The Economic and Social Review, Vol. 49, No. 1, Spring 2018, pp. 93-109

POLICY PAPER

Universal GP Care in Ireland: Potential Cost Implications

Sheelah Connolly*
Economic and Social Research Institute

Anne Nolan
Economic and Social Research Institute

Brendan Walsh
Economic and Social Research Institute

Maev-Ann Wren
Economic and Social Research Institute

Abstract: In 2011, the Government made a commitment to the introduction of universal General Practitioner (GP) care, which they equated to the removal of fees for GP care. The aim of this paper is to quantify the potential cost implications of implementing universal GP care in Ireland. The analysis finds that universal GP care would add between 2 and 3.5 per cent to overall public healthcare expenditure and up to 1.2 per cent to total healthcare expenditure. While the introduction of universal GP care in Ireland would go some way to addressing limitations of the current system, other reforms may be required before universality can be achieved.

Acknowledgements: Financial support for the research presented in this paper was provided by the Department of Health, Ireland. The funder has no role in the writing of this paper or in the decision to submit the article for publication. The views expressed in this paper are those of the authors and not necessarily those of the Department of Health.

* Corresponding author: sheelah.connolly@esri.ie

I INTRODUCTION

The use of out-of-pocket payments to finance General Practitioner (GP) care by the majority of the population in Ireland is unusual in the European context (Evetovits *et al*., 2012). In 2011, the Irish Government committed to removing fees for GP care (Department of the Taoiseach, 2011). In July 2015, free GP visits for all children aged under six years and all adults aged 70 years and over were introduced; the following year a new government committed to the introduction of free GP care to under 18s (Department of the Taoiseach, 2016). An all-party parliamentary committee (Houses of the Oireachtas Committee on the Future of Healthcare) was established with the aim of achieving a single long-term vision for healthcare and the direction of health policy in Ireland. One of the recommendations of the Committee's final *Sláintecare Report*, published in May 2017, was the introduction of universal GP care, which was equated to "access to GP care without cost" (Houses of the Oireachtas Committee on the Future of Healthcare, 2017: 65). In the context of these policy changes and policy recommendations, the aim of this analysis is to quantify the potential cost implications of implementing universal GP care free at the point of use in Ireland.

The Irish healthcare system is a complex mix of public and private financing and provision. While healthcare financing relies predominately on public sources of finance, private health insurance (PHI) and direct out-of-pocket payments by individuals are also important sources of finance in the Irish context (Central Statistics Office, 2016). Currently, there are two main categories of entitlements to public health services. Those in Category I (full medical card holders) are entitled to free public health services but pay a co-payment for prescription items (Hudson and Nolan, 2015). Those in Category II are entitled to subsidised public hospital services and prescription medicines, but must pay the full cost of GP services (and other primary and community care services) (Brick *et al*., 2010). In October 2005, the GP visit card was introduced; GP visit cardholders have the same entitlements to free GP care as Category I individuals, but the same entitlements to all other public health services (including prescription medicines) as Category II individuals. Eligibility for a full medical/GP visit card is assessed primarily on the basis of an income means test. The income thresholds for the GP visit card are 50 per cent higher than for the full medical card (Hudson and Nolan, 2015). In certain cases, individuals who are otherwise ineligible for a full medical/GP visit card may be granted a card on a 'discretionary' basis, if they have particular health needs which would cause them undue hardship (Health Service Executive, 2015a). A further layer of complexity is added by the existence of PHI. In 2016, approximately 43 per cent of the population held PHI (Department of Health, 2017), which mainly provides cover for private or semi-private acute hospital services. Recent evidence for Ireland suggests that those without free primary care and/or PHI are more likely to report an unmet need for healthcare (Connolly and Wren, 2017).

A major reform of this financing system and associated public healthcare entitlement structure was proposed in 2011, including the introduction of a single-tier system supported by universal health insurance (UHI) and covering both hospital and primary care (Department of Health, 2014). The government committed to strengthening primary care and to ensuring that every member of the population should be registered with, and have universal access to, a comprehensive multi-disciplinary primary care team. In addition, it was noted that the highest risk healthcare users would be entitled to formal healthcare management support, while other members of the population who met certain clinical criteria would be entitled to chronic disease management (Department of Health, 2014). However, following publication of a report examining the cost implications of the proposed model of UHI, the Minister for Health announced that "the high costs for the particular model of health insurance … are not acceptable, either now or any time in the future" (Department of Health, 2015a) and subsequently UHI was no longer on the political agenda. Though, as detailed above, some progress has been made in introducing GP care free at the point of use.

Research from the US and Europe has highlighted the benefits of strong primary care systems including better population health, lower costs, lower rates of unnecessary hospitalisation and relatively lower socioeconomic inequality (Kringos *et al*., 2013b; Starfield, 1994). A key component of a strong primary care system is accessibility (including addressing issues of availability, affordability and acceptability) (Kringos *et al*., 2010). With regard to affordability, Ireland performs relatively poorly, having the highest formal co-payments for primary care among 31 European countries examined (Kringos *et al*., 2013a).

In Ireland, GPs are self-employed and are free to set their fees for private (Category II) patients; in addition, they may have a contract with the State to supply care to public patients (those with a medical or GP visit card) whose care is free at the point of use under the medical card schemes (Smith and Normand, 2011). In 2015, more than 92 per cent of GPs under the medical card schemes signed up to the contract providing for free GP visits for the under sixes (Department of Health, 2015b); however, the introduction of free GP care for children aged under six years was opposed by some GP organisations (Goodey, 2015). The reasons for the opposition included concerns about the equity implications of extending free GP care to segments of the population based on their age while others, perhaps with greater affordability issues, continue to pay for such care, a concern which would be addressed if universal GP care free at the point of use for all were introduced. In addition concerns were raised about the potential impact of increased demand following the removal of fees on an already under-resourced primary care system (Goodey, 2015). As a result there were protracted negotiations between the Irish Medical Organisation and Department of Health to reach agreement on a fee structure for extending free GP care to all children aged six and under (Ring, 2015). The objectives of this analysis are:

(i) To identify different methods that might be used to set a reimbursement price for universal GP care in Ireland;
(ii) To apply these alternative methods to estimate the impact of universal GP care on public and total healthcare expenditure in Ireland.

The analysis identifies and uses three alternative scenarios to assess the cost implications of universal GP care in Ireland in terms of public and total healthcare expenditure. The scenarios are based on the likely approaches that Government may use to reimburse GPs for the services they would provide under universal GP care. In all scenarios, it is assumed that GPs would be paid predominately via a capitation system (rather than fee-for-service), with GPs being reimbursed for each patient registered with their practice rather than for each service provided. Currently in Ireland GPs receive an annual capitation payment for each patient holding a medical or GP visit card on their list; while they receive a fee-for-service for each service received by Category II patients. In addition to capitation payments, GPs receive some additional fees and allowances for their treatment of cardholders. The analysis will predominantly focus on the cost implications of extending free GP visits to those who previously paid at the point of use; however, in some of the scenarios, the cost for existing medical and GP visit cardholders will also change.

II MATERIALS AND METHODS

2.1 Methodology

The cost of universal GP care is a product of price and quantity. Given the assumption that GPs would be paid by the State for the provision of free GP visits via a capitation system, the price in this analysis is the capitation rate and the mean of any additional payments, while the quantity refers to the eligible population and/or the number of visits (as appropriate; further details below). Identifying the appropriate or probable capitation rate is complex and here alternative prices or capitation rates are examined; while there is no "correct" capitation rate, a range of rates are used in order to identify a range of potential cost implications of universal GP care. The base year for the analysis is 2013. While the Central Statistics Office (CSO) has published health expenditure data for Ireland for 2013 and subsequent years, this analysis uses 2013 data from Wren *et al*. (2015) as that analysis captures GP expenditure as a single category while the CSO estimates assign GP expenditure into two different categories (Keegan *et al*., 2017). A societal perspective was adopted; thus the effect on public healthcare expenditure of shifting the cost of GP visits from individuals to the Exchequer and the overall effect on total healthcare expenditure of the removal of out-of-pocket fees were examined.

2.2 Three Scenarios

Table 1 details the current system of reimbursing GPs in Ireland and the three alternative scenarios used in this analysis to assess the potential cost implications of universal GP care. A variety of methods and data sources were used with further detail provided in Wren *et al*. (2015). As there is no national administrative database recording the number of GP visits in Ireland, a number of surveys were used to estimate visiting rates.

Scenario 1 assumes that the capitation rates for GPs' provision of care free at the point of use will apply existing GP capitation rates and mean additional payments for cardholders' care. Scenario 2 assumes that remuneration rates will take into account increased demand for universal GP services among previous non-cardholders. Scenario 3 assumes that the State will seek to reduce costs by encouraging a supply-side response to change skill-mix in general practice.

Scenario 1: Existing Capitation Rates

In Scenario 1 it is assumed that GPs would receive for each previous non-cardholder the age and gender-specific capitation rate for existing medical and GP visit cardholders, plus the mean fee of some of the other fees and allowances including out-of-hours, secretarial/nursing and annual leave. Other fees (such as dispensing and asylum seekers) are specific to certain practices and do not extend to the total population and are therefore not included in our analysis. This scenario does not adopt any assumption about utilisation of GP care by previous non-cardholders who are now entitled to free GP care at the point of use. However, this approach to costing in effect has an implicit assumption 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 visiting rates.

This scenario may be considered to set an upper bound on projected payments for universal GP care, since this scenario would apply the same capitation rates for the care of relatively higher income members of the population as apply for the care of lower income groups, despite the likelihood that people on higher incomes would have better health status and lower demand for care. This scenario was examined as it was to some extent 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 (which was subsequently applied to previous cardholders as well as to previous non-cardholders) was in effect 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, 2015c).

Table 1: Overview of the Three Scenarios Used to Cost Universal GP Care

Assumptions	*Previous non-cardholders*		*Previous cardholders*	
	Price (P)	*Quantity (Q)*	*Price (P)*	*Quantity (Q)*
Current system				
Payments to GPs for non-cardholders are estimated by applying the mid-range fee to estimated visits by non-cardholders, using survey evidence of visiting rates by age cohort and sex. Public payments to GPs are 2013 payments by the PCRS, which comprise a mixture of capitation, fees and allowances, plus additional payments under the Maternity and Infant Care Scheme	Mid-range private fee per visit of €52.50	2,599,993 non-cardholders with 5,078,980–6,761,199 GP visits (estimated number of GP visits dependent on data source used)	Age-sex-specific capitation rate (ranges from €43 to €272) Plus mean additional fees and allowances of €96 per cardholder Plus additional payments under separate scheme	940,544 cardholders
Scenario 1 – existing capitation fee rates				
Assumes that GPs will be paid pro rata for previous non-cardholders' care at existing age-sex-specific capitation rates and mean fees for cardholders extending recent increases in payments for under-6s to under-12s	Pro-rata capitation and fee payments on the same basis as cardholders	2,599,993 non-card-holders	As above with increased payment rates for children under 12 reflecting increased rates for children under six introduced with universal care in 2015	940,544 cardholders

Table 1: Overview of the Three Scenarios Used to Cost Universal GP Care (Contd.)

Assumptions	*Previous non-cardholders*		*Previous cardholders*	
	Price (P)	*Quantity (Q)*	*Price (P)*	*Quantity (Q)*
Scenario 2 – demand driven approach Assumes that GPs will receive remuneration for current and expected additional demand for visits from previous non-cardholders by applying prevailing private fee rates to expected visits	Aggregate payments compensate GPs for income foregone, estimated by applying mid-range private fee per visit of €52.50 to expected visits	2,599,993 non-cardholders with 7,633,259–9,315,478 expected visits by non-cardholders	As under current system	940,544 cardholders
Scenario 3 – supply-side response Assumes that the State will seek to reduce the cost of universal GP care/address shortages in supply of GPs by setting remuneration lower with reference to the potentially lower cost of supplying a higher proportion of care by practice nurses	Aggregate payments derived in Scenario 2 reduced by 14.5%–16%	2,599,993	Aggregate payments under current system reduced by 14.5–16%	940,544 cardholders

Source: Authors' own assumptions.

Scenario 2: Demand Driven Approach

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, it is assumed that GPs would seek to secure remuneration from the State for current visits and this additional visiting, at rates reflecting the fees that they would have received for these visits on the private market. Therefore this scenario was chosen to reflect a remuneration method which would capture the anticipated increase in demand.

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 2).

Table 2: Impact of Gaining a Medical or GP Visit Card on Number of GP Visits

Cohort	*Additional GP visits per annum*	*Source*
9 months–3 years	0.7	Layte and Nolan (2016)
9 years–13 years	0.4	Layte and Nolan (2016)
16–49 years	0.9-1.3	Nolan (2008)
50+ years	1.1-1.3	Ma and Nolan (2016)

These estimates of additional demand were applied to age-specific GP visiting rates for the non-cardholder population. Given the absence of administrative data on GP visiting in Ireland, three different surveys were used to estimate GP visiting rates; the Quarterly National Household Survey Health Module 2010 for adults and GUI 2007-2009 for children were used to arrive at an estimate of the number of overall visits for the period around 2010 (Wren *et al*., 2015), while Healthy Ireland data were used to derive visiting rates for the adult population for 2015. Estimated visiting rates from each survey were applied to the 2013 population.

In this scenario, expected increases in demand among those who become eligible for free GP visits informs the approach adopted by the State to remunerate GPs. It is assumed that the State would reimburse GPs for income foregone for current visits by non-cardholders and for the additional expected visits at the prevailing mid-range private fee of €52.50 in 2008 (The Competition Authority, 2009), which is assumed to have remained constant in the subsequent years based on survey evidence from 2011 and 2015 (Brick *et al*., 2015; WhatClinic.com, 2015). It is assumed that GPs would be reimbursed by the current public system of capitation combined with some fees and allowances.

Scenario 3: Supply-Side Responses

In providing universal GP care, the State may seek to encourage supply-side responses which lower the cost of universal GP care. Thus, whereas GPs in the private market may be incentivised to deliver personal care to fee-paying patients in the universal system without fee-for-service, they may seek to delegate more

care to practice nurses in instances when such care does not require medical doctor expertise. It is therefore anticipated that the introduction of universal GP care with a change in reimbursement from fee-for-service to capitation for previous non-cardholders may result in a supply response by GPs. To reflect the probability that the State will seek to reduce costs by encouraging such a supply response, we consider the effect on the cost of care of the State building such an assumed response into its price-setting for universal GP care. An additional motivation for examining this scenario is that this supply-side response may be required in the event of a shortfall in the number of GPs required to supply universal care free at the point of use.

Unfortunately there is relatively little evidence about what such supply-side responses might be. One area for consideration is the skill-mix in primary care and in particular the potential to reduce unit costs of GP care by greater employment of practice nurses. In recent research, GPs noted that practice nurses were central to the delivery of high quality care and to ensure GP time is spent efficiently (O'Dowd *et al*., 2017). Previous Irish research has found that there is a weak negative correlation between the number of practice nurses per capita and GPs per capita suggesting that in some areas shortages of GPs may be compensated for by greater utilisation of practice nurses to provide services (Teljeur *et al*., 2014).

Although lacking reliable evidence, it appears that there is lesser use of practice nurses in Ireland compared to other countries. For example one study found that among patients with coronary heart disease (CHD), the average annual number of GP visits in the Republic of Ireland was 5.6, compared to 4.4 in Northern Ireland. Conversely, the average number of practice nurse visits among the CHD patients was 1.6 in the Republic of Ireland and 2.1 in Northern Ireland (Cupples *et al*., 2008). While based on one disease group, the proportion of primary care patients seen by the practice nurse in Northern Ireland in this study (approximately 32 per cent) is similar to that observed across a sample of the total population in England (34 per cent) (Hippisley-Cox *et al*., 2007) and compares to a 22 per cent practice nurse share in the Republic (Cupples *et al*., 2008). More recent analysis has found that across the population in the Republic of Ireland, practice nurse visits accounted for 25 per cent of GP and practice nurse visits combined in 2015 (Wren *et al*., 2017). In 2015, there were an estimated 1,800 practice nurses in Ireland with 82 per cent of GP practices employing a practice nurse (O'Kelly *et al*., 2016).

The aim of this scenario therefore was to determine the potential cost savings that could be made in the Republic of Ireland if the implicit staff-mix (between GPs and practice nurses) in the study for Northern Ireland were applied to the Republic of Ireland. This involves estimating the average cost per CHD patient using Republic of Ireland visiting rates and comparing it to the average cost when using Northern Ireland visiting rates. In addition to GP and practice nurse visiting rates, it was necessary to establish the relationship between the average cost per GP and practice nurse visit. Such an analysis estimated that there would be a 15.9 per cent

reduction in GP costs if there were a change to the proportionate use of nursing staff in Northern Ireland in the Cupples *et al*. study (Wren *et al*., 2015). Since it appears that the proportion of care delivered by practice nurses has subsequently increased, a further estimate adjusts for the 2015 share of practice nurse visiting which is closer to the NI share and therefore convergence to the NI rate yields the lesser 14.5 per cent reduction in GP costs. These reductions were applied to the total cost of GP care estimated in the demand driven approach (Scenario 2).

2.3 Estimating Baseline Healthcare Expenditure

In order to determine the impact of universal GP care on current healthcare expenditure it is necessary to determine total healthcare expenditure in Ireland. For the purpose of this analysis, estimates of public expenditure on GP services, private expenditure on GP services, public healthcare expenditure and total healthcare expenditure were derived from a published report which provides estimates of healthcare expenditure for 2013 (Table 3).

Table 3: Healthcare Expenditure Estimates for Ireland, 2013

Category	*Public payments to GPs*	*Private payments to GPs*	*Total public healthcare expenditure*	*Total public and private healthcare expenditure*
€m	471	267	14,602	19,216

Source: Wren *et al*. (2015).

III RESULTS

Impact on public healthcare expenditure

Table 4 shows the impact on public healthcare expenditure of the introduction of universal GP care free at the point of use using the three alternative methods of reaching a reimbursement price for universal GP care identified above. For previous non-cardholders, the cost to the State of introducing free GP visits is €492 million per annum for Scenario 1 (existing capitation rates), €401 million to €489 million per annum for Scenario 2 (demand driven approach – which found that GP visiting by former non-cardholders would increase by 2.55 million, implying an overall increase in GP-visiting of between 16.7 and 18.7 per cent), and €337- €418 million for Scenario 3 (supply-side response).

For previous cardholders, there is no change in the cost to the State if the demand driven approach is adopted. However, if the method used to reach a price for universal GP care is based on 2013 capitation rates, then the cost for previous cardholders (for 2013) would increase by €8 million per annum. When more care by nurses is assumed (Scenario 3), there is a decrease in the cost for existing cardholders.

The overall increase in total healthcare expenditure of introducing universal GP care ranges from €262 million per annum to €500 million per annum depending on the method used to reach a price for universal GP care, representing an increase of between 1.8 and 3.4 per cent of public health expenditure in 2013.

Table 4: The Impact on Public Healthcare Expenditure of Extending Free GP Care to the Full Population, 2013

	Cost for previous non-cardholders €m	*Cost for previous cardholders* €m	*Increase in public health expenditure* €m	*Percentage increase public health expenditure*
Current	0	471		
Scenario 1 – existing capitation rates	492	479	500	3.4%
Scenario 2 – demand driven approach	401–489[1]	471	401–489	2.7–3.3%
Scenario 3 – Supply-side response	337–418[2]	396–403	262–350	1.8–2.4%

Source: Authors' own calculations.
Notes: 1 – The range reflects different visiting rates emerging from different surveys.
2 – Skill-mix savings applied to the estimated cost of universal GP care estimated from Scenario 2 (demand driven approach).

Impact on Total Healthcare Expenditure

Table 5 shows the impact on total healthcare expenditure of extending free GP care to the total population. Under the current system, non-cardholders are estimated to spend between €267 million and €355 million per annum on GP visits. The impact

Table 5: The Impact on Total Healthcare Expenditure of Extending Free GP Care to the Full Population, 2013

	Cost for previous non-cardholders €m	*Cost for previous cardholders* €m	*Increase in total health expenditure* €m	*Percentage increase total health expenditure*
Current	267–355[1]	471		
Scenario 1 – existing capitation rates	492	479	233–145	1.2%–0.8%
Scenario 2 – demand driven approach	401–489	471	134	0.7%
Scenario 3 – Supply-side response	337–418[2]	396–403	–5	0 %

Source: Authors' own calculations.
Notes: 1 – The range reflects different visiting rates emerging from different surveys.
2 – Skill-mix savings applied to the estimated cost of universal GP care estimated from Scenario 2 (demand driven approach).

on total healthcare expenditure of introducing universal GP care is less than on public healthcare expenditure because a significant proportion of the cost to the State reflects payments that were previously made out-of-pocket by individuals (and therefore included in the calculation of total healthcare expenditure). The additional cost to total healthcare expenditure (ranging from 0 to 1.2 per cent) therefore largely reflects the additional demand for GP visits arising from a drop in price at the point of use.

IV DISCUSSION

Introduction of universal GP care free at the point of use in Ireland would result in an additional cost to the State of up to €500 million per annum. However, a significant proportion of this additional cost reflects a shift in spending from private individuals paying out-of-pocket at the point of use to the State paying for GP visits under a capitation scheme. Therefore much of the additional expenditure does not reflect a net cost to society but rather a change in how contributions for healthcare services are made.

While public healthcare expenditure in Ireland has increased in the past number of years (Department of Health, 2017), this rise is in the context of a prolonged period of austerity characterised by significant cuts to public healthcare expenditure (Thomas *et al*., 2014). Furthermore, there are many competing priorities for resources and it is not yet clear if funding universal GP care is a priority. The introduction of universal GP care may also involve structural changes within primary care (for example, the development of new methods of reimbursing GPs and a change in staff-mix) and associated set-up costs, which have not been included in the analysis, putting further pressure on limited additional resources.

The current analysis examined the cost implications of universal GP care in relation to the reimbursement of GPs; however, it might be expected that universal GP care would also impact on healthcare expenditure in other sectors. For example, increased GP visiting may lead to increased medication costs due to additional prescribing; alternatively, universal GP care may result in lower hospital costs as conditions are treated in a more timely manner or in a more appropriate setting. While Kringos and colleagues found little relationship between primary care accessibility (which included affordability) and total healthcare expenditure across a number of European countries, they did find that countries with better access to primary care were associated with lower hospital admission rates for diabetes (Kringos *et al*., 2013b). A growing body of American literature has shown a positive association between accessibility of primary care and population health (Friedberg *et al*., 2007; Starfield *et al*., 2005). However, recent research has highlighted weaknesses in the Irish primary care system in domains other than accessibility (Kringos *et al*., 2013a), suggesting that improving accessibility to primary care

services is only one of the necessary reforms to achieving a strong primary care system. In Ireland other factors such as the availability of GPs in rural and deprived areas may also act as barriers to accessing GP services and should be considered in future research.

In 2015, more than 92 per cent of GPs signed up to the contract providing for free GP visits for the under sixes (Department of Health, 2015b); however, the scheme was opposed by a new representative organisation for GPs, the National Association of General Practitioners (NAGP), although the terms of the contract were negotiated by the Irish Medical Organisation (IMO), the traditional GP trade union. Some of the NAGP opposition related to the introduction of free GP care based on age rather than income (Goodey, 2015); a concern which would be addressed if universal GP care were introduced. However, concerns were also raised about the potential impact of additional demand on an under-resourced primary care system. Recent research estimates that 4.5 per cent of healthcare expenditure in 2014 was spent on general medical practice, equating to €858.6 million (O'Dowd *et al*., 2017); of this €453 million related to payments for cardholders, €90 million for other State fees and €315.6 million for private out-of-pocket care. While these expenditure estimates do not include private payments for practice nurse visits and the out-of-pocket payment estimate is lower than the €355 million estimated for the analysis presented in this paper using the Healthy Ireland Survey, the proportion of healthcare expenditure spent in general practice remains low by international standards (O'Dowd *et al*., 2017).

A further concern relates to the inadequacy of the supply of GPs in Ireland. Recent estimates suggest there are 64.4 GPs per 100,000 population in Ireland, significantly lower than the European average of 91 GPs per 100,000 (Teljeur *et al*., 2014). Further it is anticipated that that the demand for GP services will increase at a time when there will be a reduction in the number of GPs. Demographic change including an increase in the number of people in the population, as well as an increase in the number of older people, will result in a significant increase in demand, regardless of changes in policy towards universal GP care (Wren *et al*., 2017). A high proportion of GPs over the age of 55 will likely result in a large number of retirements in the next ten years, reducing the supply of GPs, a situation potentially exacerbated by a high proportion of current trainees expecting to leave Ireland after training (Health Service Executive, 2015b). However, there is evidence that the number of trainee GPs is increasing and the ICGP currently trains 172 GPs per year (Irish College of General Practitioners, 2017). Therefore, while the actual cost of providing free GP visits at the point of use may not be significant in terms of the overall healthcare budget, initiatives will likely be required to address GP supply shortfalls before universal GP care and associated changes are fully implemented (Teljeur *et al*., 2010).

There are limitations to the current analysis. Due to the lack of a national administrative dataset recording the number of GP visits, it is necessary to rely on

survey data to estimate GP visiting rates. Different surveys have provided different estimates of the number of GP visits; to account for this variation, the analysis used a range of visiting rates. An essential component of the analysis presented in this paper involved predicting behavioural change following a change in policy. On the demand side, the introduction of free GP care is expected to increase demand for GP visits. While there is some Irish evidence available to estimate how gaining a medical or GP visit card may impact on the demand for GP visits (Nolan, 2008; Ma and Nolan, 2016), there is much uncertainty on how the introduction of universal GP care would impact on the supply side. In this analysis we considered the potential cost implications of substituting GP visits with practice nurse visits under the assumptions that (i) existing practice nurses may be able to meet some of the additional demand generated from the introduction of universal GP care and (ii) may be able to do so at a reduced cost relative to GPs. While previous research for Ireland has found that increased nurse substitution offers the best long-term prospects of addressing GP shortages (Teljeur *et al*., 2010), the ability to reduce healthcare costs depends on the particular context of care. Doctors' workload may remain unchanged either because nurses are deployed to meet previously unmet patient need or because nurses generate demand for care where previously there was none. Savings in cost depend on the magnitude of the salary differential between doctors and nurses, and may be offset by the lower productivity of nurses compared to doctors (Laurant *et al*., 2005).

The three scenarios identified in this analysis about how Government might approach reimbursing GPs for the services they would provide under universal GP care are certainly not the only methods which could be used, but rather reflect recent policy and evidence in an Irish context. A number of other scenarios could be considered including a combination of Scenarios 1 and 2 where information on lower GP visiting rates among existing non-cardholders is used to set a capitation rate proportionally lower than that used for existing cardholders. Also on the supply side, alternative skill-mix possibilities could be explored including consideration of the increased role of community pharmacists.

V CONCLUSIONS

The World Health Organisation (WHO) has advocated universal healthcare as the best means of improving global health (World Health Organisation, 2015). As a first step, the WHO recommends reducing the need for people to pay directly for services at the point of delivery, out of their own pockets. The introduction of universal GP care would go some way to increasing the universality of the Irish healthcare system. While adding to public health expenditure, free GP visits at the point of use for all would add relatively little to total healthcare expenditure. However there are other obstacles which need to be circumvented before such a

policy can be comprehensively implemented, especially around the adequate resourcing (both financial and staffing) of the primary care system. A long-term perspective is required to strengthen primary care in Ireland to ensure maximum benefits including improved population health.

REFERENCES

Brick, A., A. Nolan, J. O'Reilly and Smith, 2010. *Resource Allocation, Financing and Sustainability in Health Care: Evidence for the Expert Group On Resource Allocation and Financing in the Health Sector,* Dublin, Ireland: The Economic and Social Research Institute.

Brick, A., C. Normand, S. O'Hara and S. Smith, 2015. *Economic Evaluation of Palliative Care in Ireland*, Dublin, Ireland: Trinity College Dublin.

Central Statistics Office, 2016. *Ireland's System of Health Accounts, Annual Results 2014*, Dublin, Ireland: Central Statistics Office.

Competition Authority, 2009. "Competition in Professional Services – General Practitioners – Part 1: Overview of the GP profession", Dublin: The Competition Authority.

Connolly, S. and M. Wren, 2017. "Unmet Healthcare Needs in Ireland: Analysis Using the EU-SILC Survey", *Health Policy*, Vol. 121, pp. 434-441.

Cupples, M. E., M. C. Byrne, S. M. Smith, C. S. Leathem and A. W. Murphy, 2008. "Secondary Prevention of Cardiovascular Disease in Different Primary Healthcare Systems With and Without Pay-For-Performance", *Heart,* Vol. 94, pp. 1594-600.

Department of Health, 2014. *The Path to Universal Healthcare: White Paper on Universal Health Insurance*, Dublin, Ireland: Department of Health.

Department of Health, 2015a. *Statement by Minister Varadkar following Cabinet discussion on UHI*, Dublin, Ireland: Department of Health.

Department of Health, 2015b. *Press Release – Over 163,000 Children and 23,000 People over 70s sign-up for GP Care* [Online]. Department of Health. Available: http://health.gov.ie/blog/press-release/over-163000-children-and-23000-people-over-70s-sign-up-for-gp-care.

Department of Health, 2015c. *Press Release – Ministers Welcome Agreement with IMO on Free GP Care for Under-6s*. http://health.gov.ie/blog/press-release/ministers-welcome-agreement-with-imo-on-free-gp-care-for-under-6s/: Department of Health.

Department of Health, 2017. *Health in Ireland: Key Trends 2017*, Dublin, Ireland: Department of Health.

Department of the Taoiseach, 2011. *A Programme for Government*, Dublin, Ireland: Department of the Taoiseach.

Department of the Taoiseach, 2016. *A Programme for a Partnership Government*, Dublin, Ireland: Department of the Taoiseach.

Evetovits, T., J. Figueras, M. Jowett, P. Mladovsky, A. Nolan, C. Normand and S. Thomson, 2012. *Health System Responses to Financial Pressures In Ireland: Policy Options in An International Context*, Brussels: European Observatory on Health Systems and Policies.

Friedberg, M. W., K. L. Coltin, S. D. Pearson, K. P. Kleinman, J. Zheng, J. A. Singer and E. C. Schneider, 2007. "Does Affiliation of Physician Groups With One Another Produce Higher Quality Primary Care?", *Journal of General Internal Medicine,* Vol. 22, pp. 1385-1392.

Goodey, C. 2015. *Why GPs Oppose Free Care for Children Under 6* [Online]. National Association of General Practitioners. Available: http://nagp.ie/news-media/why-gps-oppose-free-care-for-children-under-6 [Accessed 26/02/2016].

Health Service Executive, 2015a. "2015 Medical Card and GP Visit Card Income Guidelines", Dublin, Ireland: HSE.

Health Service Executive, 2015b. "Medical Workforce planning: Future Demand for General Practitioners 2015-2025", Dublin, Ireland: Health Service Executive.

Hippisley-Cox, J., J. Fenty and M. Heaps, 2007. *Trends in Consultation Rates in General Practice 1995 to 2006: Analaysis of the QRESEARCH database: Final Report to the Information Centre and Department of Health*, Leeds: The Information Centre.

Houses of the Oireachtas Committee on the Future of Healthcare, 2017. *Slaintecare Report*, Dublin, Ireland: Houses of the Oireachtas.

Hudson, E. and A. Nolan, 2015. "Public Healthcare Eligibility and the Utilisation of GP Services By Older People in Ireland", *The Journal of the Economics of Ageing,* Vol 6, pp. 24-43.

Irish College of General Practitioners, 2017. *Briefing Document to the Joint Oireachtas Committee on Health: Manpower and General Practice*, Dublin, Ireland: Oireachtas.

Keegan, C., S. Connolly and M. Wren, 2017. "Measuring Healthcare Expenditure: Different Methods, Different Results", *Irish Journal of Medical Science*, epub 2017/06/02.

Kringos, D. S., W. G. Boerma, Y. Bourgueil, T. Cartier, T. Hasvold, A. Hutchinson, M. Lember, M. Oleszczyk, D. R. Pavlic, I. Svab, P. Tedeschi, A. Wilson, A. Windak, T. Dedeu and S. Wilm, 2010. "The European Primary Care Monitor: Structure, Process and Outcome Indicators", *BMC Family Practice,* Vol. 11, p. 81.

Kringos, D., W. Boerma, Y. Bourgueil, T. Cartier, T. Dedeu, T. Hasvold, A. Hutchinson, M. Lember, M. Oleszczyk, D. Rotar Pavlic, I. Svab, P. Tedeschi, S. Wilm, A. Wilson, A. Windak, J. Van Der Zee and P. Groenewegen, 2013a. "The Strength of Primary Care in Europe: An International Comparative Study", *British Journal of General Practice,* Vol, 63, e742-50.

Kringos, D. S., W. Boerma, J. Van Der Zee and P. Groenewegen, 2013b. "Europe's Strong Primary Care Systems are Linked to Better Population Health But Also to Higher Health Spending", *Health Aff (Millwood),* Vol. 32, pp. 686-694.

Laurant, M., D. Reeves, R. Hermens, J. Braspenning, R. Grol and B. Sibbald, 2005. "Substitution of Doctors by Nurses in Primary Care", *Cochrane Database of Systematic Reviews*, CD001271.

Layte, R. and A. Nolan, 2016. *Understanding Use of General Practitioner Services Among Children in Ireland: Evidence from the Infant Cohort of the Growing Up In Ireland Survey*, Dublin, Ireland: Growing up in Ireland.

Ma, Y. and A. Nolan, 2016. "Public Healthcare Entitlements and Healthcare Utilisation Among the Older Population in Ireland", *Health Economics*, Vol. 26, pp. 1412-1428.

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, pp. 1164-1172.

O'Dowd, T., J. Ivers and D. Handy, 2017. *A Future Together Building a Better GP and Primary Care Service*, Dublin, Ireland: Trinity College Dublin.

O'Kelly, M., C. Teljeur, F. O'Kelly and A. Ní Shuilleabhain, 2016. *Structure of General Practice in Ireland 1982-2015*, Dublin, Ireland: Irish College of General Practitioners.

Ring, E. 2015. "Deal on Free GP Care for U-6s follows 81% Payment Hike", April 10 2015, *Irish Examiner*, http://www.irishexaminer.com/ireland/deal-on-free-gp-care-for-u-6s-follows-81-payment-hike-323164.html

Smith, S. and C. Normand, 2011. "Equity in Health Care: The Irish Perspective", *Health Economics, Policy and Law,* Vol 6, pp. 205-217.

Starfield, B. 1994. "Is Primary Care Essential?", *Lancet,* Vol 344, pp. 1129-1133.

Starfield, B., L. Shi and J. Macinko, 2005. "Contribution of Primary Care to Health Systems and Health", *Milbank Quarterly,* Vol. 83, pp. 457-502.

Teljeur, C., E. Tyrrell, A. Kelly, T. O'Dowd and S. Thomas, 2014. "Getting a Handle on the General Practice Workforce in Ireland", *Irish Journal of Medical Science,* Vol. 183, pp. 207-13.

Teljeur, C., S. Thomas, F. O'Kelly and O'Dowd, 2010. "General Practitioner Workforce Planning: Assessment of Four Policy Directions", *BMC Health Services Research,* Vol. 10, p. 148.

Thomas, S., S. Burke and S. Barry, 2014. "The Irish Health-Care System and Austerity: Sharing the Pain", *Lancet,* Vol. 383, pp. 1545-1546.

Whatclinic.com, 2015. "Nine in Ten (91%) Irish GPS Think Free Care Scheme for Children Under Six is a Bad Idea", *WhatClinic.com* [Online].

World Health Organisation, 2015. *News Release: WHO Lays Out Plans for Financing New Global Health Goal: To Ensure Healthy Lives and Promote Well-Being for All at All Ages* [Online]. Available: http://www.who.int/mediacentre/news/releases/2015/health-financing/en.

Wren, M., C. Keegan, B. Walsh, A. Bergin, J. Eighan, A. Brick, S. Connolly, D. Watson and J. Banks, 2017. *Projections of Demand for Healthcare in Ireland, 2015-2030: First Report from the HIPPOCRATES Model*, Dublin, Ireland: The Economic and Social Research Institute.

Wren, M., S. Connolly and N. Cunningham, 2015. *An Examination of the Potential Costs of Universal Health Insurance in Ireland*, ESRI Research Series, Dublin, Ireland: The Economic and Social Research Institute.