

**Monitoring and evaluation
of primary care in Scotland:
the baseline position**

September 2020

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This publication should be cited as:

Wyper G, Dryden R, Anderson J and Wason D.
Monitoring and evaluation of primary care in
Scotland: the baseline position. Edinburgh:
Public Health Scotland; 2020.

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Acknowledgements

We would like to thank the people and organisations involved in the primary collection and analysis of data which have been included in this report. We would also like to thank the following people for their support throughout the production of this report:

- 1** Iain MacAllister, Head of Unit, Health and Social Care Analysis Division; Fiona MacDonald, Principal Research Officer, Health and Social Care Analysis Division; Emma Milburn, Statistician, Health and Social Care Analysis Division; Karen Young, Social Researcher, Health and Social Care Analysis Division; Lucy Proud, Economist, Head of Workforce and Pay Analysis, Health and Social Care Analysis Division; from The Scottish Government, for their helpful comments on the report
- 2** Members of the Primary Care Monitoring and Evaluation Strategy Steering Group for their helpful comments on the report
- 3** Alyson MacDonald, Senior Information Analyst, Public Health Scotland, for providing data on unscheduled care service use
- 4** Paul McLaughlin, Senior Information Performance Analyst, NHS24, for providing data on NHS24 and NHS inform service use
- 5** the Scottish Government, for providing data on the GP premises survey and data on the total frontline NHS and primary care budgets
- 6** Dr Diane Stockton, Acting Director of Public Health Science, Public Health Scotland, for signing off the final version of this report.

1. Introduction

Report aim

The Scottish Government published a 10-year national monitoring and evaluation strategy for primary care in Scotland¹ in March 2019. The scale and pace of reform of primary care in Scotland is ambitious and it is vital we understand whether reforms are having a measurable impact on expected outcomes and have been implemented effectively. Monitoring and evaluation is therefore essential in developing the evidence needed by service commissioners, policy makers and Ministers to shape sustainable policy and service development. The aim of this report is to provide a baseline position and relevant trend information to support the monitoring and evaluation of primary care reform. This report was produced prior to the March 2020 COVID-19 outbreak and represents the situation prior to 2020. It does not therefore consider the influence of COVID-19 on the reform of primary care, which will be discussed in future reports.

We also aim to highlight significant gaps in the data and evidence which are required, and highlight issues with existing data, suggesting how these could be addressed. The report is centred on the Primary Care Outcomes Framework² (see [Annex A](#)). The content of this report mostly comprises already published or routinely available data and does not discuss data held by Health Boards or partners which are not currently aggregated and reported at the national level. No new data collection has been commissioned to form the content of this report and it does not cover the wider research literature and evidence base relevant to evaluation. Where data or evidence are not currently available, we suggest how we could progressively establish it either prospectively or retrospectively.

Reporting

The progress of primary care reform will be monitored and regular reports made to a Primary Care Monitoring and Evaluation Strategy Steering Group. This baseline report marks the first of such reports. Future comprehensive reports will be delivered in 2021, 2024 and 2028 which will synthesise progress and learning, describe trends


in key indicators, take stock of the evidence base, and identify evidence gaps which need to be addressed.

Policy context

Since the NHS was established in 1948, primary care has been the cornerstone of the healthcare system. It acts as the main point of contact for Scotland's population with around 25 million consultations per year in general practice alone and a further 840,000 contacts with primary care out of hours (OOH). Through promoting a focus on prevention, self-management, monitoring and management of disease, and anticipatory care planning, it influences the level of demand on other parts of the health and social care system. This is why countries with strong primary care systems have better health outcomes, access, coordination experiences and a lower and more proportionate use of resources.³ Getting primary care right is therefore vital to the sustainability of the whole health and social care system.

As set out in the Health and Social Care Delivery Plan⁴, the Scottish Government's vision for primary care is to expand and upskill multi-disciplinary teams (MDTs) to ensure people who need care have access to the right person at the right time, while remaining at or near home wherever possible. People are at the heart of reform; they must be engaged and empowered to make decisions about their own health and care. The Scottish Government has set out its vision for primary care alongside six high-level outcomes⁵ (see Figure 1 below).

Figure 1: Scottish Government primary care outcomes

National outcomes performance framework				
 We are healthy and active				
We start well		We live well		We die well
Primary care vision				
Our vision is of general practice and primary care at the heart of the healthcare system. People who need care will be more informed and empowered, will access the right professional at the right time and will remain at or near home wherever possible. Multidisciplinary teams will deliver care in communities and be involved in the strategic planning of our services.				
HSCP outcomes				
	People can look after own health	Live at home or homely setting	Positive experience of services	Services improve quality of life
Services mitigate inequalities	Carers supported to improve health	People using services safe from harm	Engaged workforce improving care	Efficient resource use
Primary care outcomes				
We are more informed and empowered when using primary care		Our primary care services better contribute to improving population health		Our experience as patients in primary care is enhanced
Our primary care workforce is expanded, more integrated and better co-ordinated with community and secondary care		Our primary care infrastructure – physical and digital – is improved		Primary care better addresses health inequalities

To facilitate shifting the balance of care from secondary to community care, the First Minister announced in October 2016 an increase in funding for primary care of £500 million by the end of the current Parliament. This investment will see at least half of frontline NHS spending going to community health services.

The 2018 General Medical Services (GMS) contract⁶ is a significant enabler in strengthening primary care, alongside the commitment to expand the general practitioner (GP) workforce by at least 800 over the next decade. The contract aims to improve patient care by refocusing GP time to focus on expert medical generalism – treating complex care, undifferentiated presentation, and providing quality and leadership. The key features of the contract are to:

- stabilise general practice funding and GP income, reducing risk for partners
- reduce GP workload by transferring some services out of general practice
- enhance patient experience
- secure more efficient, transparent use of resources
- enable better integrated, more coordinated services.

A Memorandum of Understanding (MoU),⁷ supported by an investment of an additional £250 million in direct support of general practice by 2021–22, sets out six priority services (see Table 1 below) to transfer from general practice to Health Board delivery by the development of expanded MDTs. Each Integration Authority, in collaboration with Health Boards and GP Sub-committees, is to develop annual Primary Care Improvement Plans (PCIPs) setting out how they will deliver the MoU locally, and what progress they have made redesigning their primary care services to date.

Table 1: Six memorandum of understanding priority areas and workforce requirement

Service	Workforce type	Purpose of service redesign
Vaccination Transformation Programme	Nurses and healthcare assistants	To transform vaccine delivery from GP to Health Board oversight.
Community treatment and care	Nurses and healthcare assistants	Transfer of services such as chronic disease monitoring, the management of minor injuries and dressings, phlebotomy, etc.
Pharmacotherapy	Pharmacists and pharmacy technicians	Phased transfer of pharmacotherapy services, including medication management and prescribing.
Urgent care	Advanced nurse practitioners and advanced paramedics	Support for urgent unscheduled care within primary care.
Additional professional roles	Musculoskeletal (MSK) physiotherapists and mental health workers (and other allied health professionals)	Services (such as MSK and mental health) for patients with specific needs.
Links worker programme	Community link workers (CLW)	Commitment to deliver 250 CLWs to address patients' holistic needs.

These changes are part of the wider reform of primary care. This includes the removal of the Quality and Outcome Framework (QOF) and the establishment of Improving Together,⁸ a national quality improvement framework to support the work of GP Clusters. The Transforming Roles Programme⁹ is ensuring nationally consistent, sustainable and progressive roles, education and career pathways for nurses, midwives and health professions, supported by investment in additional training and continuous professional development. There has been considerable investment in testing new models of care and improvement in every territorial Health

Board in Scotland. This includes innovative models in our national boards (particularly the Scottish Ambulance Service and NHS 24) to improve patient outcomes. Crucially, the continued investment in the development of the analytical, digital and physical infrastructure in primary care facilitates wider reforms.

The landscape within which primary care reform is taking place is itself dynamic, being reshaped through the integration of health and social care, and major reform programmes including in mental health, adult social care and acute and elective services. Reforms elsewhere in the health and social care system – and wider factors such as prevailing budgetary conditions – will clearly impact on primary care reform and the evaluation will need to consider, as far as possible, interactions across the system.

The Scottish Government's monitoring and evaluation strategy focuses on how to understand the impacts of policy at a national level by providing an evidence-based account of what difference primary care reform is making. It recognises that many of the decisions that drive the reform process are made locally, and are not under the control of national policy makers. This is most clearly articulated in the 'Scottish approach' to policy, as set out in the Christie Commission report.¹⁰ The Scottish approach involves a bottom-up, collaborative style of policymaking, where policies are designed through consultation and negotiation, and delivered in partnership with a range of other actors.^{11,12,10} The Scottish Government sets out broad national priorities in the National Performance Framework (NPF) with the expectation that public bodies will work together to achieve its aims.¹¹ This promotes a dispersion of power across the health and care system through local autonomy in decision making and service delivery.

This report provides a baseline position and relevant trend information to support the monitoring and evaluation of primary care reform. It highlights issues with existing data, and gaps in the data and evidence which are required, and suggests how these could be addressed. The report begins by setting out the policy context, the national monitoring and evaluation strategy for primary care in Scotland, and the demographic context and health needs of the population in sections one, two and

three. It moves on to outline the baseline position for each of the high level primary care outcomes (see [Annex A](#)), in relation to three broad areas: people; workforce; and the system in sections four, five and six. Section seven provides an overview of the baseline position and suggests ways to address gaps in the existing evidence base.

2. The national monitoring and evaluation strategy for primary care in Scotland

Scope

The national monitoring and evaluation strategy for primary care in Scotland sets out the overarching approach and principles for how the Scottish Government will use evidence and analysis to track, document and understand the reform of primary care, including out-of-hours services, between now and 2028. The strategy was developed by the Scottish Government in collaboration with members of the Evaluation team at NHS Health Scotland (now part of Public Health Scotland) and a range of other stakeholders. A portfolio of studies and routine data collections will be developed over time to answer prioritised evaluation questions at appropriate time points. This baseline report is an important first component of that portfolio.

The strategy focuses on tracking and assessing progress towards delivering the primary care vision and national outcomes (Figure 1, page 5) using the theory of change set out in the Outcomes Framework.² Nested within this framework are how outcomes and continuous improvement should be achieved for: people, the primary care workforce, and the wider health and social care system. The outcomes framework can be modified for different levels of scales within the system and is expected to evolve over time. The framework was co-produced by a sub-group of the Primary Care Evidence Collaborative.¹

¹ The Primary Care Evidence Collaborative is a network of organisations and institutions in Scotland who have a responsibility and a shared commitment to improve the quality, relevance, timeliness, and use of evidence relevant to primary care policy and practice. It is coordinated by Public Health Scotland and members currently include: Health and Social Care Alliance Scotland, Healthcare Improvement Scotland, International Centre for Integrated Care, National Services Scotland, NHS Education for Scotland, NHS 24, Nursing, Midwifery and Allied Health Professionals Research Unit, Scottish Ambulance Service, Scottish Government, Scottish Improvement Science Collaborating Centre, and the Scottish School of Primary Care.

How we will achieve the aims of the monitoring and evaluation strategy

Early evaluation priorities

Early monitoring and evaluation priorities from the strategy are based on the three-year period of significant transition for transformative service redesign, including those outlined in the 2018 GMS contract.⁶

The Scottish Government will set out details for how it intends to deliver its 10-year monitoring and evaluation strategy for primary care in Scotland in annual work plans. These will highlight significant annual reporting milestones for work which the Scottish Government is currently undertaking, or planning, often in collaboration with other national partners, in particular Public Health Scotland. The first annual work plan was published in August 2019.¹³

This report focuses on the six primary care outcomes below (set out in Figure 1, page 5), and in particular, to what extent progress is being made towards achieving each of these outcomes, and how:

- we are more informed and empowered when using primary care
- our experience as patients in primary care is enhanced
- our primary care workforce is expanded, more integrated and better coordinated with community and secondary care
- our primary care services better contribute to improving population health
- our primary care infrastructure – physical and digital – is improved
- primary care better addresses health inequalities.

Future reports will describe progress towards implementing the Primary Care Improvement Plans through analysis of local implementation tracker tools. More detail is provided in [Annex B](#).

Data sources and methods

This report has been compiled primarily using information which has been published or is routinely available, with limited new analysis undertaken. The types of data which have been used range from those which are based on routinely recorded records with full national coverage, to surveys based on samples of patients and the workforce. A comprehensive list of included data sources and methods are detailed in [Annex C](#).

3. What do we know about the current Scottish demographic profile, the health needs of the Scottish population and the factors that influence these?

In order to be able to assess the long-term impact of primary care reform, it is necessary to first look at what pressures might be put on the primary care system by projected changes in the population over the next 10 years, and secondly to look at the changing health needs of that population which could be a result of a variety of factors. For some time we have known that inequalities in socioeconomic and environmental conditions drive differences in the health and wellbeing of individuals.¹⁴ Additionally, the social and community networks which people have are influenced by wider societal and environmental factors. Many of these factors explain differences in individual lifestyle and health behaviour choices, such as smoking and the consumption of alcohol. These wider social and environmental issues not only influence the health needs of individuals, but they also have a major impact upon the demand for care services. The imbalance of need and demand for care services is better known as the inverse care law,¹⁵ which states that care resources and services are not allocated and accessed by those with the greatest need.

This chapter provides a summary of demographic factors and population-level measures of health need and factors influencing health needs that are important to consider in the context of primary care reform. Further details on these factors are also provided in [Annex D](#).

Age structure

Underpinning the design of care services and their workforce is the demographic construct of the population. In the context of primary care services, understanding the current and projected population and its structure is a key factor to ensuring that services are responsive to the changing demands and needs of the people they are designed to support.

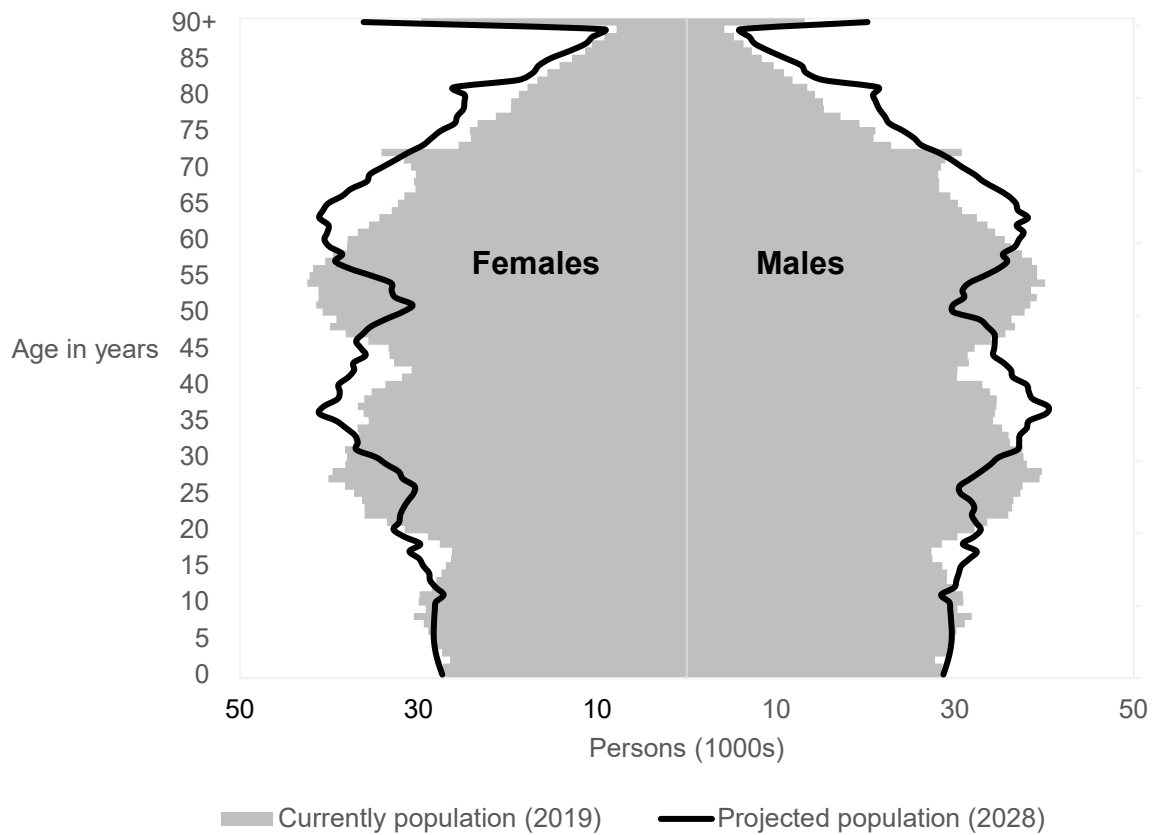
Over the next 10 years, the population is projected to grow from approximately 5,405,000 in 2019 to an all-time Scottish high of approximately 5,604,000 in 2028.¹⁶ Underpinning this increase is the ageing of the population (Figure 2). Influencing these projections are secular trends in the birth rate and age-standardised mortality rate which decreased by 13% and 7% respectively from 2009–2018.^{17,18}

The population of children and young people (under 16 years) in 2019 was approximately 929,400 and is projected to decrease to 923,700 in 2028, reflecting a reduction of the total population share of 17.0% to 16.5%. The working age population (16 to 64 years) is also similarly projected to fall from approximately 3,496,800 to 3,438,600 from 2019 to 2028, with a corresponding reduction of the total population share from 63.9% to 61.4%.

The main demographic behind the population increase is the rising elderly population (65 years and above) which had a population of approximately 1,044,100 in 2019 and is projected to increase to 1,241,200 in 2028. Overall this sub-population accounts for 19.1% of the Scottish population in 2019 and its share is projected to rise to 22.2% by 2028. Although the current and projected elderly female population is greater than the elderly male population, it is projected that the elderly male population will increase by approximately 100,100 people over the time period, which is more than the 97,000 which the elderly female population is expected to increase by.

Further impacting the increasing elderly population are estimates that the number of Scottish households with only one adult will increase from approximately 926,200 in 2019 to 1,023,500 in 2028, representing an increase of 11%¹⁹ ([Annex D](#)). Recent evidence suggests that 11% of adults in Scotland feel lonely often, with 38% reporting that they feel lonely sometimes.¹⁸ In terms of demographic, people aged 75 years and above report the highest rates of loneliness. The integration of these factors has important implications to ensure that primary care services adapt to meet the changing demographic and social needs of the Scottish population.

Figure 2: Current (2019) and 10-year projected population (2028) by sex and single year of age



Data source: Population projections, National Records of Scotland

An important element of population change is how change is distributed among both urban and rural areas. By 2028, the elderly population of island and remote rural council areas is projected to increase (14.3%) which is offset with decreases in the children and young (-7.2%) and working age (-8.5%) populations to give an overall projected population reduction of -2.6% ([Annex D – Table D1](#)). Research carried out by the James Hutton Institute has illustrated that by 2046, sparsely populated areas of Scotland risk losing up to a quarter of their population if current demographic trends continue.²⁰ This has been driven by the relatively small numbers of children and young people, which has serious implication for the future care workforce.

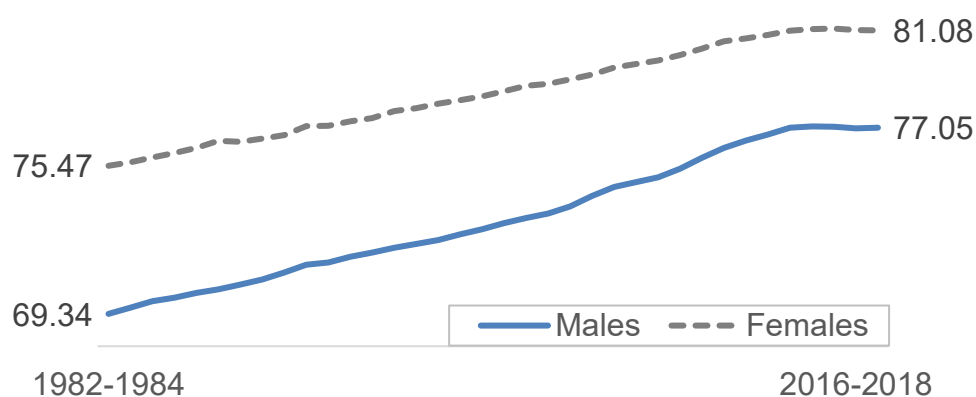
Life expectancy

After achieving several decades of gains, life expectancy at birth during 2016–18 was 81.08 years for females and 77.05 years for males (Figure 3).²¹ Current evidence has shown that the rate of improvement in life expectancy and mortality has experienced a slow-down since around 2012, such that mortality improvements across all age-groups are less than they were prior to 2012.²² In particular, life expectancy took an unprecedented drop in 2015–17, which is the first time this has happened since the Second World War.

We know that socioeconomic inequalities in health strongly affect overall population health, and Scotland has both the widest socioeconomic inequalities in health and the worst overall population health in Western Europe.¹⁴ Slow-down in life expectancy gains have also exhibited as inequalities in mortality, hitting those living in the most deprived areas of Scotland the hardest.²³

Analysis of the changes in life expectancy has highlighted that particular changes behind the slow-down are the reduction in cardiovascular deaths in late working and elderly ages. Recent increases in drug-related deaths in the mid-to-late working ages and dementia in elderly patients have adversely affected life expectancy in more recent years (post 2012).²⁴

Figure 3: Life expectancy at birth in Scotland, by sex, 1982–1984 to 2016–18



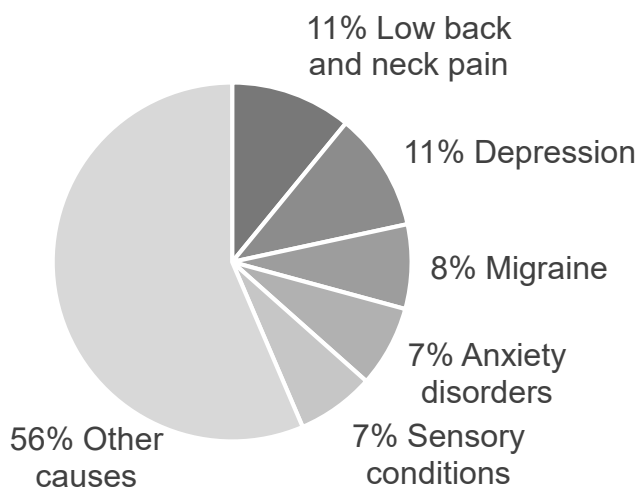
Data source: Life expectancy, National Records of Scotland

There is a common consensus that several factors are contributing to this slow-down. In particular, there have been concerns that increased pressures on health and social care services are important in explaining the recent trends.²⁵

Burden of disease

The increasing effects of the burden of morbidity have led to a decline in self-assessed health. Recent estimates from the Scottish Health Survey (2017) indicate that 73% of people feel their general health is either good or very good, a drop of 4% in a ten-year period.²⁶ Driving these trends are wide inequalities. The Scottish Burden of Disease study illustrated that the total fatal and non-fatal burden results in twice the burden in the most deprived areas of Scotland, compared with the least deprived areas.²⁷ The majority of this excess is a result of mortality. However, non-fatal health loss is also higher in our most deprived areas.

Figure 4: Leading causes of ill-health and disability, 2014–2016



Data source: Scottish Burden of Disease study

The leading five causes of non-fatal health loss are: lower back and neck pain, depression, migraine, anxiety disorders and sensory conditions. Together, these account for 43% of all ill-health and disability suffered in Scotland (Figure 4). While these causes of disease are affecting the quality of life of individuals the most, they are amenable to secondary prevention. For example, the ability to prevent early symptoms progressing and mitigate increasing severity of some of these leading causes such as lower back and neck pain, depression and anxiety disorders could be served by the expansion of multi-disciplinary teams by ensuring more effective access to the most appropriate healthcare professional in a timely manner.

The Scottish Burden of Disease study has evidenced that the causes of population health loss can be attributed to risk factors which harm us the most. The leading five risk factors that contribute towards the majority of disease burden are: cigarette smoking, hazardous alcohol consumption, overweight and obesity, poor diet and low physical activity.²⁸ Combined estimates from the 2013–2016 Scottish Health Survey results suggest that 40% of adults had one of these risk factors, with 31% exhibiting two or more²⁹ ([Annex D – Table D2](#)). Of those adults living in the most deprived 10% of areas, 78% has at least one risk factor, compared with 60% of adults living in the least deprived 10% of areas.

Over the period 2008–18 there has been much progress in reducing risk factor prevalence of hazardous alcohol consumption (-33%), cigarette smoking (-27%) and low physical activity (-9%). Unfortunately there has been no progress in reducing the prevalence of overweight and obesity and poor diet. Although progress on some risk factors have been successful, the prevalence of cigarette smoking (19%) and hazardous alcohol consumption (24%) remain stubbornly high.

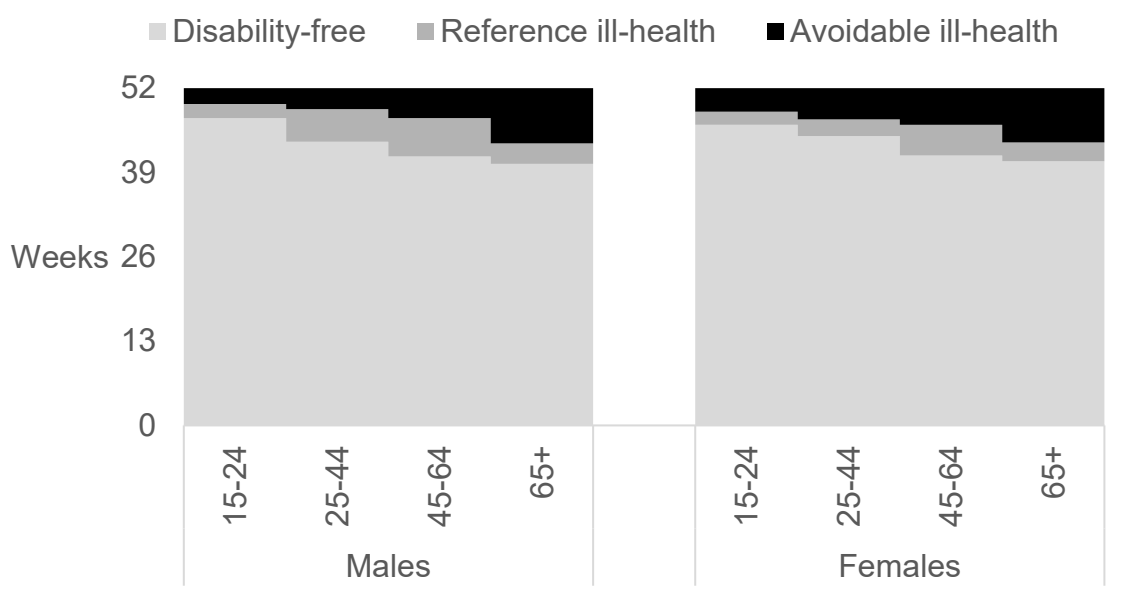
Living with multiple conditions

It is becoming increasingly normal to live with multiple conditions, but care services have traditionally been designed to treat single conditions. A recent estimate has suggested that the prevalence of people living with two or more conditions in Scotland was 20%, and was 38% higher in the most deprived decile compared to

least deprived areas.³⁰ People living with multiple conditions experience more problems with the coordination of their care and are more likely to have emergency and potentially avoidable hospital admissions.

Age- and socioeconomic-related inequalities persist in the debilitating effects of living with multiple conditions, as summarised in the 2018 [National Registrar General report](#). Those living in the most deprived 10% of areas of Scotland experienced excess health loss across all ages, with males and females aged 65 years and above experiencing eight weeks of excess health loss over and above that experienced in the least deprived areas of Scotland (Figure 5).³¹

Figure 5: Excess ill-health and disability experienced by the most deprived areas by sex and age-group in a single year



Data source: Scottish Burden of Disease study

Frailty is associated with the process of ageing. While it is associated with multi-morbidity, it encompasses vulnerability due to symptoms, disease severity, and other social vulnerabilities. Moving towards equitable person-centred primary care services is essential to combat the effects of the changing composition of conditions and their severity on both population health and population health inequalities.

4. What do we know about primary care outcomes for people?

Background

This section outlines what existing data and indicators can tell us about progress towards achieving the primary care outcomes for people at the national level ([Annex A](#)). It describes how the Health and Care Experience (HACE) survey³² can help us understand how outcomes for people are changing as primary care is reformed and discusses where we lack evidence to measure outcomes. The primary care outcomes for people discussed in this section, are:

- We are more informed and empowered when using primary care.
- Our experience as patients in primary care services is enhanced.

Also discussed within this section are how we will monitor progress in relation to intermediate outcomes over people's experiences of access to services, coordination of care, and care and treatment.

We are more informed and empowered when using primary care

The Scottish Government's vision for the future of primary care services includes ensuring that 'people who need care will be more informed and empowered'. To assess progress towards this outcome at the national level, we will monitor and assess trends in responses to specific questions from the HACE survey relating to in-hours and out-of-hours primary care, using responses from 2017/18 as baseline. It is the HACE 2017/18 data that are used in this section, unless otherwise stated. The 2017/18 HACE survey achieved returns from approximately 160,000 residents of Scotland.

Establishing whether people are becoming more informed when using primary care can be measured by an increase in people reporting that they strongly agree, or agree with the statement 'I understood the information I was given'.

- 95% of people agreed they had understood the information that they were given during their last experience of treatment or advice at their GP practice.
- 93% of people agreed they had understood the information that they were given during their last experience of treatment or advice in an out-of-hours setting.

Evidence that people are becoming more empowered when using primary care can be measured by an increased percentage of people reporting that they strongly agree, or agree with the statement 'I was in control of my treatment or care'.

- 82% of people agreed that they were in control of their treatment or care the last time they experienced treatment or advice at their GP practice.
- 78% of people agreed that they were in control of their treatment or care the last time they experienced treatment or advice in an out-of-hours setting.

Our experience as patients in primary care services is enhanced

Evidencing progress towards this outcome at the national level will be achieved through monitoring and assessing any increases in the percentage of people responding excellent, or good, to the HACE survey questions: 'Overall, how would you rate the care provided by your GP practice?', and 'Overall, how would you rate the care you experienced from this service?', with respect to out-of-hours services.

- 83% of people rated the overall care provided by their GP practice as excellent or good. This has decreased from when the question was first asked in the 2009/10 survey, where 90% responded that their overall care provided by their GP practice was excellent or good.
- 83% of people rated the overall out-of-hours care provided as excellent or good. The question was first asked in 2017/18, so no prior trend data exist.

Understanding people's experiences of access to services, coordination of care, and care and treatment will also contribute towards monitoring progress in relation to people's experience of primary care becoming enhanced.

Access to services

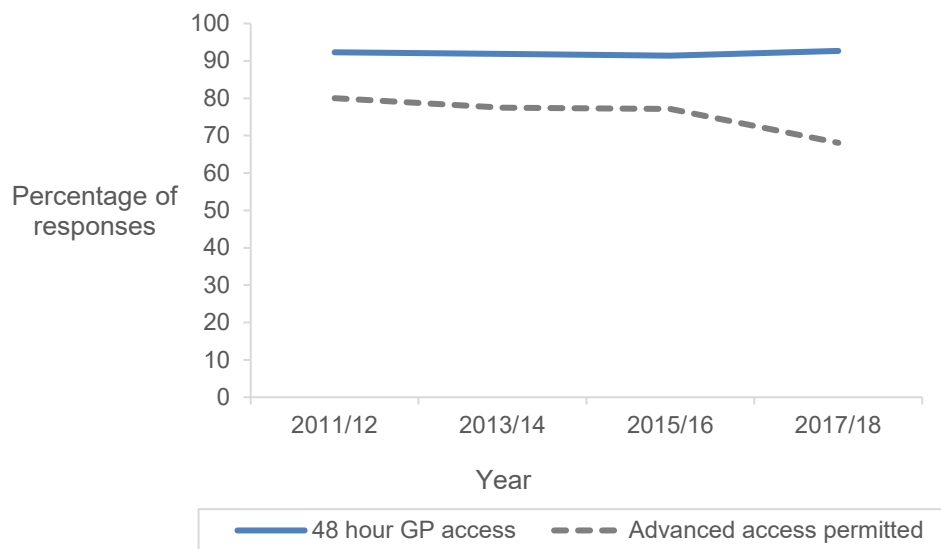
A key component of the primary care vision is that people are able to access the right support, delivered by the right person, at the right time. In Scotland, an NHS Local Delivery Plan (LDP) standard³³ measures access within 48 hours to an appropriate healthcare professional through their GP practice through responses to the HACE survey.¹⁴ Additionally, it monitors access for non-urgent issues, defined as the percentage of positive responses to the question: 'If you ask to make an appointment with a doctor three or more working days in advance, does your GP practice allow you to?' These measures are well established, with available prior trend data and can be used to monitor the effect of primary care reform on access for people. The 2019 survey asked an additional question about mode of consultation (face-to-face; phone; video; home visit), to reflect the increasingly diverse nature of service delivery. The forthcoming publication of the survey results will therefore help us to better understand how different modes of consultation are affecting access.

Increases in the percentage of positive responses to both access within 48 hours and advanced access could be indicative of improvements in people being able to access primary care services when they consider it to be appropriate for them. A summary of both of these indicators in 2017/18, with the trend since 2011/12, are outlined in Figure 6.

- 93% of people indicated they were able to access an appropriate healthcare professional via their GP practice within 48 hours in 2017/18. This percentage has remained stable since 2011/12.
- 68% of people indicated that they were able to book an appointment more than 48 hours in advance with a GP in 2017/18. This reflects a reduction since the 2011/12 survey when 80% of people reported they were able to book an

appointment more than 48 hours in advance with a GP. This reduction may in part reflect the desire of GP practices to tailor their booking systems to meet the needs of the patients within their practice as it is recognised that the same system of booking appointments doesn't suit all practices.

Figure 6: Access to appointments in GP practices, 2011/12 to 2017/18



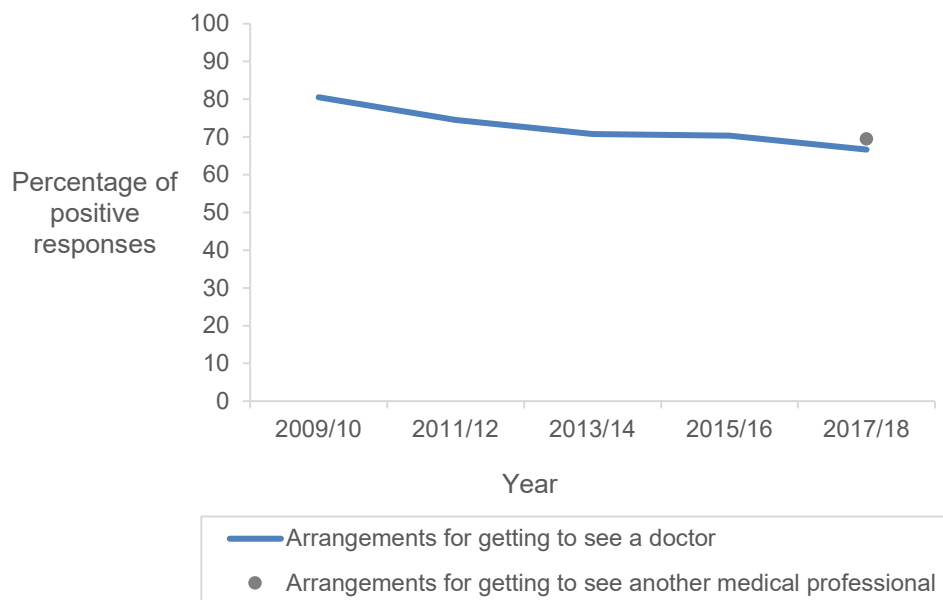
Data source: Health and Care Experience survey

Respondents to the HACE survey were also asked how they would rate the arrangements for getting to see a GP or another medical professional in their GP practice (Figure 7). Positive responses were defined as those that were excellent or good. Increases in the percentage of positive responses to these questions for both GPs and for other medical professionals working in GP practices would indicate improvements in the arrangements for accessing appointments for people.

- 67% of people indicated they would rate the arrangements for getting to see a GP as excellent or good in 2017/18. The corresponding estimate in 2011/12 for the arrangements for getting to see another medical professional was 70%.
- People are less positive about the arrangements to see a GP in their GP practice than they previously were. When this question was first asked in

2009/10, 81% of people responded positively. Data for arrangements for accessing other medical professionals at GP practices was first asked for in 2017/18, so there are no prior trend data.

Figure 7: Positive responses to arrangements for accessing staff at GP practices, 2009/10–2017/18



Data source: Health and Care Experience survey

In the 2019 HACE survey this question has been extended to separate out the other healthcare professionals into: nurse; pharmacist; physiotherapist; mental health professional; community link worker; and other. The forthcoming publication of the survey results will therefore help us to better understand access arrangements for the wider primary care MDT.

While there is currently good information about patient experience of primary care services, there are currently limited routine data available which would help us assess and monitor changes in whether people are accessing the right person, at the right place, at the right time. Further work is required with key stakeholders to identify the most appropriate way to collect this information to supplement the HACE survey responses.

Coordination of care

The HACE survey can also be used to gain the insights of people into the coordination of care within their GP practice and out-of-hours services. This can be achieved by monitoring and assessing agreement with the statement 'My treatment/care was well coordinated' in both settings. There is ambiguity in the way this question is phrased as it could indicate coordination of care between health and social care, or could indicate within-practice coordination, for example, a GP liaising with a physiotherapist who is based in the practice. Improvements in the percentage of people reporting excellent or good to this question could indicate that primary care reform was likely making a positive contribution to continuity of care across the MDT. Any worsening of these measures could be indicative of potential adverse unintended consequences of primary care reform. There were no prior trend data available as these questions were first asked in the 2017/18 HACE survey.

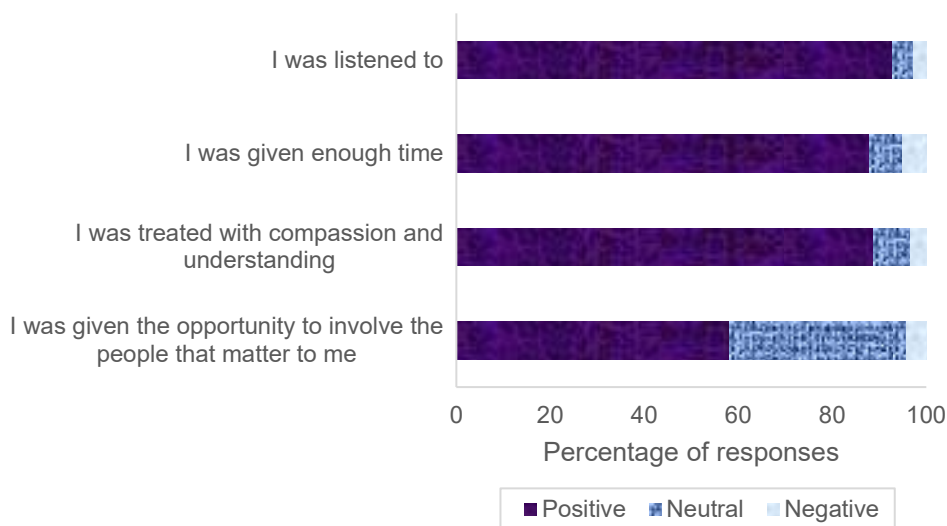
- 78% of patients felt that the coordination of their care within their GP practice was excellent or good.
- 77% of patients indicated that the coordination of their care within out-of-hours services was excellent or good.

Care and treatment

One of the intermediate outcomes for people in the outcomes framework is that they 'receive compassionate person-centred care that takes account of their life and circumstances'. Progress towards achieving this will be monitored by observing increases in the percentage of people strongly agreeing, or disagreeing, with the following statements in the HACE survey: 'I was listened to'; 'I was given enough time'; 'I was treated with compassion and understanding'; and 'I was given the opportunity to involve the people that matter to me' (Figure 8). The 2017/18 HACE survey was the first time that patients were asked to respond to these statements and they were asked in relation to the GP practice and in the out-of-hours service settings, therefore no trend information on responses is available.

- The majority of patients agreed that they had been listened to in both an in-hours (93%) and out-of-hours setting (92%).
- 88% of people agreed that they were given enough time in an in-hours setting, with 89% agreeing that they were given enough time in out-of-hours services.
- People mostly agreed they were treated with compassion and understanding when accessing in-hours (89%) and out-of-hours (86%) services.
- Responses indicate that improvements were needed to make services more acceptable in relation to giving people the opportunity to involve the people that matter to them. There were 58% of people that indicated agreement with this statement for in-hours services, with 63% agreeing with the statement when accessing out-of-hours services. However, these findings should be interpreted with caution as this statement had a lower completion rate, the highest neutral response (38%), and a comparable negative response (4%) to the other more positively rated statements in this section. This could mean that people did not understand the question or did not think it was applicable to their situation.

Figure 8: Indicators of acceptability when receiving treatment of advice from the GP practice, 2017/18



Data source: Health and Care Experience survey

5. What do we know about primary care outcomes for the workforce?

Background

This section outlines what existing data and indicators can tell us about progress towards achieving the primary care outcomes for the workforce at the national level ([Annex A](#)). It also outlines what other data are currently available to help us understand how the workforce is changing as primary care is reformed. The primary care outcome for the workforce, discussed in this section, is:

- Our primary care workforce is expanded, more integrated and better coordinated with community and secondary care.

The discussion in this section separates this outcome into three main areas:

- workforce expansion
- integration and coordination with community and secondary care
- workforce satisfaction, health and wellbeing.

Workforce expansion

In order to measure progress towards the national outcome of expanding the workforce, we will monitor and assess trends in the headcount and whole time equivalent (WTE) of both general practice employed staff, and NHS employed staff working in primary and community care settings.

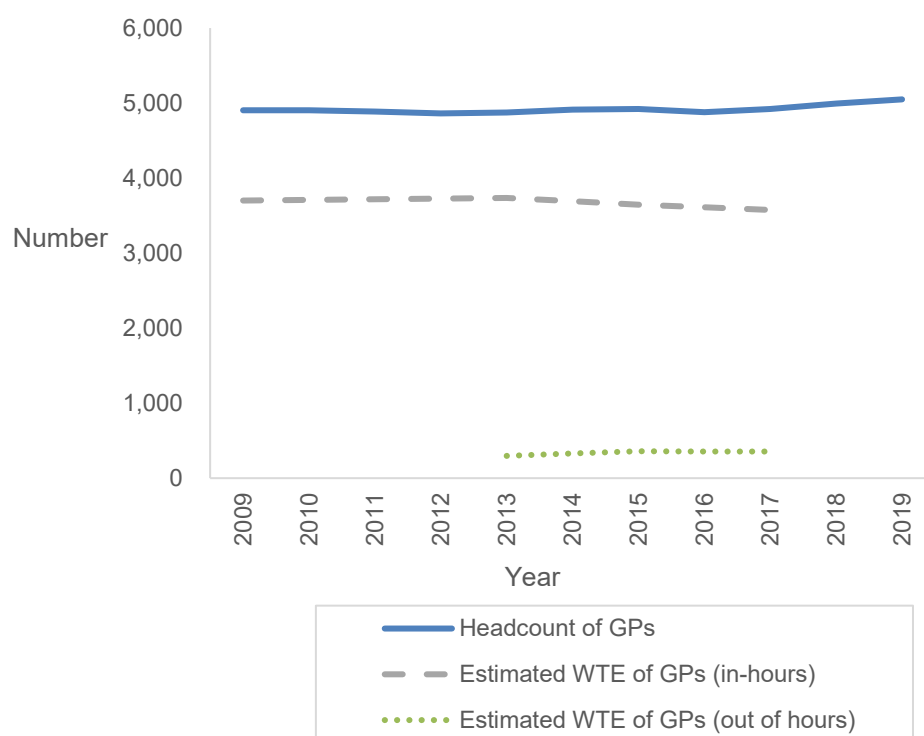
The National Health and Social Care Workforce Plan: part three,³⁴ published in April 2018, set out baseline measurements and recent trends from available data on the size and shape of the primary care workforce.

GPs

A target of an increased headcount of 800 more GPs over 10 years was set by the then Cabinet Secretary for Health and Sport Shona Robison in December 2017.³⁵

Information from the General Practitioner Contractor Database (GPCD)³⁶ can be used to monitor progress towards that commitment. WTE information has been collected as part of the National Primary Care Workforce Survey³⁷ across four survey waves between 2009 and 2017. A summary of available data on headcount and WTE of GPs from 2008 to 2019 is displayed in Figure 9.

Figure 9: Headcount and estimated WTE of GPs, 2009–2019

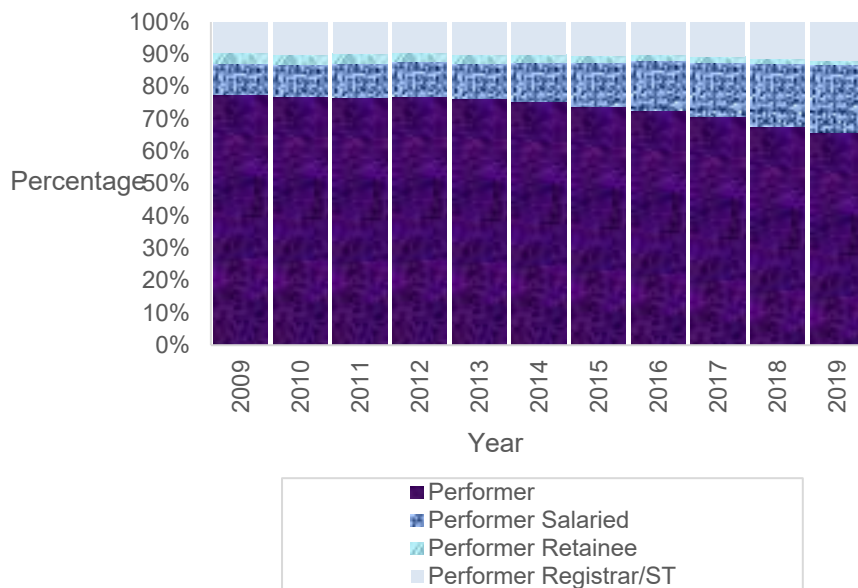


Data sources: Scottish Primary Care Workforce Survey (WTE); General Practitioner Contractor Database (Headcount)

- The most recent headcount of all GPs, including registrars and specialist trainees (STs) as at September 2019 was 5,049. Over the last two-year period there has been an increase in the headcount of 130 GPs (or 2.6%). This has been slower over the last year, with an increase of 55 (or 1.1%).
- The WTE of GPs in post as at August 2017 was 3,575. Since 2013, there has been a 4.3% reduction in the WTE of GPs, whereas there was no relative increase in the number of GPs.

- Estimates of GP WTE in out-of-hours services indicated that 7.4% of total WTE was spent in out-of-hours services in 2013. This increased to 9.0% in 2015, which was also estimated for 2017.
- We don't currently know how the recent increase in GP headcount has affected the WTE of GPs, as there has been no update of information on GP working patterns since 2017. The new workforce data collection³⁸ issued in November 2019 as part of the GMS contract will provide us with more insight into these figures.
- 71.0% of GPs in 2017 were performer GPs,² which has now decreased to 66.1% in 2019 (Figure 10). This has largely been replaced by an increase in salaried GPs from 16.9% to 21.1% of all GPs, but also contributing are the increasing share of registrars and STs, whose share of all GPs increased from 10.6% to 11.9% from 2017 to 2019.

Figure 10: Distribution of GP designations, 2009–2019



Data source: General Practitioner Contractor Database

² As all GPs are required by law to be registered on an NHS Board's Performer List in order to work within that NHS Board area, they are often collectively referred to as Performers. In this report, a GP who is a 'Performer' (as opposed to one of the other types) is most likely to be a partner in a practice.

Community and primary care nursing

There were 68,778 (60,015 WTE) nursing and midwifery staff in post in NHS Scotland in September 2019. Of these staff, 13,493 (11,348 WTE) staff worked in the community, which is 2,413 WTE more than in 2007. However, more recent data illustrate there has been a reduction of 434 WTE from September 2017 to September 2019. Increases in the number and WTE of nurse staff working in the community are required to achieve the strategic goal of moving care out of hospital settings to home or a homely setting wherever possible.

Estimates of headcount and WTE on the practice-employed nursing workforce were last published in 2017. They give us insights into how the practice nurse, healthcare support worker and phlebotomy professional workforce groups have changed since 2013. The new workforce data collection³⁸ will provide us with more recent insights into the changes to these workforce groups.

- In 2017 there were 2,297 nurses employed to work in general practices in Scotland. This has represented an increased headcount of 8% from 2013 to 2017. The WTE in 2017 was 1,541 which was an increase of 8% since 2013.
- Of all nurses employed to work in general practices in Scotland, the distribution of the number employed by type were: 47.7% were General Practice nurses; 19.3% were senior general practice nurses; 12.1% were advanced nurse practitioners; 11.6% were nurse practitioners; 8.4% were treatment room nurses; and 1.0% were staff nurses. The corresponding distribution of WTE was: 44.2% were general practice nurses; 20.4% were senior general practice nurses; 14.9% were advanced nurse practitioners; 12.7% were nurse practitioners; 7.1% were treatment room nurses; and 0.7% were staff nurses.

Comparable information on other designations of nurses is available through routine data collections, although changes to classifications have meant that long-term comparisons (pre-2015) are not available.

- In 2017, there were 3,443 WTE staff working in district nursing, of which 1,002 were band 6 and 7 district nurses, representing respective reductions of 2% and 5% since 2015.
- The number of health visitors in 2017 was estimated to be 1,448. This has increased by 23% since 2015.
- In 2016, approximately 4,600 nurses were working in care homes, with the vast majority of these nurses (approximately 4,250) working in private care homes.

Healthcare support workers and phlebotomists working in general practice

Healthcare support workers occupy an important role within primary and community care teams working across healthcare disciplines.

- There were 787 healthcare support workers in general practice in Scotland in 2017, an increase of 37% since 2013. Equivalent WTE for those in post was 399, which was an increase of 33% since 2013.
- In 2017, there were 281 phlebotomists working in general practice in Scotland. This was a reduction of 5% since 2013. The WTE of phlebotomists in post was 89, representing a reduction of 11% since 2013.

Allied health professionals

There are currently no national data available on allied health professionals (AHPs) working in primary care services. ISD Scotland has historically published information relating to AHPs working across the whole of NHS Scotland. This information has previously illustrated that the number of physiotherapists, occupational therapists, dietitians and paramedics has increased since 2007, while the number of podiatrists has fallen slightly. However, it is unknown as to how this has been spread across services. In line with the GMS contract 2018 there has been a steady growth in AHP roles embedding as part of MDTs across primary care. There has been considerable growth of first point of contact musculoskeletal roles with coverage across Scotland at some 271 practices (at time of reporting). There are a substantial number of other

AHPs working in community services, but current data collections do not allow numbers to be broken down by service or location. At the time of writing (January 2020), the AHP Directors of Scotland Group were undergoing a process to review existing workforce and workload tools on AHPs.

Pharmacists

Since the workforce plan (part three) was published, information on the size of the pharmacy workforce working in general practice has become available via a survey of the pharmacy workforce working in general practice.³⁹

- At the start of 2018 there were 471 pharmacists and 112 pharmacy technicians in post working in general practice in Scotland.
- Upscaling WTE estimates from a sample of respondents to the 2018 survey of the pharmacy workforce in general practice indicate that there were 242 WTE for pharmacists and 110 WTE for pharmacy technicians at the start of 2018.

Dentists

In September 2019, NHS National Education for Scotland (NES) reported that there were 3,456 dentists working in primary care.⁴⁰ This has increased year on year since 2014, representing a total increase of 3.7%.

Optometrists

Recent estimates of the number of optometrists providing eye care in the community in 2016 indicated that there were 1,453 optometrists and 3 ophthalmic medical practitioners.³⁴ There were also 140 dispensing opticians, who advise on the supply of spectacles, contact lenses and vision aids for children.

Integration and coordination with community and secondary care

We currently have limited ability to measure this workforce outcome at a national level. The only evidence we have regarding the integration and coordination of services, is that which was previous outlined around patients' experiences from the

HACE survey. As the MDT starts to take shape and the primary care workforce expands, it is important that measures of whether the workforce is better integrated and coordinated across community and secondary care are established from the perspectives of primary care healthcare professionals and activity data.

Successful integration of the workforce across community and secondary care will mean that GPs can focus on their role as expert medical generalists. Although the Scottish Government and the Scottish General Practitioners Committee have agreed that it is not appropriate to contractually define appointment lengths, the idea that service redesign will free up GP time to deal with cases requiring complex care indicates that consultation lengths would be likely to increase in length.

Since Practice Team Information⁴¹ ended in 2013, practice activity data has not been routinely extracted and at present it is only possible to get limited, aggregate information about consultations from VISION practices. During 2020, the rollout of Version four of SPIRE (the Scottish Primary Care Information Resource) will facilitate the extraction of individual-level data from both EMIS and VISION practices once this has been installed.³

To understand if longer consultations are becoming more frequent, we need to be able to monitor whether the average consultation duration with GPs has increased over time. Case studies in local areas, such as that carried out in Lothian by ISD Scotland,⁴² have illustrated that it is possible to collect information on the duration of consultations.

Staff recruitment and retention

The 2017 National Primary Care Workforce Survey³⁷ explored the challenges of recruitment for a range of primary care staff (GPs, nurses, healthcare support workers and phlebotomists). These were reported as the number of vacancies up until the year end 31 August 2017, with the number of unfilled vacancies at the

³ VISION and EMIS are GP IT systems. SPIRE is software which allows the extraction of information from GP systems, further information available at <https://spire.scot> (accessed 19 May 2020).

year-end used to calculate unfilled vacancy rates. Unfilled vacancy rates for practice based staff are reported in Table 2.

Table 2: Unfilled practice-based vacancy rates by type and year, 2015 and 2017

Staff group	2015	2017
GP (in hours)	34%	41%
Advanced nurse practitioner	-	21%
Nurse practitioner (including specialist nurse practitioner)	-	5%
Senior GP nurse	-	10%
GP nurse	-	35%
Treatment room nurse (practice employed only)	-	6%
Staff nurse (practice employed only)	-	0%
Healthcare support worker	18%	13%
Phlebotomist	10%	11%

Data sources: Scottish Primary Care Workforce Survey

‘-’denotes no comparable data available for 2015.

- 59% of unfilled in-hours GP vacancies in 2017 had been vacant for over six months.
- The main challenges reported against 69% of unfilled in-hours GP and 67% other practice staff vacancies in 2017 was that there were either no, or a shortage of, suitable applicants.

While recruiting staff has proved difficult, it is also important that staff are retained. The Royal College of General Practitioners’ (RCGP) workforce and wellbeing survey⁴³ surveyed GPs in 2018 and asked GPs how likely they were to be working in general practice over the next five years. Although the results of this survey highlight key concerns, the findings should be treated with caution as only 355 GPs

responded (approximately 8% of all GPs in Scotland), with almost a quarter near retirement age, so there is a risk of non-response bias.

- 36% of GPs indicated that they were unlikely or highly unlikely to be working in general practice in five years' time, with 67% of these GPs citing their main reason for this did not relate to retirement.

A reduction in both the percentage of GPs indicating that they were unlikely or highly unlikely to be working in general practice in five years' time, and in the percentage of non-retirement reasons, would be indicative of positive progress due to primary care reform. It would be useful to collect and monitor this type of data for all primary care professionals on a regular basis to assess whether predicted leaver rates are realised.

Workforce satisfaction, health and wellbeing

There are currently no routine national data collections that measure job satisfaction or health and wellbeing across the range of professional staff groups working in primary care. These data are required to help understand how this changes over time and to monitor whether there have been any unintended consequences as a result of primary care reform. Although iMatter⁴⁴ provides insights into NHS staff experience, it is not possible to restrict those to experiences in primary care.

Therefore, it would not provide the specificity of data which is required. The Scottish Government has, therefore, commissioned a scoping study to explore options to collect primary care workforce experience data.

The most appropriate currently available data on satisfaction and wellbeing is restricted to GPs through the Scottish GP Worklife survey (N=2,465 GPs) carried out by the Scottish School of Primary Care (SSPC),⁴⁵ and that featured in the RCGP survey of workforce and wellbeing⁴³ report (N = 355 GPs).

- The SSPC survey found that 74% of GPs were satisfied with their job but 68% agreed that there was insufficient time to do their job justice. Additionally, 26%

of GPs indicated that they would not recommend general practice as a speciality for new medical graduates.

- The RCGP survey found that only 31% of GPs reported that they were never, or not very often, overwhelmed by their daily tasks such that they couldn't cope. It also found that 85% of GPs were concerned about the level of stress they experienced in their working day.

These data indicate that action needs to be taken to ensure that the future GP workforce can be delivered. Funding for the additional cost of undergraduate teaching in general practice currently forms approximately 9% of all medical undergraduate teaching, which suggests this area of teaching could be expanded. Given this, the Scottish Funding Council (SFC) has set out an aspiration in its outcomes agreement with Scottish universities to work to increase the percentage of teaching that takes place in general practice to 25% of the clinical curriculum. In addition the Scottish Government has committed an extra £5 million from 2021/2 for undergraduate teaching for aspiring GPs.

There is very limited data for other professions within the MDT or primary care workforce as a whole, particularly in terms of job satisfaction. In recognition of this evidence gap, as noted above, the Scottish Government has commissioned a study to investigate options for how to capture data about the experiences of the primary care workforce.

6. What do we know about primary care outcomes for the system?

Background

This section outlines what existing data and indicators can tell us about progress towards achieving the primary care outcomes for the system at the national level ([Annex A](#)). It describes what data are currently available to help us understand how the system is changing as primary care is reformed. The primary care outcomes for the system, discussed in this section, are:

- Our primary care services better contribute to improving population health.
- Our primary care infrastructure – physical and digital – is improved.
- Primary care better addresses health inequalities.

Our primary care services better contribute to improving population health

International evidence has illustrated the association between strong primary care systems and better overall, and equity in, population health outcomes. Good primary and community care is an essential component of ensuring that the health and social care service is fit for purpose and will help contribute to achieving the Delivery Plan's⁴ 'triple aim' of better care, better health and better value. As primary care is the most frequent point of contact with NHS services for individuals, and impacts on the function of the wider health and social care system, its influence on population health is significant.

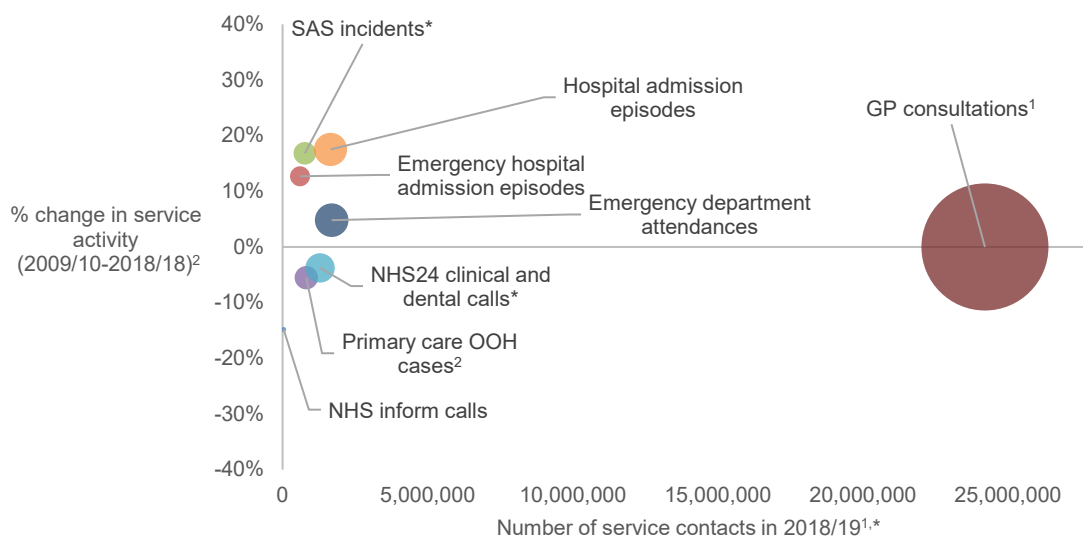
Measuring primary care's contribution to improving population health is challenging. Further work needs to be carried out to establish an appropriate indicator (or indicators) of population health for which the contribution of primary care reform can be evidenced. Although there are many routine indicators of population health such as (healthy) life expectancy⁴⁶ or self-assessed general health⁴⁷, there are difficulties in measuring the contribution of primary care reform towards any changes in these

indicators. The difficulties relate to issues around other causal factors which drive these changes such as the wider social and environmental determinants of health.

Balance of care

In the context of Health and Social Care Integration⁴⁸ and the 2020 Vision,⁴⁹ shifting the balance of care from secondary care to primary and community settings is a key component of primary care reform. Recent trends and continual monitoring of the use of care services are important to understanding the impact of primary care reform (Figure 11) across the full system.

Figure 11: Healthcare service-level activity by service type, 2009/10–2018/19



Note: In Figure 11 the size of the bubble is indicative of service activity, so larger bubbles are indicative of higher levels of service activity. Bubbles below the horizontal axis are those services whereby service activity has decreased, while those above the horizontal axis represent services increasing activity over time.

Data sources: Scottish Morbidity Record 01,⁵⁰ Unscheduled Care Datamart,⁵¹ Primary Care Out of Hours Datamart,⁵² NHS 24 and Scottish Ambulance Service, Practice Team Information.⁵³

¹ The number of GP consultations is based on the most recent estimate in 2012/13 and although the data are historic, it gives a visual indication of the relative size of primary care service activity in relation to the full system. As the data is historic, no value has

been assigned to the % change in service activity over time, and therefore should not be used to indicate this.

² The first available data on primary care (PC) OOH cases is for 2014/15, so the change has been calculated from this period.

* This data relates to calendar years and was obtained from ISD Scotland

- There were approximately 1.7 million attendances at emergency departments during 2018/19, representing an increase of 4.8% in the number of attendances at emergency departments compared to 2009/10.
- There were 1.65 million hospital episodes in 2018/19, 36.4% of which were emergency admissions. These admissions occur when, for clinical reasons, a patient is admitted to hospital at the earliest possible time after seeing a doctor which may or may not be through the emergency department. The total number of episodes and emergency care episodes have increased by 17.5% and 12.7% respectively since 2009/10.
- In 2018/19 there were 817,540 cases seen in primary care out-of-hours services. This represents a reduction in cases of 5.5% since 2014/15.
- In 2018/19 there were 37,029 calls to NHS inform-related website phone numbers. Although this represents a reduction of 14.8% since 2009/10, website visits to NHS inform sites have risen from 296,863 in 2010/11 to 35,207,727 in 2018/19 indicating a shift in the means by which people are accessing NHS inform services.⁵⁴
- The number of clinical and dental calls made to NHS 24 in 2018 was 1,291,565, a reduction of 3.8% since 2011.
- The number of incidents reported to the Scottish Ambulance Service has increased by 16.8% from 656,070 in 2011 to 766,462 in 2018.
- Although the data are outdated, the most recent estimate of GP consultations made in 2012/13 was 24.2 million. This has been used to illustrate that GP consultations account for the largest share of all system-wide activity.

Further insights into the pressures on the system can be identified by looking at indicators such as the four-hour waiting standard target for emergency departments, referrals to emergency departments from other NHS services, potentially preventable admissions (PPA), re-admissions and the 18 weeks referral to treatment (RTT) standard (Table 3).

- There has been a decline in performance against the emergency department four-hour access standard target over the last 10 years. 91.2% of attendances met the four-hour access standard in 2018/19, a decline from the 97.7% in 2008/09.
- Referrals to emergency department from other NHS services (GPs, OOH PC, NHS24, 999 service, or other healthcare professionals), as a percentage of all attendances, have increased from 26.0% in 2011 to 35.6% in 2018.
- Currently it is estimated that 17.8% of emergency or transfer admissions were potentially preventable in 2017/18.
- 4.8% and 10.3% of hospital episodes were re-admissions within seven and 28 days respectively.
- Prior trend data are not routinely available under current definitions for PPA and hospital re-admissions.
- In 2018/19, 80.2% of patients were seen (completed waits) within the 18 weeks referral to treatment (RTT) standard. This has decreased from 89.9% in 2011/12.
- The percentage of people being able to access an appropriate healthcare professional via their GP practice within 48 hours has increased from 92% in 2011/12 to 93% in 2017/18.
- There has, however, been a reduction in the percentage of people indicating they could book an appointment more than 48 hours in advance with a GP from 80% in 2011/12 to 68% in 2017/18.

Table 3: Indicators of system pressures, 2008/09–2018/19

Year	Four-hour target	Referrals to emergency department from other NHS services*	PPA	Re-admissions 7 day	Re-admissions 28 day	18 Weeks RTT	GP appointment access 48 hour GP access	GP appointment access Advanced access permitted
2008/09	97.7%	-	-	-	-	-	-	-
2009/10	97.4%	-	-	-	-	-	-	-
2010/11	96.3%	-	-	-	-	-	-	-
2011/12	95.8%	26.0%	-	-	-	89.9%	92%	80%
2012/13	93.6%	27.8%	-	-	-	91.2%	-	-
2013/14	93.9%	30.1%	-	-	-	90.5%	92%	77%
2014/15	91.9%	31.8%	-	-	-	88.9%	-	-
2015/16	94.1%	32.8%	-	-	-	87.2%	91%	77%
2016/17	94.1%	34.2%	17.4%	4.7%	10.0%	84.9%	-	-
2017/18	92.2%	35.4%	18.4%	4.8%	10.3%	82.4%	93%	68%
2018/19	91.2%	35.6%	17.8%	4.8%	10.3%	80.2%	-	-

Data sources: Unscheduled Care Datamart,⁵¹ NHS NSS Discovery,⁵⁵ 18 Week RTT standard,⁵⁶ Health and Care Experience survey

* This data relates to calendar years and was obtained from ISD Scotland

Observing increases in the four-hour access standard, 18 weeks RTT standard and GP appointment access would be indicative of positive progress for outcomes in the system. Likewise, observing decreases in PPAs and re-admissions would provide evidence of positive changes to the system. While system efficiencies to minimise the number of points of contact would mean that decreases in referrals to emergency department from other NHS services would be desirable, it is unknown whether this could increase as the capacity for primary care services to perform a gatekeeping role increases over time.

Our primary care infrastructure – physical and digital – is improved

The Health and Social Care Delivery Plan (2016)⁴ outlines the need for the creation of an environment and incentive for change by developing an approach to infrastructure and digital that supports the shift from hospital to community and primary care and works across the public sector estate. In 2017, the National Code of Practice for GP premises⁵⁷ was published which outlines how the Scottish Government plans to facilitate the shift to a model which does not entail GPs owning their practice premises. This led to the Scottish Government commissioning a survey of all GP premises, to better understand the current estate and to facilitate better planning for the future. If repeated regularly, these surveys will allow us to understand whether physical infrastructure is improving over time.

Health Facilities Scotland (HFS),⁵⁸ in conjunction with Scottish Government and key stakeholders from Health Boards, commissioned an assessment of all GP premises across NHSScotland which are either owned or leased independently by GP contractors.⁵⁹

- A total maintenance backlog of just over £59 million was found: 82% was attributable to statutory compliance issues, the rest to building fabric and engineering.
- Of the backlog, 3% was considered to be high risk; the rest was considered significant (9%), moderate (82%), or low (6%).

Positive contributions to the physical infrastructure of primary care will be evidenced by reductions in backlog maintenance, and a shift towards a moderate-to-low risk profile, as some aspects of the estate will necessarily deteriorate and will remain moderate risk over time. Further evidence can also be gained from PCIP implementation trackers around increases in the number of applications and loans approved for GP-owned premises, and increases in the number of applications and leases transferred for GP-leased premises.

To deliver an improved digital infrastructure, the Scottish Government are investing £9.34 million⁶⁰ towards ensuring that premises and IT systems better support primary care services. There are currently no data available to monitor progress. However, it is expected that data will be available in 2020 that will enable an assessment of how many practices have an updated clinical IT system. Monitoring increases in the overall percentage of practices with an updated clinical IT system will enable us to understand if the digital infrastructure is being improved.

Primary care services are available and sustainable

In October 2018, the Scottish Government Medium Term Health and Social Care Financial Framework⁶¹ was published. This report made a number of policy commitments to deliver during this parliament in relation to health and social care expenditure that will drive system-wide reform. The commitment relating to primary care was that funding for primary care would increase to 11% of the frontline NHS budget by 2021/22, which would amount to an increased investment of £500 million over the lifetime of the parliament to take spending to at least £1.28 billion. Around half of this is being invested directly into GP services, with the remainder invested in primary care services provided in the community.

Table 4: Primary care funding as a percentage of total frontline NHS budget

Year	Frontline NHS budget (in £ millions)	Percentage of budget spent on primary care
2016/17	10,200	7.7%
2017/18	10,571	8.1%
2018/19	10,865	8.7%
2019/20	11,331	9.0%

- The most recent estimate in 2019/20 has indicated that primary care spending as a percentage of the frontline NHS budget is 9.0% (Table 4).
- This share has increased year on year since 2016/17, representing a 1.3% absolute increase.

The 2018 GMS contract⁶ offered significant new arrangements for GP premises, information technology and information sharing. The effect of these are such that there should be a substantial reduction in risk for GP partners and an increase in the sustainability of general practice. This is a critical enabler for better care for patients. At present measurement of this is largely based around the physical infrastructure, which focuses on indicators of sustainability of general practice.

To further understand system-wide stresses on GP practice sustainability, monitoring the number of GP practices operated under NHS Board control is important.

- In January 2018, 55 (5.8%) GP practices were run by an NHS Board.
- The most recent estimate in October 2019 illustrated that there were 58 GP practices run by an NHS Board, an increase of three GP practices since January 2018.

These indicators are high level and can be used as a proxy to monitor sustainability of GP practices. An increase in the number of NHS Board-run practices is indicative of sustainability difficulties. The current data are indicative of changes in the number of practices and do not reflect whether the practices' changes were due to closures or mergers across GP practices. Further information which describes the trajectory

of the events preceding and following changes in practice operability will be needed to fully understand the factors contributing to the change in overall numbers.

GMS practices whose practice workload is risking their ability to provide safe care to their registered list of patients can formally apply to close their practice list to new registrations, as permitted by the 2018 GMS contract.⁶ Information on list size closures is recorded on the General Practitioner Contractor Database, with quarterly snapshots being archived on the General Medical Services Datamart,⁶² both of which are hosted by Public Health Scotland. At present, the responsibility is on a contractor from the practice to optionally record whether their list size has been closed to new registrations, and the level of under-recording of this data is currently unknown.

People are supported at or near home

The Scottish Government's vision for primary care services includes meeting changes in need and demand by ensuring that patients are treated at, or near, home, wherever possible. Future discussions with stakeholders are required to develop suitable indicators to measure whether reform is contributing towards improvements in this outcome. Possibilities for this indicator include assessing the rate of delayed discharges, re-admissions, and increases in primary care or community care utilisation.

Primary care better address health inequalities

Health inequalities are a particularly important issue in Scotland because the country has the widest of such inequalities in Western Europe.¹⁴ They are a major part in explaining why overall levels of population health are also among the worst in Western Europe. Primary care services can play a pivotal role in mitigating the effects of health inequalities and the need to address these are set within the aims of the 2018 GMS contract.⁶

The Scottish Government made a commitment to deliver 250 community link workers over the life of the parliament,⁶³ building on the existing 53 Scottish

Government funded post holders who were already working in areas of socio-economic deprivation. The main aim of the community link worker role is to mitigate the impact of social and economic inequalities on health outcomes for people. Community link workers (CLWs) are described in the 2018 GMS contract in Scotland⁶ as:

‘A non-clinical practitioner based in or aligned to a GP practice or cluster who works directly with patients to help them navigate and engage with wider services. They often serve a socio-economically deprived community or assist patients who need support because of for example, the complexity of their conditions.’

An increase in the number of GP practices with access to community link workers is a process measure which can be used to evidence progress towards primary care services better addressing health inequalities.

There were 112 community link workers in post⁶⁴ as at September 2019. Future progress towards delivering this commitment can be monitored using data from the Local Implementation Trackers.

There are currently limitations in the availability of primary care data to allow for meaningful monitoring of equalities dimensions beyond socio-economic deprivation. As HACE survey responses are available at patient level, future analytical efforts to gain insights into the degree of inequalities in patient experience due to intersectional effects such as age, gender or socioeconomic circumstance could be carried out. Data linkage may be required to obtain intersectional effects that are not recorded on HACE. Additional data linkage may be required to investigate intersectional effects such as ethnicity, due to these not being routinely recorded in standalone datasets.

7. Discussion

This baseline report has brought together a range of key indicators and data to draw insights about what we can currently measure using available data. At present, there are good survey data on patient-reported experiences of primary care, but for many other topics the evidence is patchier or weaker. There are significant gaps although developments over the next few years should enable a much more comprehensive assessment of primary care reform (for example improved workforce data). The discussion here sets out what we do and don't know about primary care outcomes for people, the workforce, and the system.

Outcomes for people

At present we know little about why people attend their GP surgery or who they see when they get there. One of the aims of primary care reform is to ensure that patients see the right person, at the right place and at the right time. The development of multi-disciplinary team working should promote this but it will be important to define what is meant by this first.

- **Right person:** Although the development of MDTs should mean that people see the most appropriate professional for their care first, it will be important to measure whether, by doing this, people are being appropriately treated first time round or whether this leads to people being 'bounced around' the system and ending up having more appointments because they did not see the most appropriate professional at the first appointment. Measures which look at the complexity of cases being seen by the GP (who should be seeing the more complex cases through their role as 'expert medical generalists'), coupled with data on the length of GP consultations and data on the return rates of patients who see MDT members at a first appointment, should help establish this. While some of this information is currently available on GP practice systems, further developments, which may take a number of years, would be required to extract it through SPIRE. These suggestions are dependent on the full

range of healthcare professionals recording on clinical systems and not just GPs and practice nurses.

- **Right time:** The 'right' timing will be different for acute and routine appointments, different conditions, different patients and from different perspectives. Ideally the right time from a clinical perspective might be as early as possible, if self-management is not an optimum solution, to prevent or mitigate the progression of symptom(s) or disease severity. From a patient's perspective, the 'right time' may also be related to convenience. Waiting time to access individual professions could be used as a proxy for timely first encounters with MDT members for specific conditions. Another possible indicator could be to monitor changes in unscheduled care use, which also potentially incorporates a component of what may be the right place.
- **Right place:** This could be interpreted in several ways, as criteria need to be established as to what is an appropriate and/or desirable use of primary care services in and out of hours, and what is appropriate unscheduled care use. A system indicator on the balance of care between community treatment and secondary and emergency care may possibly be the best indicator over shifts to people being treated in the right place. Other possibilities may be condition-specific, or assessed from a health professional's perspective, such as assessing whether home visits were appropriate.

In coming years, future extracts from SPIRE will enable users to gain insights into the types of conditions that patients were consulting their GP practice for. This information will be able to be stratified by the staff type that undertook the consultations. This relies on GP practices using clinical codes (currently Read and in the future SNOWMED) to identify reasons for consultation, such as signs, symptoms and diagnoses. There may be future issues or limitations to what structured data are available due to variability in the completeness and quality of coding between practices. The present dearth of information on the composition of MDTs in primary care will be improved once SPIRE data becomes available, but it will require the full range of MDT members to start recording on clinical systems for the full benefits to

be realised. It will be very important to report on this data as it is one of the key factors of primary care reform.

We are in a much better position in relation to self-reported patient experience data. The Scottish Government's Health and Care Experience Survey (HACE), as discussed in chapter 4, enables us to monitor the contribution of primary care reform to ensuring that people become more empowered and informed when using primary care services, as well as ensuring that their experience of service use is enhanced. According to HACE it appears that long-term trends from 2009/10 to 2017/18 have indicated that people are less positive about arrangements to see their GP in 2017/18 (67%) than they were in 2009/10 (81%) mainly due to problems of access rather than because they do not rate the care they were given. Questions on whether patients are more informed and empowered were first included in the 2017/18 survey so trend data are not yet available.

As the HACE survey consists of individual patient responses, there is the potential to link responses with other administrative datasets to gain further stratifications of responses, for example, the experience of people with long-term conditions or high levels of multi-morbidity. This would be particularly useful when looking at people's experience of both primary care and the social care system.

Outcomes for the workforce

Existing data indicates that although the numbers of GPs are increasing, the fact that many of them are choosing to formally work less than full time means that the whole-time-equivalent rate is actually falling. The development of MDTs should enable GPs to concentrate on more complex cases and be able to offer longer consultations which it is hoped, along with a more manageable workload, will improve job satisfaction for this group of professionals. The Scottish Government has commissioned a scoping study to identify options for collecting data on job satisfaction and wellbeing across the primary care workforce. If a solution is found, this would provide valuable data in the future on how other members of the MDT feel their role is working.

To improve information on workforce monitoring, practices were asked to submit information on their workforce by the end of January 2020 via the GP Data Collection Tool as part of the 2018 GMS contract. This will allow us to monitor how changes in headcount translate to changes in whole time equivalent.

At present, monitoring changes in whether the primary care workforce is better integrated and coordinated with community and secondary care is limited to observed patient experiences. In 2017/18, 78% of patients felt that coordination of their care was excellent or good in their GP practice. However, there is ambiguity around the question on this in the HACE survey as it is not clear if the coordination referred to is for coordination between services within the practice or between the GP practice and other service providers.

Estimates on vacancy rates have underpinned staffing difficulties for GPs and many of the vacancies for both GPs and other MDT staff have existed for over six months. The numbers of community nurses also seemed to have declined in terms of WTEs and this needs to be closely monitored. The new GP Data Collection Tool will help in establishing trends on all staff who are employed by GP practices. It will also be necessary to monitor Health Board employed staff who work out of GP practices as these also contribute to primary care reform. Lack of satisfaction with their current job, overwork and lack of time for CPD have been quoted by GPs in surveys as reasons for them considering leaving the profession. The backlog in maintenance and repairs might also be added in to this, in that they affect job satisfaction. It is not known if this is equally true of other MDT members. Future work to capture the experiences of the primary care workforce would help to address this gap.

Going forward it will also be important that practices use demographic, Burden of Disease data, and resource allocation tools to inform the composition of their MDTs and it would be useful to provide some pilot studies to show how this could be done. This would support an evidence-informed approach to decision-making for the composition of the MDT in any particular practice or cluster.

Outcomes for the system

There are challenges when evidencing primary care's contribution to improving population health. Further work is needed with stakeholders to establish appropriate indicators. Routinely published indicators such as (healthy) life expectancy or self-assessed general health are highly influenced by the social determinants of health and therefore difficulties arise when trying to attribute changes to primary care reform.

It is vital that primary care better addresses health inequalities. The inequalities with the largest impact on population health are inequalities due to the social determinants of health. Community link workers are part of the MDT team who can play a key role in mitigating these effects. The most recent estimate suggests that there are 112 of these in post in September 2019. This is the main process measure which will be used for assessing the likelihood that primary care reform is positively contributing to tackling health inequalities. It is important that inequalities due to socioeconomic circumstance and other intersectional effects are measured throughout all outcomes. Much of this can be achieved by using patient-level responses in the HACE survey to monitor changes in experience. HACE can be retrospectively analysed to obtain prior trend data which is important for longer-term monitoring. An example of this could be investigating long-term trends in accessing urgent appointments by deprivation quintile, where smaller differences between deprivation quintiles could indicate that reform was better addressing health inequalities through increased equity of access.

The distribution of system-wide service activity is important in gaining insights into the effect of primary care reform. These can be supplemented by specific indicators of system-wide pressures such as potentially preventable admissions, re-admissions, the four-hour emergency department target and the 18 week referral to treatment standard. These indicators collectively indicate high pressure across the system with increased percentages of referrals to the emergency department from other NHS services. In 2017/18 achievement of the four-hour target (91.2%) and the 18 weeks referral to treatment standard (80.2%) are the lowest annual estimates

recorded, and have decreased linearly over a 10-year period. Continual monitoring of changes in additional system pressures such as potentially preventable admissions (around 18%), and re-admissions following hospital stay (around 5% and 10% for 7 and 28-day re-admissions respectively) will help describe the impact of reform on the system.

A further issue when looking at pressure across the system is the current lack of data on need/demand. At present there is little information as to why people are accessing their GP. Data on demand should be matched against what is known of the prevalence of certain conditions as measured against other data such as the Scottish Burden of Disease study. GP practices need to be able to respond to possible changes in population health and this needs to be monitored both in terms of presentations at primary care facilities and through large-scale prevalence studies. Disease prevalence for GP practices is currently available on the [ISD Scotland website](#) and will be updated from SPIRE as this becomes available.

A way forward

This report has highlighted that although the current indicators and data do not allow for a full overview of primary care outcomes in 2019, there are long-standing data collections which can be used to monitor and assess outcomes across the areas of people, workforce and the system. It is important that the current measures identified in this report are retained to allow the planned outputs identified in the primary care monitoring and evaluation strategy to contribute towards an increasing evidence base. New quantitative data collections such as those planned on GP workforce and qualitative approaches are key to monitoring and evaluation. However, difficulties may be faced as some cannot measure retrospective evidence. Furthermore, the [GP Data Collection Tool](#) will only provide detail on practice-employed staff and so will not capture the wider multi-disciplinary primary care workforce who are employed by NHS Boards.

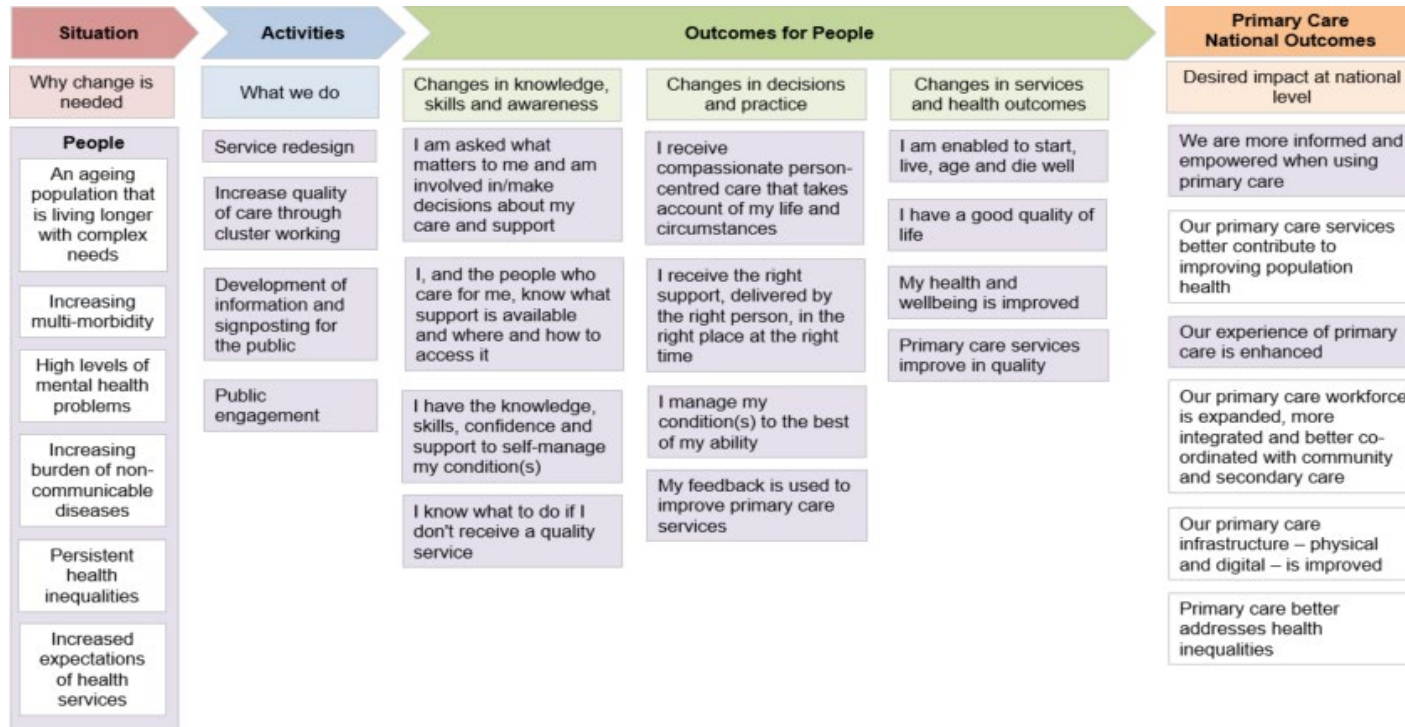
The delivery of patient-based information from SPIRE on general practice activity is a major deliverable to facilitate evidence on the contribution of reform on outcomes,

in particular, health outcomes. In the short term, this deliverable will not be available to contribute towards enhancing the evidence base, and therefore remains a long-term asset to assist with the monitoring and evaluation of primary care reform. In order to access SPIRE data, requests for information will have to be approved by the SPIRE Strategy and Oversight Group, to retain patient confidentiality and justification of clear health benefits associated with the proposed research. Linkage of this type of data will allow us to construct retrospective pathways of patient activity and outcomes across the wider health and social care system. Linkage requests will be subject to approval by both the SPIRE Strategy and Oversight Group⁶⁵ and the Public Benefit and Privacy Panel for Health and Social Care (PBPP)⁶⁶ for permission to access and link across datasets.

However, what is needed now is for stakeholders – staff, professional bodies, Health Boards, patients and the Scottish Government – to come together and design how new data sources should be used appropriately and how they can be combined to monitor indicators which would describe the achievements of primary care reform. We will work with existing groups such as the previously mentioned Primary Care Evidence Collaborative, and the Primary Care Evaluators' Network to harness local and national expertise. As has been shown above, definitions such as what is meant by the 'right person' at the 'right place' and at the 'right time' need to be established and methods for assessing the contribution of primary care to population health outcomes need to be developed and agreed by all those who have an interest in this area.

Annex A – Primary care outcomes framework

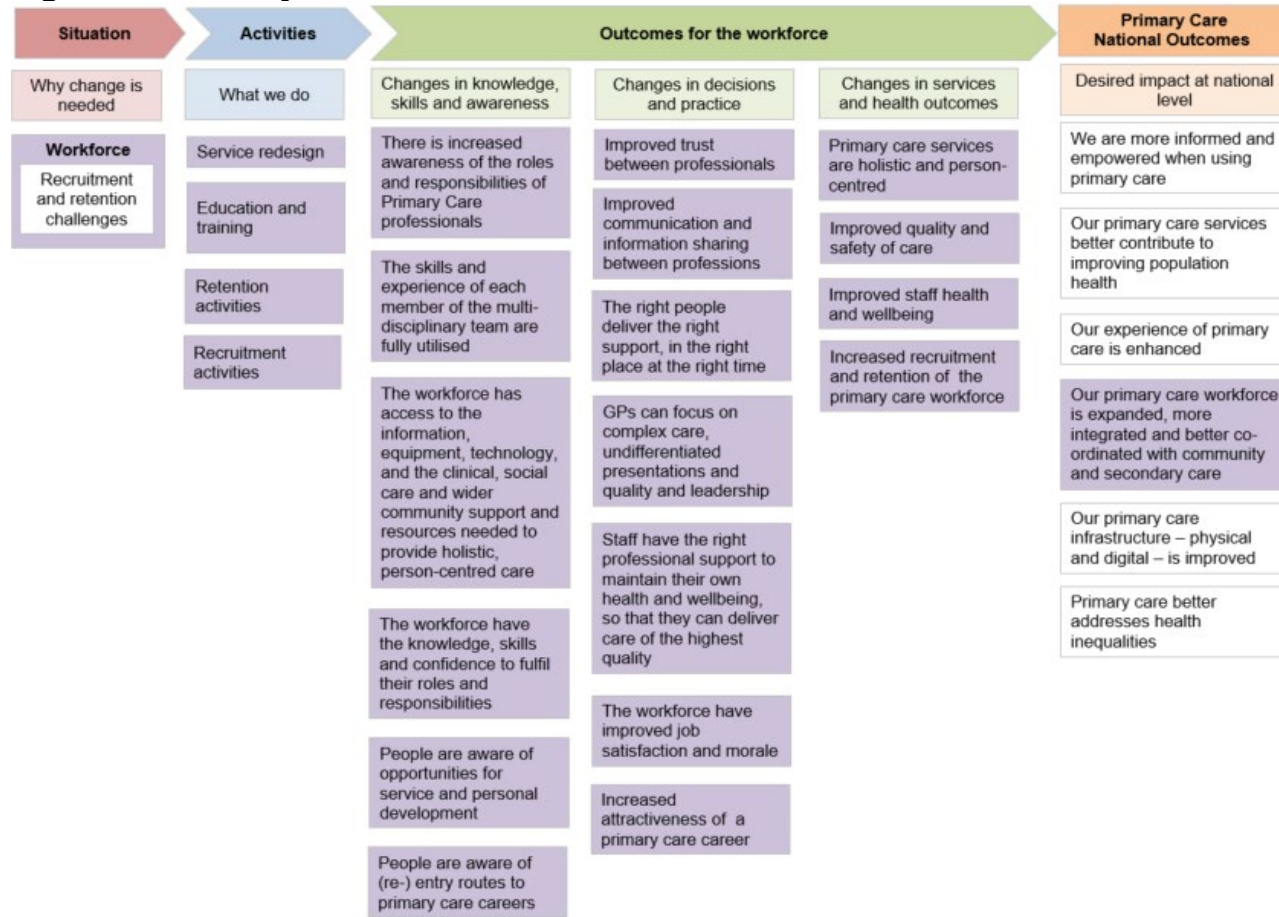
Figure A1: Primary care outcomes for people



Underlying principles: Dignity and respect, compassion, be included, responsive care and support, wellbeing (Health and Social Care Standards); Safe, person-centred, equitable, outcomes focused, effective, sustainable, affordability and value for money (GMS contract principles); co-produced and co-designed

External factors (Social, cultural, political and economic) which may affect the success of primary care transformation:
 Social determinants of health; Public Health Reform; Brexit; Recession; Welfare reform

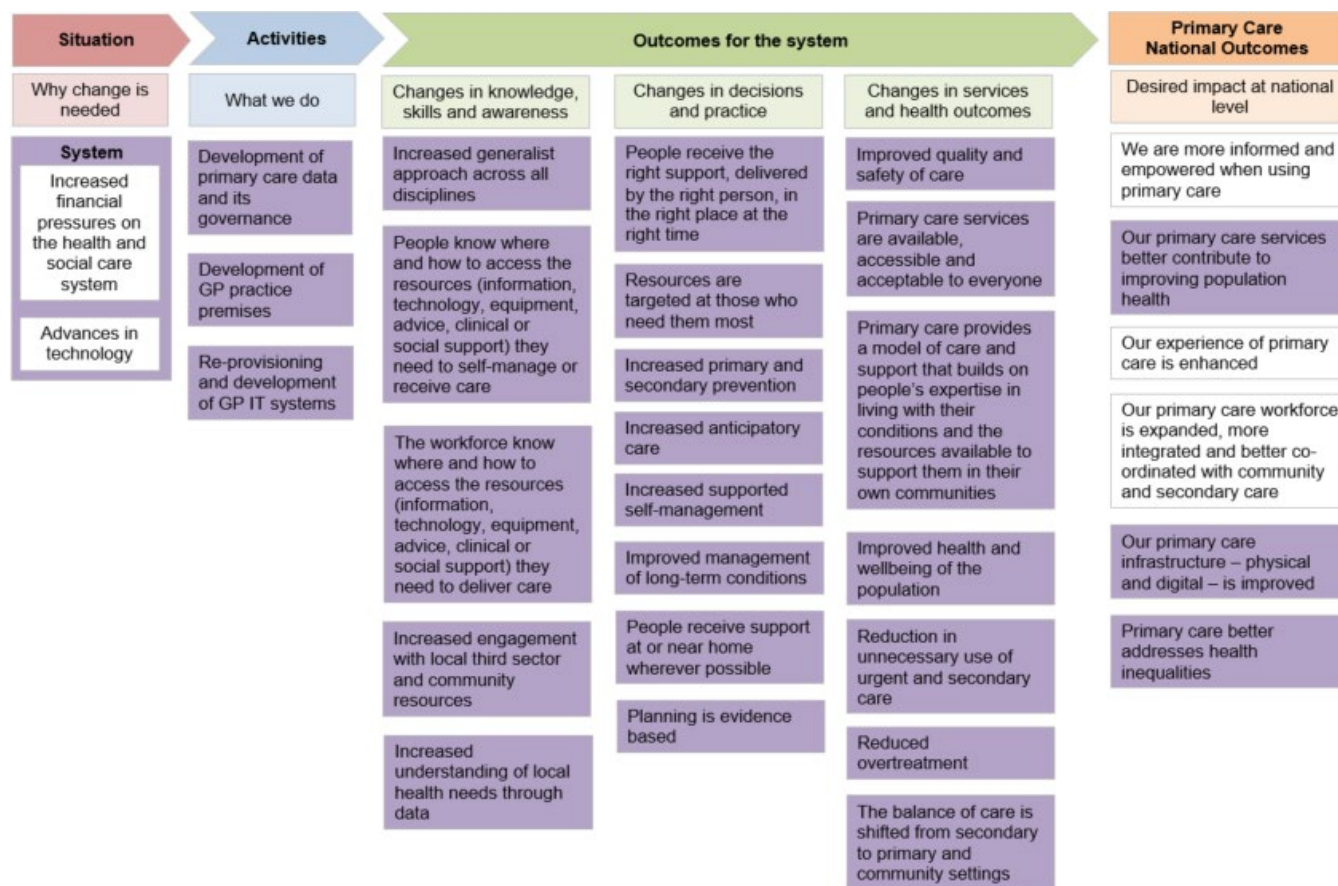
Figure A2: Primary care outcomes for the workforce



Underlying principles: Dignity and respect, compassion, be included, responsive care and support, wellbeing (Health and Social Care Standards); Safe, person-centred, equitable, outcomes focused, effective, sustainable, affordability and value for money (GMS contract principles); co-produced and co-designed

External factors (Social, cultural, political and economic) which may affect the success of primary care transformation:
 Social determinants of health; Public Health Reform; Brexit; Recession; Welfare reform

Figure A3: Primary care outcomes for the system



Underlying principles: Dignity and respect, compassion, be included, responsive care and support, wellbeing (Health and Social Care Standards); Safe, person-centred, equitable, outcomes focused, effective, sustainable, affordability and value for money (GMS contract principles); co-produced and co-designed

External factors (Social, cultural, political and economic) which may affect the success of primary care transformation:
 Social determinants of health; Public Health Reform; Brexit; Recession; Welfare reform

Annex B – Measuring implementation progress

As a result of the 2018 GMS Contract,⁶ all 31 health and social care partnerships in Scotland were required to develop a Primary Care Improvement Plan (PCIP) as part of the MoU. The six nationally agreed MoU areas which are being transformed over the three-year period from 2018 to 2021 have previously been outlined in **Table 1**.

To support governance of MoU implementation, regular reporting is undertaken by HSCPs in the form of PCIPs (annually) and local implementation trackers (workforce, finance, mental health, pharmacy – six monthly) which are submitted to the Scottish Government’s Primary Care Division. The next iteration of the PCIPs was due to be submitted by 15 May 2020 and of the workforce trackers by 24 April 2020. Due to the COVID-19 pandemic, a decision was made to postpone PCIP and tracker returns until the workload associated with the pandemic response significantly lessens and new submission dates can be set.

Following the publication of this information, we will be able to report on progress against the implementation of PCIPs using the indicators outlined in Table B1.

Table B1: Indicators used to measure progress towards implementing PCIPs

Service	Indicator to measure progress
Vaccination Transformation Programme	<ul style="list-style-type: none"> % of practices covered by pre-school service % of practices covered by school age service % of practices covered by out-of-schedule service % of practices covered by adult service % of practices covered by adult flu service % of practices covered by pregnancy service % of practices covered by travel service
Community Treatment and Care	<ul style="list-style-type: none"> % of practices with access to phlebotomy service % of practices with access to community treatment service
Pharmacotherapy	% of practices with prescribing support pharmacists in place

Service	Indicator to measure progress
Urgent care	% of practices supported with urgent care services
Additional Professional roles	% of practices accessing mental health workers/support % of practices accessing advanced practitioner physiotherapists
Links Worker Programme	% of practices accessing community link workers

Annex C – Detailed description of data sources and methods used in the report

Outcomes for people

Data on outcomes for people were sourced from responses to the Scottish Health and Care Experience (HACE) survey (2009/10, 2011/12, 2013/14, 2015/16 and 2017/18).¹⁴ The Health and Care Experience survey is a postal survey sent to a random sample of people registered with GPs in Scotland. The survey obtains responses about people's experiences of accessing and using their GP practice and other local healthcare services; receiving care, support and help with everyday living; and caring responsibilities. Responses are also available for out-of-hours care, which relates to all out-of-hours services, including emergency departments. Information on the details of the questions used are outlined in the relevant results sections.

Outcomes for the workforce

Data on number of staff in post, whole time equivalent and unfilled vacancy rates were obtained from the Scottish Primary Care Workforce Survey (PCWS).³⁷ This survey was designed to obtain workforce information which was not otherwise routinely available on GPs and other staff working in Scottish GP practices. The information used in this report relates to that from the 2009, 2013, 2015 and 2017 surveys. The most recent survey had a response rate of 82% for the 'in-hours' part of the survey. The WTE estimates presented in this report are based on eight weekly sessions representing a full-time commitment. National WTE estimates were derived by extrapolating the 82% sample ratio of WTE per population list size to reflect 100% list size coverage. Unfilled vacancies are defined as the number of unfilled vacancies as at 31 August divided by the total number of vacancies in the year ending 31 August.

Workforce data relating to staff in post and WTE in the wider community settings for community nursing and dentists were sourced from routinely published data by Public Health Scotland and NHS NES.

GP headcount information was sourced from the General Practitioner Contractor Database (GPCD).³⁶ This is a database of GP and general practice details, designed to hold Performer List information, which is held at ISD Scotland and maintained by NHS Boards. The information presented in this report are annual trends relating to data as at 30 September 2019.

Information on satisfaction and wellbeing of GPs was obtained from the GP survey carried out by the Scottish School of Primary Care.⁴⁵ This survey had a response rate from 56% of GPs in Scotland representing 88% of Scottish general practices (N=2,465 GPs). Further information on satisfaction and wellbeing was obtained from the 2018 Royal College of General Practitioners' (RCGP) workforce and wellbeing survey⁴³ report. This survey captured information relating to the wellbeing of around 8% of Scotland's GP workforce (N=355 GPs).

Outcomes for the system

A range of data was obtained to observe system-wide activity across healthcare services. Data on Emergency Department, NHS 24 clinical and dental calls and Scottish Ambulance Service (SAS) incident data were sourced from the Unscheduled Care Datamart (UCD).⁵¹ Data on acute hospital activity for all and emergency hospital admissions episodes was sourced from published data derived from the Scottish Morbidity 01 (SMR01) record.⁵⁰ Episode data are generated when a patient is either discharged from hospital, or transferred between hospitals, significant facilities, specialties or to the care of a different consultant. The data included in this report for 2018/19 were provisional at the time of publication. Data on Primary Care Out of Hours service activity was sourced from the primary care out-of-hours datamart,⁵² and reflect the number of service contacts with primary care of out-of-hours services. Information on calls to NHS inform-related numbers and website hits were obtained directly from NHS 24.⁵⁴ These estimates relate to NHS inform only and don't include other NHS 24 managed websites, such as NHS 24, Breathing Space and Care Information Scotland. Data on GP consultations were obtained from national estimates made using the Practice Team Information dataset.⁵³ These consultations relate to the period 2012/13 and, although they are now outdated, were

used to get an indication of the relative size and scale of GP consultation service activity, compared to that of other healthcare services.

Data on potentially preventable admissions (PPAs) and re-admissions were sourced from NSS Discovery. NSS Discovery is a browser-based system which contained indicators that are predominantly aligned to the six strands of the 2020 Vision. PPAs were defined as for a list of non-elective admissions across 19 pre-specified conditions.⁵⁵ The PPA indicator summarised in this report is the age-sex standardised rate of PPA admissions per 1,000 population. Re-admissions were restricted to emergency admissions only. A re-admission was defined if a patient subsequently had any emergency re-admissions within a set time period of 7 or 28 days following the date of discharge from their previous continuous inpatient stay. The re-admissions rate is calculated by dividing the number of re-admissions by the number of admissions, and presented in this report as the percentage of re-admissions within 7 or 28 days. The 18-week referral to treatment (RTT) standard⁵⁶ was measured using published data which addresses the percentage for which the standard was met for full patient journeys, originated from a GP referral to treatment in hospital. Additionally, data on 48-hour access and advanced access to appointments were obtained from biennial HACE survey waves from 2011/12 to 2017/18.

Data highlighting the monetary maintenance backlog from the survey of GP premises was sourced from the Scottish Government.⁵⁹ These data are currently unpublished. The information obtained captured the risk profile of the backlog and a breakdown of attributable areas. Estimates of the amount in £m of the total NHS frontline budget, and percentage for which is allocated to primary care services, was obtained from the Scottish Government. Information relating to the number of NHS Board-run (2C – contract type) GP practices was sourced from statistics produced using data extracted from GPCD.

Estimates of the number of community link workers were used as a process measure for evidencing that primary care was better addressing health inequalities. Headcount data was obtained from a response to a Parliamentary Question.⁶⁴

Annex D – Further information on demography, health needs and factors influencing health needs of the Scottish population

Social isolation and loneliness

There are several mechanisms for which physical and social isolation and loneliness can occur, such as those related to mobility or residential location.⁶⁷ Social isolation and loneliness are major public health issues that can have a major impact on a person's physical and mental health and wellbeing.⁶⁸ It has been estimated that the number of Scottish households with only one adult will increase from approximately 926,200 in 2019 to 1,023,500 in 2028, representing an increase of 11%.⁶⁹ Recent evidence suggests that 11% of adults in Scotland feel lonely often, with 38% reporting that they feel lonely sometimes.²⁰ In terms of demographic, people aged 75 years and above report the highest rates of loneliness.

Combined with the projected demographic shift to an increasingly ageing population that are living alone, these factors have important implications to ensure that primary care services adapt to meet the changing demographic and social needs of the Scottish population.

Change in population by rurality

A particular concern around the design and provision of care services with respect to population projections is how changes are likely to affect rural areas. While current populations can be obtained using the Scottish Government Urban Rural Classification,⁷⁰ population projections are not available. The Rural and Environment Science and Analytical Services (RESAS) division has provided a framework for which local authorities have been defined by their level of rurality, which can be used as a proxy to obtain projected populations for urban and rural areas.⁷¹

Table D1: Change in population (2019–2028) by age-group and RESAS classification

RESAS classification	Children	Working	Elderly	All ages
Islands and remote rural	▼ -7.2%	▼ -8.5%	▲ +14.3%	▼ -2.6%
Larger cities	▲ +2.3%	▲ +0.4%	▲ +18.2%	▲ +3.3%
Mainly rural	▼ -1.6%	▼ -2.6%	▲ +18.5%	▲ +2.3%
Urban with substantial rural	▼ -1.3%	▼ -2.2%	▲ +19.9%	▲ +2.3%

Data source: Population projections, National Records of Scotland

Social determinants of health

Health inequalities have been defined as the systematic differences in the health of individuals occupying unequal positions in society.⁷² Socioeconomic inequalities in health strongly affect overall population health, and Scotland has both the widest socioeconomic inequalities in health and the worst overall population health in Western Europe.

A Scottish Government report highlighted the extent of these inequalities in income inequality.⁷³ Since the last recession, median income has slowly begun to rise for all age-groups (children and young people, working-age adult and pensioners).

However, once housing costs are considered, pensioners are the only age-group whose income has continued to rise. Instead the median income of children and young people and working-age adults after housing costs is of a similar level to 10 years before. Within these trends were multiple signals that income inequality and poverty have started to rise since the last recession.

Change in health behaviours

The leading five risk factors that contribute towards the majority of disease burden are: cigarette smoking, alcohol consumption, overweight and obesity, poor diet and low physical activity.⁷⁴ Combined estimates from the 2013–2016 Scottish Health

Survey results suggest that 40% of adults had one of these risk factors, with 31% exhibiting two or more.⁷⁵ Of those adults living in the most deprived 10% of areas, 78% has at least one risk factor, compared with 60% of adults living in the least deprived 10% of areas.

Table D2: Change in risk factor prevalence by risk factor, 2008–2018

Risk factor	Prevalence (2018)	Percentage change (2008–18)
Overweight and obesity	65%	0%
Alcohol consumption	24%	▼ -33%
Cigarette smoking	19%	▼ -27%
Some or low physical activity *	35%	▼ -9%
Poor diet	78%	0%

* Change measured as difference between 2012 and 2018. Low physical activity was not assessed in the Scottish Health Survey prior to 2012.

Data source: Scottish Health Survey

The prevalence of overweight and obesity in adults is 65% (Table D2). Over the period 2008–2018 there has been no progress towards reducing the risk factor prevalence. A recent report highlighted that obesity is now the second leading cause of cancers.⁷⁶ Obesity has overtaken smoking as the cause of four cancer types (bowel, kidney, ovarian and liver) and by 2043, obesity could overtake smoking in females as the largest cause of cancer. In addition, concerns have been raised that following a latency period, rises in obesity over the last several decades may be a potential driver in the slow-down of life expectancy improvements.

Over the period 2008 to 2018, the prevalence of cigarette smoking and alcohol consumption saw the largest drops of 27% and 33% respectively. Despite this progress, the most recent estimate (2018) highlights that the prevalence of cigarette smoking slightly increased to 19% in 2018 from 18% in 2017. This increase was

driven by an increase in cigarette smoking prevalence of both males and females living in the most deprived 20% of areas. Although improvements have been made, the prevalence of harmful or hazardous alcohol consumption (24%) still remains stubbornly high. The prevalence of harmful or hazardous alcohol consumption still remains 1.5 times higher in the most deprived areas compared with least deprived rates, while cigarette smoking is 3.6 times higher. Smaller progress has been made against reducing low physical activity (not achieving weekly guidelines) and improving diets (not achieving fruit and vegetable daily guidelines), both of which remain high (35% and 78% respectively).

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Published by Public Health Scotland
1 South Gyle Crescent
Edinburgh EH12 9EB
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