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Projections of national demand and workforce requirements for general practice in Ireland, 2023–2040: Based on the Hippocrates model

SHEELAH CONNOLLY, THEANO KAKOULIDOU AND ELLEN MCHUGH

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This report has been accepted for publication by the Institute, which does not itself take institutional policy positions. All ESRI Research Series reports are peer reviewed prior to publication. The authors are solely responsible for the content and the views expressed.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF BOXES

FOREWORD

This report was prepared by researchers at the Economic and Social Research Institute (ESRI) for the Department of Health. The report is published as an ESRI Research Series report and is one of three reports that update projections of demand and capacity using the Hippocrates model. This report analyses demand for general practice services and projects demand and workforce requirements over the period 2023–2040.

The Hippocrates model was developed at the ESRI under the ESRI/Department of Health Research Programme in Healthcare Reform. The Hippocrates model is a tool that can: inform health and social service planning in Ireland; inform financial planning for the healthcare system; inform planning for capacity, services and staffing; identify future demand pressures; and provide a framework in which to analyse the effects of potential system changes and reforms. The latest project was overseen by the Department of Health with input from the Health Service Executive (HSE).

The ESRI is responsible for the quality of this research, which has undergone peer review prior to publication. This report was prepared by Dr Sheelah Connolly, Dr Theano Kakoulidou and Ellen McHugh and reflects their expertise and views. The views expressed in this report are not necessarily those of other ESRI researchers, the HSE, the Minister for Health, Department of Health or other organisations represented on the Department of Health/ESRI Research Programme Steering Group.

June 2025

ABBREVIATIONS AND ACRONYMS

CDMP	Chronic Disease Management Programme
CDTP	Chronic Disease Treatment Programme
COPD	Chronic obstructive pulmonary disease
GMS	General Medical Services
GP	General practitioner
GPN	General practice nurse
HSE	Health Service Executive
ICGP	Irish College of General Practitioners
IGPNEA	Irish General Practice Nurses Educational Association
ICT	Information and communication technology
LTC	Long-term condition
NMBI	Nursing and Midwifery Board of Ireland
OCF	Opportunistic Case Finding
PCRS	Primary Care Reimbursement Service
PP	Prevention Programme
SILC	Survey of Income and Living Conditions
SWITCH	Simulating Welfare and Income Tax Childcare and Health
WTE	Whole-time equivalent

EXECUTIVE SUMMARY

INTRODUCTION

Planning for future healthcare needs is essential for ensuring the safe and effective delivery of healthcare services in the coming years. A number of studies have shown that demand for health and social care services will increase in Ireland in the coming years due to a growing and ageing population. In recent years, a number of factors, including higher than projected population growth, the COVID-19 pandemic and government policies and reforms, have had significant implications for the demand and delivery of healthcare services. Consequently, earlier projections of healthcare demand may be somewhat outdated.

As part of the Department of Health/Economic and Social Research Institute (ESRI) Research Programme in Healthcare Reform, the ESRI used the Hippocrates model to provide up-to-date projections for three services areas – public acute hospitals, general practice and older peoples' services. The aim of the analysis in this report is to estimate the baseline and future projections for the demand for general practice services, along with the associated workforce requirements.

These projections are based on data availability and the policy environment at the time of undertaking the analysis. A number of factors contribute to potential uncertainties in these projections, including disruption to the demand and delivery of healthcare services due to the COVID-19 pandemic, limited available data on general practice and a number of proposed and implemented reforms, which will impact on general practice in the coming years. Various approaches were used in the analysis to overcome these uncertainties.

METHODS

The projections of demand and workforce requirements included in this report use the ESRI's healthcare projection tool, the Hippocrates model. The Hippocrates model is a healthcare projection model that projects from a bottom-up service or sectoral perspective.

The first step is to develop base year age- and sex-specific consultation rate profiles for general practitioners (GPs) and general practice nurses (GPNs) at the national level. This is done using data from the Healthy Ireland survey and the Growing Up in Ireland study – for medical cardholders, GP visit cardholders and non-cardholders separately. The base year is 2023 and the projection period is 2024–2040. Baseline estimates of activity are projected based on a range of assumptions, including the size and structure of the population, healthy ageing, and eligibility

and uptake for GP visit cards and the Chronic Disease Treatment Programme (CDTP), with three projection scenarios (low pressure, central and high pressure). The impact of changing assumptions on model inputs and policy measures on demand (by 2040) for GP and GPN consultations is also quantified. Finally, projected increases in activity are converted into workforce requirements over the projection period, based on current and projected workforce-to-activity rates.

FINDINGS

Between 2023 and 2040, demand for GP consultations is projected to increase by between 23 per cent and 30 per cent, while demand for GPN consultations is projected to increase by between 32 per cent and 36 per cent. The lower projection is associated with moderate healthy ageing, lower uptake of GP visit cards and a reduction in 'regular' GP visits for those participating in the CDTP. The higher projection is associated with higher projected population growth, no heathy ageing (i.e. an expansion of morbidity), higher uptake of GP visit cards and no reduction in 'regular' GP visits for those participating in the CDTP. The largest drivers of the projected increases are population growth and, to a lesser extent, population ageing.

Reflecting these increases in demand, there will be a need for additional GPs and GPNs in the coming years. Relative to the 2023 headcount of 3,928 GPs, projected additional requirements range from 943 to 1,211 GPs (24% to 31% increase) in 2040. This is based on an assumption that the current GP–consultation ratio is constant over the projection period. If GPs were to undertake fewer consultations (for example, due to higher complexity of consultations or reduced working hours), then the number of required GPs would increase accordingly. For GPNs, relative to the 2023 headcount number of 2,288, projected additional requirements range between 761 and 868 (33% to 38% increase).

DISCUSSION

An ageing and growing population, alongside a range of policy reforms, will increase the demand for general practice services in the coming years, with more GPs and GPNs required to meet this additional demand. The lack of nationally representative, available data on general practice makes capacity planning difficult. A number of measures have already been implemented to increase the general practice workforce, including increasing training places. However, it is not known if current measures will be sufficient to meet additional demands on general practice in the coming years. If and when better data become available, the projections in this report should be reviewed and updated accordingly.

CHAPTER 1

Introduction

Planning for future healthcare needs is essential for ensuring the safe and effective delivery of healthcare services in the coming years. A range of research papers and reports have shown that demand for health and social care services will increase in Ireland in the coming years due to a growing and ageing population (Layte et al., 2009; Wren et al., 2017; Department of Health and PA Consulting, 2018; Keegan et al., 2020; Walsh et al., 2021; May et al., 2022). These include a number of reports produced by the Economic and Social Research Institute (ESRI) using the Hippocrates model to project healthcare demand, expenditure, workforce and hospital and long-term care bed requirements (Wren et al., 2017; Keegan et al., 2020; Walsh et al., 2021; Keegan et al., 2022; Connolly et al., 2023; Connolly and Flanagan, 2024).

In recent years, a number of factors, including higher-than-projected population growth, the COVID-19 pandemic, the recent establishment of six health regions in Ireland, as well as initiatives aimed at re-orientating the healthcare system towards increased delivery of care in the community, have had significant implications for the demand and delivery of healthcare services in Ireland. Consequently, earlier projections of healthcare demand may be somewhat outdated. As part of the Joint Research Programme on Healthcare Reform between the Department of Health and the ESRI, the ESRI has undertaken updated projections of demand and capacity for the Irish health and social care system using the Hippocrates model.

This report is one of a series of new reports using the Hippocrates model to provide up-to-date projections for three service areas – public acute hospitals, general practice and older people's services. The aim of this report is to estimate the baseline and future projections for the demand for general practice services, along with the associated workforce requirements. Both general practitioners (GPs) and general practice nurses (GPNs) are included; the baseline year is 2023 and the projection period is 2024–2040. The year 2040 is used as the endpoint to align with, and inform, *Project Ireland 2040* – the government's long-term strategy to make Ireland a better country and to build a resilient and sustainable future.

These projections build on earlier work using the Hippocrates model (Wren et al., 2017; Walsh et al., 2021; Connolly et al., 2023; Connolly and Flanagan, 2024) by incorporating the most recent population estimates and projections, the increase in the number of people eligible for GP visit cards in 2023, and assumptions on the

potential impact of the Chronic Disease Treatment Programme (CDTP) on the demand for general practice services.[1]

The analysis in this report was undertaken at a time of great uncertainty for the health system. There was considerable disruption to healthcare demand and delivery during and after the COVID-19 pandemic (Marron et al., 2021; Mercille et al., 2022; O'Reilly et al., 2023; O'Callaghan and Glynn, 2024). Data from the Healthy Ireland survey, for example, show that the proportion of adults visiting their GP and the average annual number of GP consultations decreased during the pandemic years (see Table 2.1). However, in 2024 the proportion of the population visiting their GP was at the highest level since 2015 and the average annual number of GP consultations is now very similar to 2019 levels (4.4 visits in 2024 compared to 4.5 in 2019) (Table 2.1). In addition to the COVID-19 pandemic, other factors, including high population growth, have also had an impact on the demand for healthcare services in recent years. There are more than 100,000 Ukrainian refugees currently living in Ireland, many of whom may have specific health needs due to increased incidence of various infectious diseases in Ukraine, disrupted living conditions before and after leaving Ukraine, as well as difficulties in accessing healthcare (Conlon, 2022). A range of policy changes, in particular the Sláintecare reform proposals, which seek to reorientate health service delivery towards general practice and community-based services (Government of Ireland, 2023), are already having an impact on the demand and delivery of healthcare services, and will continue to do so in the coming years. Of particular relevance to this report, at time of writing the Department of Health is undertaking a strategic review of general practice.

Consequently, there is some uncertainty regarding how the Irish healthcare system will develop and evolve in the coming years. In this analysis, various attempts were made to address some of this uncertainty, including the use of a number of scenarios and ranges (rather than single numbers), sensitivity analyses and a focus on medium-to-long term projections where the impact of some short-term shocks and changes should have levelled off. However, in particular for general practice, many of these changes are happening in a data vacuum, with a lack of detailed, nationally representative data available to monitor and evaluate them. If, and when, better data become available, the projections in this report could be updated under the joint research programme between the Department of Health and the ESRI. In particular, consideration should be given to updating the projections as new and better data on current utilisation patterns and population growth (from Census 2026) become available.

1 The CDTP is part of the Chronic Disease Management Programme – a programme that aims to prevent and manage patient chronic disease using a population-based approach.

The rest of this report is structured as follows. Chapter 2 provides an overview of general practice in Ireland. Chapter 3 describe the methods of the analysis, while Chapter 4 details the findings. Chapter 5 concludes; it provides a summary of the findings, identifies the limitations of the analysis and discusses the policy implications.

CHAPTER 2

General practice in Ireland

2.1 INTRODUCTION

General practice is often the first point of contact for those requiring health services. This chapter provides an overview of general practice in Ireland focusing on eligibility, activity, workforce and recent reforms.

2.2 ELIGIBILITY

There are two main categories of eligibility for public healthcare services in Ireland. Those in 'Category I' (medical cardholders) are entitled to public healthcare services on a largely free basis, including general practitioner (GP) care free at the point of use.[2] Those in 'Category II' (the majority of the population) are entitled to subsidised public hospital services and prescription medicines, but pay the full cost of (privately provided) GP and other primary care services when required.

In 2005, the GP visit card was introduced. GP visit cardholders are entitled to free GP care but otherwise have the same entitlement as Category II individuals.

Eligibility for a medical card or GP visit card is assessed primarily via an income means test, with higher income thresholds for the GP visit card. Income thresholds for the medical and GP visit card differ by family status, age and number/age of dependent children in the family. For families with an adult over the age of 70, the assessment of means is based purely on gross income with no deductions for taxes or other expenses such as housing costs. Consequently, the means test for those aged over 70 is more generous, with significantly higher income limits than for those under 70 (Keane et al., 2021). For families where the oldest adult is aged under 70, means are calculated by summing current gross income (from (self)employment, rental income and investments, for example) and deducting income tax and social insurance liabilities. Income from investments/savings below €36,000 per adult is not included. Families can also claim for allowable expenses of housing, childcare and travel-to-work costs, life assurance, home and mortgage protection insurance as well as maintenance payments (Keane et al., 2021). After assessment, those deemed ineligible for a medical card will automatically be assessed for a GP visit card. Recent analysis estimated that 31 per cent of individuals eligible for a medical card do not take up a card (Keane et al., 2021),

2 Those with a medical card must pay prescription charges, which vary by age. In 2024, for those aged under 70 years, there was a prescription charge of €1.50 per item, up to a maximum of €15 per month per person or family. For those aged over 70 years, there is a prescription charge of €1 per item, up to a maximum of €10 per month per person or family.

with a lack of information about eligibility status, social stigma and the perceived complexity of the application process potentially contributing to non-take-up.

In 2015, eligibility for a GP visit card was extended to children younger than 6 and people aged 70 and over, while in 2023 eligibility was further extended to children aged 6 and 7. Also, in 2023, the income threshold basic rates for eligibility for GP visit cards were increased, leading to an increase in the number of people eligible for a GP visit card.[3]

In certain circumstances, individuals who are not eligible for a medical or GP visit card on income or age grounds may be granted a card on a 'discretionary' basis if they have particular health needs that would cause them undue financial hardship (Ma and Nolan, 2017).

In 2023, approximately 31 per cent of the population had a medical card and 12 per cent had a GP visit card (Department of Health, 2025).

In addition to the two main categories of entitlement, residents are entitled to a range of other healthcare services free at the point of use, some of which are provided in general practice, including maternity and infant care services as well as a range of screening and vaccination services for specific groups. For example, under the CervicalCheck screening programme, women aged 25 to 65 are invited to attend a cervical screening test every three to five years, with most checks undertaken in general practice. In addition, under the Primary Childhood Immunisation Programme, a number of vaccinations for babies from birth to 12/13 months are administered in general practice.

2.3 ACTIVITY

A variety of preventive and diagnostic services and medical treatments are provided in general practice; in addition, GPs act as gatekeepers for a range of primary and secondary care services.

There is no single national administrative dataset that records the totality of activity undertaken in general practice. Consequently, studies have tended to rely on either survey data (Walsh et al., 2021) or data from specific practices (Behan et al., 2013; Collins and Homeniuk, 2021). Each source comes with limitations. In general, the self-reported nature of survey-based data means that it is subject to recall bias, whereby respondents may include an event that did not occur or forget

3 See https://www.gov.ie/en/press-release/eb0d4-minister-for-health-encourages-people-to-apply-for-gp-visit-cards-as-additional-215000-people-become-eligible/.

an event that did occur. In relation to the use of general practice services in Ireland, no survey includes all population groups. The Healthy Ireland survey includes questions on GP and general practice nurse (GPN) utilisation for people aged 15 and over. Additionally, some waves of the survey include questions on GP utilisation for children, as reported by the respondent adult. However, Healthy Ireland excludes those residing in communal establishments (including nursing homes) and there is no question on GPN utilisation for children. Studies that use data from specific GP practices should capture the totality of activity associated with those particular practices; however, these practices may not be representative of practices in general. In addition, it is not clear if these studies capture out-of-hours activity. Consequently, it is difficult to get a precise estimate of the level of activity in general practice. Using survey data, Walsh et al. (2021) estimated that there were 18.8 million GP consultations in Ireland in 2019; while for 2020, Collins and Homeniuk (2021) estimated that there were 21.4 million GP consultations. The estimate from Walsh et al. (2021) includes out-of-hours consultations, but it does not include GP activity associated with those living in communal establishments; the analysis by Collins and Homeniuk (2021) is based on a survey of GP practices with a 32 per cent response rate and may not be representative of all practices.

A strength of Healthy Ireland is that it has been undertaken on a near annual basis since 2015,[4] allowing GP consultation rates to be tracked over time. However, not all waves of the survey include a question on GP and GPN consultations, and since 2021 the survey has been administered via the telephone rather than in person. Table 2.1 shows the percentage of Healthy Ireland respondents who reported consulting the GP in the preceding 12 months, as well as the average annual number of consultations for survey waves that included a question on GP consultations.

While the percentage reporting that they had consulted a GP in the previous 12 months decreased in 2021 relative to earlier years (likely reflecting the impact of the COVID-19 pandemic), by 2023 this percentage had surpassed that of earlier years. The average annual number of GP visits for 2024 was very similar to that of 2019.

4 Due to the COVID-19 pandemic and associated restrictions, the survey did not take place in 2020.

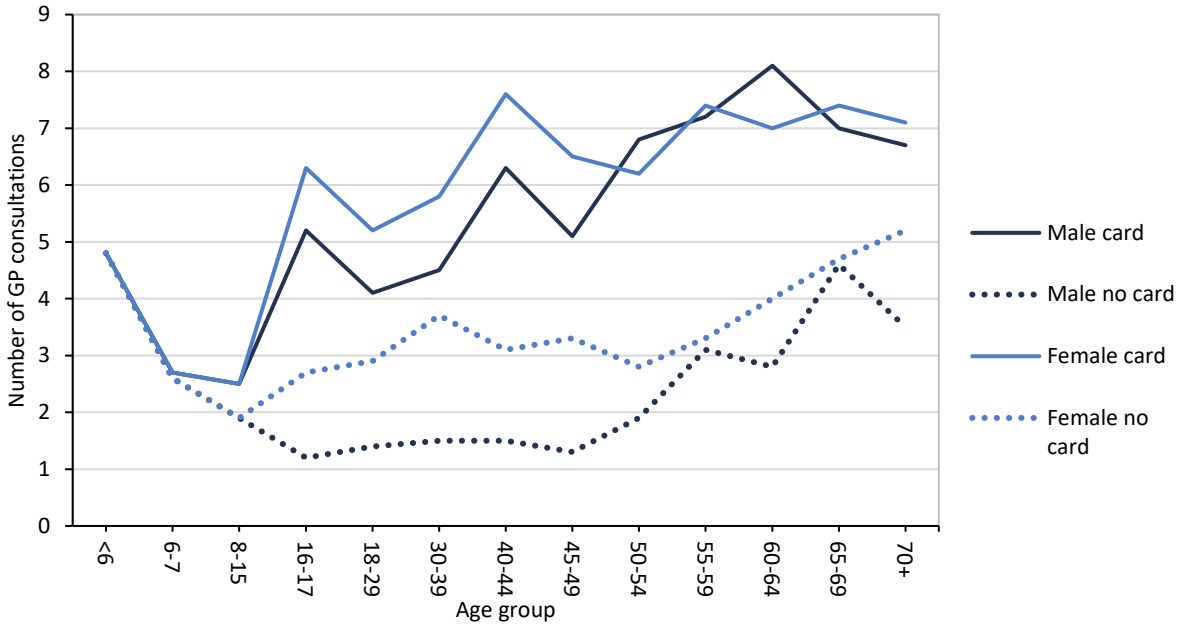
TABLE 2.1 Percentage of adults consulting the GP and average annual number of GP consultations

Year (Wave)	% attending previous 12 months	Average number of consultations
2015 (Wave 1)	71	4.3
2016 (Wave 2)	72	4.5
2018 (Wave 4)	74	3.8
2019 (Wave 5)	73	4.5
2021 (Wave 7)	66	3.3
2022 (Wave 8)	71	3.8
2023 (Wave 9)	76	4.0
2024 (Wave 10)	79	4.4

Notes: Adults are those aged 15 and over; average is for all adults including those who had no consultations. Wave 3 did not include a question on GP consultations.
Source: Ipsos B&A, 2023; 2024.

As with other healthcare services, utilisation of GP services varies depending on the population group in question. Figure 2.1 shows the mean number of GP consultations per annum by age group, sex and card status (medical and GP visit cards combined) for the period 2018/2019. Consultation rates generally increase with age; however, relatively high consultation rates are observed for children aged less than five years (Wren et al., 2017). Between the ages of approximately 12 and 45, consultation rates for females tend to be higher than for males, likely reflecting consultations associated with the management of gynaecological and reproductive issues, though differences in the propensity to utilise healthcare services between males and females may also contribute to the observed differences. Those with a medical or GP visit card have higher consultation rates than those without a card. This is explained by the greater need for healthcare services among cardholders, as cardholders tend to be more socio-economically disadvantaged (for those eligible for a card on income grounds rather than age) than those without cards; however, the price differential between cardholders and non-cardholders (zero price at the point of use relative to market price) could also explain some of this difference (Nolan and Smith, 2012).

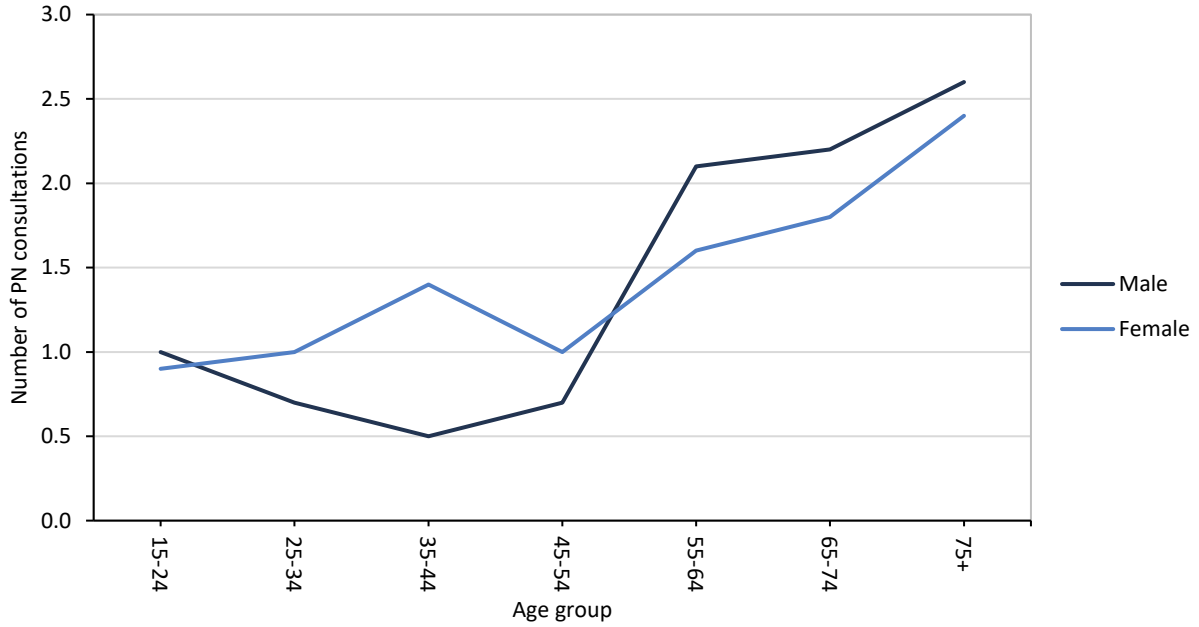
FIGURE 2.1 Number of GP consultations per annum by age group, sex and card status, 2018/2019



Notes: Card includes both medical cards and GP visit cards. There are no data on the card status of those under six so it is assumed that everyone under six has the same number of visits.
Source: Adapted from Table 4.4 of Connolly et al. (2023) and based on Healthy Ireland data.

Figure 2.2 shows the mean number of GPN consultations per annum by age (15 plus) and sex for the period 2018/2019. In general, people report fewer GPN consultations than GP consultations. However, similar to GPs, use of GPN services increases with age, and consultation rates for women of childbearing age tend to be higher than for similarly-aged males. Despite playing a key role in the administration of childhood vaccinations (Connolly and Flanagan, 2024), there is a dearth of up-to-date data on GPN consultations rates for children.

FIGURE 2.2 Number of GPN consultations per annum by age group and sex, 2018/2019



Source: Connolly and Flanagan (2024) based on Healthy Ireland data.

There are a number of potential reasons why someone requiring GP services may not receive them; these include financial barriers (in particular for those who pay out of pocket) and a shortage of GP availability. The evidence on unmet need for GP services is somewhat mixed in the Irish context. A study published in 2007 found that 19 per cent of survey respondents in Ireland reported having a medical problem in the previous 12 months but did not consult the doctor due to cost (O'Reilly et al., 2007); this included 26 per cent of paying patients and 4 per cent of non-paying patients. Among paying patients, the poorest and those with the worst health were most affected (O'Reilly et al., 2007). Given the significant increase in the number of people eligible for a GP visit card since that study was published, it is not clear whether these findings are still relevant. In 2022, it was reported that 2.6 per cent of Ireland's population experienced unmet medical care needs, but this was largely driven by unmet needs due to waiting times rather than financial barriers (European Observatory on Health Systems and Policies and OECD, 2023). A number of reports have highlighted (population-adjusted) differences in the supply of GPs across areas of Ireland (Smith et al., 2019; Coy and Tanwir, forthcoming), and there is anecdotal evidence of people not being able to access GP services in particular areas of the country due to a shortage of GPs. However, there is little national representative evidence in the Irish context about the impact of GP shortages on access to GP services, utilisation of alternative services – such as clinics associated with private health insurance companies – emergency department services or, ultimately, health status.

2.4 WORKFORCE

2.4.1 General practitioners

Most GPs in Ireland are self-employed private practitioners, although some GPs are employed by a GP practice. The majority of GPs treat both public (medical and GP visit cardholders) and private patients (those who possess neither a medical nor a GP visit card). Cardholders are required to register with a particular GP, with GPs reimbursed via the General Medical Services (GMS) scheme administered by the Primary Care Reimbursement Service (PCRS). Under this scheme, GPs receive an annual capitation payment (a set amount for each person registered with the GP, adjusted for age and sex) for each medical and GP visit cardholder on their list, as well as fees for out-of-hours services and special items of service provided to cardholders (Walsh et al., 2021). A range of allowances are also available to GPs holding a GMS contract. These cover practice supports (such as employing a GPN or a practice secretary), rural practice supports, annual leave, study leave, sick leave and maternity/paternity/adoptive leave. GPs (including both those with and without a GMS contract) are also paid fees for services delivered under specific schemes, including the Primary Childhood Immunisation Scheme, the National Cancer Screening Service (e.g. cervical screening), the Maternity and Infant Care Scheme and the prevention component (PP) of the Chronic Disease Management Programme (CDMP). For private patients receiving services outside of the aforementioned schemes, GP practices are largely reimbursed on a fee-for-service basis by individual patients, with each practice setting its own fees.

While some GP practices have extended their opening hours (e.g. evenings, Saturday mornings), most operate on standard weekday business hours. For patients requiring (non-urgent) medical care outside of regular practice hours, a network of GPs provides out-of-hours consultations on an appointment basis. Increasingly, these services are clustered on a regional basis (e.g. Eastdoc, Caredoc). Similar to day-time GP consultations, out-of-hours consultations are free at the point of use for medical and GP visit cardholders, while non-cardholders are required to pay a fee. An additional 'out-of-hours' fee is payable to GPs for a cardholder seen for a non-routine consultation between 5pm in the evening and 9am the following morning (Monday–Friday) via the PCRS.[5] In 2024, a total of 390,611 PCRS claims were made by GPs for out-of-hours consultations.[6]

In recent years, there has been an increase in the provision of primary care services by private health insurance companies. These include telephone consultations with doctors and nurses, as well as walk-in clinics that treat minor illnesses and injuries. These services are often restricted to individuals who have insurance with the provider, although some are available to everyone for a fee.

5 An additional 'out-of-hours' fee is paid on top of the regular capitation payment.
6 See PCRS annual reports – General practitioner reports.

All doctors working in Ireland must register with the Medical Council.

A range of different sources have been used to estimate the number of GPs working in Ireland, including data from the Medical Council (Table 2.2). In general, each of these sources includes a different group of GPs, which leads to variation in the reported numbers (O'Dowd et al., 2017). The Medical Council data can include doctors who are not currently active or who are only working outside of Ireland. The PCRS data only include GPs with a GMS or other contract for the provision of state-funded services (such as the Primary Childhood Immunisation Programme); consequently, the number of GPs recorded there tends to be lower than that recorded via other sources. Both the Medical Council and OECD data include trainee GPs.

TABLE 2.2 Number of GPs working in Ireland in 2023

Source	Number of GPs	Inclusion criteria
PCRS	3,110	Relates to December 2023. Includes GPs with a GMS contract and GPs not contracted to the GMS scheme who are registered to provide services under the Primary Childhood Immunisation Scheme, the Health (Amendment) Act 1996, HeartWatch, the Methadone Treatment Scheme and the National Cancer Screening Service.
Medical Council	4,456	Includes GPs registered with the Medical Council and active in Ireland in 2023. The following divisions are included in the numbers: specialist, general and trainee specialist.
OECD	5,257	GPs are defined as 'assuming responsibility for the provision of continuing and comprehensive medical care to individuals, families and communities'. Includes: GPs, district medical doctors, family medical practitioners, medical interns or residents specialising in general practice. Estimated data for 2023.

Source: PCRS data; see https://www.sspcrs.ie/portal/annual-reporting/; Medical Council data (Medical Council, 2024); OECD; see https://www.oecd.org/health/health-data.htm.

The *Medical workforce intelligence report* from the Medical Council notes that there were 4,456 active GPs in Ireland in 2023 (Medical Council, 2024). This included 3,533 in the specialist division, 856 in the generalist division and 66 trainees.[7] There were slightly more females (N=2,353, 53%) than males (N=2,103, 47%) and the mean age was 49.3 years. Additionally, 32 per cent (n = 1,424) were aged 55 and over (Medical Council, 2024). The report also showed the number of active GP hours worked, with 16 per cent reporting they worked fewer than 20 hours per week and 35 per cent reporting that they worked 40 hours or more per week; see Table 2.3 below (Medical Council, 2024).

7 The division for one GP appears to be missing in the report.

TABLE 2.3 GPs: Hours worked per week, 2023

Hours	N (%)
Less than 10 hours	236 (5%)
10–20 hours	468 (11%)
21–30 hours	718 (16%)
31–40 hours	1,426 (32%)
40–48 hours	1,039 (23%)
More than 48 hours	544 (12%)

Note: Relates to GPs actively working in Ireland in 2023; 25 GPs did not provide information on hours worked.
Source: Abridged from Medical Council (2024) Table 14.

The composition of the traditional general practice has changed over time, with a move away from the single GP practice and towards the multi-GP model. The latter, alongside GP care, offers services from other health care professionals, including GPNs (Collins and Homeniuk, 2021).

2.4.2 General practice nurses

GPNs are generally employed by their practice. All nurses working in general practice must be a registered general nurse, but there is no additional mandatory education or training involved in becoming a GPN (Connolly and Flanagan, 2024). All nurses and midwives who practice in Ireland must be registered on the Register of Nurses and Midwives, which is maintained by the Nursing and Midwifery Board of Ireland (NMBI). The register contains 12 divisions and while 'general practice nurse' is not a division, the register does record the job title of those registered, one of which is GPN. In 2023, 2,323 individuals on the NMBI register identified their job title as 'Practice nurses and GP practice nurses', with 2,288 of them recoded as working in Ireland.[8]

Table 2.4 shows the number of weekly sessions worked by 882 nurses registered with the Irish General Practice Nurses Educational Association (IGPNEA) in 2023.[9,10] Sixteen per cent reported that they worked 9–10 sessions, while 47 per cent reported working between 6 and 8 sessions per week.

8 Personal communication with NMBI, October 2024.
9 There is no one definition of a weekly session, but the ICGP defines a session as any period ≥3 hours spent undertaking GP-related activity, such that a full day of activity would consist of two sessions (Crosbie et al., 2020).
10 Established in 2008, IGPNEA aims to support the advancement of education in GPNs in Ireland.

TABLE 2.4 GPNs: Number of sessions worked per week, 2023

Number of sessions	Number	Percentage
10	92	10%
9	55	6%
8	167	19%
7	73	8%
6	178	20%
5	138	16%
4	102	12%
3	31	4%
2	20	2%
1	8	<1%
0	18 (retired)	2%
Total	882	100%

Note: Data relate to 1 March 2023, and concern 882 nurses working in general practice registered with the IGPNEA; they may not be representative of all nurses working in general practice.
Source: IGPNEA.

In general, nurses working in general practice tend to be older than other nursing groups. For example, data from the NMBI showed that 21 per cent of nurses who reported their job title as GPN were aged less than 40, compared with 42 per cent of all registered nurses; by contrast, 48 per cent of nurses who reported their job title as GPN are aged 50 and over, compared to 33 per cent of all registered nurses (Connolly and Flanagan, 2024).

2.5 RECENT REFORMS IN GENERAL PRACTICE

A key component of the Sláintecare reform proposals is the re-orientation of Irish model of healthcare away from the hospital sector and towards primary and community settings (Houses of the Oireachtas Committee on the Future of Healthcare, 2017). Reflecting these aspirations, a number of reforms have been implemented in general practice in recent years.

In 2020, the structured Chronic Disease Management Programme (CDMP) was initiated in primary care, with the aim of preventing and managing patients with chronic diseases. For medical and GP visit cardholders, the programme is designed to help identify and manage in general practice those with one or more of the following conditions: type 2 diabetes; asthma; chronic obstructive pulmonary disease (COPD); and cardiovascular disease.[11] There are plans to extend the scheme in 2025 to include chronic kidney disease and women with gestational diabetes. A report into the implementation of the programme noted that during its first two years, 83 per cent of eligible patients (aged 65 years and over) had enrolled in it (HSE, 2023). The report also noted that 91 per cent of patients with a chronic disease were being fully managed in primary care. Further details of the scheme and its potential impact on the demand for general practice services are provided in Section 3.3.4.

11 See https://www.hse.ie/eng/services/list/2/primarycare/chronic-disease-management-programme/.

In 2023, there was a significant increase in the number of people eligible for a GP visit card. In August 2023, those aged six and seven years automatically became entitled to a GP visit card on age grounds, while in September, and again in November, the income thresholds for a GP visit card (for income-based cards) were increased. For example, the weekly base eligibility threshold for a single person living alone increased from €304 (pre-September 2023) to €361 in September 2023, and further to €418 in November 2023. For a single person living with family, the income threshold increased from €271 to €322, and again to €373 over the same period.[12] These measures were estimated to increase the number of people eligible for a GP visit card by approximately 500,000.[13] Further details on the extension of eligibility and how it may impact the demand for general practice services are included in Section 3.3.3.

A new GP agreement was reached in 2023 between the Department of Health, the HSE and the Irish Medical Organisation (Department of Health et al., 2023). The agreement provided for increases in the capitation rates for cardholders, as well as a range of supports to enhance capacity in general practice. These included grants for new staff (including general practice assistants and practice managers) as well as enhancements to a range of fees and allowances currently paid to practices (Department of Health et al., 2023). In 2024, a number of changes to the rules around prescribing were introduced; these included an extension to the maximum validity of prescriptions from 6 to 12 months. In addition, work is ongoing to introduce pharmacist prescribing. As mentioned, a strategic review of general practice was ongoing at the time of writing. While it is too early to identify the impact of these changes on general practice, it is likely that they will influence demand for general practice services in the coming years.

12 See https://www.gov.ie/en/press-release/eb0d4-minister-for-health-encourages-people-to-apply-for-gp-visit-cards-as-additional-215000-people-become-eligible/.

13 See https://www.gov.ie/en/press-release/eb0d4-minister-for-health-encourages-people-to-apply-for-gp-visit-cards-as-additional-215000-people-become-eligible/.

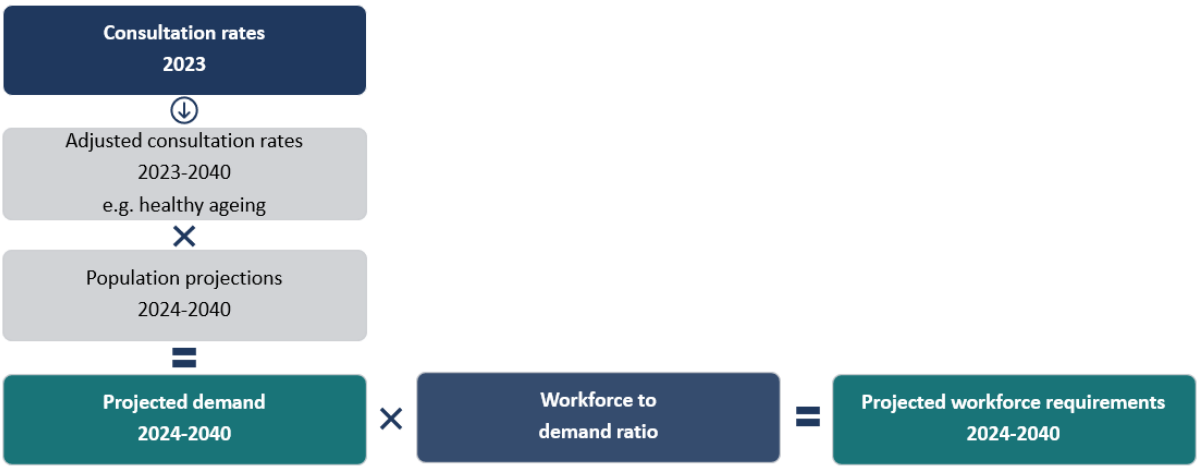
CHAPTER 3

Hippocrates projection methods and data

3.1 OVERVIEW OF APPROACH

The projections of demand and associated workforce requirements included in this report use the Economic and Social Research Institute's (ESRI) healthcare projection tool, the Hippocrates model. The Hippocrates model is a component-based healthcare projection model that projects from a bottom-up service or sectoral perspective. A detailed discussion of the model and underlying methods is included in Wren et al. (2017), Keegan et al. (2020) and Walsh et al. (2021). Figure 3.1 provides an overview of the model and describes the steps in the modelling process as applied to the current analysis.

FIGURE 3.1 Hippocrates model – Diagrammatic representation, 2023–2040



Source: Authors' representation of the Hippocrates model.

The first step is to develop base year age- and sex-specific consultation rate profiles for general practitioners (GPs) and general practice nurses (GPNs) at the national level. This is done for medical cardholders, GP visit cardholders and non-cardholders separately. The base year is 2023 and the projection period is 2024–2040. Baseline estimates of activity are projected based on a range of assumptions, including the size and composition of the population, healthy ageing and other policy-related factors that can influence the utilisation of GP and GPN services. Subsequently, projected increases in activity are converted into workforce requirements over the projection period, based on current and projected workforce to activity rates.

3.2 BASELINE ESTIMATES OF ACTIVITY

3.2.1 GP activity rates

Data on GP consultations were obtained from the Healthy Ireland survey (Box 3.1). Given the year-on-year fluctuations in GP consultations in Healthy Ireland detailed in Chapter 2, a number of waves of the survey were used to increase the robustness of the estimates. For adults, the following waves were used: Wave 1 (2014/2015), Wave 2 (2015/2016), Wave 4 (2017/2018), Wave 5 (2018/2019), Wave 8 (2021/2022) and Wave 9 (2022/2023). Wave 3 did not include any questions on GP consultations, Wave 6 was cancelled due to the COVID-19 pandemic and Wave 7 was not included as the consultation rates in that survey were low due to the pandemic and are unlikely to be relevant to the projection period. For children, Wave 5 (2018/2019) and Wave 9 (2022/2023) were used as these are the waves of the survey that include questions on children's GP consultations.

Consultation rates were estimated by sex (male, female), age group (<6, 6–7, 8–17, 18–29, 30–39, 40–49, 50–59, 60–69, 70+) and card status (medical card, GP visit card, no card).

BOX 3.1 The Healthy Ireland survey: GP and GPN consultations

The Healthy Ireland survey is an annual, cross-sectional survey. Interviews are conducted with a representative sample of the population aged 15 and older living in Ireland (IPSOS MRBI, 2015; 2018; Ipsos B&A, 2023). The sample size is approximately 7,500 people per wave. To date, eight waves of the survey have been completed in the following years: 2014/2015 (Wave 1), 2015/2016 (Wave 2), 2016/2017 (Wave 3), 2017/2018 (Wave 4), 2018/2019 (Wave 5), 2020/2021 (Wave 7), 2021/2022 (Wave 8) and 2022/2023 (Wave 9). Wave 6 of the survey, which was due to take place in 2020, was cancelled due to the COVID-19 pandemic and associated restrictions. The first five waves were completed using face-to-face interviews, while the subsequent waves were completed via the telephone.

GP consultations

Waves 1, 2, 4, 5, 7, 8 and 9 were used to estimate GP consultation rates. Wave 3 did not include any questions on GP consultations, Wave 6 was cancelled due to the COVID-19 pandemic and Wave 7 was not included as the recorded consultation rates in that survey were low due to the pandemic and are unlikely to be relevant to the projection period. Waves 1, 2, 4, 5, 7, 8 and 9 included the following question in relation to GP consultations:

> *When was the last time you consulted a GP or family doctor on your own behalf? (This includes home visits and phone consultations but excludes nurse-only consultations.)*

The following response options were provided:

- less than 12 months ago;
- more than 12 months ago;
- never consulted;
- don't know;
- refused.

Those who reported that they had consulted a GP or family doctor less than 12 months ago were asked the following question:

> *How often in the past four weeks did you consult a GP on your own behalf, excluding nurse-only consultations?*

Waves 5 and 9 of the survey included questions relating to children of the survey respondent. Each respondent was asked whether they had children, the age of each child, whether each child had attended a GP in the past 12 months and the number of visits in the previous four weeks.

The weighted[14] mean number of GP consultations per annum for adults by sex, age bands (18–29, 30–39, 40–49, 50–59, 60–69, 70+) and card status (medical card, GP visit card, no card) was estimated by multiplying the number of visits in the previous four weeks by 13 to estimate an annual rate (corresponding to 52 weeks).

A similar approach was adopted to estimate GP consultation rates for children for the following age bands: <6, 6–7 and 8–17. No data were collected on the sex or cardholder status of the child. For children aged six and over, it was assumed that they had the same cardholder status as the respondent parent or guardian; however, in the modelling all children aged 6–7 were assumed to be eligible for a GP visit card. As it was not possible to identify those aged younger than six without a GP visit card in this analysis, a constant consultation rate across cardholders and non-cardholders was assumed.

GPN consultations

Waves 1, 2, 4, 5 and 9 were used to estimate GPN consultation rates. Waves 3 and 8 did not include any questions on GPN consultations, Wave 6 was cancelled due to the COVID-19 pandemic and Wave 7 was not included as the recorded consultation rates in that survey were low due to the pandemic and are unlikely to be relevant to the projection period. Waves 1, 2, 4, 5 and 9 included the following question in relation to GPN consultations:

> *When was the last time you consulted a nurse within a GP practice on your own behalf, excluding visits where you also consulted the GP?*

The following response options were provided:

- less than 12 months ago;
- more than 12 months ago;
- never consulted;
- don't know;
- refused.

Those who reported that they had consulted less than 12 months ago were asked the following question:

> *How often in the last 4 weeks did you consult such a nurse working within a GP practice on your own behalf, excluding visits where you also consulted the GP?'*

Similar to the approach for GP consultations, the weighted mean number of GPN consultations per annum for adults by sex, age group (18–29, 30–39, 40–49, 50–59, 60–69, 70+) and card status (medical card, GP visit card, no card) was estimated by multiplying the number of visits in the previous four weeks by 13 to estimate an annual rate (corresponding to 52 weeks).

14 Weighting is a statistical technique whereby different weights are assigned to different respondents to help ensure the survey findings accurately represent the target population.

Estimates of eligibility for a medical and/or GP visit card are derived from the SWITCH (Simulating Welfare and Income Tax Childcare and Health) model (Box 3.2) and relevant uptake rates applied (see Table 3.1). Estimates of consultation rates were applied to the 2023 population to estimate consultation volumes in 2023.

BOX 3.2 SWITCH modelling of medical cards and GP visit cards

The SWITCH model is a tax benefit micro-simulation model that has been developed to simulate Irish households' tax liabilities and social welfare entitlement (Keane et al., 2023). The model is based on data drawn from the 2022 Survey on Income and Living conditions (SILC), uprated to 2023 levels for the purposes of this analysis. SILC covers a wide range of issues, with a focus on income and living conditions. The survey is carried out annually and includes approximately 4,000 households/10,000 individuals each year (Keane et al., 2023).

Using information on a person's current reported income, the SWITCH model can estimate eligibility for an income-based medical card or GP visit card (Keane et al., 2021). The modelling of eligibility for a medical card or GP visit card, based on income, closely follows the means test set by the Health Service Executive (HSE). Assessable income is calculated from all relevant sources – e.g. employee income, self-employed income, capital income and secondary properties for both the applicant and their potential spouse; simulated liabilities of income tax, pay-related social insurance and the universal social charge are deducted. Relevant social welfare income is also included in the assessment of means, including Child Benefit and the Working Family Payment. In cases where an applicant's income is solely derived from a social welfare income source, they are automatically entitled to a medical card. SWITCH also allows for deductions such as housing costs, childcare costs and allowances for dependent children, as per HSE guidelines, though it does not include all allowable expenses, for example, travel to work expenses. The assessment of means occurs at the family level, as defined by the HSE. The assessable income is then compared to the relevant income limit, which varies by age and living status (living alone or with family). Aside from income-based entitlement to cards, the model also models age-based eligibility; e.g. those aged over 70 and under 6/8 for GP visit cards. There is a hierarchical structure to the modelling, whereby individuals simultaneously eligible for a medical card and a GP visit card (such a scenario arises only for under 8s or over 70s who could be entitled to an age-based GP visit card and an income-based medical card) are modelled as eligible for a medical card.

3.2.2 GPN utilisation rates

Data on GPN consultations were obtained from the Healthy Ireland survey and the Growing Up in Ireland study (Boxes 3.1 and 3.3). Five waves of the Healthy Ireland survey were used to estimate national age-specific GPN consultation rates for adults: Wave 1 (2014/2015), Wave 2 (2015/2016), Wave 4 (2017/2018), Wave 5 (2018/2019) and Wave 9 (2022/2023).

There is a lack of recent data on GPN consultation rates for children in Ireland (Connolly and Flanagan, 2024). Reflecting earlier work (Walsh et al., 2021; Connolly and Flanagan, 2024), GPN consultation rates for children were estimated in this analysis using the Growing Up in Ireland study. Different waves of the Growing Up in Ireland Infant Cohort were used to estimate GPN consultations for different age groups: the Infant Cohort Wave 2 (2010/2011), relating to 3 year olds, was used to estimate consultations for those aged 1–5; the Infant Cohort Wave 3 (2013), relating to 5 year olds, was used to estimate consultations for those aged 6/7 ; and the Infant Cohort Wave 6 (2021/2022), relating to 13 year olds, was used to estimate consultations for those aged 8–17 years.

Under the current Primary Childhood Immunisation Schedule, it is recommended that children visit their GP on 5 separate occasions to receive scheduled vaccines in the first 13 months of life. GPNs play a key role in the administration of these vaccines; however, these visits are not captured by the Growing Up in Ireland data, which relate specifically to three year olds. No data were available to the research team on the proportion of these childhood vaccinations that are administered by the GPN rather than the GP or public health nurse; in order to incorporate these consultations, it is assumed in this analysis that 50 per cent of children receive these vaccinations from the GPN; an adjustment is subsequently made to the GPN consultation rate for those aged less than six on this basis. [15]

BOX 3.3 Growing Up in Ireland study

Growing Up in Ireland is a longitudinal study of children and young people in Ireland, which started in 2006. The study follows two groups of children: 8,000 9 year olds (child cohort) and 10,000 9 month olds (Infant Cohort) (Thornton et al., 2010; Quail et al., 2011). To date, there have been four waves of data collection and a special COVID-19 survey for the child cohort, and six waves and a COVID-19 survey for the Infant Cohort. In 2024, a new birth cohort (including nine month olds) was launched.

Various waves of the Growing Up in Ireland study included a question relating to GPN utilisation. In particular, the questionnaire for the Infant Cohort of Wave 2 (2010/2011), Wave 3 (2013) and Wave 6 (2021/22) asked the following question:

> *In the past 12 months, how many times have you seen or talked on the telephone with any of the following about <child's> physical or emotional health?*
>
> Response categories included 'a practice nurse' (i.e., a nurse in a GP's surgery/clinic)

For this analysis, the weighted annual mean number of GPN visits for the relevant waves were calculated.

3.3 DEMAND PROJECTIONS

The projections of demand in this report are based on a range of assumptions on the following variables: population growth and structure, healthy ageing, eligibility

15 It is acknowledged that there is uncertainty around the estimate of 50 per cent.

for GP services and the impact of the prevention component (PP) of the Chronic Disease Management Programme (CDMP). These assumptions are grouped to create three projection scenarios – low-pressure scenario, central scenario and high-pressure scenario (Table 3.1). Each of the assumptions are discussed in detail in the sections that follow.

TABLE 3.1 Projection scenario assumptions

		Scenarios		
		Low pressure	Central	High pressure
Population growth and structure		Central	Central	High
Healthy ageing		Moderate healthy ageing	-	-
Eligibility for a GP visit card	For those already eligible for a card, the following uptake rates are assumed:			
	• GP visit card <6:	85%	85%	85%
	• GP visit card >70:	95%	95%	95%
	• Income based GP visit card/medical card:	70%	70%	70%
	For newly eligible (2023):			
	Age: Starting in 2024, uptake of a GP visit card for 6/7 year olds is assumed to be:	85%	85%	95%
	The number of GP consultations for this group will increase in line with existing GP visit cardholders.			
	Income: Starting in 2025, uptake of a GP visit card for newly eligible groups is assumed to be:	50%	60%	70%
	The number of GP consultations for this group will increase in line with existing GP visit cardholders in the same age/sex group.			
Chronic Disease Treatment Programme (CDTP)	Starting in 2023, uptake rate is assumed to be:	85%	85%	85%
	CDTP consultations are modelled separately.	2 GP and 2 GPN per annum	2 GP and 2 GPN per annum	2 GP and 2 GPN per annum
	It is assumed that per annum for participants in the CDTP, the programme is associated with:	1 less regular GP consultation No change in the number of GPN consultations.	1 less regular GP consultation No change in the number of GPN consultations.	no change in the number of regular GP consultations No change in the number of GPN consultations.

Source: Authors' assumptions.

3.3.1 Population growth and ageing

The ESRI population projections used in the analysis are based on the 2022 Census of Population; details on the data and methods used to develop the projections are provided in Bergin and Egan (2024). In the population projections, three projection scenarios are provided – central, low and high (Table 3.2). In each scenario, mortality and fertility are dealt with in the same way; however, migration differs across the scenarios. In the central scenario, net immigration is projected to average 35,000 per annum up to 2030, with particularly high increases in 2025 and 2026; and 20,000 per annum thereafter. The low scenario assumes 10,000 less net immigration per annum; while the high scenario assumes 10,000 more net immigration per annum. For the mortality assumption, life expectancy at birth is

expected to increase from 81.1 in 2022 to 84.2 in 2040 for males, and from 84.6 to 87.1 over the same period for females. A constant fertility rate of 1.65 is assumed for each scenario.

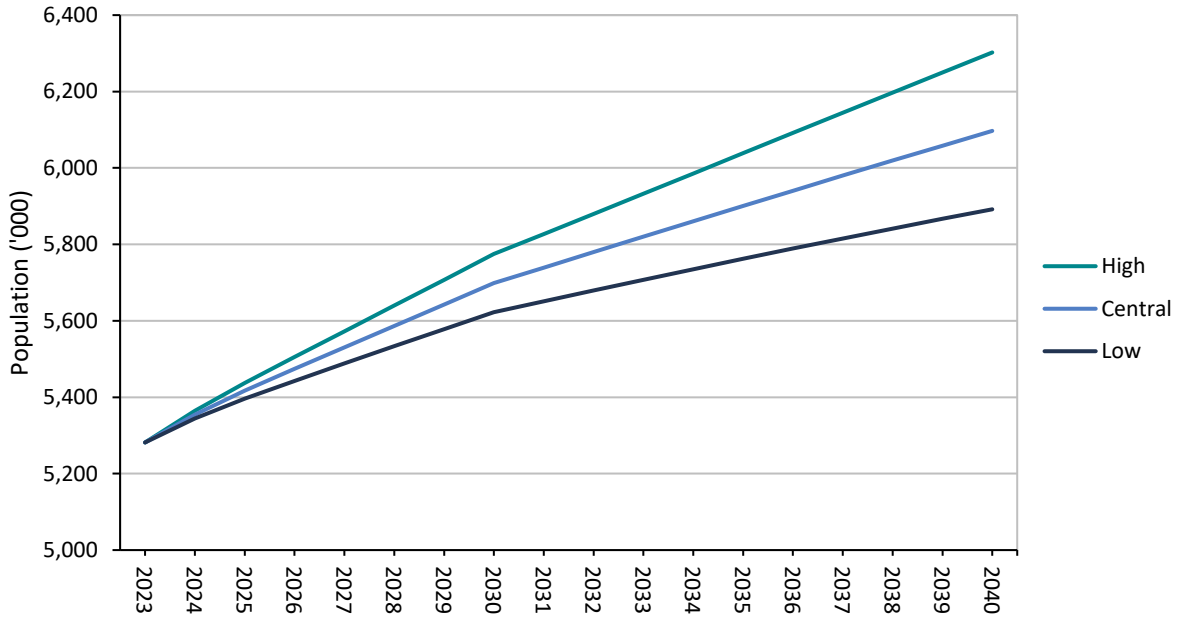
TABLE 3.2 Summary of main assumptions for population scenarios

Assumptions	Central	Low	High
Mortality	Life expectancy at birth for males (females) is expected to increase from 81.1 (84.6) in 2022 to 84.2 (87.1) for males (females) in 2040	No change from central scenario	No change from central scenario
Migration	Net immigration to average +35,000 p.a. to 2030 (higher at 45,000 in the short-term) and +20,000 p.a. thereafter	Net immigration to average +25,000 p.a. to 2030 (higher at 35,000 in the short-term) and +10,000 p.a. thereafter	Net immigration to average +45,000 p.a. to 2030 (higher at 55,000 in the short-term) and +30,000 p.a. thereafter
Fertility	Total fertility rate is unchanged at 1.65 over the period	No change from central scenario	No change from central scenario

Note: p.a.=per annum.
Source: Adapted from Bergin and Egan (2024).

Figure 3.2 shows the projected population for each year between 2023 and 2040 across the central, low and high population projections. Given the nature of the assumptions applied, the low and high scenarios are equidistant from the central scenario. In the central scenario, the population is expected to increase by 900,000 by 2040, an annual average population growth rate of 0.9 per cent per annum. In the low scenario, the increase by 2040 would be 700,000 with an annual average growth rate of 0.7 per cent, while in the high scenario, an increase of 1.1 million would be expected, reflecting annual average growth of 1.1 per cent per annum.

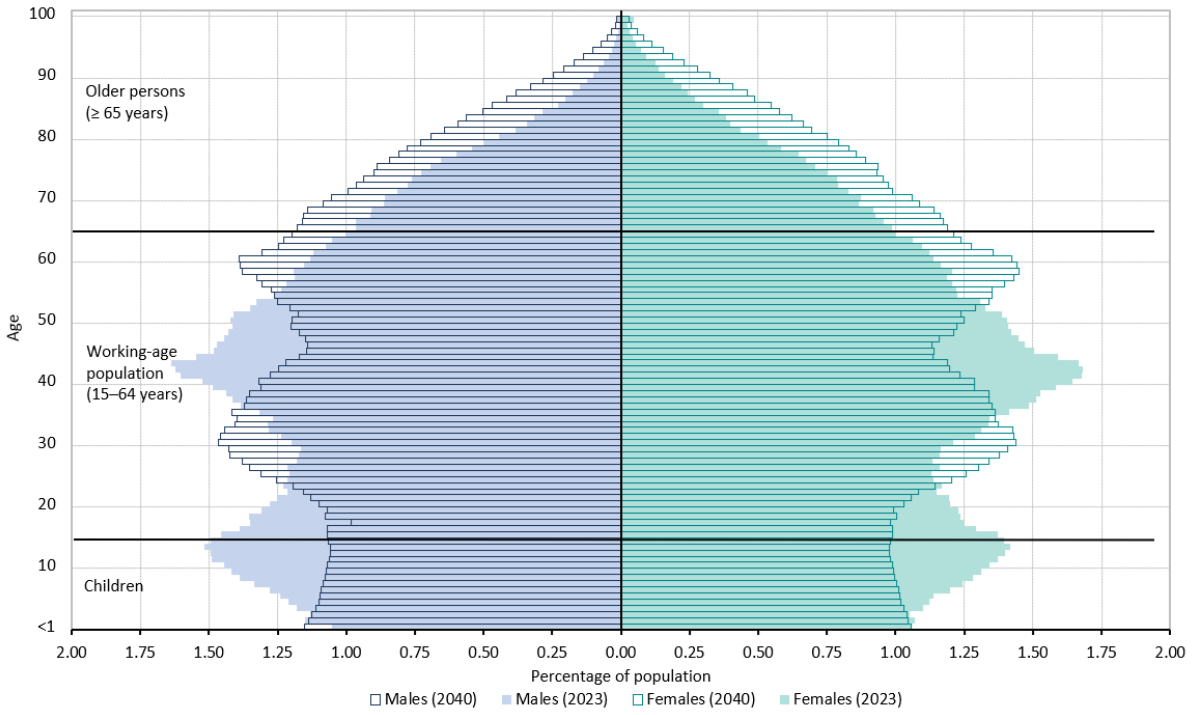
FIGURE 3.2 Total population – Low, central, and high population growth scenarios



Source: Bergin and Egan (2024) – additional data provided by the authors.

In addition to the growth in population between 2022 and 2040, there is also projected to be a change in the age structure. Figure 3.3 shows the distribution of the population across age groups for 2023 and 2040 based on the central population projection. Similar patterns are observed for both males and females, with decreases in the proportions of the projected population aged under 25 years and for those aged 35–50 years, and increases in the proportions of those aged 25–34 and over 50 years (Brick et al., 2025).

FIGURE 3.3 Central scenario | Population age pyramids for 2023 and 2040 (% of population)



Source: Bergin and Egan (2024) – additional data provided by the authors.

In this analysis, the central population scenario is applied in the low and central pressure projection scenarios, while the high population scenario is used in the high pressure scenario. Given the relatively high levels of migration to Ireland in recent years – with net migration numbers exceeding those included in the population projections in recent years (Potter et al., 2025) – the central and high population scenarios are likely the most relevant to current projections.

3.3.2 Healthy ageing

Four alternative hypotheses have been proposed about the relationship between increased life expectancy and health: *expansion of morbidity*, *compression of morbidity*, *dynamic equilibrium* and *moderate healthy ageing*. The *expansion of morbidity* hypothesis assumes that as life expectancy increases, the number of years spent in ill health and disability also increases (Gruenberg, 1977; Olshansky et al., 1991). Under *compression of morbidity*, both disease-free and disability-free

years are assumed to increase more than gains in longevity (Fries, 1980). The *dynamic equilibrium* hypothesis assumes that increasing life expectancy is accompanied by a reduction in disability and the severity of the consequences of chronic diseases, due to advances in medical technology (Manton, 1982). Under this hypothesis, it is assumed that as life expectancy increases, the absolute number of years lived in good health or mild ill health will increase by an amount equivalent to the increased life expectancy (Przywara, 2010). Finally, under the *moderate healthy ageing* hypothesis, used by the European Commission in their reports on ageing (European Commission, 2024), a health profile shift of half the change in age-specific life expectancy is assumed. Further detail on the alternative hypotheses and how they have been incorporated into the Hippocrates model are available in Wren et al. (2017), Keegan et al. (2020) and Walsh et al. (2021).

While a number of studies have examined the relationship between ageing and health, there is little consensus on which theory of healthy ageing is consistent with past trends (European Commission, 2015). Recent studies from England have employed differing assumptions about healthy ageing when making projections on health and healthcare needs in the coming years (Raymond et al., 2021; Rocks et al., 2021; Watt et al., 2023). For example, in the UK, rates of diagnosed long-term conditions (LTCs) in each age group have risen, and more people are living with two or more LTCs than would be expected purely from demographic change. However, it is unclear how much of this is driven by changes in health and wellbeing and how much is driven by changes in diagnostic practices, with increased emphasis placed on early diagnosis for conditions such as dementia (Raymond et al., 2021). Rocks and Rachet-Jacquet (2021) employ the expansion of morbidity hypothesis in their projection model of the National Health Service in the UK, assuming that morbidity will rise as the population grows and ages.

There is a lack of data or evidence on which theory of healthy ageing might apply in the Irish context. While mortality rates have fallen and life expectancy has increased in Ireland over the last 30 years (Eighan et al., 2020; Duffy et al., 2022), the proportion of the population and the length of time people are living with a chronic disease have tended to increase (Wren et al., 2017). An earlier report using the Hippocrates model to project demand for health and social care services included a literature review examining how different healthy ageing assumptions might be relevant for different health and social care sectors in Ireland (Wren et al., 2017). It noted that general practice is often the main health and social care service that meets the demands of increasing monitoring and treatment for chronic diseases and, as such, the assumptions on healthy ageing applied in an analysis of general practice may be less optimistic than for other services (Wren et al., 2017). Consequently, in this analysis an assumption of no healthy ageing (i.e. expansion of morbidity) is assumed in the central and high pressure scenarios (this assumes that years lived in poor health will increase as life expectancy increases).

In the low pressure scenario, an assumption of moderate healthy ageing is used (see Wren et al. (2017) for further detail). The moderate healthy ageing assumption is that a lower proportion of additional life expectancy is lived in poor health relative to the assumption of expansion of morbidity, similar with the hypothesis underlying the baseline scenario of the European Commission's 2024 ageing report (European Commission, 2024). Moderate healthy ageing falls between expansion of morbidity and dynamic equilibrium assumptions, and is included to account for a potential reduction in the severity of chronic disease over the projection period.

Following the methodology adopted by European Commission (2012) and previously applied in Wren et al. (2017), these effects are modelled by shifting the age- and sex-specific activity curves to the right, proportional to the projected changes in life expectancy. These adjustments are applied to those aged 40 and older.

3.3.3 Changes in eligibility for GP visit card

As discussed in Chapter 2, there was a significant increase in the number of people eligible for a GP visit card in 2023. In August 2023, those aged six and seven became automatically entitled to a GP visit card; while in September and again in November, the income thresholds for a GP visit card were increased. These increases in eligibility will lead to an increase in demand for GP consultations over the projection period for those who become eligible and receive a card.

To estimate the size of the increase in demand, it is necessary to estimate:

(i) the number of people that become eligible;

(ii) uptake of this eligibility (i.e. apply and receive a GP visit card); and

(iii) the impact of receiving a GP visit card on GP consultation rates.

(i) The number of people that become eligible

The number of people that become eligible on age grounds (i.e. six and seven year olds) is estimated as the number of children aged six and seven in any particular year, and was obtained from the ESRI population projections. Estimates of the number and age distribution of people who become eligible under the increased income thresholds for a GP visit card were derived from the SWITCH model (Box 3.2).

For the purposes of the analysis, the 2023 SWITCH policy system is applied, using the 2022 SILC data and uprated accordingly. SWITCH enables estimation of the population eligible for a GP visit card prior to recent eligibility extensions, as well as the newly eligible population.

Table 3.3 shows the percentage of the population eligible for a medical card and GP visit card in 2023 (prior to the extension of eligibility) for the age groups included in this analysis.

TABLE 3.3 Percentage of the population eligible for a medical card or GP visit card, 2023

	Medical card	GP visit card
0–5	22%	78%
6–7	32%	7%
8–17	26%	5%
18–29	19%	4%
30–39	18%	4%
40–49	21%	7%
50–59	26%	4%
60–69	46%	3%
70+	86%	14%

Notes: The numbers represent the percentage of different age groups eligible for a medical card and GP visit card in 2023. While 100% of those aged under 6 years (under 8 by end of 2023) and 70 years and over are entitled to a GP visit card, the numbers in this table for those eligible for a GP visit card refer to those eligible for a GP visit card but not eligible for a medical card (hence the numbers eligible for a GP visit card are less than 100%). Within the model, it is assumed that not everyone who is eligible will apply and receive a card; assumed uptake rates for existing cardholders are detailed in Table 3.1. These percentages pre-date the extension of eligibility in 2023. The impact of the extension of eligibility are modelled as per Table 3.1.

Source: Authors' analysis using SWITCH v.7 with 2022 SILC data.

(ii) Uptake of eligibility

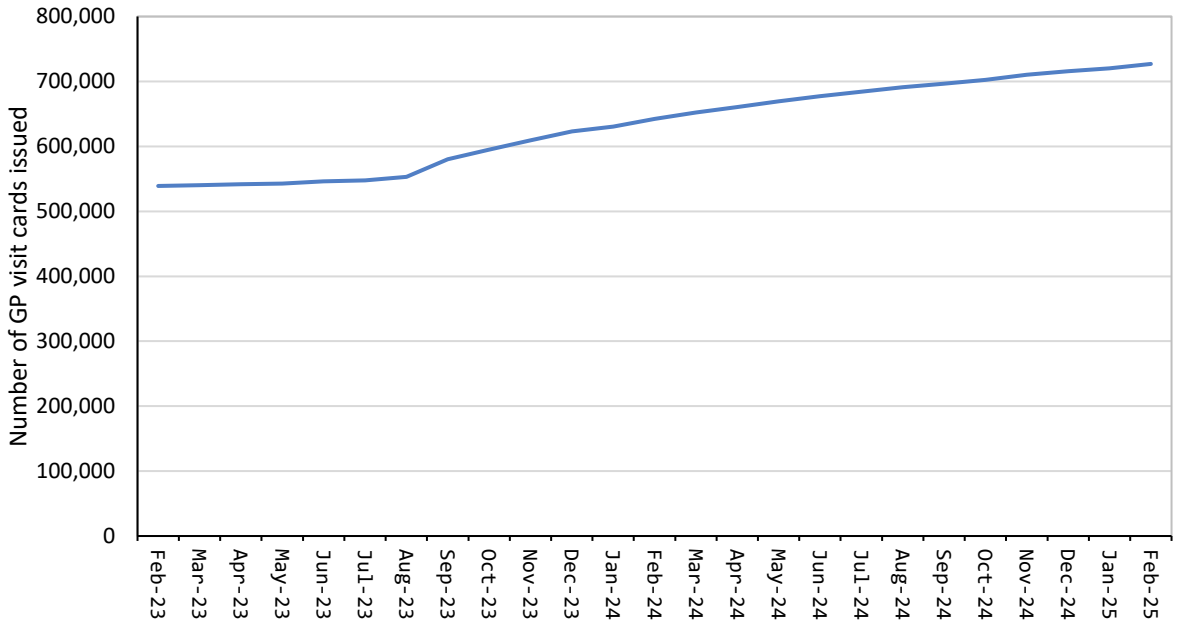
Once the number and age distribution of people who are eligible for a GP visit card are estimated, it is necessary to identify the uptake rate (i.e. the proportion that apply for and receive a GP visit card).

Not everybody who is eligible for a medical card or GP visit card avails of one. A previous analysis estimated that 31 per cent of individuals eligible for a medical card do not take up a card (Keane et al., 2021), with even lower uptake for the income-based GP visit card (Callan et al., 2016). Uptake rates for age-based cards tend to be significantly higher than for income-based cards, which may be explained by the very detailed application form and potential uncertainty about eligibility under the income-based approach relative to age-based cards (Connolly et al., 2023). However, the reasons for non-take-up are not well understood, and, as such, a fixed take-up rate across the population is assumed.

Based on uptake rates identified above and reflecting previous analysis (Connolly et al., 2023), in the central scenario, an uptake rate of 85 per cent is assumed in the age-based approach to extending eligibility. For those newly entitled to a GP visit card, an uptake rate of 60 per cent is assumed in the income-based approach. This rate is lower than that used for existing GP visit cardholders (Table 3.1), and reflects the relatively slow uptake of GP visit cards since the extension in eligibility in 2023. While it was noted by the Department of Health that the expansion of eligibility in 2023 would result in an estimated additional 500,000 people being

eligible for a GP visit card,[16] between February 2023 and February 2025, only an additional 187,893 GP visit cards were issued (Figure 3.4), suggesting that uptake has been relatively low to date. Given the uncertainty around uptake, lower (50%) and higher (70%) uptake rates for new cardholders are considered.

FIGURE 3.4 Number of GP visit cards issued, February 2023–February 2025



Source: PCRS, PCRS annual reports - Eligibility reports.

For those eligible before the extension in 2023, the uptake rates for age-based GP visit cards are 85 per cent for children younger than 6 and 95 per cent for people 70 years old and over, whereas for the income-based GP and medical cards, a 70 per cent uptake is assumed (Table 3.1).

(iii) The impact of having a GP card on GP consultation rates

The final piece that needs to be estimated is the impact of having a GP visit card on GP consultation rates. In this analysis, it is assumed that previous non-cardholders who receive a card have the same age and sex adjusted number of consultations as existing GP visit cardholders.

3.3.4 Chronic Disease Management Programme

A key component of the Sláintecare reforms was a 'shift to the left', with the reorientation of service delivery towards primary and community-based services, thereby providing services closer to people's homes and reducing pressure on

16 See gov.ie, press release: 'Minister for Health encourages people to apply for GP Visit Cards as additional 215,000 people become eligible'.

acute hospitals. A key programme in this regard is the Chronic Disease Management Programme (CDMP).

Introduced in 2020, the aim of the CDMP is to prevent and manage patients with chronic disease within general practice. Generally, cardholders are eligible to participate in the scheme if they have one of the following chronic conditions: type 2 diabetes, asthma, chronic obstructive pulmonary disorder (COPD) or cardiovascular disease.[17] The programme is split into three components, with patients only being able to register onto one component at a particular time, depending on their health status:

(i) The Chronic Disease Treatment Programme (CDTP) is for people previously diagnosed with a chronic disease.

(ii) The Opportunistic Case Finding (OCF) Programme aims to identify people who either have an (previously) undiagnosed chronic disease or that are at risk of developing one.

(iii) The CPMP Prevention Programme (PP) is for people at high risk of developing cardiovascular disease or diabetes.

The fees for GPs and GPNs depend on the component of the CDMP, the number of chronic conditions a patient has and the type of consultation involved (in person or online). These patients visit their GP once or twice per year on the basis of the CDMP programme, depending on the component to which they are subscribed.

Further details of the various programmes are provided below.

1. The CDTP was introduced in 2020 for people over 70 years with a medical or GP visit card (HSE, 2020), and has subsequently been expanded to other age groups so that since 2022, all those aged over 18 years with a medical or GP visit card and one of the relevant conditions are eligible. The programme is for patients with one of the following diagnosed chronic diseases: type 2 diabetes, asthma, COPD or cardiovascular disease. It also includes non-cardholders registered on the PP (see below for more information) with a diagnosis of gestational diabetes or pre-eclampsia and who develop diabetes. The programme includes two reviews in every 12-month period. Each review includes one consultation with the GPN and one consultation with the GP, which can take place in the GP practice, online, or over the phone.

   By the end 2023, 397,808 people aged 18 and over were enrolled in the treatment programme, giving an overall uptake rate of 80 per cent.[18]

17 There are plans to include additional conditions in the coming years; however, at the time of writing, these conditions have not yet been included in the programme.

18 Personal communication with the HSE.

2. The OCF programme was introduced in 2022 for people 65 and over with a medical card or GP visit card; in 2023, it was expanded to include those aged 45 and over. The aim of this programme is to identify patients who have not previously been diagnosed as having a chronic disease but that may either have an undiagnosed chronic disease or be at risk of developing one (HSE, 2022). Assessment for the programme takes place when a patient attends their GP for another issue and has one or more of the following indicators: is a current smoker, has a high body mass index, blood tests show possible heart failure, is of a specific high-risk ethnicity, has a history of gestational diabetes, has dyslipidaemia, has previously recorded moderate or severe chronic kidney disease, or has a history of severe mental illness.

   During the assessment, the GP carries out a number of tests and, depending on the outcomes of the tests, the patient is categorised in relation to their risk of disease. For those categorised at low risk of developing a chronic disease, the OCF assessment is repeated after five years. Those found at risk of developing cardiovascular disease, diabetes or both are registered on the PP (see below). Those diagnosed with a specific chronic disease are registered on the CDTP.

   In 2022, 38,628 assessments were carried out under the OCF programme, while 122,175 such assessments were carried out in 2023.[19]

3. The PP was introduced in 2022 for people 65 and over with a medical card or GP visit card; in 2023, it was expanded to include those aged 45 and over. It targets those at high risk of cardiovascular disease or diabetes, with special inclusion for younger cardholders (aged 18 and over) diagnosed with hypertension, or any adult over 18 years old with gestational diabetes or pre-eclampsia.[20] The programme includes an annual review, which includes one consultation with a GPN, one consultation with a GP and any relevant tests. Following the review, the healthcare practitioner can advise the patient on lifestyle changes and/or refer them to relevant support services.

   In 2022, 11,121 assessments were carried out under the PP programme, while 63,775 such assessments were carried out in 2023.[21]

Similar to the assumptions on eligibility, in order to identify the impact of the CDMP on demand for GP services, it is necessary to identify:

19 Personal communication with the HSE.
20 The last group was added in November 2023.
21 Personal communication with the HSE.

(i) the number of people that are eligible for the programme;

(ii) uptake of this eligibility; and

(iii) the impact of participating in the programme on GP consultation rates.

Given current data availability about the percentage of different age and sex groups that might be eligible for the different programmes, in this report only the CDTP is considered. Other components of the programme could be included in future work.

(i) The number of people eligible for the CDTP programme

Data on the percentage of different age groups (males and females combined) eligible for the CDTP were obtained from the HSE and are outlined in Table 3.4 below.

TABLE 3.4 CDTP eligibility rates by age group

Age-group	% eligible
18–44	10%
45–59	39%
65+	44%

Notes: The percentages relate to the percentage of people within each age group that have a medical card or GP visit card, and one of the relevant chronic conditions.
Source: HSE.

(ii) Uptake of eligibility for the CDTP

Data from the HSE showed an uptake rate for the CDTP in 2023 of 61 per cent for those aged 18–64 and 89 per cent for those aged 65 and over.[22] For the purpose of this analysis, an uptake rate of 85 per cent is assumed for all age groups. This is higher than the uptake rate for younger age groups estimated for 2023. Given that these data pertain to a period when the programme had only just recently been extended to those age groups, it is anticipated that uptake will increase (as it did for older age groups) as the programme becomes embedded into the system.

(iii) Impact of participating in the CDTP programme on GP visiting rates

While the CDTP programme has been up and running since 2020, with successive extension to younger age groups since 2022, it is anticipated that the additional GP/GPN consultations associated with the programme may not be captured in the baseline GP/GPN consultation estimates in this analysis. There are a number of reasons for this. First, many of the waves of Healthy Ireland used to estimate the baseline estimates pre-date the development and rollout of the programme. Second, while the programme was initiated in 2020 and rolled out over the following three years, it is likely that it will take some time for the programme to

22 Personal communication with the HSE, August 2024.

be fully embedded into the system; consequently, the number of consultations associated with the programme are likely to increase in the future as uptake of the programme increases among GPs and patients.

In this analysis, it is assumed that those participating in the CDTP programme have two GP and two GPN CDTP consultations per annum.

Given the longer duration of CDTP consultations relative to regular (non-CDTP) GP consultations,[23] CDTP consultations are modelled separately in this analysis. However, it is assumed that these additional CDTP consultations could result in a reduction in the number of regular (non-CDTP) GP consultations. Consequently, the following approach was adopted.

- In low and central pressure scenarios, it is assumed that there is one less regular (non-CDTP) GP consultation (due to the CDTP programme) among those that participate in the programme.
- In the high pressure scenario, it is assumed that there is no change to the number of regular GP consultations.
- Given the relatively low number of GPN consultations, no change in the number of regular GPN consultations is assumed in any of the scenarios for those participating in the CDTP programme.

3.4 DECOMPOSITION AND SENSITIVITY ANALYSIS

Further to the three projection scenarios, the analysis also includes a decomposition and sensitivity analysis. The decomposition analysis estimates the proportion of the projected increase in demand between 2023 and 2040 due to the different assumptions (e.g. population growth and ageing, healthy ageing and extension to eligibility). The sensitivity analysis examines the sensitivity of demand projections to potential changes in some of the assumptions included in the analysis. In line with previous analyses using the Hippocrates model (Keegan et al., 2020; Walsh et al., 2021; Connolly et al., 2023), this is undertaken by examining the impact on 2040 demand projections, under the central scenario, of changing one assumption at a time. In this analysis, three assumptions are varied: (i) baseline estimates of the annual number of GP and GPN consultations; (ii) the percentage of the population eligible for GP visit cards; and (iii) the percentage of the population eligible for the CDTP.

23 Personal communication the HSE, September 2024.

3.4.1 Baseline estimates of consultation rates

Given the lack of an administrative dataset capturing activity in general practice, it was necessary to use survey data to estimate GP and GPN consultation rates. These consultation rates are potentially an underestimate of activity in general practice: some consultations, including GPN consultations for children and GPN consultations that also included a consultation with the GP, are excluded; as are GP consultations for those living in communal establishments. Neither do the data capture potential unmet need for general practice services. Further, it is possible that demand for general practice services will increase in the coming years due to the Sláintecare proposals, which seek to re-orientate the health system towards increased delivery of care in the community setting. Unfortunately, there is little available data or evidence to inform how these various factors might impact on the current or future need for general practice services.

In the sensitivity analysis, the impact of one additional GP and GPN consultation per annum per person is quantified. This is not to suggest that this captures the 'need' for general practice services in the coming years; rather, it is an attempt to reflect uncertainty in consultation rates, both in the baseline and projection years.

3.4.2 Percentage of the population eligible for GP visit cards

A key component of the Sláintecare proposals is that of GP care free at the point of use to the whole population. The 2025 Programme for Government committed to '[e]xpand[ing] free GP services to children up to at least 12 years, and [to] keep its further extension under review' (Department of the Taoiseach, 2025). At the time of writing, it is not clear when this expansion of eligibility will be introduced; consequently it is not included in the main analysis. However, in the sensitivity analysis, the impact on demand of extending GP visit cards to those (i) aged 12 and under and (ii) the whole population is quantified.

3.4.3 Percentage of the population eligible for the CDTP programme

Currently the CDTP is (in the main) only available to cardholders. In the sensitivity analysis, the impact of extending eligibility for the CDTP to the whole population (not just cardholders) is examined. This requires an assessment of the population with one of the relevant chronic diseases, which was estimated from Waves 5, 7, 8 and 9 of the Healthy Ireland survey; it is detailed in Table 3.5 to identify the proportion of the population that would be eligible to participate in the programme.

TABLE 3.5 Percentage of non-cardholders with at least one eligible chronic disease

Age group	% eligible
18–39	6%
40–69	10%
70+	23%

Notes: A respondent is recorded as having at least one eligible chronic disease if they have at least one of the following: COPD, asthma, atrial fibrillation, type 2 diabetes, ischaemic heart disease, heart failure, transient ischaemic attack or cerebrovascular accident.
Source: Healthy Ireland Survey, Waves 5, 7, 8, 9.

3.5 WORKFORCE PROJECTIONS

3.5.1 Number of GPs

As discussed in Section 2.4, there is no one definitive list of GPs working in Ireland; different sources include different groups of GPs and consequently provide different estimates. For the purpose of this analysis, data on the number of GPs working in Ireland in 2024 were obtained from the HSE and are detailed in Table 3.6. This source gives an estimate of 3,928 GPs actively working in Ireland in 2024.

TABLE 3.6 Number of GPs working in Ireland, 2024

Group	Number
PCRS GPs	3,129
Private GPs	500
Number of trainee graduates (estimate)	212
Other	87
Total	3,928

Note: As discussed in Section 2.4.1 and presented in Table 2.2, different sources can be used to estimate the number of GPs in Ireland. For this analysis, the estimate of 3,928 was obtained from the HSE and relates to their assessment of the number of GPs providing GP services to the population in Ireland. The number includes the PCRS GPs noted in Table 2.2 (the numbers differ slightly due to different time periods) as well as GPs who do not have any state contracts but are providing general practice services privately. The total number in this table is lower than the Medical Council and OECD numbers in Table 2.2 as those numbers would include GPs not currently providing general practice services in Ireland (e.g. because they are living abroad, currently not working or working in a different discipline).
Source: HSE.

3.5.2 Number of GPNs

A nurse working in general practice must be a registered general nurse but beyond this, there are no mandatory education or training requirements to become a GPN. All nurses and midwives who practice in Ireland must be listed on the Register of Nurses and Midwives, which is maintained by the Nursing and Midwifery Board of Ireland (NMBI). The register contains 12 divisions, including general nurses, midwives and psychiatric nurses. There is no 'practice nurse' or 'general practice nurse' division; however, those included in the register do self-report their job title, which can include practice nurse.

Of those on the NMBI register in 2023, 2,288 identified their job title as 'practice nurses and GP practice nurse' and were active and practicing in Ireland.[24]

24 Personal communication with the NMBI, October 2024.

3.5.3 Projections of GPs and GPNs

In this analysis, projected increases in activity are converted into workforce requirements over the projection period, based on current workforce to activity rates.

General practitioners

For GPs, workforce projections were based on both GP headcounts and whole-time equivalents (WTEs). To reflect potential shortages in the current GP workforce, projections were also undertaken based on an assumption that the current workforce is not sufficient to meet demand for GP services.

The headcount of GPs (3,928 from Table 3.6) was related to the total number of GP consultations in 2023 to estimate a GP–consultation ratio.[25] This ratio was then applied to the projected number of consultations in 2040 to identify how many GPs would be required in 2040 to maintain the 2023 GP–consultation ratio. Both regular (non-CDTP) and CDTP consultations were included to estimate a total number of consultations for 2023. Given the longer average length of a CDTP consultation relative to a regular consultation, in this analysis, one CDTP consultation was regarded as equivalent to two regular GP consultations. The projected number of headcount GPs was estimated for each of the three demand projection scenarios – low pressure, central and high pressure.

Converting workforce headcounts to WTEs requires detail on the working hours of GPs. However, there is no available dataset that details the working hours of individual GPs, so it is necessary to use survey data to convert headcount numbers to WTEs. Previously, Smith et al. (2019) estimated that 9 per cent of male GPs and 28 per cent of females GPs worked part-time in 2014, while more recently, Collins (2020) estimated that approximately one-quarter of GPs worked part-time: 17 per cent of males and 31 per cent of females. A survey from 2021 of female GPs in Ireland found that less than 20 per cent of survey respondents worked five days a week in general practice, but that a majority of respondents reported additional roles including the provision of out-of-hours services and research and academic roles (Keenan et al., 2024).

In this analysis, data for 2023 on GP working hours from the Medical Council (Medical Council, 2024; see Tables 2.3 and 3.7) was used to estimate an adjustment rate to convert headcounts to WTEs. This required a number of simplifying assumptions to be made. First, 40 hours is assumed to be full-time; those working fewer than 40 hours are assumed to work part-time. Second, as the Medical

25 Given issues regarding available data, it was necessary to use data on the number of GPs from early 2024 rather than 2023.

Council data include a range of hours (e.g. 21 to 30 hours) rather than individual hours, the midpoint of the range is used (Table 3.7). Applying these assumptions, an average adjustment rate of 78.9 per cent was estimated.

TABLE 3.7 GPs: Converting headcounts to WTEs

Hours	% of GPs	Assumed hours (mid-point)	WTE rate (assumed hours/40 hours)	Adjustment factor (% of GPs * WTE rate)
<10 hours	5.3	5	0.13	0.7
10–20 hours	10.6	15	0.38	4.0
21–30 hours	16.2	25.5	0.64	10.3
31–40 hours	32.2	35	0.88	28.2
40–48 hours	23.4	40	1.00	23.4
> 48 hours	12.3	40	1.00	12.3
Total	100			78.9

Notes: '31–40 hours' was assumed to mean '31–39 hours', given that '40' is also included in the category '40–48'. In keeping with earlier analysis, those working more than 40 hours are assigned a WTE rate equal to 1, in part because some GPs may be working outside of standard general practice activities (e.g. research).
Sources: Columns 1 and 2 from Medical Council (2024); remaining columns authors' assumption and analysis.

The approach to estimating GP workforce requirements detailed above assumes that the current GP–consultation ratio will remain constant over the projection period. However, there are a number of reasons why this may not happen in practice. First, a significant cohort of GPs currently work more than 40 hours per week (see Table 3.7). As noted in the previous paragraph, recent years have seen an increase in part-time working hours among GPs, suggesting that, on average, GPs may work fewer hours in the future. Second, there is some evidence to suggest that people living in particular parts of the country are unable to access a GP when required.[26] There is no agreed metric regarding the number of GPs required per population, making it difficult to quantify the extent to which there may be an undersupply of GPs in Ireland (as of 2023). This is further complicated in the Irish context by the variation in the number of GPs recorded by different sources (Table 2.2), and the associated lack of clarity about how many doctors are actively working in general practice at any given point in time. By way of a sensitivity analysis, the impact on GP workforce requirements if the GP–consultation ratio per annum was reduced by 10 per cent over the projection period is also examined.

General practice nurses

Similar to GPs, workforce projections for GPNs were based on both headcounts and whole-time equivalents (WTEs).

There was an estimated 2,288 PNs working in Ireland in 2023; this headcount was related to the total number of GPN consultations in 2023 to estimate a GPN–

26 See Houses of the Oireactas, Dáil Éireann debate (33rd, parliamentary questions, 31 January 2024, 'General practitioner services; Houses of the Oireactas, Dáil Éireann debate (34th Dáil), parliamentary questions, 6 March 2025, 'General practitioner services'.

consultation ratio. This ratio was then applied to the projected number of consultations in 2040 to identify how many GPNs would be required in 2040 to maintain the 2023 GPN–consultation ratio. Both regular (non-CDTP) and CDTP consultations were included to identify a total number of consultations in 2023. Given the longer average length of a CDTP consultation relative to a regular consultation, in this analysis one CDTP consultation was regarded as equivalent to two regular GPN consultations. The projected number of headcount GPNs was estimated for each of the three demand projection scenarios – low pressure, central and high pressure.

Converting workforce headcounts to WTEs requires detail on the working hours of GPNs. However, as with GPs, there is no available dataset that details the working hours of individual GPNs. For this analysis, data from a sample of GPNs, on the number of sessions they worked, was obtained from the IGPNEA (Connolly and Flanagan, 2024), and was used to estimate an adjustment rate to convert headcounts to WTEs (see Table 2.4 and Table 3.8). This required a number of simplifying assumptions to be made. First, a single session is assumed to be equivalent to four hours. Second, 10 sessions (or 40 hours) are assumed to be full-time, with those working less than 10 sessions a week assumed to be working part-time. Applying these assumptions, an adjustment rate of 63.1 per cent was estimated and applied in the analysis (Table 3.8).

TABLE 3.8 GPNs: Converting headcounts to WTEs

Sessions	% of GPNs	Assumed hours (session = 4 hours)	WTE rate (assumed hours/40 hours)	Adjustment factor (% of GPNs * WTE rate)
0	2	0	0	0.0
1	1	4	0.10	0.1
2	2	8	0.20	0.5
3	4	12	0.30	1.1
4	12	16	0.40	4.6
5	16	20	0.50	7.8
6	20	24	0.60	12.1
7	8	28	0.70	5.8
8	19	32	0.80	15.1
9	6	36	0.90	5.6
10	10	40	1.00	10.4
Total	100			63.1

Note: Data relate to 1 March 2023, and concern 882 nurses working in general practice registered with the IGPNEA; they therefore may not be representative of all nurses working in general practice.
Sources: Columns 1 and 2 from IGPNEA; remaining columns authors' assumption and analysis.

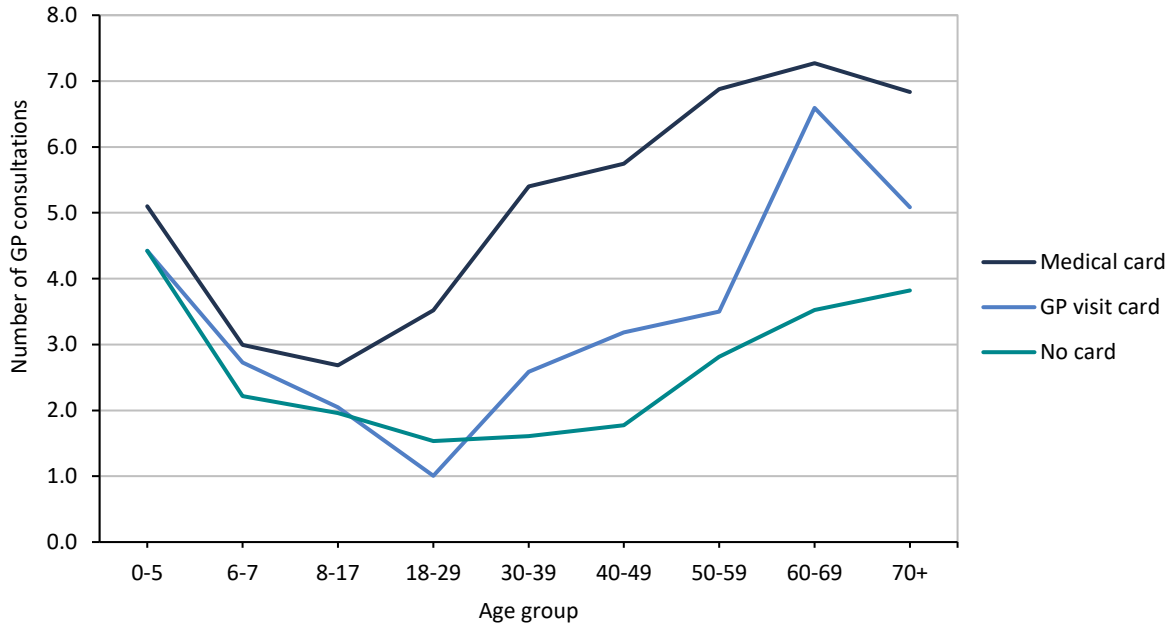
CHAPTER 4

Findings

4.1 BASELINE ACTIVITY RATES

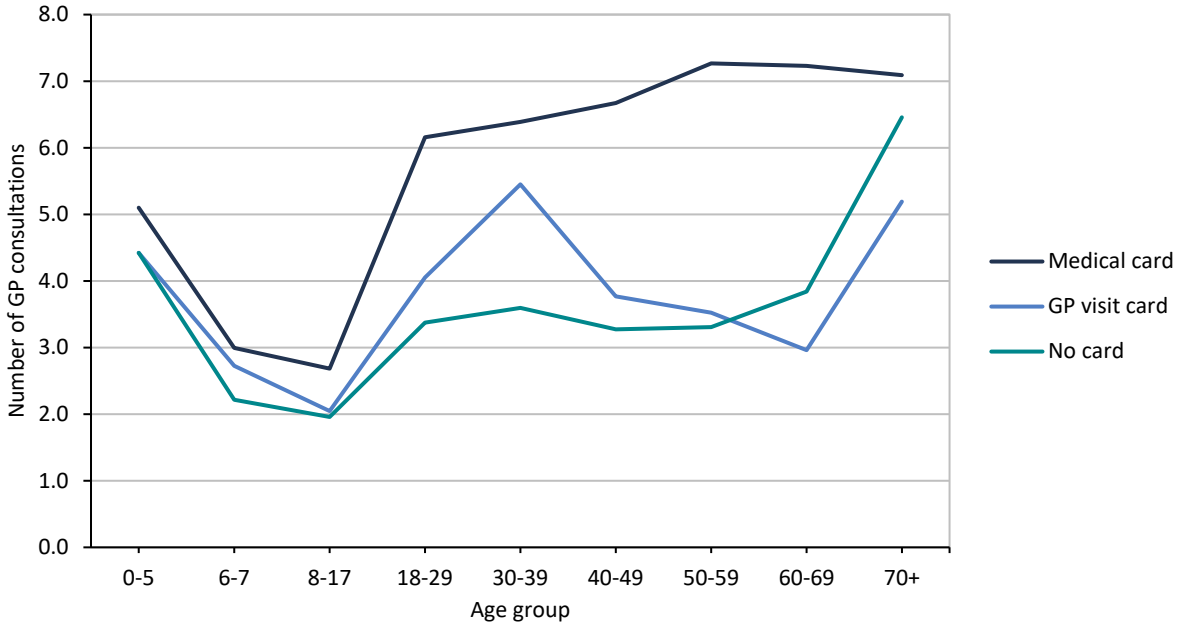
Figures 4.1 and 4.2 show the average number of general practitioner (GP) consultations by age group and card status for males and females respectively. Medical cardholders have the highest number of GP consultations, while there is some overlap between the average number of consultations for GP visit cardholders and non-cardholders. In general, the average number of consultations increases with age, although a relatively high number of consultations is also observed for the youngest age group. In the middle age groups, females tend to have more consultations than similarly aged males; for example, male non-cardholders aged 30–39 have on average 1.6 GP consultations per annum, compared to 3.6 for similarly aged females without a card.

FIGURE 4.1 Average number of GP consultations by age group and card status, males, 2023



Note: The estimates included in the figure are used as a proxy for 2023 but are based on a number of waves of the Healthy Ireland survey (see Section 3.2.1).
Source: Healthy Ireland data; author's analysis.

FIGURE 4.2 Average number of GP consultations by age group and card status, females, 2023

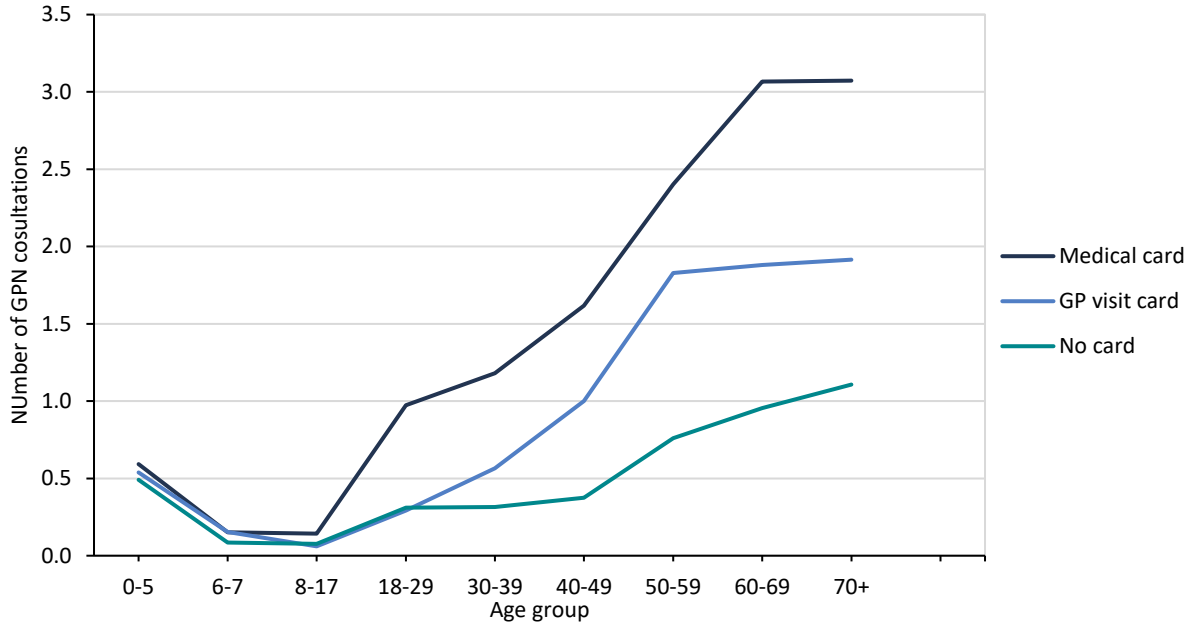


Note: The estimates included in the figure are used as a proxy for 2023 but are based on a number of waves of the Healthy Ireland survey (see Section 3.2.1).
Source: Healthy Ireland data; author's analysis.

Figures 4.3 and 4.4 show the average number of general practice nurse (GPN) consultations by age group and card status, for males and females respectively. The average number of GPN consultations per annum tends to be lower than that for GPs. However, some caution is required in interpreting these findings. Many of the estimates are based on responses to a question in Healthy Ireland that relates specifically to consultations with the GPN where the individual did not also see the GP; for this reason, these data are likely to represent an underestimate of the actual number of GPN consultations.

As with GPs, the average number of GPN consultations increases with age and is higher among medical cardholders relative to other groups. In addition, among the middle age groups, the number of GPN consultations is greater for females relative to males; for example, male non-cardholders aged 30–39 have on average 0.3 GPN consultations per annum, compared to 1.1 for similarly aged females without a card.

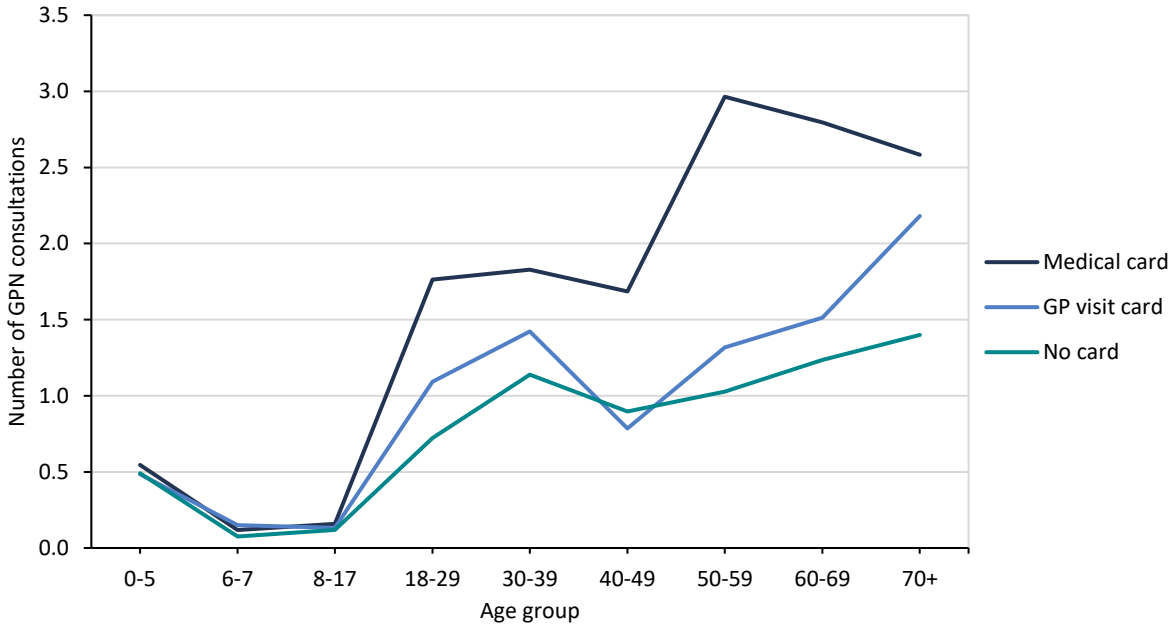
FIGURE 4.3 Average number of GPN consultations by age group and card status, males, 2023



Notes: The estimates included in the figure are used as a proxy for 2023 but are based on different waves of the Healthy Ireland survey and Growing Up in Ireland study (see Section 3.2.2). An adjustment is made to the average number of consultations for those aged less than six to reflect consultations associated with the childhood vaccination schedule (see Section 3.2.2).

Sources: Authors' analysis based on Healthy Ireland and Growing Up in Ireland data.

FIGURE 4.4 Average number of GPN consultations by age group and card status, females, 2023



Notes: The estimates included in the figure are used as a proxy for 2023 but are based on different waves of the Healthy Ireland survey and Growing Up in Ireland study (see Section 3.2.2). An adjustment is made to the average number of consultations for those aged less than six to reflect consultations associated with the childhood vaccination schedule (see Section 3.2.2).

Sources: Authors' analysis based on Healthy Ireland data and Growing Up in Ireland data.

4.2 BASELINE NUMBER OF GP AND GPN CONSULTATIONS

As previously noted, there is no one dataset that records the totality of activity in general practice in Ireland. In this analysis, the number of GP and GPN consultations in 2023 were estimated by applying the age-, sex- and card-specific activity rates in 2023 (detailed in Section 4.1) to the projected population for 2023.

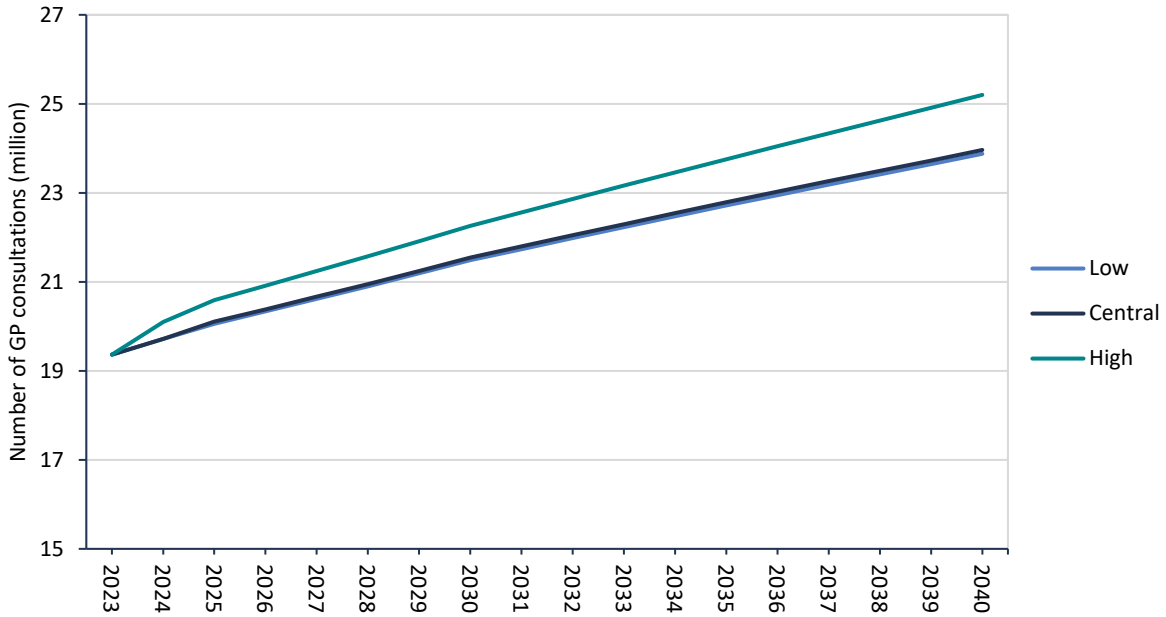
There were an estimated 18.7 million regular (non-Chronic Disease Treatment Programme (CDTP)) GP consultations and 669,680 CDTP GP consultations in 2023. The corresponding numbers for GPN consultations were 5.05 million regular (non-CDTP) consultations and 669,680 CDTP consultations.

4.3 PROJECTIONS OF ACTIVITY

4.3.1 General practitioners

Figure 4.5 show the projected increase in demand for GP (regular and CDTP) consultations over the projection horizon for the three projection scenarios detailed in Table 3.1. The scenarios differ across a range of assumptions, including population growth and structure, healthy ageing, uptake of GP visit cards and the impact of the CDTP on GP consultations. The higher projected demand in the earlier years of the projection period relates to the assumed uptake of GP visit cards (for newly eligible groups) in 2024 and 2025, and higher assumed net migration. While the assumptions on healthy ageing and uptake of GP visit cards differ for the low and central scenarios, there is very little difference between the two scenarios in the projected number of GP consultations over the projection horizon.

FIGURE 4.5 GP consultations – Demand requirements by projection scenario, 2023–2040



Note: The estimates included in the figure are used as a proxy for 2023 but are based on different waves of the Healthy Ireland survey (see Section 3.2.2).

Sources: Healthy Ireland data, SWITCH v.7 with 2022 SILC data and ESRI 2022 population projections; authors' calculations.

Table 4.1 shows the projected increase in demand for GP consultations between 2023 and 2040 under the three projection scenarios. Between 2023 and 2040, demand for GP consultations (including demand for the CDTP consultations) is projected to increase by between 23 per cent and 30 per cent. In 2040, demand for GP consultations is projected to be between 23.9 million and 25.2 million per annum. The projected increase in demand for GP consultations will be greater for cardholders relative to non-cardholders due to a projected increase in the number of cardholders over the projection period, arising from the 2023 extension to GP visit card eligibility, and to an ageing population (given that currently all those aged 70 and older are entitled to a GP visit card on age grounds). As the number of cardholders increases, so too will the number of people eligible for the CDTP, given that the programme is only currently available for cardholders. The relatively low projected increase in demand for non-cardholders is due to a decreasing proportion of non-cardholders in the population. In the high pressure scenario, the projected increase for GP consultations from non-cardholders is lower than the central scenario as the high pressure scenario assumes a higher uptake rate of GP visit cards relative to the central scenario. Average annual increases for the total number of consultations are between 1.2 and 1.6 per cent.

TABLE 4.1 GP consultations (regular and CDTP), projections of demand, 2023–2040

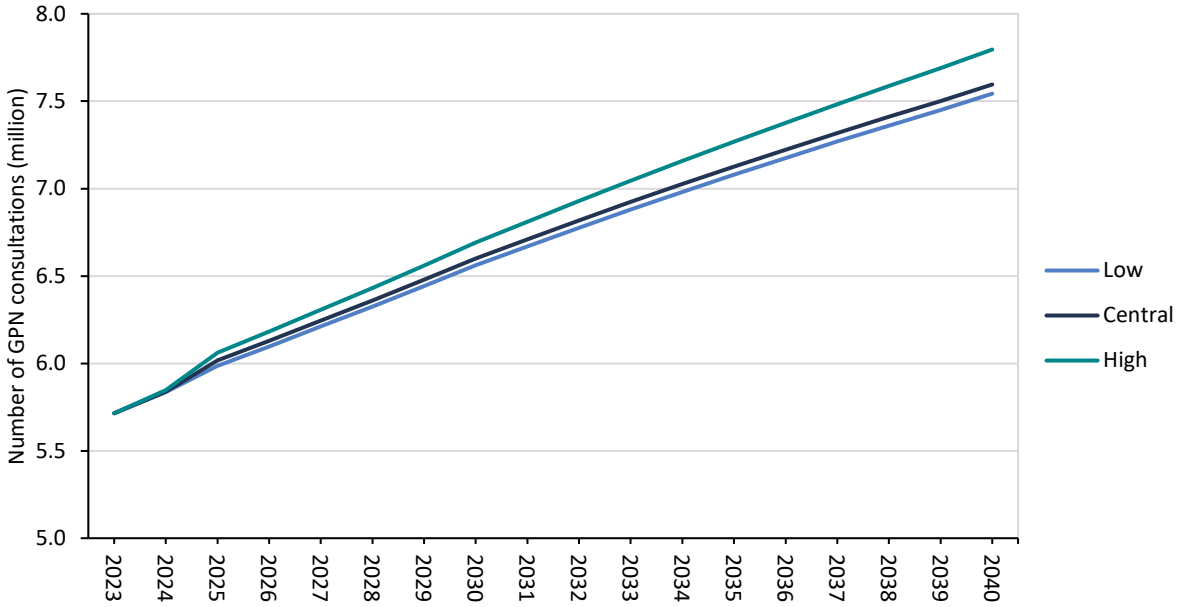
Scenarios	2023	2040		Total growth 2023–2040	Average annual growth 2023–2040
		Projected additional	Total		
	N ('000)	N ('000)	N ('000)	%	%
Medical card					
Low pressure	6,742	2,239	8,982	33	1.7
Central		2,247	8,989	33	1.7
High pressure		2,834	9,576	42	2.1
GP visit card					
Low pressure	1,850	745	2,595	40	2.0
Central		881	2,731	48	2.3
High pressure		1,261	3,111	68	3.1
Non-card					
Low pressure	10,103	1,233	11,336	12	0.7
Central		1,160	11,263	11	0.6
High pressure		1,399	11,501	14	0.8
Total (non-CDTP)					
Low pressure	18,695	4,218	22,913	23	1.2
Central		4,288	22,983	23	1.2
High pressure		5,494	24,189	29	1.5
CDTP consultations					
Low pressure	670	295	965	44	2.2
Central		311	981	46	2.3
High pressure		342	1,012	51	2.5
Total consultations					
Low pressure	19,364	4,513	23,878	23	1.2
Central		4,599	23,964	24	1.3
High pressure		5,836	25,201	30	1.6

Note: Due to rounding, the numbers might not always sum up precisely.
Sources: Healthy Ireland data, SWITCH v.7 with 2022 SILC data and ESRI 2022 population projections; authors' calculations.

4.3.2 General practice nurses

Figure 4.6 shows the projected increase in demand for GPN consultations over the projection horizon for the three projection scenarios detailed in Table 3.1.

FIGURE 4.6 GPN consultations – Demand requirements by projection scenario, 2023–2040



Notes: The estimates included in the figure are used as a proxy for 2023 but are based on different waves of the Healthy Ireland survey and Growing Up in Ireland study (see Section 3.2.2). An adjustment is made to the average number of consultations for those aged less than six to reflect consultations associated with the childhood vaccination schedule (see Section 3.2.2).

Sources: Healthy Ireland data, SWITCH v.7 with 2022 SILC data and ESRI 2022 population projections; authors' calculations.

Table 4.2 shows the projected increase in demand for GPN consultations between 2023 to 2040 under the three projection scenarios. Between 2023 and 2040, demand for GPN consultations (including demand for the Chronic Disease Management Programme (CDMP)) is projected to increase by between 32 per cent and 36 per cent. The larger projected increase for GPN consultations relative to GP consultations is, in part, driven by the impact of the CDTP. For participants, the programme is associated with two additional GP and two additional GPN consultations per year; given the lower number of GPN consultations relative to GP consultations, this increase will be more pronounced for GPN consultations. In 2040, demand for GPN consultations is projected to be between 7.5 million and 7.8 million. Similar to GPs, the projected increase in demand for GPNs consultations will be higher for cardholders relative to non-cardholders due to a projected increase in the number of cardholders over the projection period due to policy changes and the ageing of the population. Average annual increases for the total number of consultations are between 1.6 and 1.8 per cent.

TABLE 4.2 GPN consultations (regular and CDTP), projections of demand, 2023–2040

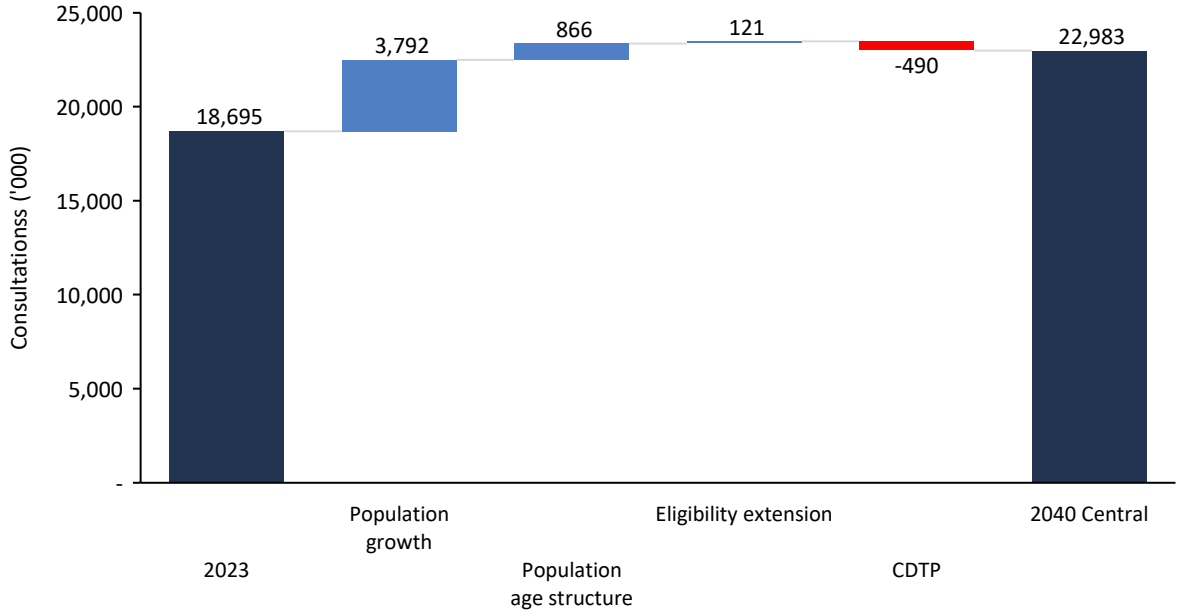
Scenarios	2023	2040		Total growth 2023–2040	Average annual growth 2023–2040
		Projected additional	Total		
	N ('000)	N ('000)	N ('000)	%	%
Medical card					
Low pressure	2,339	948	3,286	41	2.0
Central		957	3,296	41	2.0
High pressure		1,009	3,348	43	2.1
GP visit card					
Low pressure	397	190	587	48	2.3
Central		231	628	58	2.7
High pressure		291	688	73	3.3
Non-card					
Low pressure	2,310	395	2,705	17	0.9
Central		382	2,691	17	0.9
High pressure		438	2,748	19	1.0
Total (non-CDTP)					
Low pressure	5,045	1,533	6,578	30	1.6
Central		1,570	6,615	31	1.6
High pressure		1,739	6,784	34	1.8
CDTP consultations					
Low pressure	670	295	965	44	2.2
Central		311	981	46	2.3
High pressure		342	1,012	51	2.5
Total consultations					
Low pressure	5,715	1,829	7.543	32	1.6
Central		1,881	7,596	33	1.7
High pressure		2,081	7,796	36	1.8

Note: Due to rounding, the numbers might not always sum up precisely.
Sources: Healthy Ireland and Growing Up in Ireland data, SWITCH v.7 with 2022 SILC data and ESRI 2022 population projections; authors' calculations.

4.4 DECOMPOSITION ANALYSIS

Relative to 2023, an additional 4.3 million 'regular' GP consultations are projected to occur by 2040 (in the central scenario). Figure 4.7 shows that the main driver of this increase is population growth, followed by changes in the population age structure. The increase in eligibility (assumed to take place in 2024/2025) has a relatively small impact on the projected increases for 2040; while the CDTP is assumed to reduce the number of 'regular' consultations (though increasing the number of CDTP consultations).

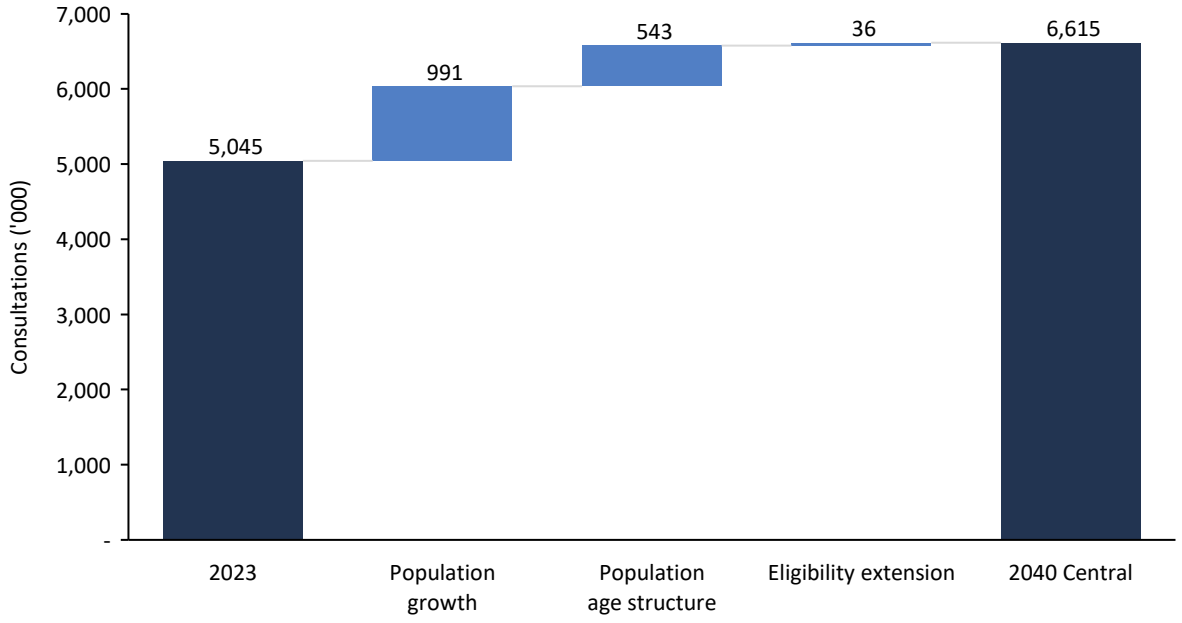
FIGURE 4.7 Regular GP consultations – Decomposition of projected consultation growth (central scenario), 2023–2040



Sources: Authors' calculations using Healthy Ireland data, SWITCH v.7 with 2022 SILC data and ESRI 2022 population projections.

Relative to 2023, an additional 1.6 million 'regular' GPN consultations are projected to occur by 2040. Similar to GPs, the main driver of this growth is population growth, followed by the change in the structure of the population. The increase in eligibility (assumed to take place in 2024/2025) has a small impact on the projected increases for 2040 (Figure 4.8).

FIGURE 4.8 Regular GPN consultations – Decomposition of projected consultation growth (central scenario), 2023–2040



Sources: Healthy Ireland data, SWITCH v.7 with 2022 SILC data and ESRI population data, 2024; authors' calculations.

4.5 SENSITIVITY ANALYSIS

Regarding 2040 demand projections under the central scenario, Table 4.3 shows the impact of changing three variables separately:

(i) increasing the average number of GP and GPN consultations (by age, sex and card status) per annum by one;

(ii) extending eligibility for a GP visit card to different age groups; and

(iii) extending eligibility for the CDTP to the whole population (with one of the relevant chronic diseases).

One additional GP and one additional GPN consultation per person per annum would increase the number of these consultations in 2040 by 25 per cent and 80 per cent respectively. The significantly larger percentage increase for GPNs relative to GPs arises due to the lower number of GPN consultations relative to GP consultations in the baseline period.

Extending eligibility for GP visit cards to the whole population would increase demand for GP and GPN consultations in 2040 (relative to a situation of no such increase) by 8 and 18 per cent respectively. Extending eligibility to those aged 12 and under was found to increase demand in 2040 by a small amount (relative to a situation of no such increase by 2040); however, this result should be interpreted with caution given the very limited data on GP utilisation among this group. In addition, given the reduction in the proportion of the population in this age group in 2040 relative to 2023 (Figure 3.3), the impact in 2040 of such an extension potentially masks a larger impact in earlier years during which the proportion of the population in this age group is higher. Without more detail on when such a policy would be implemented, it is not possible to precisely quantify the impact of extending eligibility to those aged 12 and under.

Extending eligibility for the CDTP to the whole population with a chronic disease is also projected to have a relatively small impact on demand for consultations in 2040, with demand increasing by 2 per cent for GPs and 7 per cent for GPNs (assuming no reduction in regular GP/GPN consultations). There are a number of potential reasons for this relatively small increase. One is that a relatively small number of people would be eligible for the programme (e.g. the number of people without a card with one of the relevant chronic diseases); another is that, as the population ages to 2040, a higher proportion of the population will already be eligible for the scheme as they will have an age-related GP visit card. However, while the number of CDTP consultations is relatively small, these consultations are generally more involved and longer than regular consultations, and consequently would have implications for workforce requirements.

TABLE 4.3 Sensitivity analysis: Percentage effect on 2040 demand for GP and GPN consultations of changing one assumption, central scenario

	GPs	GPNs
Projected demand 2040, central scenario (regular + CDTP consultations) ('000)	23,964	7,596
One additional consultation	25%	80%
Extending eligibility to GP visit card up to 12 year olds	<1%	<1%
Extending eligibility to GP visit card to total population	8%	18%
Extending CDTP to total population (assume 1 less regular consultation)	1%	-
Extending CDTP to total population (assume no difference to regular consultation)	2%	7%

Note: Due to rounding, the numbers might not always sum up precisely.
Sources: Healthy Ireland data, SWITCH v.7 with 2022 SILC data and ESRI population data, 2024; authors' calculations.

4.6 PROJECTIONS OF WORKFORCE REQUIREMENTS

Tables 4.4 and 4.5 show the projected number of GPs and GPNs required in 2040 to meet the additional demand for general practice services detailed in Tables 4.1 and 4.2 above.

In this analysis, there was an estimated (headcount) 3,928 GPs working in Ireland at the end of 2023 (see Table 3.5 for more detail), corresponding to 3,097 whole-time equivalent (WTE) GPs. By 2040, assuming a constant GP–consultation ratio, the number of (headcount) GPs required to meet projected demand is between 4,871 and 5,139; this equates to an increase of between 24 per cent and 31 per cent.

If, as discussed in Chapter 3, the number of consultations per GP decreases over the projection period (by an assumed 10 per cent), then the number of GPs required to meet projected demand would increase to between 5,412 and 5,710; this equates to an increase of between 38 per cent and 45 per cent (Table 4.4).

TABLE 4.4 GPs: Projected requirements, 2023–2040

Scenarios	2023	2040		Total growth 2023–2040
		Projected additional	Total	
	N	N	N	%
GPs: Headcount				
Low pressure	3,928	943	4,871	24
Central		963	4,891	25
High pressure		1,211	5,139	31
GPs: WTE				
Low pressure	3,097	743	3,840	24
Central		759	3,865	25
High pressure		955	4,052	31
GPs: Reduction in consultations numbers				
Low pressure	3,928	1,484	5,412	38
Central		1,506	5,434	38
High pressure		1,782	5,710	45

Note: Due to rounding, the numbers might not always sum up precisely.
Source: Authors' analysis.

There were an estimated (headcount) 2,288 GPNs working in Ireland in 2023, corresponding to 1,445 WTE GPNs (Table 4.5). By 2040, the number of (headcount) GPNs required to meet projected demand is between 3,049 and 3,156; this equates to an increase of between 33 per cent and 38 per cent. This difference is greater for GPNs relative to GPs as both groups are assumed to undertake a similar number of CDTP consultations, which will have a greater impact for GPNs as the number of GPN consultations is lower than for GPs in the baseline period (e.g. 5.7 million consultations in 2023 for GPNs relative to 19.4 million for GPs).

TABLE 4.5 GPNs: Projected requirements, 2023–2040

Scenarios	2023	2040		Total growth 2023–2040
		Projected additional	Total	
	N	N	N	%
GPNs: Headcount				
Low pressure	2,288	761	3,049	33
Central		786	3,074	34
High pressure		868	3,156	38
GPNs: WTE				
Low pressure	1,445	481	1,925	33
Central		496	1,941	34
High pressure		548	1,993	38

Note: Due to rounding, the numbers might not always sum up precisely.
Source: Authors' analysis.

CHAPTER 5

Discussion

5.1 SUMMARY OF RESULTS

There were an estimated 19.4 million general practitioner (GP) consultations and 5.7 million general practice nurse (GPN) consultations in 2023. The demand for general practice services is projected to increase significantly in the coming years due to a growing and ageing population as well as a number of policy reforms that seek to further re-orientate the healthcare system towards primary and community-based care. Between 2023 and 2040, demand for GP consultations is projected to increase by between 23 per cent and 30 per cent, while demand for GPN consultations is projected to increase by between 32 per cent and 36 per cent. This represents average annual increases of between 1.2 per cent and 1.6 per cent for GPs and 1.6 per cent to 1.8 per cent for GPNs. The lower projection is associated with lower population growth, moderate healthy ageing, lower uptake of GP visit cards and a reduction in 'regular' GP consultations for those participating in the Chronic Disease Treatment Programme (CDTP) (and consequently having two CDTP reviews per annum). The higher projection is associated with higher projected population growth, an expansion of morbidity, higher uptake of GP visit cards and no reduction in 'regular' GP consultations for those participating in the CDTP.

Looking at 'regular' (e.g. non-CDTP) GP and GPN consultations, the largest drivers of the projected increases are population growth and, to a lesser extent, population ageing. Changes in eligibility have a more minor impact on the projected increases for 2040.

The sensitivity analysis examined the impact of changing some of the assumptions underlying the projections. It found that increasing the average number of GP/GPN per annum consultations had the largest impact on the projections. For example, if all individuals had one additional GP/GPN consultation per annum, projected demand for GP and GPN consultations would be 25 per cent and 80 per cent higher respectively in 2040 relative to the original 2040 projections. Extending eligibility for a GP visit card to the whole population would increase demand (in 2040) for GP and GPN consultations by 8 per cent and 18 per cent respectively. The analysis found that extending eligibility for a GP visit card to those aged 12 and under would have a small additional impact on the demand for GP visits; however, this result should be interpreted with caution given the very limited data available on GP utilisation for children. Extending eligibility for the CDTP to the total population (for those with one of the relevant chronic conditions) would increase demand for GP consultations by between 1 per cent and 2 per cent, while demand for GPN consultations would increase by approximately 7 per cent in 2040 relative to the

initial projections. The relatively low projected increase for GP consultations associated with the extension of the CDTP to the total population is likely explained by the estimated relatively low incidence of one of the relevant chronic conditions among non-cardholders.

Reflecting these increases in demand, there will be a need for additional GPs and GPNs in the coming years. Given the method used to estimate the additional workforce requirements, the percentage increase in workforce requirements very closely mirrors those of the projected percentage increases in demand. For GPs, relative to the 2023 headcount of 3,928, projected additional requirements range from 943 to 1,211 GPs (24% to 31% increase) in 2040 to meet the additional projected demand. This is based on an assumption that the current GP–consultations ratio is constant over the projection period. If GPs were to undertake fewer consultations, then the number of required GPs would increase accordingly. For GPNs, relative to the 2023 headcount number of 2,288, projected additional requirements range between 761 and 868 (33% to 38% increase). This is based on the current GPN–consultation ratio.

5.2 POTENTIAL INFLUENCES ON DEMAND FOR GENERAL PRACTICE SERVICES IN THE COMING YEARS

The projections in this report are based on assumptions on a range of factors that are assumed to impact on the demand for general practice services in the coming years. These assumptions are informed by current data availability, reform policies and expert input. However, it is likely that factors not included in this analysis will also have an impact on the demand and capacity requirements for general practice in the coming years. These include: developments in information systems; the extent and role of private health insurers in primary care; changes in the health workforce tasks and activities; potential changes in the demand for general practice services as the impact of the COVID-19 pandemic wanes; and changes in the complexity of consultations over time. Currently there is a lack of data and/or evidence to inform how these (and other) potential changes might impact the demand for general practice services in the coming years. However, if and when new data or evidence become available, they should be incorporated into new projections so that appropriate capacity planning can take place.

5.2.1 Information and communications technology

There is increasing interest in, and use of, information and communications technology (ICT) in health systems across the world. Such technologies facilitate the use of remote consultations. In Ireland, policy documents have discussed the potential for remote consultations in the delivery of healthcare services (Government of Ireland, 2021), including in general practice, and usage increased significantly during the COVID-19 pandemic (Ryan and Ipsos B&A, 2020). Such

developments will likely impact the demand and supply of GP services in the coming years; however, their potential impact is somewhat ambiguous.

Within general practice, remote consultations are sometimes seen as reducing time demands on the workforce, but this may not always happen in practice. McKinstry et al. (2002), for example, found that while telephone consultations took less time than face-to-face consultations, patients consulting by telephone reconsulted the GP more frequently in the two weeks that followed. Banks et al. (2018) found that many e-consultations resulted in GPs needing to follow up with a telephone or face-to-face appointment because the e-consultation did not contain sufficient information to inform clinical decision making.

In Ireland, there has been a significant reduction in the proportion of consultations delivered remotely in the years following the height of the pandemic; from 39 per cent in 2021 to 10 per cent in 2023 (McHugh and Connolly, 2025). Some of this reduction is to be expected in the context of the COVID-19 pandemic coming to an end, and the associated relaxation of restrictions. However, the rapidity of this reduction is somewhat surprising, as is the low proportion of consultations delivered remotely in Ireland relative to, for example, England where approximately 27 per cent of GP appointments took place remotely in 2023 (McHugh and Connolly, 2025).

A review of remote consultations in general practice in Europe found somewhat diverging views among GPs about the future of remote consultations (Walley et al., 2024). While some GPs anticipated that some consultations would continue to be delivered remotely after the pandemic, others expressed a preference for continuing with in-person care. There were a number of reasons identified for this, including an inability to assess subtle symptoms remotely, increases in GP workloads through increased training needs, and concerns regarding the accessibility of remote consultations for some patient groups (Walley et al., 2024).

It remains to be seen the extent to which remote consultations and other ICT developments will impact on the delivery of general practice services in the coming years.

5.2.2 The role of private health insurers in general practice

Traditionally, the main role of private health insurance in Ireland was to fund private hospital activity, delivered in both public and private hospitals. However, this role has evolved over time, and now most of the open insurers are involved (to a lesser or greater extent) in the funding and/or provision of services outside the hospital sector. This includes the provision of video consultations with a range

of healthcare professionals, including GPs, nurses and physiotherapists, and onsite clinics for minor injuries and illnesses. Such services are generally provided free at the point of use or at reduced cost for the insurer's members. A number of health insurance plans also provide some cover for the costs associated with a GP consultation.

In 2019, similar to the publicly funded CDTP, Vhi (the largest health insurer in Ireland) launched a pilot structured care programme for members with type 2 diabetes (Ryan, 2020). The initiative between the Irish College of General Practitioners (ICGP) and Vhi aimed to provide regular check-ups for eligible participants to monitor their condition and help reduce complications. Further, Vhi have plans to expand chronic disease management programmes in the coming years (Lynch, 2023). It is too early to tell how such developments might impact on the delivery of general practice services in Ireland in the coming years. It will depend on a range of factors, including how such programmes evolve and the level of uptake. However, consideration is required regarding the possible development of a two-tier system in general practice in Ireland – if provision of such services evolves in such a way that significant differences emerge between those with and without insurance. In addition, given that at any point in time, the available number of working GPs is relatively fixed, consideration should also be given to how the provision of private-health-insurance-financed GP care might impact on state-funded provision if GPs with state contracts are also involved in private-health-insurance-financed care.

5.2.3 Demand for GP consultations

As discussed in Chapter 2, the average annual number of GP consultations per person decreased during the COVID-19 pandemic and remained below pre-pandemic levels for a number of years (Ipsos B&A, 2023). There are a number of potential reasons for this, including difficulty involved for patients in getting a GP appointment, patients accessing alternative services (e.g. emergency departments, clinics provided by private health insurance companies) and a potential reluctance among some groups to visit the GP due to concerns about the spread of COVID-19 and other respiratory infections.

The most recent data from the Healthy Ireland survey (relating to 2024) show that the average number of annual consultations is now very similar to corresponding numbers for 2019. Given the significant impact of the COVID-19 pandemic on the demand and delivery of healthcare services, it is difficult to identify a trend in consultation rates over time or, on this basis, to project what might happen to consultation rates over the projection period. However, it is possible that the Sláintecare reforms, which seek to reorientate the healthcare system towards primary and community care, could result in an increase in demand for

consultations in the coming years. Other factors could also result in an increase in the demand for general practice services in the coming years, including changes in health seeking behaviour and the economic outlook. The economic outlook can influence both health and health seeking behaviour. While there is some ambiguity about what happens to health status during an economic downturn (Margerison-Zilko et al., 2016), in Ireland an economic downturn would likely result in an increase in the number of people with a medical or GP visit card if income limits for cards remain the same.

In the base analysis, (age, sex and eligibility adjusted) consultation rates are assumed to be constant over the projection period. However, to account for uncertainty around consultation rates, the impact on the demand for general practice services in 2040 is also quantified, assuming that everyone receives one additional GP and GPN consultation per year. Again, as the impact of the pandemic on the health system wanes and further Sláintecare proposals are implemented, the consultation rate should be re-evaluated and projections updated if required.

5.2.4 Change in workforce tasks and activities

Recognising the growing demand for general practice services in the coming years, a number of reforms have been introduced in recent years to reduce pressure on GPs. The GP Agreement 2023, for example, included increased and additional grants for new employees in general practice, such as general practice assistants, GPNs and practice managers (Department of Health et al., 2023). Alongside this, in 2024, a number of changes to the rules around prescribing were introduced, including extending the maximum validity of prescriptions from 6 to 12 months and the introduction of pharmacist prescribing. It is expected that these changes will help reduce the number of GP consultations for prescriptions, thereby reducing demand on general practice services (Department of Health, 2024).

While it is too early to estimate the effect of these changes on general practice, these reforms should be monitored to identify their success (or otherwise) on reducing demand for GP services.

5.2.5 Complexity of GP consultations

There are little available data on the complexity of GP consultations. However, for a number of reasons, the complexity of visits could increase over time: the shift to increased delivery of care in community and primary care settings detailed in the Sláintecare reforms could result in GPs managing and treating patients previously managed within the hospital setting; while new roles and tasks for other workforce groups could mean that GP consultations take place for the most complex patients. Population growth and ageing will impact the demand for all health and social care

services; however, inward migration can have a disproportionate impact on general practice as migrants are often of working age and consequently more reliant on community-based services (including general practice) rather than hospital services. Arrivals from Ukraine, for example, are unevenly distributed across the country, leading to increased demand for general practice in particular areas. In addition, while those arriving in Ireland are on average younger than the general population, and consequently may not be high users of healthcare services, they may nonetheless have specific health needs (Conlon, 2022).

5.3 LIMITATIONS

The estimates included in this report are intended as medium-term projections and reflect data availability and policy at the time of completion. There are a number of limitations to the analysis.

First, the data available to the research team on general practice are very limited and significantly undermine the extent and type of analysis that can be undertaken. Due to a lack of a central register for GPs and the nature of general practice in Ireland, with GPs operating independently, information about both GP numbers and the volume of general practice consultations is difficult to accurately quantify (Collins and Homeniuk, 2021). In this analysis, survey data were used to estimate the number of GP and GPN consultations. While the development of the annual Healthy Ireland survey is an important step forward in relation to quantifying health service use over time, the use of the survey for this purpose is not without its limitations; these include the potential for recall bias whereby survey respondents under- or over-report service utilisation (Brusco and Watts, 2015).

The Healthy Ireland survey excludes some groups of the population, for example children (although some recent waves of the survey have included questions on the use of GP services among children of survey respondents) and those living in residential settings. In addition, the potential for sub-group analysis within the Healthy Ireland survey is somewhat limited by the relatively small number of respondents within some groups of interest (e.g. the number of GP visit cardholders by age group). The Healthy Ireland question on GPN consultations – of particular relevance to the current analysis – excludes those GPN consultations that also included a GP consultation (as part of the same appointment); it therefore likely underestimates the number of GPN consultations. The estimates of GPN utilisation for children are obtained from the Growing Up In Ireland study and may be somewhat out of date, in particular given the increase in the number of GPNs working in general practice in recent years. Further, the Growing Up in Ireland Infant Cohort (on which some of the GPN estimates for children are based) were born in 2007 or 2008, the period of a significant recession in Ireland, and it is possible that utilisation of health services for this group may differ to those not

born during an economic downturn (Angelini and Mierau, 2014). Finally, there is a lack of available detailed data on the use of, and potential barriers to utilisation of, out-of-hours GP services in Ireland. More complete data on GPN and GP consultations (including dual consultations), visit duration, complexity indicators, workforce hours and activity breakdowns are essential for capacity planning in the Irish healthcare system. Further, there is a need for more data on the utilisation of out-of-hours services and how its use (or otherwise) is potentially interacting with the use of other services, including daytime GP services and emergency departments. These limitations and data gaps are detailed in a forthcoming report that examines current gaps in health services data in Ireland required for the type of modelling that can be undertaken with the Hippocrates model (Connolly et al., forthcoming); that report will also make recommendations on what is needed to address these gaps.

Second, as discussed in Section 5.2, a number of changes have taken place in general practice in recent years, including the development of the Chronic Disease Management Programme (CDMP). Where data were available, the potential impact of these changes on the demand for general practice services was examined. However, for some of these changes – including the Prevention Programme (PP) aspect of the CDMP – the available data, or evidence, were insufficient to allow incorporation of the changes into the Hippocrates model. As these reforms become embedded into the system over the coming years, and more data and evidence become available; these can subsequently be incorporated into Hippocrates modelling, and their impact on projected demand and workforce requirements quantified.

Third, there is uncertainty about the number of GPs and GPNs working in Ireland at any particular point in time. While a number of sources seek to capture the number of GPs in Ireland, each provides a different total figure, due to their use of differing definitions of GP (i.e. including trainees, specialists, providing publicly financed services, etc.). In this analysis, an estimate of the number of GPs working in Ireland (including those only providing privately financed services) was provided by the HSE. In relation to GPNs, there is no specific additional qualification for a nurse to work in general practice (over and above being a registered general nurse). In the Nursing and Midwifery Board of Ireland (NMBI) register, there are 12 divisions, which generally relate to qualifications; consequently, most GPNs are allocated to the 'registered general nurse' division rather than a specific practice nurse division. The register does, however, capture the number of nurses registered in Ireland who report their job title as 'practice nurse'. The number who identified this title was used in the current analysis, though it is possible that this might inappropriately exclude some nurses currently working in general practice and/or include some nurses not currently working in general practice.

Fourth, the workforce projections in this report project requirements based on current GP/GPN numbers to current GP/GPN consultations. If the existing number of GPs/GPNs is insufficient (which is potentially the case in some areas of the country), then the workforce requirements will potentially underestimate future needs. In addition, given the lack of data on the complexity of GP/GPN consultations (e.g. dealing with one relatively straightforward issue relative to a person with complex multi-morbidities), it is not possible to estimate how changes in complexity could impact workforce requirements in the coming years. In addition, there appears to be an increase over time in the proportion of GPs working on a part-time basis in general practice (see Section 3.4.3), with GPs increasingly taking on additional roles outside of general practice, including research and academic positions (Keenan et al., 2024). To account for this in the analysis, the impact of a reduced GP–consultation ratio on GP requirements was also estimated. This was based on an assumed 10 per cent reduction in the annual number of consultations undertaken by a GP; however, as more data become available over time this should be reviewed and the projections updated accordingly.

5.4 POLICY IMPLICATIONS

A key component of the Sláintecare reform proposals is the re-orientation of the model of care towards primary and community settings (Houses of the Oireachtas Committee on the Future of Healthcare, 2017). Reflecting these aspirations, a number of reforms have been implemented in general practice in recent years, including the extension of GP visit cards to children under eight years of age as well as to those below the median income, and the development of the CDMP.

While it is anticipated that such reforms may reduce pressures on the hospital sector, they will inevitably increase the demand for general practice services in the coming years; increases which come in addition to increased demand arising from a growing and ageing population. There is already some evidence to suggest that general practice is struggling to meet existing demand. A study by Crosbie et al. (2020) highlighted the significant workload of existing GPs, in particular older GPs, who may be seeking to retire in the coming years. A study by the *Irish Independent* of registered GPs across Ireland found that half of surveyed GPs were not currently accepting new patients and that, in some cases, waits for a GP appointment were close to two weeks (McTaggart and O'Broin, 2024). The study also found that particular areas of the country, including rural areas, were more affected than others.

Research relating to Ireland published in 2010 identified four strategies to address future GP shortages, including increasing training places for GPs, importing GPs from abroad, delayed retirement and increasing nurse substitution (Teljeur et al.,

2010). More recently, the Irish College of General Practitioners (ICGP) discussed ten potential measures to help address GP shortages, including the development of GP-led practice teams, an enhanced role for nurses and practice managers, and special supports for rural general practices (ICGP, 2022a). Recent analysis highlighted that some Irish-trained GPs living abroad could be encouraged to return to practice in Ireland (Hanlon, 2024).

The GP Agreement 2023 (which provided additional funding for other general practice staff) was an important first step forward in addressing workforce shortages in general practice. In addition, the recent increase in training places for GPs – from 258 in 2022, to 285 in 2023 and 350 in 2024 (Department of Health, 2023) – should help increase the number of GPs in the coming years. However, the number of GPs will need to be regularly monitored over time to ensure that supply keeps up with demand. In addition, the working patterns of GPs will need to be reviewed given evidence that younger GPs are tending to take on additional roles outside of general practice (Keenan et al., 2024), which means that the number of hours working in general practice may be lower for future cohorts of GPs relative to existing GPs. Recent analysis has highlighted the need for better data on the GP workforce in ensuring a sustainable GP workforce in the coming years (Hanlon, 2024).

Demand for GPN services is also projected to increase in the coming years. Such demand will increase further if nurses take on increasing tasks and activities, including services currently undertaken by GPs. Additional payments for GPNs outlined in the GP Agreement 2023 (Department of Health et al., 2023) and the establishment of a new graduate diploma in primary care nursing are important initiatives in terms of increasing the number of nurses working in general practice, though at the time of writing the providers of this programme were awaiting confirmation of funding approval for the 2025/2026 academic year.

Other initiatives may also be required to increase the number of nurses, including those that incentivise nurses to work in general practice (Connolly and Flanagan, 2024); this could include protected time and funding for study and training, recognised career pathways, and employment terms and conditions in line with nursing colleagues working in the hospital sector (McCarthy et al., 2011; ICGP, 2022b). However, the private nature of general practice may provide an obstacle to the implementation of these initiatives. Greater exposure for student nurses to general practice when training may help increase awareness among nurses of general practice as a career option, and make them feel more equipped to deal with the type of work undertaken in general practice (Connolly and Flanagan, 2024). In this regard, the Expert Review Board on Nursing and Midwifery noted the need to expand the locations for undergraduate nursing and midwifery student clinical placements, particularly in community and primary care settings

(Department of Health, 2022). As with GPs, there is an urgent need for better data on the GPN workforce, including the range of tasks and activities undertaken by GPNs.

5.5 CONCLUSIONS

An ageing and growing population, in the context of healthcare reforms aimed at reorientating the healthcare system toward increased delivery of care in the community, is expected to increase the demand for general practice services in the coming years. This will require a larger workforce of GPs and GPNs to meet the additional demand. A number of measures have been (or are in the process of being) implemented to address this; these include the expansion of training places for GPs, the introduction of new workforce groups, and enhancement of the role of community pharmacists. However, the lack of nationally representative and accessible data on general practice presents a major challenge for effective capacity planning. It remains unclear whether current measures will be sufficient to meet future demand. As more comprehensive data become available, the projections in this report should be reviewed and updated accordingly.

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