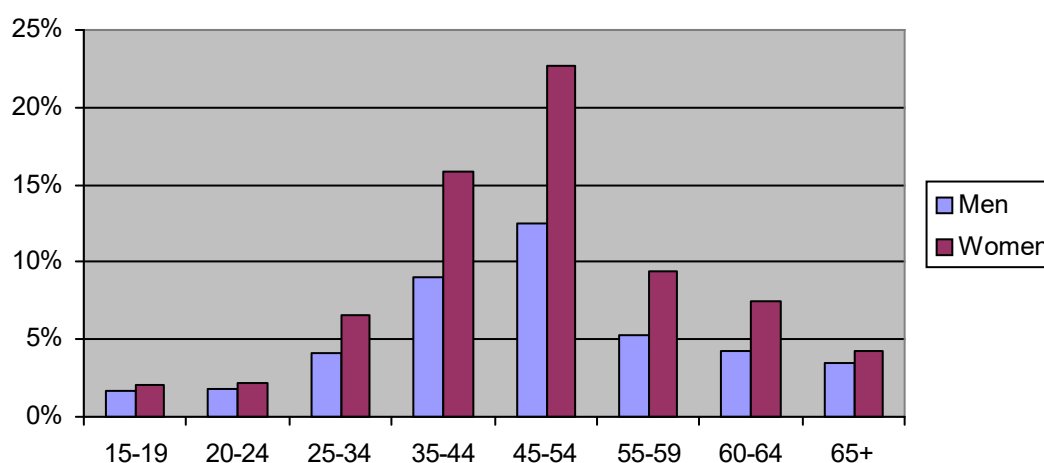


Source: Central Statistics Office QNHS, rates for fourth quarter.

6.15 Reliance on unpaid carers for the care at home of older ill and disabled people is common in Ireland and internationally (Schultz, 2004). In 2006 4.8% of the total population aged 15 and over provided some unpaid care, according to the 2006 Census. This represents 160,900 people who in that year were engaged in unpaid care of friends or family members with long-term illness, or disability. Of these, nearly 41,000 (1.2% of the population) were providing 43 or more hours care per week;

almost 10,000 were providing between 29 to 42 hours; and a further 17,000 were providing 15 to 28 hours care weekly. More women than men provided this informal care (Figure.6.6). Over 11% of women aged 45-54 were providing unpaid care in 2006. Nearly 5% of this cohort of women were providing 15 or more unpaid hours of care each week. The proportion of the Irish population and the peak cohort engaged in unpaid care fall within the EU average. In 2001 across the EU (excluding Luxembourg and Sweden) 4% of the population aged over 15 looked after the old and disabled, and this peaked at 9% of women aged 45-59 (Schulz, 2004). These EU averages disguise great cross-country differences in the proportion of the population engaged in informal care. In the UK in 2001 16% of the population was engaged in the informal care of older people compared to 2% in Germany (Schulz, 2004).

Figure 6.6: Unpaid Carers of Ill and Disabled by Age Cohort and Sex as Percentage of Population Census 2006



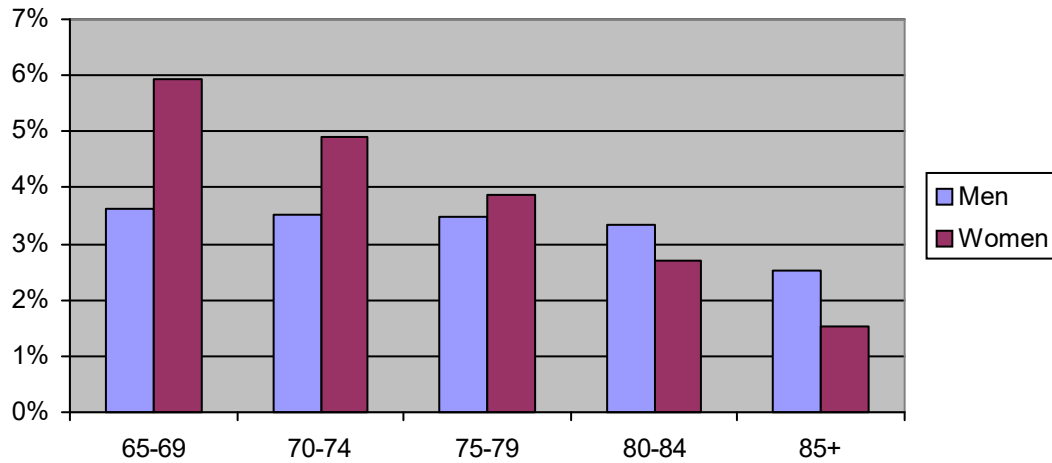
6.16 The potential pool of unpaid carers is diminishing rapidly in Ireland. The Irish cohort of 25-34 year old women, who in 2006 show the highest labour force participation rate, will over the 19 years to 2026 become the cohort of 45-54 year old women, on whom the burden of unpaid care falls most heavily (Figures 6.5 and 6.6). Already, over the years since 1997 increased labour force participation among women aged 45-59 might be expected to have contributed to demand for formal care of older people (Figure 6.6). Despite some evidence that married women will give up paid employment to provide informal care, ECHP data for 2001 show under 2% of care-

givers outside paid employment reporting that they gave up their job to look after older people. The majority of care appears to be given by women already working in the home (Schulz, 2004). It has been estimated for Germany that by 2050 the proportion of informal care-givers could rise to 25% of non-employed women and 9% of employed women aged 40-64, and to 9% of women aged 65-80. Demographic pressures are expected to lead to increased demand for professional caregivers at home and in institutions (Schulz, Leidl and Konig, 2004).

6.17 While women and men in late middle age care for ageing parents, increasingly older people also care for their ill or disabled spouses due to increased life expectancy. Thus 4.2% of women and 3.4% of men aged 65 and over were in caring roles in Ireland in 2006. There are significant numbers of carers even amongst the oldest old, with proportionately more men than women in these roles at ages of 80 and above, reflecting the much higher proportion of women than men who live alone due to widowhood at these ages, and conversely the much higher proportion of men than women who may live with an ill or disabled spouse at these ages (Figure 6.7).

6.18 Even at advanced age some carers carry heavy burdens. Of the nearly 40,000 Irish men aged 80 and over in 2006, nearly 1,200 (3%) were carers, of whom nearly 700 (1.7%) were providing 29 or more hours unpaid care a week. In absolute terms there were still more women than men at these ages in caring roles. Of the 73,400 women aged 80 and over in 2006, nearly 1,600 (2.2%) were carers, of whom 900 (1.2%) were providing 29 or more hours unpaid care a week. Although these carers at advanced age are few in proportion to the population of their age, without their unpaid labours there could conceivably have been an additional 1,588 people requiring nursing home care, increasing the estimated population of 22,500 people aged 65 and over receiving care in institutions by 7% in 2006.

Figure 6.7: Unpaid Carers of Ill and Disabled As A Percentage of Population in Older Age Cohorts, Census 2006



6.19 Some recipients of care in institutions are stated to require care for “social reasons”. In the Dublin/ North-East HSE region of the country 7.1% of patients occupied limited stay beds for “social reasons” compared to 3.4% in the West in 2006 (Department of Health, Longstay Activity Statistics, 2006). Such regional variations warrant further examination as potential emerging evidence of the effect of increased female participation and/or dispersion of generations on the availability of informal care for older people.

Existing Care

Institutional care - international data

6.20 It has been observed above that cross-country comparisons of institutional care rates are difficult because of differing definitions of care. Available data do, however, reveal considerable divergence in institutional care rates possibly reflecting cultural and policy differences, or differing disability prevalence and life expectancy among the population aged 65 and over. While OECD data for many countries are not directly comparable due to differences in the data supplied to the OECD, such as the inclusion solely of residents in public institutions in Ireland and some other countries

(Table 6.2), among those countries for which broadly comparable data are available (Table 6.3), the percentage of the population aged 65 and over who receive long-term care in institutions ranges from 7.5% in Sweden to 0.5% in Korea. From national data sources discussed below, it is possible to calculate that 4.8% of the Irish population aged 65 and over were in receipt of long-term care in an institution in 2006, placing Ireland close to the average (excluding Korea) among countries with broadly comparable data.

6.21 It should be recalled that what constitutes a long-term care institution in any of these countries may range from retirement villages to sheltered accommodation to private nursing home care to a long stay ward in a hospital. The scatter diagram below (Figure 6.8) illustrates that there is a variable relationship between the proportion of over 65s in long-term care institutions and the proportion of the population aged 80 and over among countries with comparable data (Table 6.3), indicating the importance of influences other than the age profile of the population in determining the institutionalisation rate of older people. Italy in particular is an outlier with a very low rate of institutional care of over 65s (1.5%) relative to its share of population aged 80 and over (4.7%).

Table 6.2: Percentage of long-term care recipients in institutions among people aged 65 and older – OECD countries

	2004/2003	Percentage of population aged 80 and over, 2004/2003
Australia*	5.3	3.4
Austria* a)	3.6	4.2
Belgium* a)	6.6	-
Canada	4.2	3.3
Czech Republic b)	4.9	2.8
Denmark	4.4	4.1
Finland	4.9	3.7
France	6.3	4.4
Germany	3.4	4.2
Hungary b)	8	3.3
IRELAND*	1.8	2.7
Italy	<i>1.5</i>	4.7
Japan*	3	4.4
Korea	0.4	1.2
Luxembourg*	3.9	3.1
Netherlands	5.6	3.4
New Zealand*	4.5	3.1
Norway	5.8	4.5
Slovak Republic b)	5.1	2.2
Sweden	7.5	5.3
Switzerland	6.6	4.3
UK* c)	4.2	4.4
USA d)	3.6	3.5

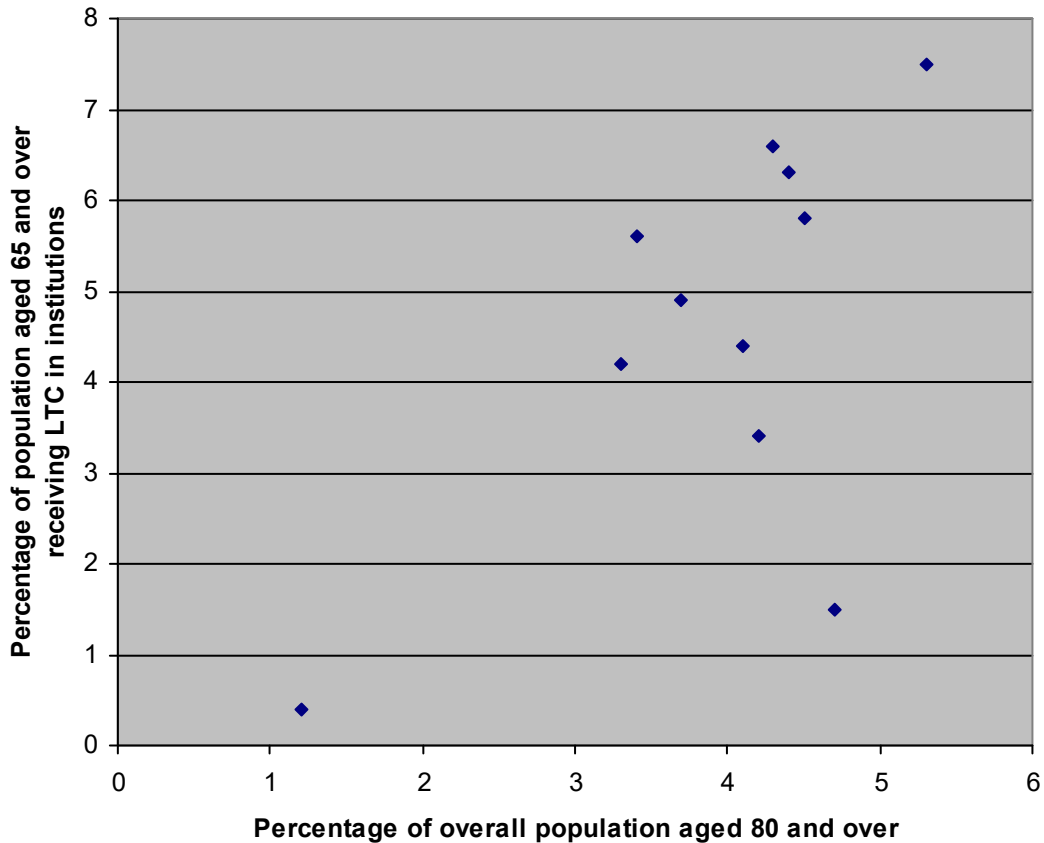
Source: OECD Health Data, 2007. Note: figures in italics are for 2003. ***Only residents of publicly-funded institutions- this applies to Ireland in these data.** a) Aged 60 and over. b) Recipients of all ages. c) Estimated from English data. d) 1.5% of recipients excluded due missing age data.

Table 6. 3: Percentage of long-term care recipients in institutions among people aged 65 and older – countries with more comparable data

	2004/2003	Percentage of population aged 80 and over, 2004/2003
Canada	4.2	3.3
Denmark	4.4	4.1
Finland	4.9	3.7
France	6.3	4.4
Germany	3.4	4.2
Italy	<i>1.5</i>	4.7
Korea	0.4	1.2
Netherlands	5.6	3.4
Norway	5.8	4.5
Sweden	7.5	5.3
Switzerland	6.6	4.3
Average	4.6	3.9
Average excluding Korea	5.0	4.2

Source: OECD Health Data, 2007. Note: figures in italics are for 2003.

Figure 6.8: Relationship between institutionalisation rate of over 65s and proportion of population aged 80 and over, OECD countries 2003/2004



Residential Care - National Data

6.22 There are a number of sources of data for long-term residential care in Ireland. The Census of Population for 2002 and 2006 enumerated numbers living in public and private nursing homes in a count of “persons enumerated in communal establishments”. Detailed examination of the Census data reveals a substantial population at younger ages, suggesting that this category includes institutions that are not LTC facilities, which limits the usefulness of these data. The Department of Health and Children has published Longstay Activity Statistics since 1980 based on a survey of public, voluntary and private, long-stay institutions. The response rate to the survey has been variable, and it tends to understate the private nursing home population, in particular. The Irish Nursing Homes Organisation has published annual surveys of all registered private nursing homes since 2003. This survey includes

homes run by voluntary and religious groups. A further study based largely on these surveys and focussing on the cost of appropriate care has been published by Age Action Ireland (McEnery, 2007).

6.23 The annual Longstay Statistics volumes published by the Department of Health and compiled by surveying all longstay units nationally, show the public longstay bed stock fluctuating between approximately 8,700 and 9,700 from 1995 to 2006 (excluding years with atypical survey response rates); and the voluntary longstay bed stock fluctuating at between 3,000 and 3,800 (Table 6.4). The Department of Health has stated that there were 9,488 beds in public longstay units in 2006 (Department of Health, 2006). Public long-stay units include HSE welfare homes and newly defined “HSE extended care units”, which umbrella definition encompasses former Health Board geriatric homes, geriatric hospitals, district hospitals and community hospitals. Since 2004, the Department has distinguished between longstay (over three months) and limited stay beds. That distinction is not made in this discussion.

Table 6.4: Public and Voluntary Bed Capacity
1994-2006

	Public	Voluntary	Survey Response Rate
1994	9278	3290	-
1995	9261	3385	-
1996	9573	3786	-
1997	9716	3676	86.6%
1998	9138	3019	77%
1999*	6158	1137	46.9%
2000*	8318	2150	68.3%
2001	8671	2945	84.9%
2002	8671	3227	87.3%
2003	8773	2717	87.3%
2004	9498	3280	85.4%
2005**	7699	3429	80%
2006**	8007	2212	80.1%

Source: Department of Health Longstay Activity Statistics

* These years' low survey response rates related to the establishment of the Eastern Regional Health Authority. ** The low response rate in 2005 and 2006 relate to the establishment of the HSE.

6.24 While the Department records increasing numbers of private nursing home beds, its count is not complete. A complete count of beds in all registered private homes published by the Irish Nursing Homes Organisation (INHO) shows a steady growth of private and voluntary beds from some 15,000 in 2003 to nearly 18,000 in 2006 (Table 6.5). Given the relative stability of numbers of beds in the voluntary sector, this effectively represents a growth in private beds. It has been estimated that in 1995 the combined private and voluntary bed supply was slightly in excess of 10,500 (McEnery, 2007). The increase by more than 70% in private and voluntary beds over a decade has largely been driven by the introduction of tax incentives in 1997, which afford investors potential 47% tax savings against income and profits. While an effective policy if judged solely by the rapid increase in supply, the consequent influx of inexperienced operators in an under-regulated area has provoked expressions of concerns about standards of care and staffing ratios (O'Neill, 2006; McEnery, 2007). The HSE also regularly contracts private beds from the private sector. It has been argued that the HSE contract price is set too low to maintain adequate staffing ratios (McEnery, 2007).

Table 6.5: Growth in private and voluntary nursing home capacity 2003-2006

	2003	2004	2005	2006	Increase 2003-2006
Beds	14946	16461	17722	17909	19.8%
Occupancy	89.0%	86.8%	86.1%	89.4%	
Estimated Residents	13301	14288	15258	16011	20.4%

Source: Irish Nursing Home Organisation, 2006; Residents estimated by applying occupancy rates to bed numbers.

6.25 With 17,909 beds and an occupancy rate of 89.4% (Irish Nursing Homes Organisation, 2006), private and voluntary nursing homes can be estimated to have had an average population of some 16,000 in 2006. If the 9,488 public long-stay beds in 2006 had the 88.5% occupancy rate recorded for the units surveyed (Department of Health, Longstay Activity Statistics, 2006), they would have accommodated 8,396 patients. Thus it would appear that private, public and voluntary sectors combined had approximately 27,400 beds accommodating approximately 24,400 patients in 2006.

6.26 The variability of the survey response rate to the department's Longstay Statistics renders it difficult to analyse the trend in demand for LTC from this source. It can, however, be estimated from the INHO surveys that the population resident in private and voluntary facilities increased by 20% in the years from 2003 to 2006 (Table 6.5). If it is assumed that public long-stay units had an approximately constant population of some 8,400 over this period, the overall number of residents would have increased from 21,700 to 24,400, a 12.4% increase. In this period the number of people aged 65 and over increased by 6% and numbers aged 80 and over by 10%, suggesting that utilisation rates of residential long-term care have been increasing.

6.27 While the Department's Longstay Statistics do not offer precise totals of either capacity or patients because of variable coverage, they do nonetheless provide a very detailed survey of the characteristics of recipients of long-term institutional care. The Irish Nursing Home Organisation's Surveys also provide details of patients' characteristics. The INHO's 2006 survey received a 33% response rate from the registered and private voluntary homes.

Characteristics of long-stay residents

Age

6.28 The majority of residents of long and limited stay institutions are aged 65 and over. Only in voluntary homes/hospitals for older people are a substantial proportion of residents aged under 65 at 26.4% and under 40 at 7.1%. In HSE extended care units, 9% of residents are aged under 65 and 2.4% under 40. LTC institutions largely cater for people who are in need of care due to the disabilities and illnesses consequent on ageing. The Department of Health's survey across all categories of unit, including private and voluntary nursing homes, found 92.3% of residents to be aged 65 and over and 65% aged 80 and over in 2006. This is a marginal increase from 63.1% of patients who were aged 80 and over in 1997. Assuming these age profiles hold true of the estimated 24,400 patients in all categories of long-stay unit in 2006, this implies that approximately 22,500 residents were aged 65 and over, representing 4.8% of the population of 467,926 in that age bracket (Census 2006).

Table 6.6. Age profile of residents of private and voluntary nursing homes, 2006

Age category	Under 65	65-75	76-85	Over 85
	3.8%	12.4%	41.2%	42.6%

Source: INHO, 2006

Table 6.7. Age profile of residents of public long-stay units, 2006

Long-stay	Under 65	65-74	75-84	85-94	95 and over
HSE extended care unit	8.8%	14.0%	38.1%	35.8%	3.2%
HSE welfare home	2.5%	14.8%	42.0%	37.7%	2.9%
Limited-stay HSE extended care unit	10.8%	18.4%	42.2%	26.6%	2.0%
HSE welfare home	6.4%	27.6%	35.7%	29.4%	0.9%

Source: Department of Health Long-Stay Activity Statistics, 2006

Gender

6.29 The majority of residents of long-stay units of every type are female, although this percentage varies by bed and unit type. While 10.7% of male patients across all units are aged 90 and over, 22.0% of female patients are of this age, reflecting women's longer life expectancy, and greater probability of living alone and needing formal care.

Table 6.8. Gender profile of residents of long-stay units, 2006

Category of Unit	Male	Female
HSE extended care unit	38.6%	61.4%
HSE welfare home	40.7%	59.3%
Voluntary Home/Hospital for Older People	38.0%	62.0%
Voluntary Welfare Home	35.1%	64.9%
Private Nursing Home	29.9%	69.9%
Total All Beds	33.7%	66.2%

Source: Department of Health Long-Stay Activity Statistics, 2006

Dependency Level

6.30 The Department of Health asks long-stay units to describe their residents' level of dependency according to four definitions: low, medium, high and maximum dependency. These definitions respectively broadly imply: relative independence; impaired mobility and absence of support/care at home; multiple disability but not bed bound; and likely to be bed bound and requiring nursing care and assistance with all personal care.²⁶ The largest proportion of residents (39.6%) were in the maximum dependency category requiring a high degree of nursing care and assistance. HSE extended care units had the highest proportion of maximum dependency residents (43.9%) and of maximum and high dependency residents combined (76.7%). Private nursing homes had a lower level of maximum dependency residents (38.2%) and of maximum and high dependency residents combined (69.4%). Voluntary welfare homes reported the lowest proportion (33.6%) of residents in the high and maximum dependency categories. Almost three quarters (72.7%) of residents in long-stay beds are in the high or maximum dependency categories compared to just over half (50.7%) of residents in limited-stay beds (Department of Health, Longstay Activity Statistics, 2006).

Disability/Illness

6.31 The Department also elicits information about residents' medico/social status or "main reason for residence" under 11 possible headings: respite, chronic mental

²⁶ The Department of Health uses the following definitions of dependency:

- **Low dependency:** This category refers to people who need some support in the community and the more independent residents in residential accommodation who require little nursing care. They are usually independently mobile but may use a walking stick and have difficulty managing stairs.
- **Medium dependency:** Person whose independence is impaired to the extent that he or she requires residential care because the appropriate support and nursing care required by the person cannot be provided by the community. Mobility is impaired to the extent that the person requires supervision or a walking aid.
- **High dependency:** Independence is impaired to the extent that the person requires residential care but is not bed bound. The person may have a combination of physical and mental disabilities, may be confused at times and be incontinent. He/she may require a walking aid and physical assistance to walk.
- **Maximum dependency:** Person whose independence is impaired to the extent that he/she requires nursing care. The person is likely to be bed bound, requires assistance with all aspects of personal care and may be ambulant but confused, disturbed and incontinent. (Department of Health, Long-stay Activity Statistics, 2006)

illness, chronic physical illness, convalescence, rehabilitation, dementia, physical disability, intellectual disability, social reasons, palliative care, and other reasons. The largest proportion of residents require care because of chronic physical illness (34.5%) with dementia (24.1%) as the second largest reason for residence (Table 6.9). These reasons for residence apply to over 40% of residents in all categories of long-stay unit except for voluntary welfare homes, where 54% of residents were present for social reasons in 2006, 22% due to chronic physical illness and 12% due to physical disability (Department of Health, Longstay Activity Statistics, 2006). Private nursing homes report significantly more residents suffering from dementia (29.9%) than any other category of institution. A further 6.8% of their residents suffer from chronic mental illness. In the INHO survey of private and voluntary homes in 2006, 36.8% of residents had been formally diagnosed with dementia, which the INHO suggested might be understated because residents with dementia might not be formally assessed or categorised as dementia residents (Irish Nursing Homes Organisation, 2006).

Table 6.9. Medico/social status of residents of long-stay units, 2006

	HSE extended care unit	HSE welfare home	Voluntary Home/Hospital for Older People	Voluntary Welfare Home	Private Nursing Home	Total All Beds
Respite	6.3%	3.0%	3.2%	2.5%	3.1%	4.0%
Chronic mental illness	5.8%	11.4%	2.2%	3.8%	6.8%	6.4%
Chronic physical illness	44.1%	33.9%	30.1%	22.3%	30.8%	34.5%
Convalescence	4.7%	0.4%	3.5%	0.3%	2.0%	2.7%
Rehabilitation	3.0%	3.3%	6.1%	0.0%	1.0%	2.1%
Dementia	18.6%	15.1%	12.5%	5.0%	29.9%	24.1%
Physical Disability	5.0%	7.4%	5.5%	11.9%	11.4%	8.9%
Intellectual Disability	5.8%	3.1%	25.0%	0.0%	2.1%	4.9%
Social Reasons	3.7%	19.3%	8.6%	53.9%	8.1%	8.3%
Palliative Care	1.5%	0.8%	0.7%	0.3%	0.9%	1.0%
Other	1.6%	2.5%	2.5%	0.0%	4.0%	3.1%

Source: Department of Health Long-stay Activity Statistics, 2006

Length of Stay

6.32 Of residents in all long-stay units who were discharged during 2006, including those who died, the majority (78%) had been present for less than three months (Table 6.10). Voluntary homes/hospitals and HSE extended care units had the greatest proportion of such short-stay discharges at 89.2% and 83.2% respectively, while private nursing homes had the lowest proportion at 65.4%. Correspondingly, only 5.5% of voluntary home residents and 8.4% of residents of HSE extended care units were discharged following a stay of over one year, compared to 19.8% of residents of private nursing homes (Department of Health, Long-stay Activity Statistics, 2006). The average length of stay for residents in the private and voluntary nursing homes surveyed by the Irish Nursing Homes Organisation was 3.6 years in 2006. The apparent contradiction between this high average length of stay and the fact that over a year the majority of residents discharged have been present for less than three months reflects differences in survey methodology. The Department reports on all discharges over a year, while the INHO reports on the length of stay of all residents present at a point in time, the majority (93.2%) of whom are considered to be long-stay. Over half of long-stay patient stays (51.3%) end with death compared to 3.7% of patient stays in limited-stay beds. The majority (83.9%) of patients in limited-stay beds are discharged into the community.

Table 6.10. Proportion of residents of long-stay units discharged (including deaths) during 2006 by length of stay

	HSE extended care unit	HSE welfare home	Voluntary Home/Hospital for Older People	Voluntary Welfare Home	Private Nursing Home	Total All Beds
Under 3 months	83.2%	73.3%	89.2%	74.4%	65.4%	78.0%
3 - 6 months	5.7%	4.6%	3.6%	1.5%	7.6%	5.9%
6 - 12 months	2.8%	3.0%	1.7%	3.0%	6.7%	3.9%
1- 2 yrs	3.3%	3.6%	1.6%	4.1%	6.5%	4.1%
2-4 yrs	2.8%	6.7%	1.8%	5.6%	7.2%	4.2%
4 -6 yrs	1.0%	4.8%	0.8%	3.5%	3.4%	1.9%
6-10yrs	0.9%	2.5%	0.8%	7.6%	2.0%	1.3%
10+ yrs	0.4%	1.4%	0.5%	0.3%	0.7%	0.5%

Source: Department of Health Long-stay Activity Statistics, 2006

Relationship between acute and long-term care – regional variations

6.33 Significant variation is evident in regional patterns of admission to and discharge from long-stay units. In 2006 48.5% of residents were admitted from the community within the Western region compared to 69.1% in the Dublin / Mid-Leinster region. Correspondingly, the proportion admitted from acute hospitals also varied from 22.0% in Dublin / Mid-Leinster to 44.5% in the West. A higher proportion of patients (16.0%) died when resident in long-stay units in Dublin/Mid-Leinster compared to 14.5% in the West, whereas 14.3% of residents were discharged to acute hospitals in the West, compared to 4.4% in Dublin/Mid-Leinster (Department of Health, Long-stay Activity Statistics, 2006).

6.34 A pattern thus emerges in the 2006 data which show long-stay units in the West playing a more integrated role with hospital services than in the Dublin/Mid Leinster region. Residents in the West were much more likely to be admitted to a long-stay unit from hospital and to be discharged to an acute hospital. Residents in Dublin/Mid-Leinster were much more likely to be admitted to a long-stay unit directly from the community and to die there. It would appear that in long-stay units in the West residents who become very ill are more likely to be discharged to hospital and to die there. There has been official recognition for some time that the supply of stepdown facilities from acute hospitals is a particular problem in the East. Difficulties in accessing acute care have also been most pronounced in the East, as evidenced by waits in Accident and Emergency departments (Tussing and Wren, 2006). It was noted in Chapter 2 (para 2.46) that patients in acute hospitals in the East had the longest average duration of hospitalisation, staying in hospital for more than 8 days on average in 2004, which was approximately 28 per cent longer than the figure across all health boards, an observation which might partially reflect complexity of conditions but could also reflect difficulties in accessing appropriate long-stay or limited stay accommodation on discharge.

Long-term care in the community

6.35 No definition of “community care” appears in Irish legislation. Eligibility for services is unclear. The National Economic and Social Forum (NESF) has published a broad definition:

As part of the services for older people, community care generally means helping people who need care and support to live with dignity and independence in the community, usually in the person’s own home or the home of a relative. But it could also include care provided in specially provided facilities within the local community, for example in some form of sheltered or supported housing with varying degrees of supervision and /or nursing care. The care involved may be provided by a combination of sources: family members or voluntary carers, public health nursing, home help, day centres, paramedical services such as occupational therapy and chiropody, meals on wheels, etc. (National Economic and Social Forum, 2005: 24).

This definition can be further broadened beyond health and social services to include income maintenance, housing, transport and life-long education, all of which contribute to the ability of an older person to remain in the community. This section concentrates on care services in the community.

6.36 The majority of older people do not need care services, live fully independently and may indeed themselves care for younger and older relatives and friends (Timonen et al, 2006). The objective of maintaining older people with care needs in their own homes for as long as possible has been Government policy since the publication of *The Years Ahead: A Policy for the Elderly* (Working Party on Services for the Elderly, 1988). The social partnership agreement, *Towards 2016*, asserted a shared “vision of an Ireland which provides the supports, where necessary, to enable older people to maintain their health and well-being, as well as to live active and full lives, in an independent way in their own homes and communities for as long as possible” (Department of the Taoiseach, 2006: 60). The agreement lists among its 10-year goals:

- *Every older person would have adequate support to enable them to remain living independently in their own homes for as long as possible. This will involve access to good quality services in the community, including: health, education, transport, housing and security, and;*
- *Every older person would, in conformity with their needs and conscious of the high level of disability and disabling conditions amongst this group, have access to a spectrum of care services stretching from support for self-care through support for family and informal carers to formal care in the home, the community or in residential settings. Such care services should ensure the person has opportunities for civic and social engagement at community level (ibid).*

6.37 Evidence suggests that much more needs to be done to make this a reality (NESF, 2005). A traditional reliance on the family to care for frail, older people has led to the underdevelopment of formal community services (Convery, 2001). Barriers to the development of better community care, identified by the NESF, include: its weak legal underpinning; a bias in funding and incentives towards institutional care; uncoordinated and patchy service provision; shortages of community staff (particularly social workers, chiropodists and physiotherapists); and a lack of clarity about the respective caring roles of the family and the State (NESF, 2005). Such are the shortcomings of the existing community care system that it remains valid to ask:

is it possible, within the Irish context, to increase service provision to the level where even persons with extensive care needs, and especially those who lack informal supports, can be facilitated to live in their own homes? (Timonen, Doyle and Prendergast, 2006: 203)

6.38 Sources of data on long-term care in the community in Ireland are limited. These include: the HARP-Hessop surveys, the 2006 National Disability Survey; and a new minimum data set on services for older people, under development by the HSE.

6.39 HESSOP (Health and Social Services for Older People) is a longitudinal study of community-dwelling older people designed to identify their health and social needs, service use, and challenges to service delivery and take-up. Repeated studies were conducted in 2000 and 2004 (Garavan et al, 2001; O'Hanlon et al, 2005). The 2004 study was commissioned as part of the Healthy Ageing Research Programme (HARP), a cross-institutional, cross-border project which aims to provide continuity in knowledge of health and social service usage for older people in Ireland. Cross-border comparisons were published in a separate study (McGee et al, 2005). Samples in the HARP/HESSOP studies are close to or under 1,000 randomly selected people aged 65 and over. Only 314 of the original participants from HESSOP 2000 provided full responses to the follow-up longitudinal study in 2004.

6.40 The 2006 National Disability Survey has the benefit of a much larger sample than HARP-Hessop. The survey covers 17,000 people of all ages, randomly sampled from respondents who indicated in the 2006 Census of Population that they had a disability or longstanding health condition. The survey includes detailed questions about met and unmet need for aids to daily living and care services in the community.

6.41 In 2006 the HSE developed a minimum data set on services for older people, with monthly data collection on: number of home help hours provided; number of recipients of home help; number of persons in receipt of home care packages; and number of persons in receipt of day care (HSE Service Plan, 2006). The HSE has supplied data for 2006 and provisional data to June 2007 for home helps and home care packages. Data on day care recipients are not yet available.

6.42 While national quantitative data are limited, recent valuable qualitative research has explored the nature of and inter-relationships within the rapidly evolving system of domiciliary (at home) care in Ireland (Timonen, Doyle and Prendergast, 2006). The key providers of formal care services in the home are: public health nurses, home helps, health care assistants (formerly known as home care attendants) and privately

employed carers and nurses. Social workers and publicly employed paramedical staff, such as physiotherapists, occupational therapists and speech and language therapists, also play an important role in enabling older people to return home from hospital or to remain in their homes. The health boards formerly and now the HSE employ public health nurses (PHNs) and community general nurses (RGNs). In addition to clinical care, PHNs assess and re-assess clients for home care services. The combined effect of reduced hospital stays for older people and a public sector recruitment embargo from 2002 subsequently greatly increased demands on a stretched community nursing service (Timonen et al, 2006).

6.43 The home help service was initially developed by voluntary, non-profit organisations. From the 1970s, health boards also came to employ home helps directly. Home helps generally provide domestic services like cleaning, shopping, doing laundry and making meals. Some home helps also provide personal care and companionship. The establishment of the health care assistant role in the 1990s was the first publicly financed and publicly-provided, non-medical, home care service in Ireland. Community health care assistants provide personal care services, like washing, dressing and lifting, and helping in and out of bed (*ibid: passim*).

6.44 In 2001, health boards began to pilot home care packages, which have since become a rapidly growing conduit for state funding of home care. As pressures mounted on acute hospitals in the winter of 2004/2005, these packages were expanded by the HSE as part of an initiative to speed discharge of older people from acute hospitals and reduce pressures on A&E departments. Home care packages can vary greatly. The HSE has supplied the following definition:

These packages should comprise services such as Public Health Nursing, Day Care, Occupational Therapy, Physiotherapy, Home Help Services and Respite Care, whether drawn from the existing pool of services or any additional resources which might be put in place. If appropriate they should also take account of requirements for specialised equipment or adaptations to the house, and the availability of sheltered housing options.

Each package will be tailored to the needs of the recipient taking account of his or her particular circumstances and the presence or otherwise of a carer. It could involve the provision of services by public and / or private providers, voluntary groups and individuals. In most cases, this should be through direct reimbursement of the service provider by the HSE. However, in order to maximise flexibility it may be appropriate, in certain circumstance, to make a cash payment to the care recipient on the basis of receipted and approved expenses.²⁷

6.45 Thus, home care packages may encompass a range of services from home help to care attendant to nursing care. The providers may be private, voluntary or public. The package may take the form of a cash grant, so-called “cash-for-care”, directly supplied to a client by the HSE to enable them to purchase their own care; or, more frequently, the HSE instead purchases care directly from a provider on a client's behalf. This provider may be a non-profit or, increasingly, a private home care provider. Private home care organisations offer more flexible care workers, who are usually expected to combine personal and domestic care, and to be willing to work at night. Private home care agencies offer domestic care, personal care, day sitting/companionship service, night sitting service, night waking service, respite care and live-in care (Timonen, 2004; Timonen et al, 2006).

Numbers in receipt of home care

6.46 In December 2006, 49,578 people were receiving home help services. Aggregate home help hours provided nationally were 1,044,382 in that month, implying an individual average of 21 hours monthly. This is the first year covered by the HSE's new data set, collected monthly. Previously the Department of Health recorded annual totals of home help hours provided (Table 6.13 and Figure. 6.9).

²⁷ Definition supplied by HSE.

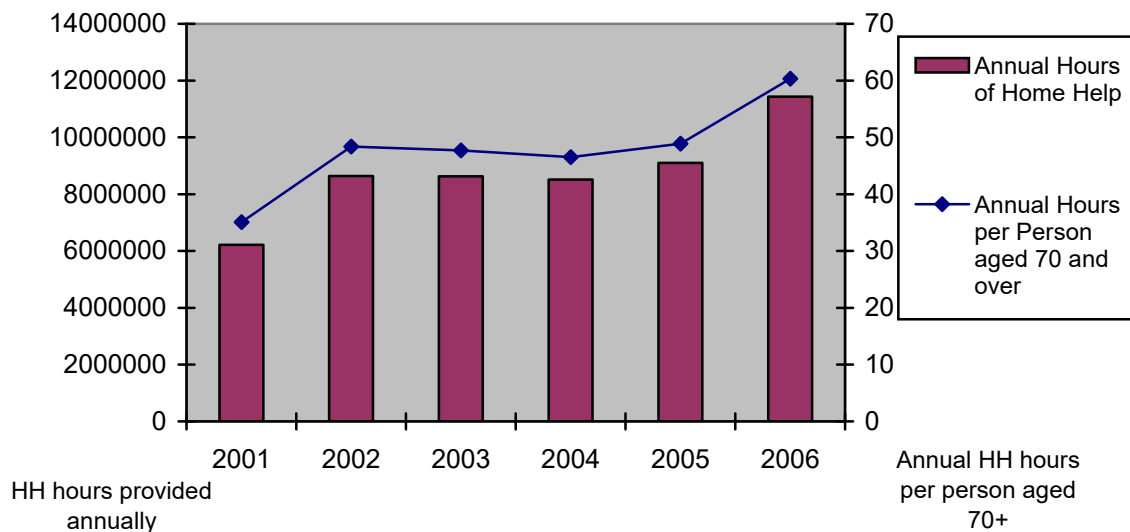
Table 6.11 Hours of home help provided annually and in relation to population aged 70 and over, 2001-2006

Year	Annual Hours of Home Help	Population aged 70 and over	Annual Hours per Person aged 70 and over
2001	6211657	177000	35.1
2002	8639010	178600	48.4
2003	8629561	180900	47.7
2004	8513448	183200	46.5
2005	9096000	186100	48.9
2006	11430570	189600	60.3

Source: Department of Health for home help hours; Central Statistics Office for population.

6.47 The notably increased delivery of domiciliary care in 2006 reflects a new commitment from Government to supporting alternatives to institutional care, expressed in additional funding in the 2006 Budget. This followed a reduction in home help hours provided annually in 2003 and 2004. In health board areas outside the East there had been a 19% drop in the number of whole-time equivalent home helps employed from 2001 to early 2005 (Tussing and Wren, 2006).

Figure 6.9: Hours of Home Help Provided Annually and in Relation to Population Aged 70 and Over 2001-2006



(Source: Department of Health and Children)

6.48 The HARP-Hessop study reported that in 2004 7% of people aged 65 and over in the Republic of Ireland had received home help services in the preceding 12 months compared to 17% in Northern Ireland; 2% of those interviewed in the Republic had received meals-on-wheels compared to 6% in Northern Ireland. These differences remained significant even when known demographic differences between the samples were taken into account (McGee et al, 2005). Home help service provision in 2004 was about half that of comparable European countries (O’Hanlon et al, 2005).

6.49 Other research has described a high level of unmet care needs among older people living in the community (Timonen, 2004). There has been survey evidence of significant differences in provision of home help services, depending on area of residence, with residents in the East more likely to avail of such services than their counterparts in the West (O’Hanlon et al, 2005). Over the four-year period of the two Hessop surveys, a trend emerged of increasing numbers of people paying for community-based health and social care services (*ibid*).

6.50 In December 2006 5,283 individuals were in receipt of home care packages, as recorded in the HSE’s new minimum data set. Provisional figures for June 2007 show an increase to 7,469 recipients. These increases came from the low base of 1,000 in 2004 (Department of Health and Children, 2006b). A study of ten private home care providers in the Dublin area found that for all but two of them home care packages were becoming their main source of clientele (Timonen et al, 2006). This study found that most home care grants were secured through hospital discharge procedures. The level of grant available for older people returning home from hospital was higher than that offered to older people who were assessed as needing home supports, when still in the community. There were fewer home care grants available to people in the community. This discrepancy has provoked concerns about a perverse incentive for hospital admission as a route to assistance in remaining at home (*ibid*).

6.51 Eligibility for and the amount of a home care package is subject to a means test. Eligibility requirements have been variable over time and across areas. The value of the package and its duration may vary (Timonen, 2004; Timonen et al, 2006: *passim*). In the case of home help services, user fees are inconsistently imposed. While the services of health care assistants are free to the client, and private services are either

funded by the HSE through home care packages or purchased privately, the home help services supplied by not-for-profit organisations may or may not incur a charge and the amount charged varies greatly depending on area. Availability of home help services is also very variable (*ibid*: 210-211). Such inconsistencies can make accessing home care a confusing and daunting process for older people and their families.

6.52 The rapid increase in state funding of privately delivered home care has provoked concern about the unregulated nature of the sector, frequently expressed by directors of private companies (*ibid*), echoing the concerns expressed about rapid expansion and lack of regulation in the private nursing home sector (McEnery, 2007). The new emphasis on home care has been driven by an imperative to speed discharges of older people from acute hospitals and by a perception that it is not only preferred by older people themselves but that it is also cheaper. This may not be the case for people with higher levels of care needs. Furthermore, if the opportunity costs of informal care (i.e. the loss to the workforce of the unpaid, informal carer, or the loss to the carer of potential earnings) are taken into account, care in the home has been shown to be more expensive than nursing home care (Timonen et al, 2006; Hughes, Williams and Blackwell, 2004).

6.53 The population of 49,578 in receipt of home help services in December 2006 was approximately twice the population of 24,400 resident in long-stay units in that year. To estimate the total population in receipt of community care services, some proportion of those receiving home care packages should be added but, given that many packages include an element of home help, there is overlap between the two populations. There is no official count of individuals purchasing care privately either from commercial providers or in the “grey” market, who should also be included in a comprehensive count. The 2006 National Disability Survey may, however, provide a count encompassing all these elements.

Summary

6.54 The decade to 2006 saw a marked rise in the population in older age brackets in Ireland. Although there is emerging evidence of declining disability among older

people, demand for long-term care increased, as evidenced in the increasing numbers of residents in private nursing homes and growing numbers availing of home help services. Further factors driving this demand have been the increase in the proportion of older people living alone and the rise in female labour force participation, which has reduced the potential supply of informal carers in the community.

6.55 The population receiving long-term care in institutions rose by an estimated 12.4% in the years 2003-2006, a period when population aged 80 and over increased by 10%. With little change in public long-term care provision, most of this demand was met by rapid increases in the supply of private nursing home beds.²⁸ Pressure to facilitate discharge of older people from acute hospitals was the catalyst for increased public spending on care in the community, delivered primarily in the form of additional home help hours and home care packages. While the rate of residential care for older people in Ireland is close to the OECD average, community care is under-developed and there is evidence of continued unmet need.

6.56 The rapid increase in public funding to private providers in an under-regulated sector has provoked concerns about quality of care, staff training and ratios in institutions and in the community. The desirability of more demanding care standards suggests that projection of the future cost of care in Ireland should not be predicated on current prevailing costs.

6.57 Long-term care is a sector of health and social services that is undergoing and will continue to undergo rapid change, driven by population growth and ageing, further shrinking in the pool of informal carers, and government policies of promoting independent living in the community, and private provision of community and institutional care. The planned introduction of a new system of eligibility and state support for long-term care in institutions (Department of Health and Children/HSE, 2006), in the absence of a similar system for funding community care, may reinforce the existing bias towards institutional care.

²⁸ The HSE opened new public community nursing units in 2007, adding 221 public beds (HSE, 2008)

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