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PROJECTING THE
IMPACT OF
DEMOGRAPHIC
CHANGE ON THE
DEMAND FOR AND
DELIVERY OF
HEALTH CARE IN
IRELAND

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4. OUTPATIENT SERVICES

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4.1 Introduction and Chapter Plan

This chapter looks at the area of outpatient care in Ireland. Although there is no agreed definition of outpatient care, the term is commonly taken to encompass the care provided by clinics within hospitals for patients who are not currently inpatients within the hospital at that point or attending for a day procedure. But the term is also often taken to cover the activities of specialist doctors working outside the hospital sector (both private and public) in smaller clinics or their own specialist surgery space. The majority of both public and private outpatient care is provided within public hospitals, but a significant proportion of private secondary, specialist care is also provided outside of the public hospital sector in private hospitals, clinics and surgeries. The increase in proportion of the population with health insurance over the last decade in Ireland has probably increased the level of private outpatient care although no data are available to confirm this. The extent of private provision of outpatient care has important implications for the availability of care and its distribution across the population. We return to this in more detail later in the chapter.

In this chapter we first examine trends in outpatient utilisation in administrative data before moving on to the projection of levels of outpatient utilisation from 2007 to 2021. Projection analyses are performed for the total population and then for the three age groups which are available in the administrative data from the National Hospitals Office. Using a number of assumptions, the impact of population projections across hospital networks are also then examined.

4.2 Data and Methodology

The majority of both public and private outpatient care is provided within public hospitals in Ireland but a significant proportion of private secondary, specialist care is also provided outside of the public hospital sector in private hospitals, clinics and surgeries. Records of public hospital consultations nationally are collated by the Performance Monitoring Unit of the National Hospitals Office (NHO) of the Health Service Executive (HSE). Unfortunately, national data are only available from 2006 onward although data for the Dublin Hospitals in what was the Eastern Region Health Authority (ERHA) are available from 2001 to 2006. These hospitals carried out over 57 per cent of all public outpatient consultations nationally in 2006 and so are likely to closely approximate national developments although the lack of national longitudinal data is clearly not ideal. The

NHO data provides information on a limited range of areas including the sex and age of patients (in three categories: less than 18 years, 18 to 64 years and 65+ years) as well as whether the consultation is a new or return visit, the hospital and health board where it took place and the specialty of the consultant undertaking the consultation.

The vast majority of outpatient care is also provided in the public service but there is a significant level of private outpatient activity, often in public hospitals. Unfortunately, this activity is not recorded and so is not available for analysis. Given this, in this chapter we focus solely on data provided by the NHO and seek to examine the impact which demographic change will have on the demand for and delivery of public outpatient services to 2021.

Our approach to projecting the requirement for outpatient care to 2021 is very similar to the approach taken in the last chapter on GP care as the data available are very similar. First we harmonise the demographic projects that we have with the data on outpatient care, that is, we construct demographic projections for three age groups (less than 18 years, 18 to 64 years and 65+ years) by sex. We then use these projections to inflate or deflate the patterns of utilisation found in the NHO data for 2006. Once we have established this projection on a current use basis we then examine the impact of different assumptions for trends in outpatient care based on the ERHA patterns observed between 2001 and 2006. Lastly, we also inflate the current use and trend inflated projections by our epidemiological projections. The complex pattern of referral for outpatient care in Ireland means that break downs by geographical area are not easy to perform. However, by applying a number of assumptions and using data on referral patterns for inpatient care we produce projections by hospital network. A full account of the approach taken is provided below.

4.3 Measuring Trends in Outpatient Utilisation

In the first chapter of this report we discussed the important distinction between supply and demand factors in determining levels of utilisation. The ‘need’ for health care among some groups, notably older people or those with lower levels of income means that we see higher levels of demand and utilisation among these groups compared to others. However, the available supply of health care is also important in determining patterns of utilisation and this is particularly true in the area of outpatient care where under supply has led to lengthy waiting times for public patients. 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 years or more are available from the Health and Social Services for Older People Survey (HeSSOP – see O’Hanlon *et al.*, 2005) which was carried out in 2004. This shows that 7.1 per cent of those aged 65+ years (32,838) were waiting for an outpatient appointment in 2004. Those who were waiting had been on the waiting list for an average of 16 weeks, but 27 per cent had been waiting more than a year and 10 per cent had been waiting more than three years.

4.4 Trends in Out- patient Consultations

In terms of public outpatient consultations, the only data available that allow us to examine trends over time are for the Dublin Hospitals in what was the Eastern Region Health Authority (ERHA). Data are available for 2001 and 2006 and show that there has been a 44 per cent increase in total volume over the period. This increase is not uniform over age groups however. Among those under the age of 18 years there has been an increase of 17 per cent in total consultations whereas among those aged 18 years to 64 years and 65+ years, the number has increased by 47 and 58 per cent respectively. It is important to understand the reasons for this very large increase if we are to project the demand for and delivery of future levels of outpatient care.

Although there was some population growth and population ageing between 2001 and 2006, this is far outstripped by the increase in consultations. For example, the overall population increase of 8.2 per cent and increase among the over 65 year olds of 7.3 per cent is far outstripped by the 44 per cent rise in consultations. However, over the period there was a substantial increase in the number of both consultant and non-consultant doctors within Irish hospitals. The former increased by 33 per cent from 1,574 to 2,096 and the latter by 25 per cent from 3,726 to 4,648 (DoHC, 2007) between 2001 and 2006. At the same time there was a concerted effort by central government to decrease the significant waiting times being experienced for outpatient care and this translated into a pressure through out the public hospital system to increase the number of clinics and throughput within clinics. Given this, it could be that the large increase over the period is actually the result of a substantial increase in the supply of services rather than an increase in the demand. On the other hand, it could be that the large rise in consultations that occurred is simply an artefact of better data collection and reporting over the period. The NHO acknowledge that data collection did improve over the period but cannot quantify the impact that this had. It could, of course, also be that the large rise in consultations that occurred is a combination of both effects.

Either way, it is likely that the rate of growth in supply will not continue into the future. Budget restrictions brought in as part of the October budget of 2008 will block further expansion in the short term and in the medium term it is likely that expenditure growth will moderate as overall national income growth slows from the rates experienced in the late 1990s and early 2000s. Similarly, the rate of improvement in data reporting are probably negligible at this stage so it is likely that increases in the number of consultations reported from this source will slow. One countervailing process may be the implementation of the new contract for hospital consultants. The successful renegotiation of the consultant's contract was meant to precede the recruitment of a large number of extra hospital consultants. If this were to occur it is likely that the number of outpatient consultations would rise.

No national data on waiting lists for outpatient appointments are available so it is impossible to assess the extent to which the increase in consultations over recent years has decreased the back log of referrals into the system. If it has it is likely that at some point in the medium term the incidence of new patients requiring care will peak and begin to decline. If population growth and ageing counterbalance the decrease in the backlog

of past cases this may lead to a plateauing or even increase in need for outpatient services.

4.5 The Impact of Changing Policy

The projection methodology used in this chapter is a combination of a population projection model combined with an analysis of current utilisation patterns. Such a simple analysis has its benefits but it cannot take into account the possible impact which changes in national health policy may have on the supply of health care and outpatient care in particular. There are a large number of possible practice and policy changes which could impact on outpatient care in Ireland. One good example is the picture of possible change presented in the PA Consulting Group report *Acute Hospital Bed Capacity Review: A Preferred Health System in Ireland to 2020* which was published in 2008 (PA Consulting Group, 2007a; 2007b). This report sets out a vision of change in which health services are configured locally around the patient rather than centrally around hospitals via the expansion of primary care facilities including greater access to diagnostic services. Currently, almost three-quarters of outpatient consultations are return visits (Layte *et al.* 2009), largely so that the consultant can monitor progress.

If primary care were to develop in the direction set out in the PA report just mentioned (i.e. in the direction set out in the Primary Care Strategy, DoHC, 2001) then many of the follow up work which is being carried out in repeat visits to outpatient clinics could be transferred to primary care thus drastically reducing the number of outpatient consultations. This would be a positive development in terms of freeing up expensive hospital resources although such savings would need to be set alongside the costs of increasing the services available to primary care and paying GPs to carry out the follow up care.

Another possible policy change that would have a substantial impact on outpatient care, primarily through the redistribution of care across the country, is the implementation of the recommendations of the Hanly Report (DoHC, 2003) which argues that health service regions should become largely autonomous of each other in terms of their ability to provide the majority of specialty care required for their population. Although national centres of excellence would require some travel by patients for services, an increase in the availability of services locally would mean substantial changes in the distribution of outpatient consultations across the country. At present close to half of all consultations occur in Dublin hospitals and half of the patients attending outpatient clinics in Dublin come from outside of the Dublin region.

4.6 Projecting Overall Public Outpatient Consultations

As shown in the first chapter to this report the total population of Ireland is projected to increase substantially in the period to 2021 under the assumptions of the central projection adopted in this project (M2F2). Table 4.1 shows that overall population numbers are projected to increase by over a fifth or 21 per cent between 2006 and 2021.

Population growth will not be uniform across age groups, however, with older age groups projected to increase at a substantially higher rate than younger age groups. Table 4.1 shows that whereas children aged under 18 years are projected to increase by almost 12 per cent by 2021, the

proportion aged 18 to 64 years will rise by 16 per cent and the proportion over 65 years by 69 per cent.

Table 4.1: Projected Increase in Population By Age Group 2006-2021

	2006	2010	2015	2021
Aged <18 years	1,036,034	1,091,155	1,149,026	1,157,021
% Change on 2006	-	5.3%	10.9%	11.7%
Aged 18-64 years	2,735,888	2,943,832	3,065,817	3,183,546
% Change on 2006	-	7.6%	12.1%	16.4%
Aged 65+ years	467,926	509,951	639,466	792,067
% Change on 2006	-	12.7%	36.7%	69.3%
Total	4,239,848	4,499,396	4,854,310	5,132,633
% Change on 2006	-	7.6%	14.5%	21.1%

The first report of this project (Report 1: *Recent Demographic Trends and their Impact on the Delivery of Health Care in Ireland*) showed that the average number of outpatient consultations among older age groups per capita per annum was far higher than among younger age groups. The average number of consultations among those aged under 18 years in 2006 was 0.27 whereas this number increases to 0.75 among those aged 18 to 66 years and 0.96 among those aged 65+ years, almost four times the rate.

The combination of higher utilisation rates among older age groups paired with an differential rates of increase at older age means that the rate of outpatient consultations should increase at a higher rate than the overall population. This is shown by Table 4.2 which shows overall outpatient consultations increasing by almost 25 per cent by 2021, 3.4 per cent higher than the population increase over the same period.

Table 4.2: Projected Increase in Outpatient Consultations By Age Group 2006-2021

	2006	2010	2015	2021
Aged <18 years	275,581	290,243	305,636	307,763
% Change on 2006	-	5.3%	10.9%	11.7%
Aged 18-64 years	2,053,403	2,209,474	2,301,029	2,389,390
% Change on 2006	-	7.6%	12.1%	16.4%
Aged 65+ years	450,311	490,754	615,394	762,249
% Change on 2006	-	12.7%	36.7%	69.3%
Total	2,779,295	2,961,869	3,222,059	3,459,402
% Change on 2006	-	8.2%	15.9%	24.5%

Source: Calculations based on NHO National outpatient data 2006.

The changing population composition will also change the proportion of outpatient consultations falling to different age groups as shown by Table 4.3. Here the proportion of consultations among those aged under 18 years falls from 9.9 per cent of the total in 2006 to 8.9 per cent by 2021. Among the middle aged group we also see a fall from 74 per cent to 69 per cent. For those over the age of 65 years on the other hand Table 4.3 shows a substantial increase in the share of outpatient consultations from 16 per cent to 22 per cent.

Table 4.3: Projected Distribution of Outpatient Consultations By Age Group 2006-2021

	2006	2010	2015	2021
	%	%	%	%
<18 years	9.9	9.7	9.5	8.9
18-64 years	73.9	73.7	71.4	69.1
65+ years	16.2	16.6	19.1	22.0
Total	100.0	100.0	100.0	100.0

Source: Calculations based on NHO National outpatient data 2006.

4.7 Projecting Public Out- patient Consultations Including Growth and Epidemiolog- ical Forecasts

As explained above, there was a 44 per cent increase in the number of outpatient consultations in ERHA hospitals between 2001 and 2006. This is the average rate of increase across all age groups and rates of increase among the two older age groups were substantially higher. Were these rates of increase to continue it would of course mean that the impact of demographic change and population ageing would be amplified. Table 4.4 shows the significant impact that this would have on overall increases in outpatient consultations and on those for the different age groups. Table 4.2 above projected that overall consultations would increase by 25 per cent by 2021. Table 4.4 increases this almost threefold to 58 per cent. This figure is the average growth rate with projected consultations among the youngest age group 4.2 per cent lower than the core projection whilst the rate of increase among the oldest age group almost doubles from 69 per cent to 132 per cent.

Table 4.4: Projected Increase in Outpatient Consultations By Age Group 2006-2021 Including Growth 2002-2006

	2006	2010	2015	2021
Aged <18 years	275,581	279,339	294,155	296,201
% Change on 2006		1.4%	6.7%	7.5%
Aged 18-64 years	2,053,403	2,810,558	2,927,020	3,039,419
% Change on 2006		36.9%	42.5%	48.0%
Aged 65+ years	450,311	672,010	842,684	1,043,780
% Change on 2006		54.3%	87.1%	131.8%
Total	2,779,295	3,726,473	4,063,859	4,379,401
% Change on 2006		36.2%	46.2%	57.6%

Overall however, it is unlikely that such high rates of increase will continue into the future as the waiting lists for outpatient care are reduced. However, epidemiological change may nonetheless mean that the need for consultations still increases at a higher rate than population growth alone would suggest. The first chapter of this report used a combined projection based on a number of different conditions to suggest that the 'need' for care as measured by the incidence of these conditions would increase by around 12 per cent, with marginally higher rates for men compared to women.

4.8 Projecting Public Out- patient Consultations by Hospital Network

The core national demographic projection provides a picture of the average change across the country but as the first chapter to this report showed, demographic change varies considerably across Ireland. This will lead to different patterns across the country in terms of the demand for health care, including outpatient appointments. However, projecting the impact of regional demographic trends on outpatient care is complicated by the fact that a high proportion of outpatient consultations are carried out in hospitals which are not in the hospital network area in which the patient lives. This is especially true in the old Eastern Region Health Authority Area, essentially the large Dublin hospitals, where 48 per cent of total outpatient consultations are with patients from outside of the region. The proportion in other regions is not as large, although 'out of region' consultations in the old Western Health Board make up 42 per cent of the total work load. This complex pattern of referral stems from the fact that not all specialities are available in every region or hospital network and so patients must be referred to consultants in other regions, quite often in Dublin hospitals.

Since patients are referred for outpatient appointments outside of their own region we cannot simply inflate current outpatient utilisation within a specific geographical area by the demographic projections for that area (as individuals from outside that area may be travelling in for treatment). This presents a problem as no data are available on the patterns of referral for outpatient services. However, patterns of referral are available for inpatient care and these have been published in a recent PA report (PA Consulting Group, 2007b, p.84). It is very likely that the pattern of outpatient referral is close to that for elective referral for inpatient procedures and treatment since the same hospital consultants will be involved in both processes. What is more uncertain, however, is the extent to which inter-hospital transfers, which are also part of the referral pattern for inpatient services, would not be reflective of the pattern of outpatient referrals. Given the relatively small number of inter-hospital transfers it is nonetheless likely that the pattern of inpatient referral is sufficiently similar that it can be used as a method for disaggregating the impact of demographic change.

Table 4.5: Current Inpatient Referral Pattern from CSO Regional Authority Areas to HSE Hospital Networks (Row Percentages)

Area of Residence	Dublin Midlands	Dublin North East	Dublin South	Mid-Western	North-Eastern	South Eastern	South -ern	West/ North-West	Non-Acute
Border	1.99	7.30	3.81	0.03	39.77	0.03	0.07	46.86	0.15
Dublin	20.80	42.64	34.09	0.05	1.16	0.16	0.08	0.17	0.85
Mid-East	33.06	17.95	28.39	0.06	18.65	1.09	0.10	0.20	0.51
Midland	76.13	4.67	7.43	0.50	0.96	0.64	0.09	9.39	0.19
Mid-West	2.18	1.47	2.54	81.05	0.02	3.01	5.61	3.91	0.20
South-East	3.98	2.77	6.20	0.69	0.04	80.32	5.52	0.11	0.38
South-West	0.90	0.56	0.67	0.66	0.01	0.18	92.97	0.10	3.95
West	1.52	1.75	1.70	0.19	0.07	0.02	0.09	94.57	0.09

Source: Reproduced from PA Consulting Group (2007b), p. 84.

Table 4.5 shows the current pattern of inpatient referral from the eight regional authority areas to the eight hospital networks of the HSE. This shows that those regions close to the capital are significantly more likely to refer to hospitals in the Dublin region with the proportion falling as distance from Dublin increases. However, even the Western region still refers almost 5 per cent of its patients to Dublin hospitals.

To apply this pattern of referral to outpatient data and project the impact of demographic change we first transformed the data produced by the demographic projection into CSO regional authorities. The data on outpatient consultations from the National Hospitals Office were then grouped into hospital networks. The population projection by regional authority by year were then distributed across the hospital networks in the proportions set out in Table 4.5. The increase in the populations serviced by each of the hospital networks was then used as an inflator for the volume of outpatient consultations in each hospital network in 2006.

Figure 4.1: Projected Increase in Outpatient Consultations By Hospital Network 2006-2021

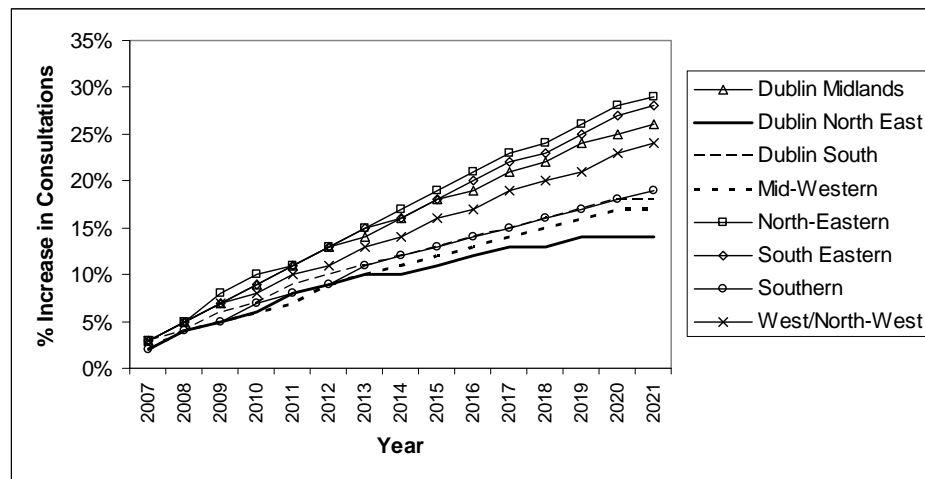


Figure 4.1 shows how the volume of outpatient consultations across hospital networks is projected to increase as a result of changing demographic patterns alone between 2006 and 2021. Table 4.6 gives the actual volume of outpatient consultations projected to occur and Table 4.7 the proportionate increases these imply. Figure 4.1 graphs the complete set of increases projected to occur and shows that volumes of consultations are projected to increase substantially across all hospital networks between 2006 and 2021. However, rates of increase are projected to differ substantially. The North Eastern and South Eastern networks are projected to experience the highest levels of growth at 29 per cent and 28 per cent respectively by 2021. At the other end of the scale the Dublin North-East and Mid-Western networks are projected to experience the lowest levels of growth at 14 and 17 per cent respectively.

Table 4.6: Projected Increase in Outpatient Consultations By Hospital Network 2006-2021

	2006	2010	2015	2021
Dublin Midlands	513,767	560,273	604,318	647,898
Dublin North East	451,723	480,778	502,148	516,207
Dublin South	489,792	525,494	554,630	577,949
Mid-Western	153,048	162,406	171,146	179,713
North-Eastern	191,497	209,620	227,753	247,246
South Eastern	260,488	283,691	307,522	333,345
Southern	324,909	346,891	366,935	386,172
West/North-West	394,071	426,012	456,117	487,713
Total	2,779,295	2,995,165	3,190,569	3,376,242

Table 4.7: Projected % Increase in Outpatient Consultations By Hospital Network 2006-2021

	2007	2010	2015	2021
	%	%	%	%
Dublin Midlands	2.9	9.1	17.6	26.1
Dublin North East	2.3	6.4	11.2	14.3
Dublin South	2.5	7.3	13.2	18.0
Mid-Western	1.9	6.1	11.8	17.4
North-Eastern	2.9	9.5	18.9	29.1
South Eastern	2.7	8.9	18.1	28.0
Southern	2.2	6.8	12.9	18.9
West/North-West	2.6	8.1	15.7	23.8
Total	2.5	7.8	14.8	21.5

4.9 Summary and Conclusions

This chapter has combined the analysis of patterns of outpatient care set out in the first report of this project with the demographic projections of the second report. Population change in Ireland for the period to 2021 is projected to be substantial with the overall population projected to increase by just over a fifth. At the same time the age composition of the population will also change substantially. Although the absolute number of those aged less than 18 years is projected to increase (by 12 per cent), this rate of growth will be far outstripped by that among older age groups and particularly the oldest old (85+). Although the oldest age groups are a small proportion of the overall population, the rate of growth combined with the higher rate of utilisation of outpatient services means that demographic change will have a significant impact on the demand placed on outpatient services.

Fortunately, the volume of public outpatient care undertaken in Ireland has increased dramatically in recent years, rising by 44 per cent between 2001 and 2006. Although there was some population growth over this period, the rate of increase in consultations stems largely from the substantial growth in the supply of services available. The number of both consultant and non-consultant doctors in service expanded significantly over this period, as did the number and size of outpatient clinics. Although it is difficult to measure whether these changes have had an impact on the level of unmet need for outpatient care, it is likely that the waiting times for care have improved in recent years and that the growth in supply has

peaked or will peak in the relatively near future (if only because of budget constraints).

Analyses in this chapter project that demographic change alone will require an increase in the requirement for outpatient consultations of 16 per cent by 2015 and 25 per cent by 2021. If epidemiological forecasts are correct these figures could rise to 46 per cent and 58 per cent. These are very substantial figures, even without the poor epidemiological outlook and would require a substantial extra investment in services. Disaggregated analyses suggest that these national estimates would need to be altered substantially across hospital networks where growth forecasts between 2006 and 2021 vary between 14 per cent and 29 per cent.

These growth requirements into the future assume that the current supply of services is in rough equilibrium with the demand, or 'need' for services. At this point it is difficult to assess the extent to which this is true as official figures are not available. If the growth in services in recent years has cleared the existing unmet need or continues to decrease the queuing times then it may be that the existing supply of services will not need to expand by the proportion stated above. On the other hand, if levels of unmet need are not being reduced, or are being reduced more slowly than population and epidemiological change, then service levels will need to be expanded. Another source of uncertainty in our projections is the current and future level of private outpatient care being provided in Ireland. It is likely that the amount of private care has increased strongly over the last decade in line with the growth in health insurance as this improved access to the insured in front of those waiting in public queues. The recent downturn in Ireland's economic fortunes may mean that the prevalence of health insurance will decline and this may well force individuals back into the public system for treatment thus increasing the need for care above the estimates given in this chapter. The same effect may also occur if the stated policy of a unified public/private queue for outpatient services is actually adopted in practice in Irish hospitals. If it is, the prime reason for buying health insurance, preferential access to hospital services, will disappear and many will return to the public system.

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