POLICY PAPER

Universal Primary Care in Ireland: Cost and Workforce Implications

Sheelah Connolly*

Economic and Social Research Institute, Dublin and Trinity College Dublin

Maev-Ann Wren

Economic and Social Research Institute, Dublin and Trinity College Dublin

Conor Keegan

Economic and Social Research Institute, Dublin and Trinity College Dublin

Abian Garcia Rodriguez

Economic and Social Research Institute, Dublin and Trinity College Dublin

Abstract: Government policy in Ireland has identified the introduction of a universal primary healthcare system as a priority. This study examined the potential expenditure and workforce implications of introducing universal GP and community-based nurse care in 2018. The analysis estimated that providing universal entitlement to GP and community-based nurse services in 2018 would increase total healthcare expenditure by between 1.1 per cent and 1.4 per cent. An estimated additional 521 GPs and 1,500 community-based nurses would be required to meet the additional demand associated with a universal system and to address existing unmet needs.

Acknowledgements: The analysis presented in this paper was funded by the Health Research Board, Ireland (grant number ILP-HSR-2017-019). The authors are solely responsible for the content and the views expressed.

^{*} Corresponding author: Email: Sheelah.connolly@esri.ie

I INTRODUCTION

Universal healthcare is increasingly being endorsed as a priority goal for health systems around the world (Garrett, *et al.*, 2009). Ireland however remains an anomaly in Europe in not providing universal healthcare. Recognising the need to reform the Irish healthcare system, in 2011 a newly elected Government committed to a universal healthcare system financed by universal health insurance (Department of the Taoiseach, 2011). This was the first time in the history of the Irish State that there was a political commitment to the introduction of universal healthcare. While that particular reform proposal was abandoned on cost grounds in 2015 (Department of Health, 2015a), the idea of universal healthcare was now on the political agenda.

In 2016, an all-party parliamentary committee was established with the aim of achieving a long-term vision for healthcare and the direction of health policy in Ireland. The committee's final report (the Sláintecare report) noted the need to move towards equitable access to a high quality, universal healthcare system for Ireland (Houses of the Oireachtas Committee on the Future of Healthcare, 2017). The report recommended the introduction of universal general practitioner (GP) and primary care, reducing or removing out-of-pocket fees and substantially increasing public healthcare expenditure and capacity in a government-funded system. While progress in implementing these reforms has been limited (Connolly and Wren, 2019; Thomas *et al.*, 2021), it was announced in Budget 2023 that GP care without charge at the point of use would be extended to an additional 400,000 people. Concerns in relation to the implementation of universal healthcare relate to the potential cost of such reforms as well as questions of whether there are sufficient staff available within the system to deliver the increased demand that would be expected under a universal system.

The aim of the research presented in this paper is to examine the potential cost and workforce implications of introducing universal primary care in Ireland. While primary care comprises several healthcare professionals, two groups – GPs and community-based nurses – are included in this analysis. These groups were chosen given their important role in the Irish healthcare system as 'gatekeepers' to other healthcare services. By way of context, the next section will provide an overview of the Irish primary care system, with particular emphasis on general practice and community-based nurses.

II OVERVIEW OF THE PRIMARY CARE SYSTEM IN IRELAND

There is a complex system of healthcare eligibility in Ireland. There are two main categories of entitlement to public healthcare services: those in Category I (Medical Card holders) are entitled to free public healthcare services but pay a co-payment for prescription items; those in Category II (non-Medical Card holders) are entitled

to subsidised public hospital services and prescription medicines but pay the full cost of GP and other primary care services. In 2005 the GP visit card was introduced; GP visit card holders are entitled to free GP visits but otherwise have the same entitlements as Category II individuals. Eligibility for a medical/GP visit card is assessed primarily based on an income means test, with the threshold for GP visit cards about 50 per cent higher than for the Medical Card. In 2015, a GP visit card was extended to all children under the age of 6, as well as to those aged 70 and over. In 2020, approximately 32 per cent of the population had a Medical Card and 11 per cent had a GP visit card (Department of Health, 2021); the remainder of the population (57 per cent) pay the full cost of accessing GP services. With regard to affordability of primary care services, previous research has shown that Ireland performs relatively poorly having the highest formal co-payments for primary care among 31 European countries examined (Kringos et al., 2013). Eligibility for other primary healthcare services, including community-based nursing services is complex. For example, there is universal entitlement to some services including the provision of community care to pre-school children, and Medical Card holders are entitled to community-based nurse services free at the point of delivery. However, eligibility for other groups is limited (Phelan et al., 2016).

GPs in Ireland are self-employed private practitioners, most of whom hold a state General Medical Services (GMS) contract to provide GP care that is free at the point of use to Medical and GP Visit card holders. A small number of GPs (approximately 13 per cent in 2018) who do not hold a GMS contract are registered to provide services under alternative state-funded programmes, including for example the Primary Childhood Immunisation Scheme (Primary Care Reimbursement Service, 2019). GPs also provide services for those without a Medical or GP visit card, for which they are paid out-of-pocket by the patient at the point of use. There are no set fees for the provision of services to private patients, with GPs free to set their own fees, which average around €50 per visit (Smith et al., 2021). With the exception of Emergency Department (ED) visits, general practices are usually individuals' first point of contact with the healthcare system. They provide a variety of diagnostic services and medical treatments and act as gatekeepers for a range of secondary care services (Nolan, 2007). Practice nurses are an increasing and integral component of general practice, with a recent study finding that 94 per cent of practices employ a nurse (Collins and Homeniuk, 2021). It has been estimated that 17 per cent of day-time visits to general practice for children aged under 12 were with a practice nurse (McDonnell et al., 2022), and that practice nurses provided more than five million consultations in 2019 (Walsh et al., 2021).

Public health nurses and community registered nurses in Ireland provide a range of community-based nursing services including home nursing care, child and family health and clinical nursing services (Phelan *et al.*, 2016). Public health nurses are

registered general nurses but, distinct to other community-based nurses, have a postgraduate higher diploma in public health nursing (Hanafin *et al.*, 2015). An important aspect of community-based nurses' role is the co-ordination of care with other care workers including midwives, personal-care assistants and home helps (Pye, 2015). Community-based nurses are employed by the Health Service Executive (HSE) (the predominant provider and payer for public health services in Ireland) and their services are provided free of charge at the point of use.

There is a growing body of evidence that some people are not accessing necessary primary care services in Ireland. O'Reilly et al. (2007) found that almost 19 per cent of patients (4 per cent of non-paying patients and 26 per cent of paying patients) had a medical problem in the previous year but had not consulted the doctor because of cost. Among paying patients, it was the poorest and those with the worst health who were more affected. In later analysis, Connolly and Wren (2017) found that of those reporting an unmet healthcare need in Ireland, 59 per cent attributed their unmet need to affordability issues. Affordability issues were most common among those without a medical/GP visit card suggesting that they may be related to the high cost of accessing GP services for those who pay at the point of use. Murphy et al. (2016) found that those without a Medical Card were less likely to be in receipt of treatment for their hypertension than those with a Medical Card, while McHugh et al. (2015) found that those required to pay a fee for the flu vaccination were less likely to receive it than those not required to pay a fee. Less is known about difficulties in accessing community-based nurse services in Ireland. However, in a survey of community-based nurses, a number reported that it was necessary to delay or not provide some necessary services, in part due to inadequate staffing levels and growth in client volume and complexity of care over time (Phelan and McCarthy, 2016).

The data on the number of health professionals and the level of healthcare related activity in Ireland are limited. There is no one definitive list of the number of practising GPs, with different sources providing different estimates (O'Dowd *et al.*, 2017). Previous research suggests that, compared to other European countries, Ireland has relatively few GPs and a significant shortfall in GP supply is predicted unless recruitment increases (Teljeur *et al.*, 2010). Recent analysis has highlighted the significant volume of work currently undertaken by GPs and further identified potential issues around supply of GPs in the future given that approximately one-third of existing GPs are aged 55 or over and approaching retirement (Crosbie *et al.*, 2020).

While differences in definitions across countries make comparing the number of community-based nurses difficult, Phelan and McCarthy (2016), have previously noted that approximately 5 per cent of nurses in Ireland work in the community, compared to 15 per cent in England and Canada. There were an estimated 5.4 community-based nurses per 10,000 population in Ireland in 2014 (Smith *et al.*, 2019); however, substantial geographic variation exists. For example, the rate

was found to range from 10.0 per 10,000 population in the best served county, compared to 3.6 per 10,000 population in the worst served county (Smith *et al.*, 2019), variations which do not appear to be explained by differences in need.

Recognising limitations in access to primary care services in Ireland, the 2017 Sláintecare report recommended the introduction of universal access to GP care without charge and universal access to other primary care services (Houses of the Oireachtas Committee on the Future of Healthcare, 2017). A small body of work has examined some of the potential impacts of introducing GP visits free at the point of use for all. Doolan and Prior (2020), for example, found that the introduction of free GP care would result in a 20-40 per cent increase in the number of visits per annum. Connolly *et al.* (2018), found that universal GP care would add between 2 per cent and 3.5 per cent to overall public healthcare expenditure and up to 1.2 per cent to total healthcare expenditure. They noted that while the introduction of universal GP care in Ireland would go some way to addressing limitations of the current system, other reforms including ensuring a sufficient supply of GPs would also be necessary.

This paper, as well as examining the potential cost of universal GP care, builds on previous work in the area by (i) including community-based nurses and (ii) quantifying the workforce requirements to deliver universal GP and community-based nurse care.

III METHODS

The analysis assumes that in a universal primary care system all individuals would have eligibility for primary care services which would be provided free at the point of use. The approach to estimating cost and workforce implications differs for GPs and community-based nurses, in part because of differences in data availability and in part due to differences in how GPs and community-based nurses are employed. Further it is assumed that in a universal system, the state will continue to purchase care from self-employed contracted GPs, who may also have private practice.

3.1 GP Services

3.1.1 *Cost*

In keeping with the payment method for patients who are already eligible for GP services free at the point of use, this analysis assumes that GPs will be paid through a combination of capitation and other allowances and fees for patients who would become eligible for such services under a universal system. Consequently, the cost of providing GP care free at the point of use will depend on the rate of such payments. Consistent with earlier work in this area (Connolly *et al.*, 2018), this analysis examines two potential rates – existing capitation rates and the current private fee.

Existing Capitation Rates

Here it is assumed that GPs would receive for each previous non-cardholder the age and sex-specific capitation rate for existing cardholders, plus the mean of some other fees payable to GPs (including fees associated with out-of-hours and vaccination services) (Appendix 1). Some fees (such as special payments for asylum seekers) are specific to certain practices and would not be expected to increase pro rata in a universal system. A range of allowances (including secretarial, nursing and annual leave) are already paid to GP practices which hold GMS contracts and are assumed to benefit both public and private patients (Doolan and Prior, 2020). Consequently, it is assumed that, under a universal system, these allowances would not increase pro rata for practices which already hold a GMS contract. However, such allowances are assumed to be payable to the small number of GP practices which currently do not hold a GMS contract but do provide some state reimbursed services.

This approach to costing assumes that GPs would receive an equivalent level of remuneration for the care of previous non-cardholders, who have in general better health status than the cardholder group and might be expected to have lower GP utilisation rates. This scenario was examined as it is somewhat reflective of the method used to reach a price schedule for extending free GP visits to all children aged under six in 2015. However, the agreed price was a 29 per cent increase over the previous cardholder rate for young children (Wren et al., 2015). These increased payments were in return for an enhanced service which includes free visits for preventive checks and annual reviews of children with asthma (Department of Health, 2015b). Consequently, it is assumed that a lower than current capitation rate would be applied if free GP visits were to be extended to the total population. This is also in keeping with a recent agreement between GPs and the Department of Health which detailed increased capitation payments in the coming years for existing cardholders to support a range of measures to improve integrated healthcare delivery (Department of Health, Health Service Executive, Irish Medical Organisation, 2019). In this analysis, it is assumed that there are no additional costs associated with universal GP care for those aged under six and over 70 as this group already has an entitlement to a GP visit card.

Current Private Fee

As it is expected that the removal of GP fees at the point of use would result in an increase in the demand for GP visits, here it is assumed that GPs would seek payment from the state for current and additional visits at rates similar to the fees that they would have received for these visits from individuals paying out-of-pocket. This scenario encompasses the increase in demand which would likely follow from the introduction of GP visits free at the point of use (Connolly *et al.*, 2018). Previous research in Ireland has derived estimates of the expected increase

in demand associated with receipt of a full medical or GP visit card (Table 1). Like the previous method, this scenario assumes that all those aged under six and over 70 already have an entitlement to free GP visits and no additional costs/demand is assumed for this group.

Table 1: Increase in Demand for GP Visits on Receipt of a Medical or GP Visit Card

Age-group	Additional number of visits per annum (% increase in visits)	Source
6-15	0.5 (63%)	Nolan and Layte (2017)
16-54	0.9-1.3 (27% to 39%)	Nolan (2008)
55-70	1.3 (43%)	Ma and Nolan (2017)

The estimates of additional demand detailed in Table 1 were applied to age-specific GP visiting rates (for those aged 6-70 years) for the non-cardholder population to identify the number of GP visits that would be expected for previous non-cardholders in a universal system. Given the absence of a nationally representative administrative dataset recording all GP visits in Ireland, it was necessary to use survey data to estimate the number of GP visits. Age-specific visiting rates (which are assumed to include out-of-hours visits) were estimated from two surveys – the *Growing Up in Ireland* study and the Healthy Ireland survey.

- Growing Up in Ireland is a longitudinal study of children and young people in Ireland started in 2006 (Watson et al., 2014). The study follows two groups of children: 8,000 9-year-olds (child cohort) and 10,000 9-month-olds (infant cohort). There have been four waves of data collection for the child cohort (as well as a special COVID survey in 2020) and five waves for the infant cohort. For this analysis, GUI Wave 5 infant cohort of nine-year olds was used to provide an estimate of the number of visits for 6–11-year-olds, while GUI Wave 2 child cohort of 13-year-olds was used to provide an estimate of the number of visits for 12-15-year-olds.
- The Healthy Ireland survey is an annual face-to-face survey. Interviews are conducted with a representative sample of the population aged 15 and older living in Ireland (Ipsos MRBI, 2018). The sample size is in the region of 7,500 people. To date six waves of the survey have been completed in the following years: 2015, 2016, 2017, 2018, 2019, 2021. Healthy Ireland Wave 4 (2018) was used to provide an estimate of the number of GP visits for adults.

Estimated visiting rates from Healthy Ireland and *Growing Up in Ireland* were applied to the 2018 population to estimate visiting volumes in 2018. It is assumed that the State would reimburse GPs for income foregone for current visits by non-cardholders and for the additional expected visits using the current private fee, recently estimated at €50 per visit (Smith *et al.*, 2021).

3.1.2 Workforce

Providing GP visits free at the point of use will reduce financial barriers to accessing such services. However, demand for such services will likely increase and given that there is potentially relatively little capacity within current general practice (Teljeur et al., 2010; Crosbie et al., 2020), demand for such services could exceed supply. Consequently, there is a need to increase general practice capacity. Incorporating the additional demand associated with the provision of universal GP visits, the analysis seeks to identify the number of additional GPs that would be required to maintain the GP to GP visits ratio in 2018. This requires an estimate of the current number of GPs in Ireland and the annual number of GP visits. As previously noted, there is no definitive list of all GPs practising in Ireland; however, the professional body for GPs in Ireland (the Irish College of General Practitioners (ICGP)), estimated that there were 3,496 GPs actively practising in Ireland around the year 2018 (Collins, 2020). Approximately 25 per cent of GPs in Ireland report working part-time (Collins, 2020), suggesting that there were 3,059 whole-time equivalent (WTE) GPs in 2018. Age- and sex-adjusted GP visiting rates derived from the Healthy Ireland and Growing Up in Ireland surveys were added to the expected number of additional visits arising from free GP visits (sources identified in Table 1). These data were used to identify how many GPs would have been required in 2018 to ensure that the 2018 ratio of GP visits to GPs was maintained.

3.2 Community-Based Nurse Services

This analysis assumes that under a universal system, all individuals would have eligibility for community-based nurse care and that existing unmet needs for such services would be met. Given a paucity of data on the extent of unmet need for community-based nurse services for those eligible for such services as well as those without eligibility, it is difficult to identify how many additional nurses are required. However, previous research for Ireland identified significant variations across areas in terms of the rate of community-based nursing provision (Smith *et al.*, 2019); therefore, the approach adopted in this analysis is to identify the number of community-based nurses that would be required if all areas had the (population adjusted) number of community-based nurses of the best served area. The analysis therefore assumes that there are enough community-based nurses in the best served area to deliver a universal service.

Data from the Health Service Personnel Census (Health Service Executive, 2019) – the official record of employment levels in the public healthcare sector –

were used to estimate the number of WTE community-based nurses working in primary care and older person's community services in each of 32 Local Health Office areas. For this analysis, community-based nurses included public health nurses and other registered nurses working in the community. Nurses on career breaks were excluded as were nurses working exclusively in palliative care or disability services, since they might work in institutional settings rather than in the community. Population estimates for 2018 at the Local Health Office level (Bergin et al., 2020) were used to estimate the number of community-based nurses per 10,000 population for each Local Health Office area. Subsequently, the rate of community-based nurses in the best served area was applied to all areas to identify how many additional community-based nurses would be required if the rate in the best served area was applied to all areas. Given that the current distribution of community-based nurses might reflect differing needs across areas, with greater need for example in areas with more older people, the analysis also examined the number of community-based nurses relative to the population aged 75 and over. The results relating to the rates for the population aged 75 and over were very similar to that using the total population, so here results relating to the total population are presented.

Recent research for Ireland estimated the annual cost in 2018 for a publicly employed public health nurse was \leq 91,829 (Smith et~al., 2021). In keeping with the method used in the PSSRU in the UK to estimate unit costs for various health professionals (Curtis and Burns, 2020), this estimate includes salary as well as salary oncosts and overheads. Not all nurses working in the community are public health nurses; however, there is no published cost estimate relating to other community-based nurses. Consequently, it was necessary to estimate the cost of non-public health nurses based in the community. The annual cost of a staff nurse was calculated using the same method as that used in the analysis to calculate the annual cost of a public health nurse (Smith et~al., 2021), and used as a proxy for the cost of a non-public health nurse based in the community.

IV RESULTS

4.1 Universal GP Care

Based on analysis of the Healthy Ireland survey, in 2018, 56 per cent of the population did not have a medical or GP visit card and consequently paid for GP services out-of-pocket. Table 2 shows the impact on public and total healthcare expenditure of introducing free GP visits for the total population using different approaches to reach a payment schedule for GPs. For previous non-cardholders, the cost to the state of introducing free GP visits is estimated at €398 million (using current capitation rates) to €440 million (using the current private fee). This equates to a 2.4 per cent to 2.7 per cent increase in public healthcare expenditure.

, , , , , , , , , , , , , , , , , , ,				
	Increase in	Percentage	Increase in	Percentage
	public health	increase in	total healthcare	increase in
	expenditure	public health	expenditure ²	total health
	(million)	expenditure (%)1	(million)	expenditure ³ (%)
GP	€398–€440	2.4%-2.7%	€102–€144	0.5%-0.6%
Community				
based nurses	€102–€138	0.6% - 0.8%	€102–€138	0.6% - 0.8%
Total	€500–€578	3.0%-3.5%	€204–€282	1.1%-1.4%

Table 2: Impact on Public and Total Health Expenditure of Universal GP and Community-Based Nurse Services for the Total Population (2018)

Source: Authors' analysis.

Notes: 1 Public (non-capital) expenditure was €16,304 million in 2018 (Department of Health, 2019). ² Increase in total healthcare expenditure = Increase in public health expenditure less decrease in private health expenditure. Private health expenditure was estimated at €296 million. ³ Total (non-capital) expenditure was €22,452 million in 2018 (Central Statistics Office, 2020).

Some of the additional costs to the state will be offset by a reduction in private expenditure by previous non-cardholders. The estimated private expenditure on GP visits in 2018 was €296 million. Consequently, if all of this private expenditure became publicly financed, the increase in total health expenditure arising from introducing free GP visits at the point of use is estimated at 0.5 per cent to 0.6 per cent.

In 2018, an estimated 3,059 WTE GPs provided 16.9 million consultations. Introducing free GP visits in 2018 would have increased the number of consultations to 19.8 million. To maintain the 2018 GP to GP visits ratio, an additional 521 WTE GPs would have been required in 2018.

4.2 Universal Community-Based Nurse Care

In 2018 there were an estimated 2,830 community-based nurses working in Ireland, corresponding to a rate of approximately 6 per 10,000 population. This was found to range from 9.2 in the best served Local Health Office area to 3.7 in the most poorly served area (Figure 1), with a mean of 6.3 and median of 6.0. If the rate from the best served areas was applied to all areas, an estimated additional 1,502 nurses would have been required in 2018, making an increase of 53 per cent.

Depending on qualifications, the annual cost of a community-based nurse was estimated to be between €67,976 and €91,829. Consequently, the cost of employing an additional 1,502 community-based nurses would range from €102 million to €138 million in 2018, indicating an increase in public healthcare expenditure in 2018 in the region of 0.6 per cent to 0.8 per cent.

10 9 8 8 9 7 7 9 6 6 5 5 9 4 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 Local health office

Figure 1: Number of WTE Community-Based Nurses per 10,000 Population Across 32 Local Health Office Areas, 2018

Source: Authors' analysis.

In total providing universal entitlement to GP and community-based nurse services would increase public healthcare expenditure by 3.0 per cent and 3.5 per cent, while it would increase total healthcare expenditure by between 1.1 per cent and 1.4 per cent.

V DISCUSSION

Previous research has identified unmet needs for both GP and community-based nurse services in Ireland (Phelan and McCarthy, 2016; O'Reilly et al., 2007; Connolly and Wren, 2017). Consequently, government policy has identified the introduction of a universal primary healthcare system with access based on need rather than ability to pay as a priority (Houses of the Oireachtas Committee on the Future of Healthcare, 2017). This analysis estimated that providing universal entitlement to GP and community-based nurse care would increase public healthcare expenditure by between 3.0 per cent and 3.5 per cent in 2018. However, some of this increase would be offset by a reduction in private expenditure as previously privately financed GP visits become publicly financed under a universal system. Consequently, the increase in total healthcare expenditure was estimated to be between 1.1 per cent and 1.4 per cent. A concern in relation to the introduction of universal primary care is whether there are sufficient staff numbers to deliver the additional demand associated with an increase in eligibility for such services. Given that there is relatively little capacity in the existing primary care system, an estimated 521 additional GPs and approximately 1,500 additional community-based nurses would be required to meet the additional demand associated with a universal system and to address existing unmet needs.

Recognising potential shortfalls in GP supply, previous research for Ireland 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). Some progress appears to have been made in this area with OECD Health Statistics recording that the number of GPs increased from 0.56 per 1,000 population in 2010 to 0.84 in 2018 (OECD, 2020) (albeit as noted earlier there is no consensus on how GP numbers are counted in Ireland). In addition, there is some evidence of an increase in the number of GP training places in recent years (ICGP, 2017). However, a growing and ageing population will put increasing pressure on the primary care system in the coming decade (Wren et al., 2017), even if universal GP care is not introduced. Similarly, demographic change and a broadening of the scope and remit of community-based nurses without matching funding has resulted in a service which is already under strain (Phelan and McCarthy, 2016), and one which may struggle to deliver universal community-based nurse care without appropriate additional resources. While enhancing eligibility is one component of the Sláintecare reform proposals, other proposals around reorientating the healthcare system more towards primary care would put further pressure on the existing system and require additional staff over and above the level indicated in this analysis. Community-based nurses are likely to become key components of new multi-disciplinary Community Health Networks (CHNs) being rolled out under current plans to deliver enhanced community care under Sláintecare. In light of both demographic challenges and the current reform agenda, the 2021 HSE National Service Plan has committed to a substantial expansion of HSE workforce of approximately 16,000 WTE in total (Health Service Executive, 2021). However, as noted in the 2022 HSE National Service Plan, attracting additional staff remains a significant challenge (Health Service Executive, 2022).

In addition to workforce issues, several other areas need to be considered if universal primary care is to be introduced. While it might be expected that if universal GP care were introduced all eligible individuals would avail of such services free at the point of use, previous research for Ireland has found that some people eligible for a GP visit card continue to pay out-of-pocket for such services (Callan *et al.*, 2018). In addition, not all GPs hold state contracts and a small proportion do not provide state financed services. It could be argued that the existence of private providers funded via out-of-pocket payments (or private health insurance) could take pressure off the public system. However, the dual public/private hospital-based system in Ireland has resulted in equity issues with those paying privately able to access services in a timelier manner relative to public patients (Whyte *et al.*, 2020). Adequate resourcing of the universal system would be required to avoid such inequities in primary care. While this analysis assumed that GPs would continue to be self-employed within a universal system, and provide services to both public and private patients, consideration of the merits of

introducing salaried GPs should be explored, especially as a previous survey of GP trainees found that a number of trainees were interested in more secure salaried GP positions (Collins *et al.*, 2014).

There are limitations to the current analysis. Firstly, analyses of this kind in the Irish context are hampered by a poor data infrastructure with limited administrative data on primary care. This analysis estimated that there were approximately 17 million GP consultations in 2018, while a more recent analysis for 2020 estimated that there were 21 million consultations (Collins and Homeniuk, 2021). It is not clear how much of this difference is related to differences in methods for estimating the number of visits rather than real changes over time. Second, the analysis focuses on the cost and workforce implications for GPs and community-based nurses; however, there are also likely to be implications for other sectors if a universal entitlement to primary care services were introduced. For example, costs in relation to prescription drugs could increase if more people are accessing the GP. Alternatively, costs could decrease in the hospital sector as previous Irish research has highlighted that investment in primary care could reduce demands on the hospital sector relating to ambulatory care sensitive conditions (McDarby and Smyth, 2019; Keegan et al., 2020). In addition, the introduction of universal GP care will likely increase the demand for services provided by nurses working within general practice. A lack of data on the number of such nurses in Ireland makes it difficult to estimate the additional number that would be required were universal GP care to be introduced. However, given the increasing number of nurses working within general practice, consideration of their role in a universal system is required. Finally, the analysis in the paper examined the cost and workforce implications of universal primary care in 2018. However, such estimates are likely to increase further in the coming years. The 2019 agreement between GPs and the Department of Health (Department of Health, Health Service Executive, Irish Medical Organisation, 2019) outlined increased capitation payments for GPs to support a range of measures to improve integrated healthcare delivery. In addition, a growing and ageing population will contribute to increased demand for a range of healthcare services (Walsh et al., 2021) including GPs and community-based nurses. Ongoing work by some of the authors is examining the cost implications of extending free GP care up to 2026, incorporating population ageing and growth as well as general cost pressures.

VI CONCLUSIONS

The introduction of a universal entitlement to GP and community nurse care in Ireland would go some way to increasing the universality of the Irish healthcare system. While adding to public health expenditure, the introduction of universal primary care would help reduce out-of-pocket expenditure and unmet need for

primary care services and in doing so would help achieve a key reform objective for the health system in Ireland. Like all reform proposals, careful consideration of the potential impacts is required to ensure that the reforms achieve what they are intended to achieve. In the Irish context, for example, failure to put in place the additional staff could result in the situation where people have, in theory, an entitlement to a service but are not able to access the services in practice, thereby undermining the universality of the system.

REFERENCES

- Bergin, A. and A. García-Rodríguez, 2020. *Regional Demographics and Structural Housing Demand at a County Level*. Dublin: Economic and Social Research Institute. https://www.esri.ie/publications/regional-demographics-and-structural-housing-demand-at-acounty-level.
- Callan, T., B. Colgan, C. Keane, C. Logue and J. Walsh, 2018. "Income-Tested Health Entitlements: Micro-Simulation Modelling Using SILC", *Journal of The Statistical and Social Inquiry of Ireland*, Vol. XLVI, pp 97-109.
- Central Statistics Office, 2020. "System of Health Accounts 2018". Dublin: Central Statistics Office. https://www.cso.ie/en/releasesandpublications/ep/p-sha/systemofhealthaccounts2018.
- Collins, C. and R. Homeniuk, 2021. "How Many General Practice Consultations Occur in Ireland Annually? Cross-Sectional Data from a Survey of General Practices", BMC Family Practice, Vol. 22, No.1, article No.40. https://bmcprimcare.biomedcentral.com/articles/10.1186/s12875-021-01377-0.
- Collins, C., 2020. GPs: The Numbers Game. Dublin: Irish College of General Practitioners.
- Collins, C., G. Mansfield, D. O'Ciardha and K. Ryan, 2014. *Planning for the Future Irish General Practitioner Workforce Informed by a National Survey of GP trainees and recent GP Graduates*. Dublin: Irish College of General Practitioners.
- Connolly, S. and M-A. Wren, 2017. "Unmet Healthcare Needs in Ireland: Analysis Using the EU-SILC survey", *Health Policy*, Vol. 121, No. 4, pp. 434-441. https://www.sciencedirect.com/science/article/abs/pii/S0168851017300374.
- Connolly, S. and M-A. Wren, 2019. "Universal Health Care in Ireland What are the Prospects for Reform?", *Health Systems and Reform*, Vol 5, No. 2, pp. 94-99. https://www.tandfonline.com/doi/full/10.1080/23288604.2018.1551700.
- Connolly, S., A. Nolan, B. Walsh and M-A. Wren, 2018. "Universal GP Care in Ireland: Potential Cost Implications", *The Economic and Social Review*, Vol. 49, No. 1, pp 93-109. https://www.esr.ie/article/view/871.
- Crosbie, B., M. O'Callaghan, S. O'Flanaghan, D. Brennan, G. Keane and W. Behan, 2020. "A Real-time Measurement Of General Practice Workload in the Republic of Ireland: A Prospective Study", *British Journal of General Practice*, Vol. 70, No. 696, pp 489-496. https://bjgp.org/content/70/696/e489.
- Curtis, L. and A. Burns, 2020. *Unit Costs of Health & Social Care 2020*. Kent: PSSRU, University of Kent. https://www.pssru.ac.uk/project-pages/unit-costs/unit-costs-2020.
- Department of Health, 2015a. Statement by Minister Varadkar Following cabinet Discussion on UHI.

 Dublin: Department of Health. https://merrionstreet.ie/en/news-room/releases/statement_by_minister varadkar following cabinet discussion on uhi.html.
- Department of Health, 2015b. Press Release Ministers Welcome Agreement with IMO on Free GP Care for Under-6s. Dublin: Department of Health.

- Department of Health, 2019. *Health in Ireland: Key Trends 2019*. Dublin: Department of Health. https://www.gov.ie/en/publication/f1bb64-health-in-ireland-key-trends-2019.
- Department of Health, 2021. *Health in Ireland: Key Trends 2021*. Dublin: Department of Health. https://www.gov.ie/en/publication/350b7-health-in-ireland-key-trends-2021.
- Department of Health, Health Service Executive, Irish Medical Organisation, 2019. *Terms of Agreement Between the Department of Health, the HSE and the IMO Regarding GP Contractual Reform and Service Development.* Dublin: Health Service Executive. https://www.hse.ie/eng/about/who/gmscontracts/2019agreement/agreement-2019.pdf.
- Department of the Taoiseach, 2011. *Programme for Government 2011-2016*. Dublin: Department of the Taoiseach.
- Doolan, M. and S. Prior, 2020. *Private Expenditure on General Practice*. Dublin: Department of Public Expenditure and Reform. https://igees.gov.ie/wp-content/uploads/2020/11/Private-Expenditure-on-GP-Care-in-Ireland.pdf.
- Garrett, L., AM. Chowdhury and A. Pablos-Mendez, 2009. "All for Universal Health Coverage", Lancet, Vol. 374, pp.1294-9. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)61503-8/fulltext.
- Hanafin, S. and E. Dwan O'Reilly, 2015. "Multiple Stakeholder Views on Changes in Delivery of Public Health Nursing Services in Ireland", *British Journal of Community Nursing*, Vol. 20, No. 8, pp. 389-93. https://www.magonlinelibrary.com/doi/abs/10.12968/bjcn.2015.20.8.389.
- Health Service Executive, 2019. *Health Service Personnel Census: Instructions. 2019.* Dublin: Health Service Executive.
- Health Service Executive, 2021. *National Service Plan 2021*. Dublin: Health Service Executive. https://www.hse.ie/eng/services/publications/serviceplans/national-service-plan-2021.pdf.
- Health Service Executive, 2022. *National Service Plan 2022*. Dublin: Health Service Executive. https://www.hse.ie/eng/services/publications/serviceplans/hse-national-service-plan-2022.pdf.
- Houses of the Oireachtas Committee on the Future of Healthcare, 2017. *Slaintecare Report*. Dublin: Houses of the Oireachtas. https://www.gov.ie/en/publication/0d2d60-slaintecare-publications/#slaintecare-report.
- ICGP, 2017. Applications for GP Training Places Have Increased by Almost 50%. Dublin: ICGP. https://www.icgp.ie/go/about/policies_statements/2017/476541B7-0F87-A49B-D4B0F5A228632F28.html.
- Ipsos MRBI, 2018. Healthy Ireland, Technical report 2018. Dublin: Department of Health.
- Keegan, C., A. Brick, A. Bergin, M-A. Wren, E. Henry and R. Whyte, 2020. Projections of Expenditure for Public Hospitals in Ireland, 2018-2035, Based on the Hippocrates Model. Dublin: Economic and Social Research Institute. https://www.esri.ie/publications/projections-of-expenditure-for-public-hospitals-in-ireland-2018-2035-based-on-the.
- Kringos, D., W. Boerma, Y. Bourgueil Y, *et al.*, 2013. "The Strength of Primary Care in Europe: An International Comparative Study", *British Journal of General Practice*, Vol. 63, No. 616, e742-50. https://bjgp.org/content/63/616/e742.
- Ma, Y., and A. Nolan (2017). "Public Healthcare Entitlements and Healthcare Utilisation among the Older Population in Ireland", *Health Economics*, Vol. 26, No. 11, pp. 1412-1428. https://onlinelibrary.wiley.com/doi/full/10.1002/hec.3429.
- McDarby, G. and B. Smyth, 2019. "Identifying Priorities For Primary Care Investment in Ireland Through a Population-Based Analysis of Avoidable Hospital Admissions for Ambulatory Care Sensitive Conditions (ACSC)", *BMJ Open*, Vol. 9, No. 11, e028744. https://bmjopen.bmj.com/content/9/11/e028744.
- McDonnell, T., E. Nicholson. G. Bury, C. Collins, C. Conlon, K. Denny, M. O'Callaghan and E. McAuliffe, 2022. "Policy of Free GP Care for Children Under 6 Years: The Impact on Daytime and Out-of-hours General Practice", Social Science & Medicine, Vol. 296, 114792.

- McHugh, S., J. Browne and C. O'Neill, 2015. "The Influence of Partial Public Reimbursement on Vaccination Uptake in the Older Population: A Cross-Sectional Study", BMC Public Health, Vol.15, No. 83. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-015-1356-7.
- Murphy, C., P. Kearney and E. Shelley, 2016. "Hypertension Prevalence, Awareness, Treatment and Control in the Over 50s in Ireland: Evidence from *The Irish Longitudinal Study on Ageing*", *Journal of Public Health*, Vol. 38, No. 3, pp. 450-458. https://academic.oup.com/jpubhealth/ article/38/3/450/2239797.
- Nolan, A., 2008. "Evaluating the Impact of Eligibility for Free Care on the Use of General Practitioner (Gp) Services: A Difference-in-difference Matching Approach", Social Science and Medicine, Vol. 67, No. 7, pp. 1164-72. https://www.sciencedirect.com/science/article/abs/pii/ S0277953608003274.
- Nolan, A. and R. Layte, 2017. "The Impact of Transitions in Insurance Coverage on GP Visiting Among Children in Ireland", *Social Science and Medicine*, Vol. 180, pp. 94-100. https://www.sciencedirect.com/science/article/abs/pii/S0277953617301727.
- Nolan, A., 2007. "The Financing and Delivery of GP services in Ireland", B. Nolan (ed), *The Provision and Use of Health Services, Health Inequalities and Health and Social Gain*, Dublin: Economic and Social Research Institute. https://www.esri.ie/publications/the-provision-and-use-of-health-services-health-inequalities-and-health-and-social-gain.
- O'Dowd, T., J. Ivers and D. Handy, 2017. A Future Together: Building a Better GP and Primary Care Service. Dublin: Trinity College Dublin.
- OECD, 2020. OECD Health Statistics. Paris: OECD.
- O'Reilly, D., T. O'Dowd, K. Galway, A. Murphy, C O'Neill, E. Shryane, K. Steele, G. Bury, A. Gilliland and A. Kelly, 2007. "Consultation Charges in Ireland Deter a Large Proportion of Patients from Seeing the GP: Results of a Cross-Sectional Survey", *European Journal of General Practice*, Vol. 13, No. 4, pp. 231-6. https://www.tandfonline.com/doi/full/10.1080/13814780701815082.
- Phelan, A. and S. McCarthy, 2016. *Missed Care: Community Nursing in Ireland*. Dublin: University College Dublin and the Irish Nurses and Midwives Organisation.
- Primary Care Reimbursement Service, 2019. Primary Care Reimbursement Service Statistical Analysis of Claims and Payments 2018. Dublin: Health Service Executive.
- Pye, V., 2015. "Reshaping Public Health Nursing in the Republic of Ireland", *British Journal of Community Nursing*, Vol. 20, No. 7, pp. 348-50. https://www.magonlinelibrary.com/doi/abs/10.12968/bjcn.2015.20.7.348.
- Smith, S., B. Walsh, M-A. Wren, S. Barron, E. Morgenroth, J. Eighan and S. Lyons, 2019. Geographic Profile of Healthcare Needs and Non-Acute Healthcare Supply in Ireland. Dublin: Economic and Social Research Institute. https://www.esri.ie/publications/geographic-profile-of-healthcare-needs-and-non-acute-healthcare-supply-in-ireland.
- Smith, S., J. Jiang, C. Normand and C. O'Neill, 2021. "Unit Costs for Non-Acute Care in Ireland", *HRB Open Research* Vol. 4, No. 39. https://hrbopenresearch.org/articles/4-39.
- Teljeur, C., S. Thomas, F. O'Kelly and T. O'Dowd, 2010. "General Practitioner Workforce Planning: Assessment of Four Policy Directions", *BMC Health Services Research*, Vol. 10, No. 148. https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-10-148.
- Thomas, S., B. Johnston, S. Barry, R. Siersbaek and S. Burke, 2021. "Slaintecare Implementation Status in 2020: Limited Progress with Entitlement Expansion", *Health Policy*, Vol. 125, No. 3, pp. 277-283. https://www.sciencedirect.com/science/article/pii/S0168851021000270.
- Walsh, B., C. Keegan, A. Brick, S. Connolly, A. Bergin, M-A.Wren, S. Lyons, L. Hill and S. Smith (2021). Projections of Expenditure for Primary, Community and Long-term Care in Ireland, 2019-2035, Based on the Hippocrates Model. Dublin: Economic and Social Research Institute.

- Watson, D., B. Maître, C. Whelan and J. Williams, 2014. *Growing Up in Ireland: Dynamics of Child Economic Vulnerability and Socio-Emotional Development: An Analysis of the First Two Waves of the Growing Up In Ireland Study.* Dublin: The Stationery Office. https://www.esri.ie/publications/growing-up-in-ireland-dynamics-of-child-economic-vulnerability-and-socio-emotional-development-an-analysis-of-the-first-two-waves-of-the-growing-up-in-ireland-study.
- Whyte, R., S. Connolly and M-A. Wren, 2020. "Insurance Status and Waiting Times for Hospital-Based Services in Ireland", *Health Policy*, Vol. 124, No. 11, pp. 1174-1181. https://www.sciencedirect.com/science/article/abs/pii/S0168851020301822.
- Wren, M-A., C. Keegan, B. Walsh, A. Bergin, J. Eighan, A. Brick, S. Connolly and D. Watson, 2017. *Projections of Demand for Healthcare in Ireland, 2015-2030.* Dublin: Economic and Social Research Institute. https://www.esri.ie/publications/projections-of-demand-for-healthcare-in-ireland-2015-2030-first-report-from-the.
- Wren, M-A., S. Connolly and N. Cunningham, 2015. *An Examination of the Potential Costs of Universal Health Insurance in Ireland*. Dublin: Economic and Social Research Institute. https://www.esri.ie/publications/an-examination-of-the-potential-costs-of-universal-health-insurance-in-ireland.

APPENDIX 1

Table A.1: Capitation Rates for Card Holders Used in the Analysis, 2018¹

	Male	Female
5-15	43.29	43.79
16-44	55.26	90.37
45-64	110.38	121.29
65-69	116.28	129.72

Source: Primary Care Reimbursement Service (2019).

Note: 1 \in 61.72 was added to the capitation payment for each individual reflecting the additional fees and allowances paid to GPs.