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Research Report

Current and projected demand for nurses working in general practice in Ireland

Research Series, No. 180

Provided in Cooperation with:

The Economic and Social Research Institute (ESRI), Dublin

Suggested Citation: Connolly, Sheelah; Flanagan, Ellen (2024) : Current and projected demand for nurses working in general practice in Ireland, Research Series, No. 180, The Economic and Social Research Institute (ESRI), Dublin,
<https://doi.org/10.26504/rs180>

This Version is available at:

<https://hdl.handle.net/10419/298378>

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CURRENT AND PROJECTED DEMAND FOR NURSES WORKING IN GENERAL PRACTICE IN IRELAND

SHEELAH CONNOLLY AND ELLEN FLANAGAN



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April 2024

RESEARCH SERIES

NUMBER 180

Available to download from www.esri.ie

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Whitaker Square, Sir John Rogerson's Quay, Dublin 2

<https://doi.org/10.26504/rs180>



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ACKNOWLEDGEMENTS

Financial support for this research was provided by the Department of Health. The authors would like to thank the members of the Department of Health/ESRI Research Programme on Healthcare Reform Steering Group and Terry Hynes of the Department of Health for their input and direction in completing this analysis. The authors would also like to thank representatives from the Irish General Practice Nurses Educational Association and the Nurses and Midwifery Board for Ireland for facilitating access to data and providing valuable insights on the role of practice nurses in Ireland. The authors also acknowledge the significant contribution of Anne Nolan of the ESRI and three anonymous reviewers.

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GLOSSARY

CDM	Chronic Disease Management
GMS	General Medical Services scheme
GPs	Medical doctors in general practice
HSE	Health Service Executive
ICGP	Irish College of General Practitioners
IGPNEA	Irish General Practice Nurses Educational Association
NMBI	Nursing and Midwifery Board of Ireland
PCRS	Primary Care Reimbursement Service
QALY	Quality Adjusted Life Year

EXECUTIVE SUMMARY

BACKGROUND

General practice is an integral part of the Irish healthcare system. Demand for general practice services is expected to increase in the coming years due to both (i) a growing and ageing population, and ii) policy proposals seeking to re-orientate healthcare delivery towards the community setting. Consequently, there is a need to increase the general practice workforce to deliver on this projected increase in demand. The number of GP training places have increased in the last number of years; however an increase in the number of nurses working in general practice could also help address growing demands on the sector.

The aim of the research in this report is:

1. To examine the current utilisation of practice nurse services in Ireland.
2. To make projections about the future demand for practice nurse services.
3. To identify challenges and potential facilitators to increasing the number of nurses working in general practice in Ireland.

METHODS

The *Healthy Ireland Survey* and the *Growing Up in Ireland* study were used to examine the current utilisation of nurse services within general practice in Ireland. Subsequently, the Hippocrates Model of healthcare demand and expenditure was used to estimate projected increases in demand for practice nurse services to 2035. Finally, a review of the Irish and international literature was undertaken to identify the potential barriers and facilitators to increasing the number of nurses working in general practice.

FINDINGS AND DISCUSSION

Approximately one-third of the population aged 15 and over visit a practice nurse annually. Similar to other healthcare services, relatively high utilisation of practice nurse services is observed among particular groups including older people, those with a chronic condition and Medical Card holders. On average, those living outside of Dublin had a slightly higher number of visits to the practice nurse relative to those living in Dublin, though this finding was not statistically significant.

Due to population growth and ageing, the demand for practice nurse services is projected to increase by between 22 and 27 per cent between 2019 and 2035. Consequently an additional 502-616 practice nurses are required by 2035 to keep

up with additional demand for such services. In 2023, there were 79,489 nurses and midwives working in Ireland.

Larger-than-expected population growth, and the implementation of Sláintecare proposals to shift care provision (where appropriate) from the hospital setting to the community, will likely further increase demand for such services.

A number of countries (including the UK) have increased the number of nurses working in general practice in recent years, with generally positive outcomes on health status and patient satisfaction. Challenges to increasing the number of nurses identified in the international literature include a potential reluctance from doctors and patients. In the available Irish literature, little reluctance from doctors to increasing the number of nurses was observed, though there is a lack of evidence on patients' perceptions of the role of nurses in general practice. Among nurses themselves, a lack of training and education in the area of general practice may contribute to a reluctance among nurses to seek roles within general practice. In addition, potentially superior working conditions within the public sector (including established career pathways, dedicated and paid leave for training and education, and pension provision) could act as a barrier to more nurses seeking to work in general practice.

Recognising the importance of nurses to general practice, the 2023 GP Agreement made provisions for increased subsidies for practices to employ a practice nurse. This is an important step forward in increasing the number of nurses working in general practice, as is the establishment of the new graduate diploma in primary care nursing. However other initiatives may also be required, especially those which incentivise nurses to work in general practice.

CHAPTER 1

Introduction

In Ireland, general practice is often the first point of contact that individuals have with the healthcare system. In 2019, there were an estimated 18.8 million visits among community-dwelling individuals to a General Practitioner (GP) and 5.1 million separate visits to a nurse working in general practice in Ireland (Walsh et al., 2021). While the demand for general practice services generally increases with age, general practice differs somewhat to other healthcare services as it is used across all age groups, with relatively high utilisation among children under five and females of childbearing years (Connolly et al., 2023). Reflecting a growing and ageing population, there is projected to be a significant increase in the demand for general practice services in the coming years (Walsh et al., 2021). In addition, recent health system reforms, including an increase in the number of people eligible for GP services free at the point of use and the development of the Chronic Disease Management Programme,¹ will likely further increase demand in the coming years (Nolan, 2008; Houses of the Oireachtas Committee on the Future of Healthcare, 2017; Connolly et al., 2022; 2023).

Given the lack of a publicly available register including all GPs, it is difficult to estimate the number of GPs working in Ireland at any particular point in time. However, OECD data suggest that there has been an increase in the number of GPs, from 0.56 per 1,000 population in 2010 to 0.86 per 1,000 population in 2021 (OECD, 2022). In addition, in recent years, there has been an increase in the number of GP training places. The Irish College of General Practitioners (ICGP) notes that in 2023, there were 1,044 trainee GPs in their training programme, compared to 700 in 2019.² Currently there are significant demands on general practice, with the ICGP noting that four out of five GPs across the country were not opening their GP list to any new Medical Card holding patients, and three-quarters not opening their list to new private patients (Collins and Homeniuk, 2021). Consequently, it is unclear whether there will be a sufficient number of GPs available to deliver the projected additional demand in the coming years (Teljeur et al., 2010; Irish College of General Practitioners, 2022a).

Previous analysis by Teljeur et al. (2010) identified four potential approaches to addressing shortages of GPs in Ireland: increasing training places; recruiting GPs

¹ The Chronic Disease Management (CDM) Programme aims to prevent and manage patient chronic diseases using a population-approach and was introduced on a phased bases for medical- and GP-visit card holders from 2020. The programme includes preventive and treatment programmes. Under the treatment programme, patients receive two scheduled reviews in a 12-month period. Each scheduled review will require two visits: a visit to the GP and to the practice nurse. In the preventive programme high risk patients receive an annual GP and practice nurse visit.

² <https://www.icgp.ie/go/about/news/23C3598D-70AF-4FE6-879D09C52AA38955.html>.

from abroad; incentivising later retirement; and increasing nurse substitution to enable practice nurses to deliver more services which are currently delivered by GPs. While recognising that addressing a potential shortage of GPs will involve a number of approaches, they note that nurse substitution presents an opportunity to reshape general practice to meet the demands of the future. More recently, the ICGP also identified a number of potential solutions to the expected shortage of GPs in Ireland, which included an increase in the number of nurses working in general practice (Irish College of General Practitioners, 2022a).

While nurses play an integral part in the Irish healthcare system, there has been relatively little research examining the role of nurses in general practice in Ireland, with a few notable exceptions. McCarthy et al. (2011), for example, examined the role, competencies and professional development needs of practice nurses in Ireland. More recently, Bury et al. (2021) documented the experience and views of practice nurses in relation to current and future roles, while Casey et al. (2022) explored the interest of practice nurses in becoming advanced nurse practitioners.³

In light of the projected increasing demands on general practice in the coming years, the research in this report focuses on the current and projected demand for practice nurse services in Ireland. The specific aims of the research are:

1. To examine the utilisation of practice nurse services in Ireland;
2. To make projections about future demands for such services;
3. To identify challenges and potential facilitators to increasing the number of nurses working in general practice.

The rest of the report is structured as follows: Chapter 2 provides an overview of practice nurses in Ireland. Chapter 3 reports on analysis using the *Healthy Ireland Survey* and the *Growing Up in Ireland* study examining the utilisation of practice nurses in Ireland. Chapter 4 examines increasing demands for general practice services and staff in the coming years. Chapter 5 reviews the national and international research relating to the increased number of nurses working in general practice. Finally, Chapter 6 provides a summary of the findings, discusses some policy implications and identifies data limitations.

³ The Nursing and Midwifery Board of Ireland notes that Advanced Nurse Practitioners are educated to Master's degree level, and have the competencies to be senior decision-makers that undertake a comprehensive advanced physical and/or mental health assessment of patients with complex multiple healthcare needs.

CHAPTER 2

Nurses in general practice in Ireland

2.1 INTRODUCTION

Similar to other countries including the UK, there has been an increase in the number of nurses working in general practice in Ireland in recent years. It has been proposed that further increases in the number of nurses could help address some of the expected increases in demand for general practice services in the coming years (Irish College of General Practitioners, 2022b). This chapter provides an overview of the number and role of nurses working in general practice in Ireland.

2.2 PRACTICE NURSES IN IRELAND

General practice is generally an individuals' first point of contact with the healthcare system in Ireland. It provides a variety of diagnostic services and medical treatments and acts as gatekeepers for a range of secondary care services. GPs and practice nurses play a central role in general practice. GPs are self-employed private practitioners, with most providing services to those with a Medical or GP visit card,⁴ as well as those with no card (i.e. fee-paying). Nurses are generally employed by the practice.

Under the General Medical Services (GMS) scheme, GPs receive an annual capitation payment (adjusted for age and sex) for each Medical and GP visit card holder on their list, as well as fees for out-of-hours and special items of service provided to card holders. A range of allowances are also available to GPs holding a GMS contract; these cover practice supports including employing a practice nurse, rural practice supports, annual leave, study leave, sick leave and maternity/paternity/adoptive leave. In 2022, the maximum annual allowance for a practice nurse was €37,822.72 (HSE, 2022), although changes to this allowance were agreed in the recent 2023 GP agreement (Department of Health et al., 2023) (detailed in Section 2.4). A practice can also receive income from those without a card who access GP and practice nurse services and pay out-of-pocket. A survey of practices found that 94 per cent of responding practices employed a practice nurse on at least a part-time basis, while just under two-thirds (62 per cent) of these practices had at least one full-time equivalent nurse (Collins and Homeniuk, 2021).

⁴ A Medical Card entitles holders to largely free public healthcare services (including free GP care), with eligibility determined by income, and to a lesser extent, health status. A GP visit card entitles the holder to free GP care, with eligibility determined by income and age. Income thresholds for the GP visit card are higher than for the Medical Card, while all those aged less than eight and over 70 have an automatic entitlement to a GP visit card.

All nurses working in general practice must be a registered general nurse but there is no additional mandatory education or training to become a practice nurse. All nurses and midwives who practice in Ireland must be registered on the Register of Nurses and Midwives (maintained by the Nursing and Midwifery Board of Ireland (NMBI)). The register contains 12 divisions and while 'practice nurse' is not a division, those included in the register do record their job title which can include practice nurse. Of those on the NMBI register in 2022, 2,318 identified their job title as 'Practice nurses and GP practice nurses' (Nursing and Midwifery Board of Ireland, 2022), of whom 2,280 were recoded as working in Ireland.⁵

Established in 2008, the Irish General Practice Nurses Educational Association (IGPNEA) aims to support the advancement of education in general practice nurses in Ireland. In 2023, the IGPNEA had a membership of 944 nurses. Table 2.1 shows the divisions to which 915 of these nurses were allocated in 2023 (nurses can be allocated to more than one division).⁶ Ninety-nine per cent (n=911/915) were registered as general nurses, while 23 per cent (n=211/915) were additionally registered as midwives. In total, 38 per cent (352) were registered to more than one division.

TABLE 2.1 DIVISION OF NURSES WORKING IN GENERAL PRACTICE IN IRELAND, 2023

Division	Number	Percentage
General nurse	911	99%
Nurse prescribers	61	7%
Midwives	211	23%
Public health nurses	8	1%
Children's nurses	77	8%
Advanced nurse practitioners	11	1%
Midwife prescribers	3	<1%
Psychiatric nurses	12	1%
Nurse tutors	3	<1%
Intellectual disability nurse	6	1%
Total registrations	915	

Source: IGPNEA.

Note: Data relate to 1 March 2023. Nurses can be registered with more than one division. The data relate to 915 nurses working in general practice registered with the IGPNEA and may not be representative of all nurses working in general practice. While all nurses in general practice are required to be registered as general nurses, it is possible that some nurses in the register refer to another division they are trained in rather than their general registration.

⁵ Personal communication with NMBI.

⁶ While all nurses in general practice are required to be registered as general nurses, it is possible that some nurses in the register refer to another division they are trained in rather than their general registration.

Table 2.2 shows the number of sessions⁷ worked per week by 882 nurses registered with the IGPNEA in 2023. Sixteen per cent reported that they worked 9-10 sessions, while 47 per cent reported working between six and eight sessions per week.

TABLE 2.2 NUMBER OF SESSIONS WORKED PER WEEK, 2023

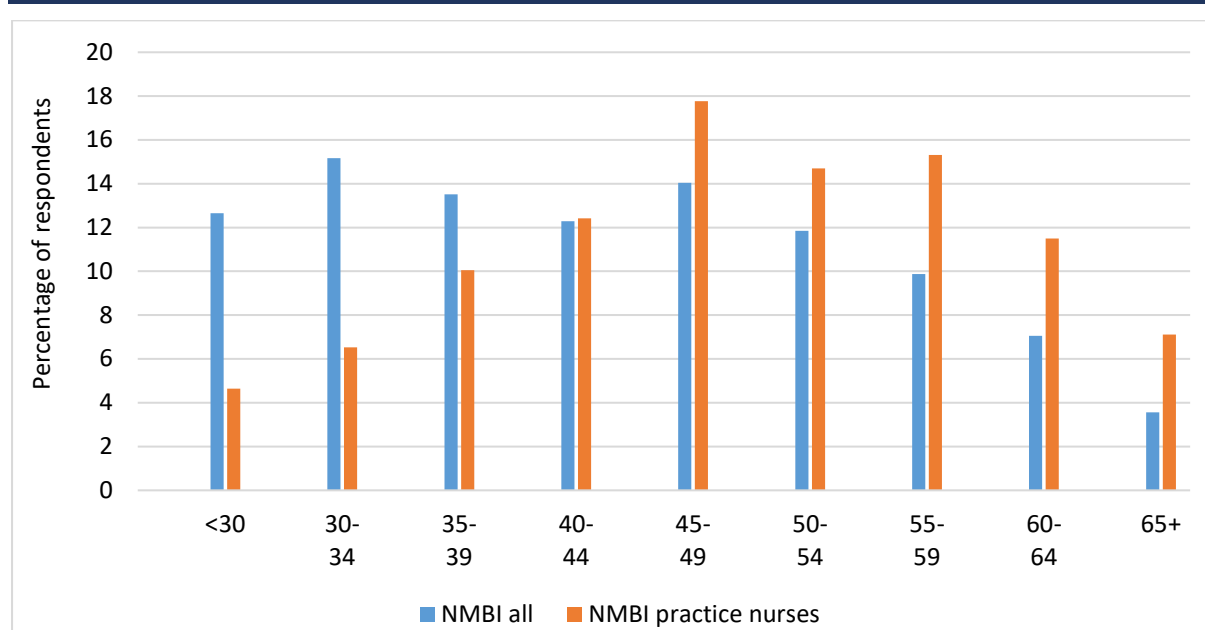
Number of sessions	Number	Percentage
10	92	10%
9	55	6%
8	167	19%
7	73	8%
6	178	20%
5	138	16%
4	102	12%
3	31	4%
2	20	2%
1	8	<1%
0	18 (retired)	2%
Total	882	

Source: IGPNEA.

Note: Data relate to 1 March 2023. The data relate to 882 nurses working in general practice registered with the IGPNEA and may not be representative of all nurses working in general practice.

Figure 2.1 shows the age distribution of 2,280 practice nurses registered with the NMBI (and working in Ireland) in 2022; it also shows the age distribution of all nurses registered with the NMBI in 2022. The practice nurse group appear to be older, on average, than 'all nurses' registered with the NMBI. For example, 21 per cent of registered practice nurses are aged less than 40, compared with 42 per cent of all registered nurses. Similarly, 48 per cent of registered practice nurses are aged 50 and over compared to 33 per cent of all registered nurses. The older distribution of practice nurses might be related to nurses working in the hospital sector after training and moving to general practice slightly later, reflecting a preference for the daytime hours associated with general practice.

⁷ There is no one definition of 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).

FIGURE 2.1 AGE DISTRIBUTION OF ALL NURSES REGISTERED WITH NMBI (N = 81,431) AND PRACTICE NURSES REGISTERED WITH NMBI (N = 2,280), 2023

Source: Nursing and Midwifery Board of Ireland (NMBI) (2022) for all nurses and personal communication with the NMBI for practice nurses.

2.3 THE ROLE OF NURSES IN GENERAL PRACTICE IN IRELAND

The tasks undertaken by nurses in general practice are wide and varied and differ from practice to practice. Current tasks include immunisations, female health and obstetric care, men's health, chronic disease management, health promotion, health screening and nurse prescribing (Irish Practice Nurses, 2022). A survey including 451 practice nurses in Ireland (McCarthy et al., 2011) noted that regular activities undertaken by practice nurses included immunisation, phlebotomy, management of laboratory results, wound care, and electrocardiography. Cervical screening, dietary advice, and health screening were also regularly undertaken by over 85 per cent of practice nurse respondents, while over 78 per cent reported that they regularly undertook aspects of chronic disease management (including diabetes and hypertension).

2.4 RECENT DEVELOPMENTS IN PRACTICE NURSING IN IRELAND

Recognising the increasing demand for general practice services due to a growing and ageing population, and increased care delivery in the community, some attempts have been made to facilitate an increase in the number of nurses working in general practice in Ireland. For example, in 2023, a graduate diploma in primary care nursing practice was established in University College Dublin (UCD). The programme received funding from the Government of Ireland's Sláintecare Integration Innovation Fund and aims to provide formal, structured education and

training to equip nurses with knowledge, skills and competencies to work in primary care including general practice.⁸

Changes have also been made to the subsidies that practices can receive for practice nurses. As previously noted, practice nurses are employed by private GP practices which receive a subsidy via the Primary Care Reimbursement Service (PCRS).⁹ The practice pays the indemnity cover (Casey et al., 2022). Under the new 2023 GP agreement, the maximum subsidy for a practice nurse was increased from €37,822.72 to €43,725.75 per annum¹⁰ (Department of Health et al., 2023). In addition, qualifying GMS GPs may access a new practice grant up to €15,000¹¹ per annum towards the employment of a practice nurse, practice administrator, practice manager or GP practice assistant for new staff hires or additional hours for existing staff (Department of Health et al., 2023).

⁸ <https://www.ucd.ie/nmhs/courses/taughtgraduate/publichealthandcommunitynursing/graduatediplomainprimarycarenursingpractice/>.

⁹ The Primary Care Reimbursement Service (PCRS) is part of the HSE, and is responsible for making payments to healthcare professionals – like GPs, dentists and pharmacists – for the free or reduced costs services they provide to the public.

¹⁰ In order to avail of the maximum subsidy, the GP must have a GMS panel of 100 patients and the maximum payment is applicable at a panel size of 1,200 or more patients; payments made to panels less than 1,200 are made on a pro-rata basis.

¹¹ The €15,000 is in respect of practice nurses with four or more years' experience, lower rates apply to those with less experience.

CHAPTER 3

Utilisation of practice nurse services in Ireland

3.1 INTRODUCTION

Limited data are available on the utilisation of practice nurse services in Ireland. Similar to GPs, there is no national administrative dataset which captures the totality of activity undertaken by nurses in general practice. No one survey includes all segments of the population, and some older surveys may not reflect current utilisation of practice nurses given increases in the number of nurses working in general practice in recent years. Piecing together insights gained from surveys focusing on different age groups of the population can, however, help to give an overview of practice nurse utilisation.

The *Healthy Ireland Survey* includes those aged 15 and older and includes a number of questions on healthcare utilisation. While a question on practice nurses was included in earlier waves, it was not included in Waves 7 (2020/21) and 8 (2021/22), though has been subsequently included in Wave 9 (2022/23). The *Growing Up in Ireland '08* cohort study includes a question on visits to a practice nurse in a number of waves, but only captures the experience of the ages included in the particular wave (e.g. 3 years, 5 years, 9 years and 13 years). The *Irish Longitudinal Study on Ageing* (including community-dwelling people aged 50 and over) includes a question about public health and community nurses but not a specific question on nurses in general practice.

In this chapter, analysis of the *Healthy Ireland Survey* quantifies the utilisation of practice nurses for those aged 15 and over in Ireland in 2018 and 2019. The frequency of practice nurse visits is analysed across a range of respondent groups. The chapter also includes the number of practice nurse visits from various waves of the *Growing Up in Ireland* study.

3.2 DATA AND METHODS

3.2.1 The *Healthy Ireland Survey*

The *Healthy Ireland Survey* is an annual cross-sectional survey, with interviews carried out with a representative sample of the population aged 15 and older living in the community in Ireland (Ipsos MRBI, 2018). Prior to 2020, the survey involved in-home face-to-face interviews. Since the onset of the COVID-19 pandemic, the interview has moved to computer-aided telephone interviewing. To date, eight waves of the survey have been completed in the following years: 2014/15 (Wave 1), 2015/16 (Wave 2), 2016/17 (Wave 3), 2017/18 (Wave 4), 2018/19

(Wave 5), 2020/21 (Wave 7), 2021/22 (Wave 8) and 2022/23 (Wave 9).¹² The sample size is in the region of 7,500 people per wave.

As noted above, Waves 8 and 9 did not include a question on visits to nurses in general practice. A question on practice nurses is included in the most recent wave (Wave 9). However, at the time of completing these analyses, these data were not available to the research team.

Waves 4 (2017/18) and 5 (2018/19) of the survey include the following question in relation to practice nurse utilisation:

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 are provided:

- Less than 12 months ago;
- More than 12 months ago;
- Never consulted;
- Don't know;
- Refused.

Those that 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?

For the purpose of this analysis, the weighted mean number of practice nurse visits per annum was estimated by multiplying the number of visits in the previous four weeks by 13 to estimate an annual rate (corresponding to 52 weeks). Subsequently, this analysis examined the mean number of visits for a range of demographic and health-related characteristics known to be associated with healthcare utilisation and for which there were a sufficient number of observations. These were:

- Sex – male; female.
- Age group – 15-24; 25-34; 35-44; 45-54; 55-64; 65-74; 75+.

¹² Wave 6 of the survey which was due to take place in 2020 was cancelled due to the COVID-19 pandemic and associated restrictions.

- *Marital status* – single; married/civil partnership; separated/divorced; widowed.
- *Region* – Dublin; rest of Leinster; Munster; Connaught/Ulster.
- *Area type* – urban; rural.
- *Card status* – Medical Card; GP visit card; no card.
- *Private health insurance* – yes; no.
- *Long-standing illness* – yes; no.
- *Diagnosis of asthma* – yes; no.
- *Diagnosis of high blood pressure* – yes; no.
- *Diagnosis of arthritis* – yes; no.
- *Diagnosis of diabetes* – yes; no.
- *Diagnosis of depression* – yes; no.

3.2.2 *Growing Up in Ireland study*

Growing Up in Ireland is a longitudinal study of children and young people in Ireland started in 2006. The study follows two groups of children: 8,000 9-year-olds ('98 cohort) and 10,000 9-month-olds ('08 cohort) (Quail et al., 2011; Thornton et al., 2010). There have been four waves of data collection and a special COVID-19 survey for the '98 cohort; and six waves and a COVID-19 survey for the '08 cohort.

Various waves of the *Growing Up in Ireland* study included a question relating to practice nurse utilisation. For example, the '08 cohort Waves 2 (2011), 3 (2013) and 5 (2017/18) and the '98 cohort Wave 2 (2011/12) 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?

A practice nurse (i.e. a nurse in a GP's surgery/clinic)

For this analysis, the weighted mean number of practice nurse visits for the relevant waves were calculated. Further analysis on the *Growing Up in Ireland* data was not undertaken given that some of the data relate to the period 2011-2013 and may not represent current utilisation rates.

3.3 FINDINGS

3.3.1 *Healthy Ireland Survey*

A total of 15,083 respondents aged 15 and older completed either Wave 4 (2018) or 5 (2019) of the *Healthy Ireland Survey*. Table 3.1 shows the proportion of respondents who visited a practice nurse in the 12 months preceding the survey. It also shows the proportion who visited a GP over the same period. While 77 per cent of respondents had visited a GP in the preceding 12 months, 34 per cent reported having visited a practice nurse.

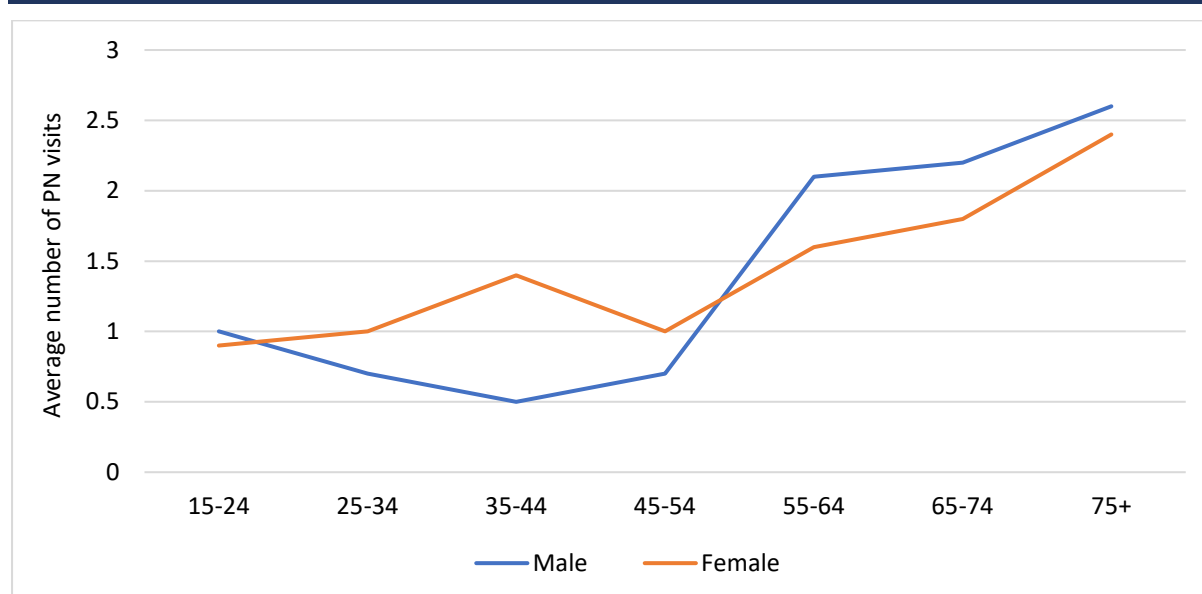
TABLE 3.1 PERCENTAGE OF THE POPULATION AGED 15 AND OVER VISITING A PRACTICE NURSE AND GP, *HEALTHY IRELAND SURVEY WAVES 4 AND 5*

	Practice nurse	General Practitioner (GP)
Less than 12 months	5,101 (34%)	11,571 (77%)
More than 12 months	5,441 (36%)	3,426 (23%)
Never consulted	4,465 (30%)	72 (<1%)
Don't know/refused to answer	76 (<1%)	14 (<1%)

Source: Authors' analysis using the *Healthy Ireland Survey Waves 4 and 5*.

Note: The question in the *Healthy Ireland Survey* on practice nurses asks respondents to exclude visits to the practice nurse if the visit also included a consultation with the GP. Consequently, the number of visits recorded may be an underestimate of practice nurse activity.

Among those aged 15 and over, the average number of visits to a practice nurse per year was 1.2 for males and 1.3 for females. The corresponding average number of GP visits was 3.4 and 4.7. Figure 3.1 shows the average number of practice nurse visits per annum by sex and age group. In general, the number of visits to the practice nurse increases with age. Older males tend to visit the practice nurse more than older females. However, in the younger and middle age groups (25-34, 35-44 and 45-54), the number of visits is higher among females, likely reflecting the receipt of reproductive healthcare and cervical screening services. It is not evident why practice nurse visits are higher among older men relative to older women.

FIGURE 3.1 AVERAGE NUMBER OF PRACTICE NURSE VISITS PER ANNUM BY SEX AND AGE GROUP, *HEALTHY IRELAND SURVEY WAVES 4 AND 5*

Source: Authors' analysis using the *Healthy Ireland Survey Waves 4 and 5*.

Note: Differences in the mean number of practice nurse visits across age groups was statistically significant at the 5 per cent level.

Table 3.2 shows the average number of visits to the practice nurse for a range of demographic and health-related characteristics for those aged 15 and over and for the subset of the population aged 65 and over. The table also includes the p-value indicating whether the differences between the groups was statistically significant.

The observed higher utilisation among the widower group likely reflects the older composition of this group, with the difference much reduced (and not statistically significant) for those aged 65 and over.

For males (and to a lesser extent females) the average number of visits to the practice nurse was somewhat lower for those based in Dublin compared to the other regions, although this finding was not statistically significant. There are a number of potential reasons why visiting rates may be lower in the Dublin region, including the younger age profile of the Dublin region and/or a lower supply of nurses working in general practice in Dublin. While it is not possible to identify the reason for this difference across the regions with current data availability, it does not appear to be explained by the age profile of Dublin, given that when the sample was disaggregated by age, the relationship was observed for those aged 65 and over (Table 3.2) as well as those aged 75 and over¹³ (although again not reaching conventional levels of statistical significance). In addition, the relationship does not

¹³ For those aged 75 and over the average number of visits to the practice nurse for males was 1.7 in Dublin; 2.3 in the rest of Leinster; 2.5 in Munster; and 2.9 in Connacht/Ulster; the corresponding numbers for females were Dublin 1.5; rest of Leinster 2.1; Munster 2.3; and Connaught/Ulster 2.6.

appear to be explained by lower levels of long-standing illness in the Dublin region, given that the relationship was also observed for those with and without a long-standing illness (Table 3.3), though again the observed differences across the regions were not statistically significant.

Those with a Medical Card had a higher number of visits compared to those without a card, with differences across the group statistically significant. However, utilisation of the practice nurse was similar between those with a GP visit card and no card, suggesting that the difference in utilisation between Medical Card holders and non-cardholders is not solely driven by the differences in the cost of accessing the practice nurse. In addition, the relationship between practice nurse visits and Medical Card status does not appear to be solely driven by the age and health status of the respondent. Table 3.4 shows higher utilisation among people with a Medical Card and a long-standing illness relative to those with a long-term illness and no card.

For males, those without private health insurance (PHI) had more visits on average than those with PHI. However, this association was not observed for females. While in this context, higher utilisation among males without PHI might reflect higher need for primary care services in general (e.g. those with PHI tend to be more affluent and consequently healthier), it is not clear why the same association was not found for females.

Those with long-standing illness had double the average number of visits to the practice nurse relative to those without a diagnosed long-standing illness. This relationship was observed for all those aged 15 and over, as well as the subset of the population aged 65 and older. Similarly, those with particular conditions (including asthma, high blood pressure, arthritis, diabetes and depression) tended to have a higher number of practice nurse visits (Table 3.2).

TABLE 3.2 AVERAGE NUMBER OF PRACTICE NURSE VISITS PER ANNUM (NUMBERS) FOR A RANGE OF PATIENT CHARACTERISTICS BY SEX AND AGE GROUP, *HEALTHY IRELAND SURVEY WAVES 4 AND 5*

	All aged 15+		65+	
	Male	Female	Male	Female
Marital status				
Single	1.0 (2,453)	1.0 (2,146)	2.7 (417)	1.5 (206)
Married/civil partnership	1.2 (3,847)	1.4 (4,854)	2.2 (1,328)	2.0 (1,500)
Separated/divorced	1.9 (420)	1.9 (602)	2.5 (129)	1.1 (127)
Widowed	2.4 (221)	2.8 (540)	2.9 (181)	2.9 (458)
<i>P-value (based on f-test)</i>	0.01*	0.00*	0.19	0.20
Region				
Dublin	0.8 (1,103)	1.3 (1,554)	1.7 (301)	1.5 (411)
Rest of Leinster	1.3 (2,140)	1.3 (2,464)	2.3 (591)	2.1 (615)
Munster	1.4 (1,752)	1.4 (2,078)	2.5 (521)	2.3 (600)
Connaught/Ulster	1.3 (1,946)	1.5 (2,046)	2.9 (642)	2.6 (665)
<i>P-value (based on f-test)</i>	0.10	0.62	0.19	0.48
Urban/rural				
Urban	0.9 (3,015)	1.3 (3,940)	2.5 (773)	1.7 (952)
Rural	1.5 (3,926)	1.4 (4,202)	2.3 (1,282)	2.4 (1,339)
<i>P-value (based on t-test)</i>	0.11	0.67	0.33	0.22
Card status				
Medical Card	2.4 (2,618)	2.0 (3,372)	2.9 (1,355)	2.3 (1,602)
GP visit card	0.9 (424)	1.0 (556)	1.1 (259)	1.8 (241)
No card	0.6 (3,899)	1.0 (4,214)	1.2 (441)	1.6 (448)
<i>P-value (based on f-test)</i>	0.00*	0.00*	0.00*	0.61
PHI				
Yes	0.8 (3,061)	1.3 (3,806)	1.4 (897)	2.0 (1,065)
No	1.4 (3,880)	1.4 (4,336)	3.1 (1,158)	2.1 (1,226)
<i>P-value (based on t-test)</i>	0.00*	0.68	0.00*	0.91

Contd.

TABLE 3.2 CONTD.

	All aged 15+		65+	
	Male	Female	Male	Female
Long-standing illness				
Yes	2.5 (2,417)	2.3 (2,734)	3.1 (1,151)	2.6 (1,266)
No	0.6 (4,519)	0.9 (5,402)	1.5 (901)	1.5 (1,085)
P-value (based on f-test)	0.00*	0.00*	0.00*	0.00*
Diagnosed condition				
Asthma diagnosis	1.5 (402)	1.7 (593)	4.2 (102)	2.8 (162)
No asthma diagnosis	1.2 (6,539)	1.3 (7,549)	2.3 (1,953)	2.0 (2,129)
P-value (based on t-test)	0.34	0.02*	0.02*	0.18
High BP diagnosis				
High BP diagnosis	2.2 (1,213)	2.1 (1,315)	2.7 (742)	2.5 (872)
No high BP diagnosis	1.0 (5,728)	1.2 (6,827)	2.2 (1,313)	1.8 (1,419)
P-value (based on t-test)	0.00*	0.00*	0.27	0.00*
Arthritis diagnosis				
Arthritis diagnosis	2.5 (822)	2.5 (1,202)	3.1 (564)	2.7 (798)
No arthritis diagnosis	1.1 (6,119)	1.2 (6,940)	2.1 (1,491)	1.7 (1,493)
P-value (based on t-test)	0.00*	0.00*	0.03*	0.00*
Diabetes diagnosis				
Diabetes diagnosis	2.9 (471)	4.1 (353)	3.5 (294)	3.9 (213)
No diabetes diagnosis	1.1 (6,470)	1.2 (7,789)	2.2 (1,761)	1.9 (2,078)
P-value (based on t-test)	0.00*	0.00*	0.01*	0.00*
Depression diagnosis				
Depression diagnosis	3.8 (297)	1.6 (508)	6.1 (49)	2.9 (120)
No depression diagnosis	1.1 (6,644)	1.3 (7,634)	2.3 (2,006)	2.0 (2,171)
P-value (based on t-test)	0.00*	0.02*	0.01*	0.13

Source: Authors' analysis using the *Healthy Ireland Survey Waves 4 and 5*.

Note: Data are weighted. Not all respondents answered all questions so numbers may differ across questions. * denotes that differences across the groups are statistically significant at the 5 per cent level.

TABLE 3.3 AVERAGE NUMBER OF PRACTICE NURSE VISITS PER ANNUM (NUMBERS) BY REGION AND LONG-TERM ILLNESS STATUS, *HEALTHY IRELAND SURVEY WAVES 4 AND 5*

Region	All aged 15+		65+	
	Long-term illness	No long-term illness	Long-term illness	No long-term illness
Dublin	1.8 (978)	0.6 (1,676)	2.0 (404)	1.1 (307)
Rest of Leinster	2.8 (1,484)	0.7 (3,114)	2.9 (638)	1.4 (566)
Munster	2.5 (1,239)	0.9 (2,589)	3.0 (556)	1.8 (565)
Connaught/Ulster	2.8 (1,450)	0.8 (2,542)	3.7 (759)	1.4 (548)
<i>P-value (based on f-test)</i>	0.08	0.19	0.11	0.21

Source: Authors' analysis using the *Healthy Ireland Survey Waves 4 and 5*.

Note: Data are weighted. Not all respondents answered all questions so numbers may differ across questions.

TABLE 3.4 AVERAGE NUMBER OF PRACTICE NURSE VISITS PER ANNUM (NUMBERS) BY CARD AND LONG-TERM ILLNESS STATUS, *HEALTHY IRELAND SURVEY WAVES 4 AND 5*

Card status	All aged 15+		65+	
	Long-term illness	No long-term illness	Long-term illness	No long-term illness
Medical Card	3.1 (3,084)	1.3 (2,900)	3.2 (1,764)	1.6 (1,191)
GP visit card	1.5 (349)	0.7 (631)	1.8 (237)	1.2 (263)
No card	1.6 (1,718)	0.6 (6,390)	1.6 (356)	1.2 (532)
<i>P-value (based on f-test)</i>	0.00*	0.00*	0.00*	0.76

Source: Authors' analysis using the *Healthy Ireland Survey Waves 4 and 5*.

Note: Data are weighted. Not all respondents answered all questions so numbers may differ across questions. * denotes that differences across the groups are statistically significant at the 5 per cent level.

3.3.2 Growing Up in Ireland

Tables 3.5 to 3.8 show the distribution of visits to a practice nurse and GP in the 12 months preceding the survey. Similar to adults, utilisation of GP services was higher than utilisation of practice nurse services among children. For example, 36 per cent of three-year-olds visited the GP three or more times in the 12 months preceding the survey, while only 1 per cent visited the practice nurse three or more times.

In general, a small proportion of the included age groups reported seeing a practice nurse. For example, 9 per cent of those aged three, and 3 per cent of those aged nine visited a practice nurse in the preceding year.

TABLE 3.5 DISTRIBUTION OF VISITS (PER ANNUM) TO THE PRACTICE NURSE AND GP FOR THREE-YEAR-OLDS, GUI '08 COHORT WAVE 2 (2011)

Number of visits	Practice nurse	General Practitioner (GP)
0	8,908 (91%)	2,021 (21%)
1	599 (6%)	2,378 (24%)
2	162 (2%)	1,900 (19%)
3 or more	108 (1%)	3,469 (36%)

Source: Authors' analysis using the *Growing Up in Ireland* study.

Note: Data are weighted.

TABLE 3.6 DISTRIBUTION OF VISITS (PER ANNUM) TO THE PRACTICE NURSE AND GP FOR FIVE-YEAR-OLDS, GUI '08 COHORT WAVE 3 (2015)

Number of visits	Practice nurse	General Practitioner (GP)
0	8,246 (92%)	2,695 (30%)
1	619 (7%)	2,351 (26%)
2	71 (1%)	1,615 (28%)
3 or more	61 (1%)	2,330 (26%)

Source: Authors' analysis using the *Growing Up in Ireland* study.

Note: Data are weighted.

TABLE 3.7 DISTRIBUTION OF VISITS (PER ANNUM) TO THE PRACTICE NURSE AND GP FOR NINE-YEAR-OLDS, GUI '08 COHORT WAVE 5 (2017/18)

Number of visits	Practice nurse	General Practitioner (GP)
0	7,758 (97%)	3,792 (47%)
1	171 (2%)	1,910 (24%)
2	51 (1%)	1,098 (14%)
3 or more	51 (1%)	1,218 (15%)

Source: Authors' analysis using the *Growing Up in Ireland* study.

Note: Data are weighted.

TABLE 3.8 DISTRIBUTION OF VISITS (PER ANNUM) TO THE PRACTICE NURSE AND GP FOR 13-YEAR-OLDS, GUI '98 COHORT WAVE 2 (2011/12)

Number of visits	Practice nurse	General Practitioner (GP)
0	6,867 (93%)	4,063 (54%)
1	388 (5%)	1,844 (25%)
2	80 (1%)	813 (11%)
3 or more	86 (1%)	802 (11%)

Source: Authors' analysis using the *Growing Up in Ireland* study.

Note: Data are weighted.

3.4 SUMMARY

Similar to other primary and community healthcare services, there is a lack of data on the totality of activity undertaken by nurses in general practice. The analysis in this chapter showed that just over a third of adults visited a practice nurse annually. However, some caution is required in interpreting these numbers as the question in the *Healthy Ireland Survey* excludes visits to the practice nurse that also included consultation with a GP. Consequently, it is likely that the number of visits to the practice nurse are greater than reported here.

There was relatively little use of the practice nurse among the child cohorts included in this analysis, likely reflecting the different types of activities undertaken by nurses in general practice (e.g. vaccination, screening, chronic disease management, etc.) which may not be relevant to these age groups. However, in many practices, nurses have a key role in the administration of childhood vaccinations (in the first 13 months of life), which is not captured in the waves of the *Growing Up in Ireland* study that includes include a question on practice nurse utilisation. In addition, given that some of the data relate to the period 2011-2013, it is possible that there has been an increase in practice nurse consultations among this age group in recent years, given the increase in the number of nurses working in general practice in recent years.

The analysis of the *Healthy Ireland Survey* found relatively high utilisation of the practice nurse among particular groups, including older people, those with a chronic condition, and Medical Card holders. Given the projected ageing of the population in the coming years and the relatively high level of chronic disease in the older population (55 per cent of those aged 65 and older included in the *Healthy Ireland Survey* reported a diagnosed condition) as well as programmes such as the Chronic Disease Management Programme,¹⁴ it is likely that the demand for practice nurses will increase significantly in the coming years (further discussed in the following chapter).

¹⁴ The estimates of practice nurse utilisation in this analysis relate to the period 2018/2019 and so pre-date the roll-out of the chronic disease management programme.

CHAPTER 4

Increasing demand for nurses in general practice

4.1 INTRODUCTION

Population growth and ageing, as well as reform proposals which seek to incentivise the greater delivery of care in primary and community settings, will result in an increase in the demand for general practice services in the coming years (Walsh et al., 2021; Connolly et al., 2023). While much of the focus to date has been on the increasing need for GPs, there will also be an increasing demand for practice nurses given (as shown in the previous chapter) the increased utilisation of nurse services among older people and those with chronic conditions.

This chapter includes projections of the demand for general practice services in the coming years (including nurse services) and the associated workforce requirements.

4.2 METHODS

4.2.1 Demand projections

The ESRI Hippocrates model, a macro-simulation model, was used to project demand for practice nurse and GP visits between 2019 and 2035. The model has been used to project future demand and expenditure for a range of health and social care services as well as acute hospital-bed capacity and workforce (Keegan et al., 2018; 2020; 2022; Wren et al., 2017; Walsh et al., 2021). In the model, demand is projected through developing and applying assumptions in relation to population change, healthy ageing, and other potential demand drivers. Population projections are provided by the ESRI's demographic model (COSMO) (for 2016) based on assumptions in relation to fertility, mortality and net migration. Demographic assumptions have been updated to reflect the effects of the COVID-19 pandemic.

Baseline demand (relating to 2019) for the analysis was derived from the *Healthy Ireland Survey* and the *Growing Up in Ireland* study (see Chapter 3 and Walsh et al., 2021). Age-specific practice nurse visiting rates were applied to the 2019 population to estimate practice nurse visiting volumes in 2019.

Assumptions on population growth and healthy ageing are grouped to provide three projection scenarios – low demand, central demand and high demand (Walsh et al., 2021). Under the central scenario, demand for GP and practice nurse services

evolves in line with the central population growth scenario, combined with moderate healthy ageing; while in the high demand scenario, demand for GP and practice nurse services evolves in line with central population growth and an expansion of morbidity.

4.2.2 Workforce projections

Additional demand for practice nurse visits and GP visits will result in an increased need for general practice workforce. Converting this additional demand to workforce requirements is problematic given a lack of data on the precise number of nurses working in general practice as well as their working hours.

In this analysis, an estimate of 2,280 practice nurses working in Ireland was used, reflecting the number of nurses on the NMBI register who reported that they are working as practice nurses in 2022 in Ireland. Based on an assumption that ‘new’ practice nurses would work similar hours to existing nurses, the projected increase in demand for practice nurses (between 22-27 per cent – see next section), was estimated by applying the projected increase in demand for nurse visits to the current number of nurses, i.e. the demand for nurses was projected to increase by between 22 and 27 per cent, reflecting the projected increase in demand for practice nurse visits.

This estimate shows the number of additional practice nurses that would be required to maintain the current practice-nurse to practice-nurse-visit ratio.

4.3 FINDINGS

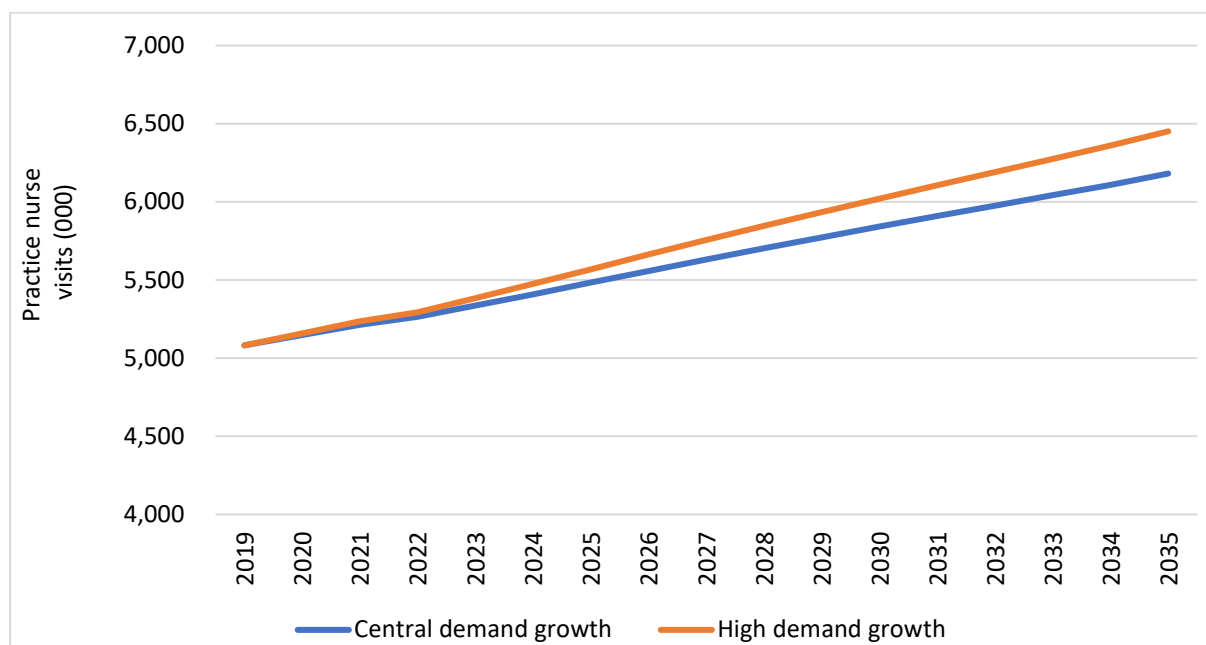
4.3.1 Projections of demand for practice nurse and GP visits, 2019-2035

It is estimated that 5.1 million practice nurse consultations (not involving the GP) were undertaken in Ireland in 2019. For the same year, there was an estimated 18.9 million GP consultations among community dwelling residents.

Figure 4.1 shows the projected increase in demand for practice nurse visits between 2019 and 2035 due to population growth and ageing. Practice nurse visits are projected to increase from 5.1 million in 2019 to 6.2 million in 2035 under the ‘central’ demand scenario, and to 6.5 million in 2035 under the high demand scenario (see Walsh et al., 2021 for more detail on the assumptions underlying the

central and high scenarios),¹⁵ corresponding to a 22 per cent and 27 per cent increase for the central and high demand scenarios, respectively.

FIGURE 4.1 PROJECTED INCREASE IN THE NUMBER OF PRACTICE NURSE VISITS, 2019-2035



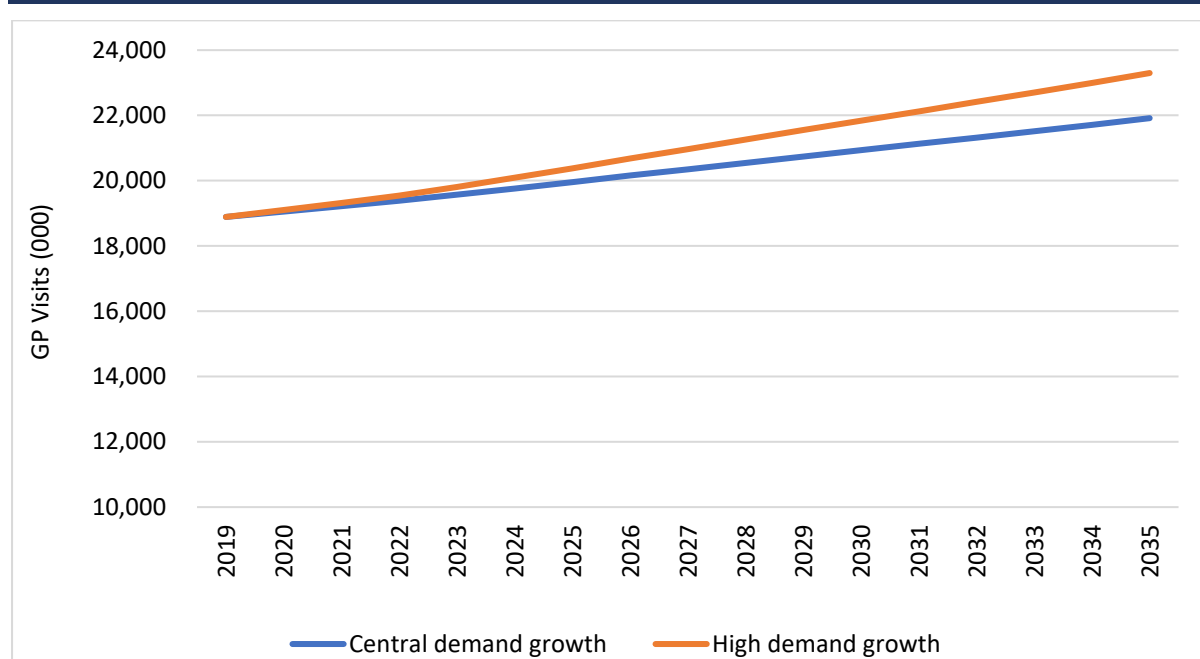
Source: ESRI Hippocrates Query Interface.

Note: For more details on methods, see Walsh et al. (2021). The projections are based on population projections from the 2016 Census. While a low demand growth scenario was also estimated, it is not included in the figure as, given the greater than projected population growth, projections are more likely to follow the central/high demand growth scenarios.

Over the same period, demand for GP visits is projected to increase from 18.9 million to 21.9 million (16 per cent increase) under assumptions of central demand growth, and to 23.3 million (23 per cent increase) under assumptions of high demand growth.¹⁶

¹⁵ Initial analysis using population projections based on the 2022 Census of Population suggests that the growth in demand for practice nurse services will be more in line with the high demand growth scenario.

¹⁶ Initial analysis using population projections based on the 2022 Census of Population suggests that the growth in demand for GP services will be more in line with the high demand growth scenario.

FIGURE 4.2 PROJECTED INCREASE IN THE NUMBER OF GENERAL PRACTITIONER VISITS, 2019-2035

Source: ESRI Hippocrates Query Interface.

Note: For more details on methods, see Walsh et al., 2021. The projections are based on population projections from the 2016 Census. While a low population growth scenario was also estimated, it is not included in the figure as, given the greater than projected population growth, projections are more likely to follow the central/high population growth scenarios.

The projections in Figures 4.1 and 4.2 are based on utilisation of general practice services in 2019 and population projections based on the 2016 Census, and may underestimate future demand for such services given larger than projected population growth in recent years. In addition, the recent extension of GP visit cards to those aged six and seven, and to those earning less than the median income, will likely result in an increase in the demand for general practice services in the coming years. Connolly et al. (2023), for example, estimated that the extension of GP visit cards to six- and seven-year-olds would result in an additional 57,571 card holders and an additional 100,000 GP visits per annum. They also estimated that extending GP visit cards to one-third of existing non-cardholders with the lowest income would result in 900,000 additional card holders and 600,000 additional GP visits; such a significant increase in the demand for GP services would likely result in an increased workload for practice nurses. The data in Figures 4.1 and 4.2 pre-date the role-out of the Chronic Disease Management Programme, so current estimates incorporating this programme are likely to be greater.

4.3.2 Projections of additional practice nurses required to meet additional demand

The previous section showed that the demand for practice nurse visits would increase by between 22 and 27 per cent between 2019 and 2035.

In 2023, there were 79,489 nurses and midwives working in Ireland. Using an estimate of 2,280 practice nurses in Ireland and assuming similar working patterns, an increase in demand (associated with an ageing and growing population) between 22 and 27 per cent, would require an additional 502–616 practice nurses by 2035 just to keep up with population growth (based on the 2016 Census) and ageing.

4.4 SUMMARY

The growing and ageing population is projected to increase demand for practice nurse visits by between 22 per cent and 27 per cent between 2019 and 2035. This corresponds to a requirement for an additional 502–616 practice nurses to keep the current nurse to nurse-visit ratio constant through time. However, a number of factors, including an extension of eligibility for general practice services in 2023 and higher than expected population growth will likely contribute to increased demand over and above that projected in this analysis.

CHAPTER 5

A literature review of nurses working in general practice

5.1 INTRODUCTION

Over the past 40 years, there have been initiatives in a number of countries to increase the number of nurses working within the community, including in general practice. This chapter reviews some of the literature which has sought to examine various aspects of the increase in the number of nurses in general practice, including the impact on costs, health service utilisation and patient satisfaction. The review also discusses some challenges and facilitators to increasing nurse participation in general practice which have been identified in the literature. Finally, the review examines a small number of studies which have attempted to quantify substitution rates between doctors and nurses in general practice.

A narrative approach was used to identify the studies included in the review. Initially, a number of review-type articles were assessed to identify relevant themes and issues associated with nurses working in general practice. Subsequently, databases, including PubMed and Google Scholar, were searched to identify relevant peer-reviewed literature within particular themes. Studies were also found by reviewing references of relevant publications. In the main, the review was limited to studies published since 2000 in the English language. In addition, the review focused, where possible, on studies with similar healthcare systems to that of Ireland.

Some caution is required when reading and interpreting the studies included in this review given the significant differences of health systems across different institutional settings. For example, differences in the organisation and structure of health systems, staff categories and qualifications, as well as the population groups being served, may mean that the findings of a study from a particular healthcare system are not generalisable beyond that system.

5.2 AN INCREASING ROLE FOR NURSES IN GENERAL PRACTICE

Across many high-income countries, nurses have assumed increasing shares of responsibility within general practice (Delamaire and Lafortune, 2010; Maier et al., 2016). In some countries, including the UK and the Netherlands, shortages of GPs have resulted in policies that seek to increase the use of practice nurses as a means of helping to manage the workload of existing GPs (van der Biezen et al., 2017; Hollinghurst et al., 2006). In some instances, increasing the role of nurses has been associated with an attempt to reduce costs associated with care delivery (Williams and Sibbald, 1999).

Nurses working in general practice undertake different types of activities across different institutional settings. The OECD identifies two types of tasks that might be undertaken by practice nurses – substitution tasks and supplementation tasks (Delamaire and Lafortune, 2010). With substitution tasks, the aim is often to reduce GP workload and costs and generally consists of nurses taking on more tasks from the doctor (Delamaire and Lafortune, 2010). Alternatively, supplementation of tasks generally involves some sort of service enhancement which may improve quality of care. For example, nurses may take responsibility for new services not previously provided, such as the delivery of a new chronic disease management programme. Such service enhancement is likely to add to costs rather than reduce them (Delamaire and Lafortune, 2010).

The role of nurses working in general practice and how tasks are allocated between nurses and doctors differs from practice to practice and place to place. In a systematic review of nurse substitution for primary care doctors, Laurant et al. (2018) documented that the role of the nurse varied from first contact to full responsibility for management of chronic disease. Examining the allocation of tasks between GPs and nurses in a review including 37 studies from seven countries, Cody et al. (2020) found that the tasks which nurses perform range from providing minor to complex care. However, there is a slight trend towards nurses treating socially complex patients and GPs focusing on medically complex cases (Cody et al., 2020). This is mirrored in other studies, including a qualitative assessment by Schönenberger et al. (2020) in Switzerland which found that patient perceptions after consultations with GP and practice nurses were that GPs tended to treat medically complex issues while nurses provided more coaching, guidance, and care coordination tasks.

5.3 THE IMPACT OF THE INCREASING NUMBER AND ROLE OF NURSES IN GENERAL PRACTICE

A growing body of research examines a range of outcomes associated with increasing the number and role of nurses in general practice (Delamaire and Lafortune, 2010; Martínez-González et al., 2015; Laurant et al., 2018). Given the methods and context-specific nature of some of these studies, they may not be generalisable beyond the study setting. Reviewed below is a range of studies which have focused on costs, healthcare utilisation, and patient satisfaction.

5.3.1 Costs

A range of different costs can be considered when measuring the impact of increasing the role and number of nurses working in general practice; however, most of the literature in this area relates to the cost of providing care.

Delamaire and Lafortune (2010) identify a number of ways in which the costs associated with nursing staff may differ to that of GPs, including:

1. An earning differential;
2. A productivity differential (e.g. the number of consultations per day);
3. The type and quantity of activities undertaken by nurses and whether these activities are carried out autonomously or require 'supervision' of a doctor;
4. Indirect costs (related to any differences in the prescription of medical tests or drugs);
5. Education and training costs;
6. Potential savings due to avoiding complications of conditions and hospitalisations.

Some of these factors may offset one another.

In the UK, data from two randomised controlled trials were used to examine the cost of care provided by nurses and salaried GPs (Hollinghurst et al., 2006). The authors found that employing nurses to provide front-line care in UK general practice is likely to cost the same or slightly more than employing doctors, with the time spent by GPs contributing to nurse consultations an important factor in increasing costs.

A systematic review examining the substitution of nurse for GPs (Martínez-González et al., 2015) found differences in how outcomes were recorded, which made it difficult to interpret results and draw conclusions on cost. For example, it was noted that there were lower direct costs with nurse-led care (including in treatments and investigations). However, the cost per quality adjusted life year (QALY) was significantly higher in nurse-led care after 56 months of the trial (Martínez-González et al., 2015). Overall, they suggested that nurses taking on more GP tasks and consultations seemed to be 'cost neutral'. A later systematic review of 18 randomised trials evaluating the impact of nurses working as substitutes for primary care doctors concluded that the evidence on the effects of nurse-led care on the costs of care was too limited to draw a conclusion (Laurant et al., 2018).

5.3.2 Use of healthcare services

A consistent finding across a range of studies is that that nurses tend to have longer consultations than doctors (Horrocks et al., 2002; Dierick-van Daele et al., 2009; Laurant et al., 2018; van der Biezen et al., 2016). In a 2008 trial of Dutch practice nurses, mean consultation length for practice nurses was found to be 12 minutes compared with nine minutes for GPs (Dierick-van Daele et al., 2009).

Observed differences across other services are, however, less consistent. For example, Gysin et al. (2020) found significantly lower levels of prescribing in a case study of a nurse compared with two GPs in Switzerland. While a study including ten general practices in south Wales and south-west England found that the number of prescriptions issued, investigations ordered, referrals to secondary care, and reattendances were similar for nurse and GP consultations (Kinnersley et al., 2000).

However, two systematic reviews found no significant differences in prescribing between doctors and nurses (Laurant et al., 2018; Horrocks et al., 2002). Similarly, some studies have found higher rates of return consultations for nurses relative to doctors, while others have found no difference (Dierick-van Daele et al., 2009; Laurant et al., 2018).

The evidence on differences in hospitalisations and health outcomes between nurses and doctors working in general practice is also somewhat mixed. A systematic review including 24 studies found that greater use of nurses led to lower hospitalisations and lower mortality, particularly with regards to ongoing care and non-urgent visits (Martínez-González et al., 2015). However, another systematic review reported no significant differences between nurse-led care and doctor-led care in the likelihood of hospital referrals and hospital admissions and attending A&E (Laurant et al., 2018). This systematic review also found that there was slightly reduced mortality among nurse-led primary care, however certainty for this evidence was regarded as low (Laurant et al., 2018).

5.3.3 Patient satisfaction

A number of studies have found high levels of patient satisfaction with care provided by nurses in general practice (Kinnersley et al., 2000; Horrocks et al., 2002; Dierick-van Daele et al., 2009; Martínez-González et al., 2015). However, this may be somewhat related to the tasks being undertaken by nurses. A qualitative Cochrane review examined the patient perception of skill-mix changes between nurses and doctors in general practice (Karimi-Shahanjarini et al., 2019). They found that patients did not know the differences between doctor-led and nurse-led care but appeared to prefer doctors to do more 'medical' tasks and nurses to do more preventive care and follow-up. For example, patients accepted the use of nurses for tasks such as prevention and promotion activities, the monitoring of a condition after a diagnosis, chronic disease management and continuing to prescribe medication initiated by the doctor (Karimi-Shahanjarini et al., 2019). A qualitative study by Schönenberger et al. (2020) found that patients were generally happy to see the nurse after the GP suggested a consultation with them. However, a high level of trust in the GP was necessary for their referral to result in patient satisfaction with the nurse. Patients in this study were also satisfied with the care that the GP and nurses brought together, highlighting that the two professions

were complementary to each other and that their collaboration led to an increase in care quality.

5.4 CHALLENGES AND FACILITATORS TO INCREASING THE NUMBER AND ROLE OF NURSES WORKING IN GENERAL PRACTICE

A number of challenges and facilitators to increasing the number and role of nurses in general practice have been identified in the literature.

5.4.1 Potential challenges to increasing the number and role of nurses working in general practice

In their Cochrane review, a key challenge identified by Karimi-Shahanjarini et al. (2019) to the implementation of doctor-nurse substitution strategies in primary care relates to potential resistance from both patients and doctors. As noted in Section 5.3.3, there appears to be a preference among some patients for doctors (rather than nurses) to do more ‘medical’ tasks, including invasive treatment, prescriptions, referrals, diagnosis, and physical examinations (Cheek et al., 2002; Coker et al., 2009; Courtenay et al., 2010). Karimi-Shahanjarini et al. (2019) note that this preference for a doctor might be related to patients’ uncertainty about nurses’ ability to perform what are regarded as medical tasks. Many studies included in the review also found that doctors often preferred nurses performing non-medical tasks (Karimi-Shahanjarini et al., 2019). A study from Germany (where traditionally practice nurses had relatively little involvement in patient care) found that GPs were sceptical about increased involvement of nurses in the care of those with a chronic illness (Rosemann et al., 2006). GPs felt that it was their duty to examine and inform the patient and explain diagnosis, prognosis, and therapy, in part because GPs thought this would be expected by the patient. However, this finding is unlikely to be generalisable to the Irish context given key differences between the two systems including a higher number of doctors per capita in Germany relative to Ireland, and different level of nursing qualifications.

Conversely in Ireland, recognising the growing pressures on general practice, the ICGP has called for an increase in the number of practice nurses as well as an increase in tasks undertaken by nurses, including chronic disease management and nurse prescribing (Irish College of General Practitioners, 2022b). Similarly, a recent Irish study including 28 GPs and 36 practice nurses in one county in Ireland found that 94 per cent of GPs (and 81 per cent of practice nurses) rated an expanded role for practice nurses as a high or highest priority (measured on a four-point scale with the following options – low, medium, high, highest priority) (Bury et al., 2021). In addition, reflecting the training requirements that nurses might need to expand their role, a large proportion of practice nurses have reported receiving help and support (including study days to undertake courses) from their employer (McCarthy et al., 2011).

Another potential barrier to the greater use of nurses in general practice may come from a reluctance among nurses themselves to take on these roles. Such a reluctance may come from a variety of sources. For example, a lack of training and education in relation to general practice and associated tasks could reduce nurses' willingness to work in general practice or to take on certain tasks (Broyles et al., 2012; Maddox et al., 2016).

For nurses within general practice in Ireland, a 2011 study reported that an education and training deficit was noted by some practice nurses for some tasks including chronic disease management, nurse prescribing, mental health advice, and women's health (McCarthy et al., 2011). Barriers to undertaking training included funding issues, lack of time, and difficulty getting cover for clinics. While funding was indicated as the biggest barrier to further training and education, this was further compounded by the fact that over 50 per cent of practice nurse respondents were unclear about whom to approach for funding (McCarthy et al., 2011).

In a mixed public-private healthcare system (like Ireland) there may be a preference for working in the public system if it is perceived that pay or other conditions (e.g. pension entitlements) are better (Casey et al., 2022; Bury et al., 2021). In general practice, where nurses are employed by the practice, there is no guaranteed pension, study leave, career progression or maternity leave, with entitlements differing across practices and potentially inferior to that within the public hospital system. Analysis from England (which has a similar general practice system to that in Ireland), found significant variation in hourly pay rates for practice nurses ranging from £10.30/hour to £27.50 hour; annual leave entitlement varied between four and six weeks and occupational sick pay varied from none to comparable to the public sector (Ashwood et al., 2018). In addition, given the lack of nationally recognised pay scales, nurses working in general practice in England were individually required to negotiate pay, terms and conditions (Ashwood et al., 2018).

Discussing the need to increase the contribution of nurses in primary care in Australia, Keleher et al. (2007) note that there is often confusion about professional indemnity insurance for practice nurses, who may be only partly covered under the general-practice indemnity insurance policy; they recommended clear guidelines about professional indemnity insurance coverage for GPs and practice nurses. Insurance and indemnity issues have also been identified among existing practice nurses in Ireland as potential barriers to expanding and developing their role (Bury et al., 2021; Casey et al., 2022).

At a practice level, differences in (fee-for-service) payments when a task is undertaken by a nurse rather than a doctor could act as a barrier to greater use of nurses in general practice (Karimi-Shahanjarini et al., 2019), where the greater use of nurses could potentially result in a drop in income for the practice.

5.4.2 Potential facilitators to increasing the number and role of nurses working in general practice

A number of factors at both the national and practice level which may facilitate an increased number and role for nurses in general practice have also been identified in the literature. For example, in an attempt to increase the number of nurses working in general practice, the Australian government introduced a number of initiatives including new funding streams, recognition of general practice as a specialist area of nursing practice, the establishment of a professional nursing association for practice nurses, and the availability of continuing professional development opportunities for nurses working in general practice (Mills and Fitzgerald, 2008).

At the practice level, both doctor- and nurse-related factors can facilitate an increasing role for nurses. In their review, Karimi-Shahanjarini et al. (2019) note that doctors' trust in and acceptance of nurses was an important determinant of the extent of nurse activity in general practice. They also noted that a close doctor-nurse relationship, characterised by trust and mutual respect, helped nurses to expand and develop their roles. The level of trust doctors had in nurses' skills appeared to be influenced by the amount of time they spent working together (Lindblad et al., 2010) and how closely they worked together (Abbott et al., 2013).

From the nurse's perspective, greater collaboration has been found to be facilitated by open communication, referral pathways, nurse-led clinics, recognition of knowledge and skills, flexibility of working hours and opportunities, and funding for continuing professional development (Mills and Fitzgerald, 2008; Francis et al., 2013). The importance of funding to support infrastructure in the form of nursing workspaces has also been noted as a factor facilitating nurses' role in general practice (McKenna et al., 2015). External factors, including good working conditions and financial incentives (Karimi-Shahanjarini et al., 2019), may also help facilitate more nurses to work in general practice.

5.5 POTENTIAL FOR SUBSTITUTION

A small body of research has attempted to quantify the extent to which GPs or tasks undertaken by GPs could be substituted by nurses. Maier et al. (2016) conceptualised substitution as the quantification of how many patients can be seen or services can be provided by a nurse that would usually be provided by a GP. In a scoping review, they found that between 67 per cent and 93 per cent of

primary care services could be substituted by a nurse. However, they note this finding may not be generalisable more widely as it is based on findings from studies from a rural practice in the US, an out-of-hours setting in the Netherlands and a 40-year-old study in Canada (Maier et al., 2016).

A study from Denmark examined the potential for substitution between GPs and nurses using a survey administered to GPs and patients after 2,115 GP consultations (Nørøxe et al., 2013). Survey participants were asked whether the consultation could have been provided by a practice nurse. GP respondents noted that approximately 15 per cent of consultations could have been undertaken by a nurse, while patients reported that 12 per cent of consultations could have been undertaken by a nurse. GPs and patients however disagreed on what type of patients (age, sex) and conditions (urgent, non-urgent, long term) could be dealt with by a nurse. According to GPs, follow-up consultations were more often feasible for substitution, as treatment plans could be put in place at the initial consultation and delegation of tasks was more straightforward thereafter. However, patients were more likely to deem follow-up care less likely to be appropriate for nurse substitution, perhaps putting more emphasis on continuity of care (Nørøxe et al., 2013).

5.6 SUMMARY

There is an increasing body of research examining various dimensions of the increased number and role of nurses in general practice. Some of these studies are specific to the particular setting in which the study was undertaken and may not be generalisable more widely.

In terms of consultation length, a consistent finding across much of the literature is that nurse consultations tend to be longer than doctor consultations. The impact on costs is somewhat ambiguous – while the unit cost associated with a nurse may be less than that of a doctor, longer consultations and participation by the doctor in some consultations may mean that total costs for nurse-led visits are similar to those for doctors. Most studies found that patients were satisfied with the care provided by nurses. However, in some settings this might be dependent on the type of tasks that are undertaken by nurses. A number of challenges and facilitators to increasing the number and role of nurses in general practice were identified in the literature. Challenges included a potential reluctance from doctors and nurses, while facilitators included good working conditions for nurses.

CHAPTER 6

Discussion

6.1 SUMMARY OF FINDINGS

Approximately 34 per cent of adults in Ireland visit a practice nurse on an annual basis. Among adults, the number of nurse visits increases with age, although younger and middle-aged females also visit the nurse relatively frequently, likely reflecting increased demand associated with reproductive health issues. Those with poorer health status (including a range of chronic conditions) had significantly more visits to the practice nurse than those with better health across all adults (aged 15+) and older adults (aged 65+). Having a Medical Card (though not a GP visit card) was also associated with an increased number of visits to a practice nurse. While this is not unexpected and is likely related to the older age and poorer health status of those with a Medical Card, this may not be the full explanation, given that among those aged 65 and over with a long-standing illness, utilisation of nurse services was significantly higher among those with a Medical Card relative to those paying out-of-pocket.

The available data on the utilisation of practice nurse services among children are limited and relatively out of date, and consequently are unlikely to reflect the current utilisation of such services among younger people (see additional discussion regarding data in the next section).

There were an estimated 5.1 million practice nurse consultations (not involving the GP) in Ireland in 2019; accounting for an ageing and growing population this was projected to increase by between 22 and 27 per cent by 2035. Over the same period, demand for GP consultations is projected to increase by between 16 and 23 per cent due to demographic changes. Given these projected demographic changes in the coming years, at least 500 additional practice nurses would be required by 2035 to keep the current practice-nurse to practice-nurse-consultation ratio constant. However, recent policy developments including the extension of GP care that is free at the point of use, as well as greater than expected population growth, will likely result in further additional demand for general practice services in the coming years.

A review of the international literature found that, in many studies/settings, patients were satisfied with the care provided by practice nurses. However, a number of challenges exist to increasing the number of nurses working in general practice, including a potential reluctance among nurses (see Section 6.2 for further discussion).

6.2 POLICY IMPLICATIONS

Similar to other sectors of the health service, a growing and ageing population will result in increased demand for general practice services in the coming years. Consequently, there is a need to increase the workforce in general practice. In thinking about practice nurses, two approaches should be explored – first, increase the number of nurses working in general practice and, second, increase the role/tasks undertaken by nurses. While the focus of this report is on the former, the ICGP has identified an enhanced role for nurses as a potential partial solution to the identified shortage of GPs (Irish College of General Practitioners, 2022a; 2022b).

In this regard, the new 2023 GP Agreement (Department of Health et al., 2023) which included increased subsidies for practice nurses (as well a new role of GP practice assistant) and the establishment of the new graduate diploma in primary care nursing are important steps forward. However, other initiatives may also be required to increase the number of nurses working in general practice including those which incentivise nurses. 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; Irish College of General Practitioners, 2022b; O'Shea, 2023). In addition, 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. In this regard, a recommendation of the expert review body 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).

Initiatives to increase the role of nurses in general practice will require investment, raising the question as to where the additional funding might come from. O'Shea (2023) noted the need for sick leave, pension and career pathways for nurses to be funded through the PCRS as a means of increasing capacity within general practice in the short term. However, it is not clear if the additional payments included in the 2023 GP Agreement will be sufficient to cover these costs.

Another concern relates to the potential availability of nurses in the coming years across the whole health and social care system. Keegan et al. (2022) estimated that an additional 5,726-8,868 nurses and midwives would be required between 2019 and 2035 to meet additional demand (predominantly due to demographic change) within the public hospital system. Initiatives such as improving the working conditions of nurses working in general practice could increase the number of

nurses in general practice but contribute to potential shortages in other sectors, highlighting the need for a systems approach to workforce issues.

6.3 DATA LIMITATIONS

Similar to other sectors of the health service, there is a lack of nationally representative data on practice nurses in Ireland, with different components contained in different sources. While some waves of the *Healthy Ireland Survey* include questions on practice nurse utilisation for adults, the absence of an up-to-date survey for children including such questions, in particular for babies, is problematic given the significant role that practice nurses play in administering vaccinations to babies in their first year of life.

In addition, while the *Healthy Ireland Survey* can highlight differences in practice nurse utilisation across groups, it provides little insight into the reasons for these differences. Understanding the reasons for the observed differences across groups (and in particular whether it is explained by health need or some other factor) would provide valuable insights on areas where it might be feasible to expand the number of nurses working in general practice. The differences between GP and practice nurse utilisation (for example analysis of *Healthy Ireland Survey* found that 77 per cent of respondents had visited a GP in the preceding 12 months compared to 34 per cent who reported having visited a practice nurse; while 30 per cent of respondents had never seen the practice nurse, relative to 1 per cent who had never visited the GP) is also worthy of further exploration. There are a number of potential reasons for this difference, including fewer nurses relative to GPs, an expectation among patients that they will see a GP and the suitability of the patient issue for a nurse consultation. The higher utilisation of the practice nurse among those with a chronic condition and a Medical Card likely reflects greater need (and utilisation) for healthcare services among these groups. However, given that these patients will likely have a greater familiarity with the practice and staff, they may be more willing to visit the nurse relative to those who visit the practice on a more ad-hoc basis.

In general, there is a lack of available, nationally representative, administrative data on primary care and general practice. While the IGPNEA has detailed data on practice nurses in Ireland, not all nurses working in general practice are registered with the IGPNEA. For example, 944 nurses were registered with the IGPNEA in 2023, while the NMBI included 2,280 nurses with a job title 'practice nurse/GP practice nurse' in 2023 working in Ireland. The NMBI data however include less information on the role and activities undertaken by nurses working in general practice.

Over the past 15 years, a small number of important Irish studies have been undertaken looking at the role and competencies of practice nurses in Ireland (McCarthy et al., 2011; Bury et al., 2021; Casey et al., 2022). A potential valuable addition to this research would involve surveying student and early career nurses (who are not currently working in general practice) to identify potential barriers and facilitators to working in general practice in the Irish context. In addition, further information on the perceptions of GPs and patients could provide valuable insights when considering increasing the number of nurses working in general practice.

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