

Expert Report for the UK Covid-19 Public Inquiry

Module 3: The impact of the Covid-19 pandemic on healthcare systems in the UK

General Medical Practice during the pandemic

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Author statement

I confirm that this is my own work and that the facts stated in the report are within my own knowledge. I understand my duty to provide independent evidence and have complied with that duty. I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

Professor Adrian Edwards

13/08/2024

Professor Edwards is the expert who was instructed for this report, will give evidence and who holds overall responsibility for the report. He gratefully acknowledges the contributions Dr Williams in developing content for this report, and also Ms. Delyth Price in PRIME Centre Wales for further contributions.

Contents

Preamble	5
Executive summary	6
Organisation of primary care services	9
Access to general practice appointments before and during the pandemic	11
“Telephone First”	18
Pre-pandemic research on telephone consulting	18
Results of Newbould et al NIHR Telephone First study	19
Conclusions of Newbould et al NIHR Telephone First study	20
Omission of general practice from pandemic preparedness guidance	20
England	20
Scotland	21
Wales	21
Northern Ireland	22
Planning for ‘high-consequence’ disease and national emergency	22
Reactive planning	22
The resilience of the general practice system at the onset of the pandemic	26
Changes in provision during the pandemic	30
Telephone versus face-to-face versus home visits	36
Training in remote consulting	38
Online consulting	42
Promoting online consulting	42
Evidence about online consulting	43
Are some patient groups disadvantaged by online consulting?	44
Practicalities of online consulting	45
Research and changing clinical practice during the pandemic	47
Patients who were missed during the pandemic	49
Long term conditions	49
Cancer symptoms	50
Pulse oximeters for Covid-19 care at home	53
Introduction	53
Adoption of pulse oximeters for Covid-19 care in the community	53
Possible racial differences in the ability of oximetry to detect low oxygen levels	55
The COVID Oximetry @home (CO@h) programme	57
The impact of the pandemic on the general practice workforce	63
Actual workload / provision	63
Ageing population and rising levels of illness	65
Physical and mental health of primary care staff	67
Career development, training, and the numbers of GPs intending to leave the profession.	75
Workforce data	77
Conclusions	90
Recommendations to improve the delivery of primary care in a future pandemic	93
Recovering after the Covid-19 pandemic	93

Planning and preparedness	93
List of figures	101
References	103

Preamble

Professor Adrian Edwards

- I. Qualifications and experience: I qualified in Medicine from Newcastle University in 1989 (also BMedSci 1988); I gained MRCP in 1994, MRCGP in 1995, MPhil 1999, PhD 2002, FRCGP in 2017.
- II. I have been Professor of General Practice at Cardiff University since 2005 and to date. As part of that role I have been Director of PRIME Centre Wales (research centre for primary & emergency care research, www.primecentre.wales across 4 Welsh Universities from 2015 to date); I have been Director of the Wales Covid-19 Evidence Centre 2021-23 (and thus also of the Technical Advisory Group for Welsh Government) and of the Health & Care Research Wales Evidence Centre 2023 to date. I was a Partner in General Practice in Cwmbran, Gwent 1999-2020. On 31st December 2019 my partnership at the time (Cae Teg Health Centre) resigned its GMS contract with Aneurin Bevan University Health Board, terminating this contract on 30th June 2020. The resignation was therefore pre-pandemic, and reflected other problems, i.e. it was a failed practice 'merger'. I am now a salaried GP at Nant Dowlais Health Centre, Cwmbran, 1st July 2020 to date (one day per week).
- III. This report is my own work.
- IV. In making the report I draw upon a range of relevant published literature known to me from my own published work, my searching of the published literature and some searching also undertaken by Ms Delyth Price, Research Assistant at PRIME Centre Wales, Cardiff University. I identify the relevant literature upon which I have drawn, with full references given in the text. I also draw upon content contributed by Dr Darius Williams, GP Academic Fellow at Cardiff University.
- V. I summarise the evidence which is material to the opinions expressed in the report or upon which those opinions are based; the evidence base is not exhaustive or the subject of systematic literature review, but represents what I believe to be relevant and informative to the questions posed.
- VI. Throughout the Report I seek to make clear where I identify reported research evidence, and where I express my opinion about its validity and relevance.
- VII. I also seek to identify where evidence or opinion in the professional community may vary and what these differences are.
- VIII. I summarise my conclusions and recommendations at the end.
- IX. I understand my duty is to provide independent evidence and have complied with that duty. I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

Adrian Edwards 7/8/24

Executive summary

1. This report comprises a narrative review of the scientific literature and a summary of expert opinion on general medical practice in the Covid-19 pandemic in response to instruction from the UK Covid-19 Inquiry. The report focuses on General (medical) Practice, where my expertise lies. Other parts of the primary care system, such as community pharmacy, are addressed in other statements to the Inquiry.
2. The stronger a nation's primary care system the stronger the overall health system is to improve health outcomes, reduce costs, and maximise equity for the population.
3. The UK nations have for a long time had strong general medical practice (known as "GP") systems, but the situation is changing in response to several pressures. The ageing population, with rising numbers of conditions per person means that requirements for primary care appointments are rising rapidly, and the workforce numbers are not keeping pace. There are small rises in staff numbers, but full-time equivalent staff numbers, and numbers of fully qualified staff are decreasing. GP job vacancies are rising. Numbers of patients per GP are rising. The proportion of NHS budget spent on general practice is declining year on year, and despite real terms increases (for example, spending on general practice in England 2020/21 was 35.5% higher in real terms including Covid costs, and 31.7% higher in real terms excluding Covid costs, than in 2009/10), the overall NHS budget is not keeping pace with rising healthcare demand. 'Burnout' is a significant problem and the numbers of younger GPs leaving the workforce are worryingly high. These trends continue from before to during and now after the pandemic, raising serious concerns about the resilience of primary care to respond in the event of a future pandemic.
4. Access (provision in relation to need) and experience of access are deteriorating and frustrating for patients and staff alike. There has been interest in whether some (or much) of GPs' work can be done with telephone or other 'remote' consulting methods. There was a substantial switch to telephone consulting in the pandemic which persists now (though less than the extremely high levels early in the pandemic). It is feasible for many patients and consultations, though particular attention is required for groups of patients who may struggle with this and be disadvantaged (older persons, digitally excluded, etc.). Specific training needs for staff about telephone and other remote technologies (email, texts etc) for consulting are important.
5. There was little evidence of pandemic preparedness specifically for primary care. In the pandemic, there was a focus on acute illness especially, and some new conditions like Long Covid. There were fewer patients who presented with long-term conditions and symptoms potentially suggesting cancer. General practice participation in the vaccination programme from late 2020 onwards was also a substantial commitment. Targeted resourcing may still be needed to catch up on the 'backlog', to ensure that these patients are identified and have access to continuing evidence-based monitoring and treatment.
6. Regarding acute Covid illness, specific programmes integrated oximetry (oxygen monitors) into remote patient monitoring. It appeared feasible and safe, though with limited impact due to low uptake. Disadvantaged groups need active support to engage with oximetry monitoring in the event of a further respiratory illness pandemic. A specific and necessary further step

required is to undertake more research and enhance guidance on the use of oximetry in ethnic minority patients.

7. Collectively these coinciding influences and experiences in the pandemic significantly affect the capacity and resilience of the primary sector for a future pandemic, both the abilities to prepare and to provide when the surge pressures arrive. Resourcing primary care is cost-effective at societal level and improves health outcomes for the population.
8. Pandemic preparedness planning needs to specifically cover primary care implications, including management of presenting pandemic illness, continuing care and needs, prevention and health promotion activity (including vaccination and screening programmes), modification of help-seeking behaviour, channels for and content of communication with patients and public. It needs to examine adaptations to GP surgeries and technology, as well as ways of working, places of work, and risk management. Specific planning is required about minimising unequal impacts of future pandemic on particular population or patient groups.
9. Research infrastructure for large-scale high-quality trials in primary care was not in pace but was rapidly established at the start of the pandemic and evidence accrued from 2021 to inform practice. Primary care research infrastructure needs to be in place now to respond quickly in a further pandemic. Specific research may enable preparedness in clinical practice such as work on evidence-based triage and scoring systems. More research on the differential effects of the pandemic on ethnic minority staff groups is needed and high-quality research on interventions to support this staff group.
10. Resilience in primary care is poor and needs urgent and substantial efforts to improve it, both to restore primary care to meet current needs which are outstripping capacity, and so that primary care is available with capability and capacity to respond to pressures of a future pandemic on the scale of Covid-19.
11. The workforce must be expanded in all disciplines – general practice, nursing and allied health, administrative groups. Recruitment and retention initiatives are essential, and development and support of existing staff, with evaluation of their effectiveness. Governments, RCGP and key stakeholders should consider quotas of minimum medical training places that must be in primary care with policy commitment to deliver agreed targets, including training and supervision capacity. There is strong interest from doctors to join GP training schemes.
12. Specific attention is required to retaining and enhancing the partner workforce, predominantly GPs but increasingly also some Advanced Nurse, Mental Health or other Practitioners, to be able to provide the leadership and management of the service, and educational supervision and training across the disciplines in primary care.

The proportion of NHS budget spent on primary care needs to increase in each UK country and could further support direct reimbursement schemes for additional posts. Continuous and transparent assessments of primary care workforce shortages and future staffing requirements must be undertaken in relation to need and demand, including addressing the 'inverse care law' – that the population(s) in greatest need of health services tends to have the least provided.

13. Practices can need emergency support to meet rising need and demand – year-on-year, seasonal or in exceptional circumstances such as a pandemic. Practices need to be able to access such support easily when needed.

Enabling return to the workforce (e.g. of those recently retired or left general practice) needs to be leaner and more effective than in 2020.

14. Technological improvements are needed to ensure many practices can indeed respond to such pressures. Further development of telephone systems, online booking systems, video-consulting, patient information materials, clinical and patient decision aids are needed. These developments need resourcing and evaluation, especially to enable disadvantaged groups to use novel access and clinical management technologies, so that all patients can access the right care at the right time with the right professional.
15. Existing staff need specific support to restore personal resilience – across the primary care disciplines. Improved primary care occupational health systems are needed to quickly help staff both during and outside health emergencies. Enhanced wellbeing support must be available for primary care staff and trainees, also specific support to recover from the pandemic pressures. Various strategies, interventions and support schemes to enhance wellbeing and minimise burnout have evidence and should be implemented with evaluation.

Organisation of primary care services

16. The primary care system includes general medical practice, community pharmacy, dentistry and optometry. It is the “front door” to the NHS for non-emergency care. This report focuses on the general medical practice (known as “GP”) part of the primary care system, but refers to primary care more broadly where issues affect more than just GP services.
17. General medical practice has traditionally been based on a practice working as contractors for the NHS ¹ serving a local population area. This often comprises about 10,000 patients, but with huge variation from 2,000 to 250,000 under newer models of primary care provision and with more varied contractual models in place according to local context and population groups being served. These different scales of practice reflect wide variation in the commissioning and contracting arrangements, including across the four UK countries. Integrated Care Boards replaced Clinical Commissioning Groups in July 2022 for England; Scotland and Wales have Health Boards; Northern Ireland has the Health & Social Care department. These Boards are responsible for planning and delivering or commissioning primary care and many other services to meet health and healthcare needs, and their populations range typically from 500,000 to approximately 3 million people.
18. Almost all UK residents are registered with a GP practice. Care is resourced from general taxation and is free at the point of delivery. Despite the different contracting arrangements, my opinion is that most people in all four countries will perceive a very similar arrangement, knowing which practice they are registered at and to which they will make contact when needing care, or being asked to attend for care.
19. All GP Practices must provide “essential services” set out in their contract within core hours of business – 0800 – 1830, Monday to Friday excluding bank holidays. This includes identification and management of acute illnesses and long-term conditions in both adults and children, referral to secondary care services (and taking over responsibility for care when a patient is discharged from hospital) and post-natal checks. GPs issue the majority of all prescriptions for medication (a small number of highly specialist drugs are “hospital only”).
20. These services are governed by slightly different contracts within each of the four UK Nations (General Medical Services (GMS), Personal Medical Services or Alternative Provider Medical Services in England, GMS in Wales, Scotland and Northern Ireland) although ‘essential services’ are much the same in all nations (NHS England and NHS Improvement, 2020; Scottish Government, 2017; Welsh Government, 2023a; Department of Health, 2015b; Beech and Baird, 2020). GP practices can opt in to quality assurance scoring systems, such as the Quality and Outcomes Framework (QOF) in England and Northern Ireland, Quality Assurance and Improvement Framework in Wales (QOF was abolished in Scotland in 2016), which provide extra funding if practices hit targets in key pre-determined metrics for certain chronic diseases such as hypertension and diabetes. Responsibility for providing “out-of-hours” (6:30pm to 8am and weekends, bank holidays) cover to the patients on their list mostly lies with the Integrated Care and Health Boards (England, Scotland, Wales) and of Health & Social Care (Northern Ireland) since the GP contract reform of 2004. GP practices

¹ This report refers to the “NHS” throughout to denote the publicly funded national health services across the UK, including “Health and Social Care”, the equivalent of the NHS in Northern Ireland.

may also choose to provide further services (termed “additional” or “enhanced”) such as minor surgery or cervical screening, in-house care to nursing homes or annual health check programmes for those with learning disabilities to increase profitability of the practice. Which service is defined as additional or enhanced differs slightly between each nation’s contract.²

21. **The worldwide evidence is that the stronger the primary care system the stronger the overall health system** is to improve health outcomes, reduce costs, and maximise equity for the population (Starfield, Shi and Macinko, 2005). Whilst termed ‘primary care’ this evidence base refers to general medical practice (also called family medicine and related terms in different countries). These findings have been robust over time and across health systems. ‘Strength’ of primary care covers various features including higher ratios of primary care physicians to population (and proportion of the total doctor workforce in primary care), stronger relationships and continuity with GPs, quality of preventive care (screening, health promotion) and early management of health problems (Starfield, Shi and Macinko, 2005).
22. **The UK does not compare well with other countries in terms of primary care provision** – both before and during the pandemic period. The number of General Practitioners (GPs) per person varies between countries.
 - Australian data show 120.7 full-time equivalent (FTE) GPs (38,357 gross total GPs) per 100,000 of the population in 2021 (most recent available data). This has risen steadily year on year from 103.7 in 2014. (Australian Government Productivity Commission, 2023).
 - In New Zealand the figures are lower at 74 FTE GPs per 100,000 population in 2021 (most recent data available), up from 68 in 2013 (Grimond, Martin and Tu, 2021).
 - Canadian figures show 103 FTE family physicians per 100,000 population in the 2021-2022 period (Canadian Institute for Health Information, ND), a decrease from 122 in 2019 (Canadian Institute for Health Information, 2019).
 - In comparison, UK figures show 45 FTE GPs per 100,000 patients in April 2022 – a fall from 52 per 100,000 in September 2015 when records of this statistic began. (RCGP, 2022). (Figures relate to NHS England, slightly higher figures in Scotland, Wales and Northern Ireland (paragraph 272, but overall the whole of the UK does not compare well to other countries).
23. Whilst it is difficult to directly compare General Practitioner numbers between countries owing to the differences of healthcare organisation and classification of doctors within these systems, these countries have health care systems and economic development that roughly approximate to the UK’s. These figures show the **comparative lack of GPs within the UK and increasing workload this group faces as time progresses** – see also under Sub-section: Workload and Workforce which presents numbers of patients per GP. Since the pandemic the situation is also continuing to worsen.

² See also witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 09/07/2024 , paras 332-4, 337-9 (INQ000485652) for further description of primary medical care services.

Access to general practice appointments before and during the pandemic

24. When experiencing illness or potential illness, or for preventive care, patients will contact their practice to seek an appointment to consult (or if they feel it is an emergency they may elect to attend the Emergency Department, see Professor Snooks' report sections on 999, 111 and ambulance services). In the past this would have been almost exclusively with a GP themselves, but increasingly over the last 10-15 years the '**multidisciplinary primary care team**' model is almost ubiquitous, and patients may be given an appointment with a range of staff members, perhaps before a GP if those staff members are considered most able to help the patients for the presented problem.
25. Several different multi-disciplinary staff are utilised for varying roles within General Practices around the UK. Below is an example range of commonly employed staff and how they are typically utilised; it is not exhaustive. Whether employed and how they are deployed differs from practice to practice depending on the practice's specific requirements and staffing needs. The range includes:
 - **Advanced Nurse Practitioners:** Able to assess, diagnose and treat a wide range of medical conditions - will typically have completed a special qualification to allow them to prescribe medications. Nature of conditions assessed will differ depending on the experience of the practitioner and local supervision policies.
 - **Community Care Coordinators:** Can help to direct patients to the most appropriate local services such as local mental health/exercise/weight loss/wellbeing services or advice on accessing funding/income sources depending on their specific social issues (sometimes also called 'Social Prescribers')
 - **Dieticians:** Able to provide advice on diet, healthy eating and weight loss management
 - **Health Care Assistants:** Able to provide several functions to assist wider practice staff such as taking blood samples and blood pressure readings, simple wound care and dressings
 - **Mental Health Practitioners:** at a similar level of expertise, qualification and responsibility as Advanced Nurse Practitioners, but focusing on patients with mental health conditions.
 - **Nursing Associates:** work with healthcare support workers and registered nurses to deliver care for patients and the public, more extended roles than Health Care Assistants.
 - **Paramedics:** may perform house calls in the community for acute illnesses and report back to the GP for supervision and to agree a management plan
 - **Pharmacists:** perform medication reviews/audit safe prescribing within the practice and make recommendations of prescribing changes to GP staff. Some specially qualified pharmacists are able to prescribe medications.

- **Phlebotomists:** Specifically used to take blood samples
 - **Physician Associates:** Able to assess and treat certain medical conditions under the supervision of a qualified GP. Nature of conditions included will differ depending on the experience of the PA and local supervision policies.
 - **Physiotherapists:** May assess and treat a wide range of musculoskeletal presentations such as low back or shoulder pain.
 - **Practice Nurse:** a qualified nurse (degree level), with further skills training and certification regarding activities undertaken in primary care, including long term condition management (e.g. diabetes, respiratory), also more complex wound care, acute conditions (e.g. minor illness and injury) health promotion (e.g. immunisation, cervical smears) as the practice may seek to deploy according to needs and staff experience
 - **Podiatrists:** May provide diabetic foot care and assess/treat musculoskeletal presentations relating to the foot such as ankle pain
 - **Mental Health Workers:** Can assess and treat lower severity mental health conditions such as mild depression/anxiety, provide counselling etc.
 - **Note:** various other members of staff may be attached to practices, but not employed by them, and still may be the most appropriate staff member to whom to direct a patient's query or problem. These staff include health visitors (typically dealing with children under 5 for developmental surveillance, health promotion and child protection), district nurses (dealing with the elderly, usually housebound with long term conditions such as wound care, diabetes and others, health promotion, vaccination etc), palliative care nurses for palliative and supportive care in collaboration with consultants in palliative and supportive care, including hospice and end-of-life care. There are also the other 'contractor' professions – dental, optometry and pharmacy, which are not in scope for this expert report.
26. **'Care navigation'** needs to be able to navigate this highly complex and changing landscape of 'primary care' needs, services, provision and responsibility for follow-up. Care Navigation tries to direct patients to the appropriate professional at the right time and place. It can be a highly confusing situation for patients. Care Navigation is not clinical decision-making - it is usually undertaken by trained reception staff. Whilst usually effective for the overall efficient provision of primary care, it may not always be successful, leading to frustrations for patients and staff alike.
27. Access to general practice was traditionally via telephone or in-person to make appointments, but before the pandemic many practices were adopting other methods including online bookings or 'asynchronous consulting'. The latter is a term describing that the patient contacts the practice and provides information and the nature of the enquiry, and awaits a response to their enquiry, not at the same time as the first contact. Systems such as "eConsults" and other applications (see section 'Changes in provision during the pandemic') are available to support this process. Many advocates support this type of contact with GP services, but there is a wide range of opinion also about its suitability, efficiency, and whether it disadvantages population groups who are less digitally able.

28. Regarding online bookings, this would seem at first sight to be a useful development, suitable for many people to be able to book appointments in the future, and potentially also for urgent needs on the same day. However, there have been some problems with some such systems, which may not have sufficient flexibility for the way a particular practice wishes to operate. For example, a practice may have multiple sites, and be seeking to offer either telephone or in-person consultations. We found in my practice that the system used (“Vision” – one of the three commonly used systems) could not adapt to this level of variation. There were also issues because appointments are inevitably in short supply, so are ‘released’ at a given time each day (or week), which leads to patients all attempting to book at the same time, causing system capacity issues and frustrations for patients alike. Telephone appointments may require updating of the patient’s contact number, which if not done or given accurately then leads to a break down in the chain of communication (and a failed encounter). Practices often do not offer appointments very far ahead (e.g. one or two weeks) because experience shows that booking further ahead leads to a significant proportion of non-attendances (perhaps 10%) and thus wasted capacity. This is a frustration for people who would like to book further ahead, and wasted appointments are always a concern for patient groups as well as staff, given the short supply.
29. The evidence is that most patients choose appropriately for the ‘acuity’ (severity and urgency) of their condition, that is whether they need same day assessment (or indeed need to attend Accident & Emergency departments with more severe conditions) or can wait for an appointment a few days further ahead. Likewise, they can select appropriately whether they need an in-person appointment, or whether it is suitable to be dealt with by telephone only. However, when there is short supply and pressure in the system for appointments, there is an increased likelihood that an appointment is taken because it is available but may not best suit the patient’s needs. If this requires additional appointments, then it may be overall less efficient.
30. Overall, *experience* of access is deteriorating (Fisher et al. 2024).
31. The Health Foundation published a report in March 2024 on these issues. It describes **poor and deteriorating public satisfaction with GP access**, alongside falls in full time equivalent workforce of GPs from 2015 to 2024 (Fisher et al. 2024). It also notes that the issue of access itself is not straightforward, comprising making appointments, waiting times for appointments available, whether in-person or telephone, whether the professional of choice is available. The report advocates for new ways of thinking about the problem of access, not just focusing on supply (noting that record numbers of appointments are being provided and by a greater number of staff and from a wider range of disciplines). It describes the ‘candidacy framework’ in which the problem can be examined from the first point of when a patient identifies themselves as a ‘candidate’ for health care and might adopt alternative self-help or other sources of help instead. Potentially these earlier stages might be useful to support first before focusing on supply of primary care itself. However, such strategies are always likely to be longer term in nature and effect than the immediate pressures of access to a GP. Here and now, access and experience of access is a problem for patients and staff alike.
32. Data from the Health and Care Experience Survey are available on the Scottish Government Website (Scottish Government, 2024), showing a clear trend of worsening ratings over several years. These ratings are a function of both experience and expectations – in 2020

ratings appeared to be maintained, although arguably expectations may have been lower as patients and public ‘allowed for’ the system stresses, but this was not sustained to 2022.

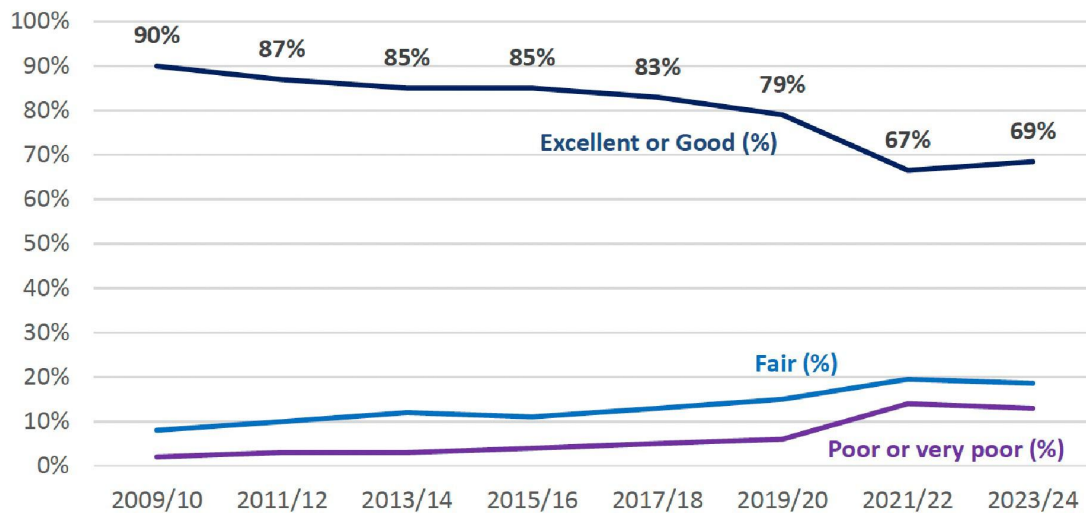


Figure 1: Overall rating for arrangements to see a GP in Scotland (Scottish Government, 2024)

33. Other surveys of patients registered with a GP practice in England indicate that patient experience has deteriorated. In the annual GP Patient Survey, only 56.2% rated their experience of making an appointment as good or better in 2022, down from more than 70% in 2021 (NHS England 2022) Further items in the survey show similar trends of deteriorating experience and satisfaction (Hoddinott, and Davies, 2023a) – see graph below. Ethnic minority patients consistently report lower satisfaction with GP services in recent years (Magadi and Magadi, 2022). These figures about experience should be taken in the context of increasing provision of appointments over the same years (before, and since the pandemic) – see this report’s section on Workload in general practice (paragraphs 221-228).

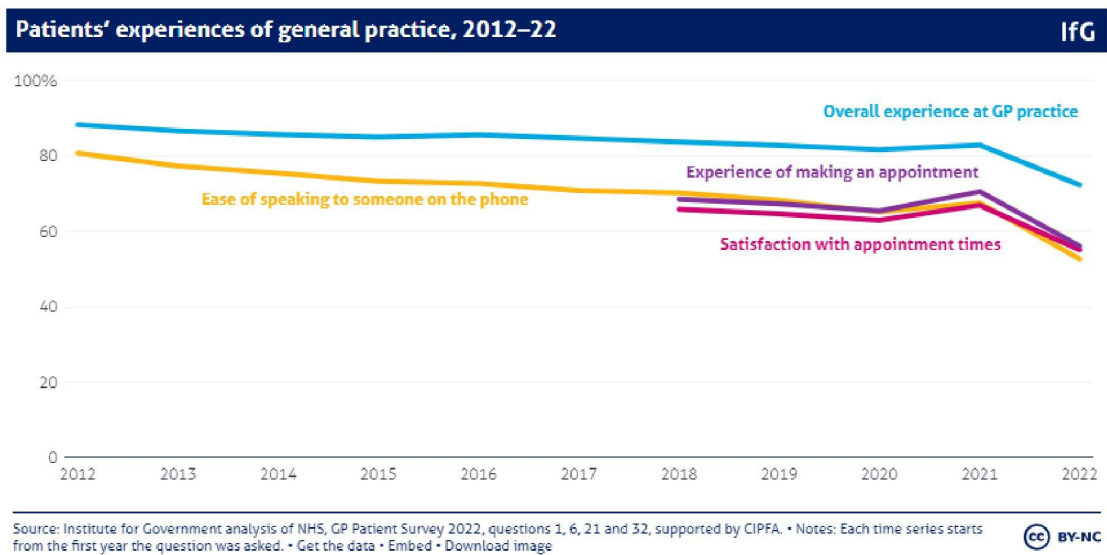


Figure 2: Patients' experiences of general practice (Magadi and Magadi, 2022)

34. In Wales, the National Survey showed a fall in overall patient satisfaction with GP services, from 93% in 2018-2019 to 86% in 2021-2022 (Welsh Government, 2020b). Conversely, results for dissatisfaction with accessibility of appointments improved with 40% of patients finding it difficult to make an appointment in 2018-2019 compared with 33% in 2021-22. Top three reasons for dissatisfaction with the appointment process in the most recent survey were “difficulty getting through on the phone” (57%), “needing to make an early morning phone call” (40%) and “appointments not available on the same day” (32%) (Welsh Government, 2020b).
35. Very limited data regarding patient satisfaction with General Practice services have been published in Northern Ireland, with a single satisfaction score of 88% measured in 2018. Overall, patient satisfaction with the service provided by General Practices in the UK has fallen over the last 10 years (see figure below from the ONS (ONS, 2024) The ONS acknowledges that survey item wording and methods of administering vary between countries, so direct comparisons and rankings are not possible, but in my view they assist in building the general picture about satisfaction with GP services including access, which is of general deterioration over several years.

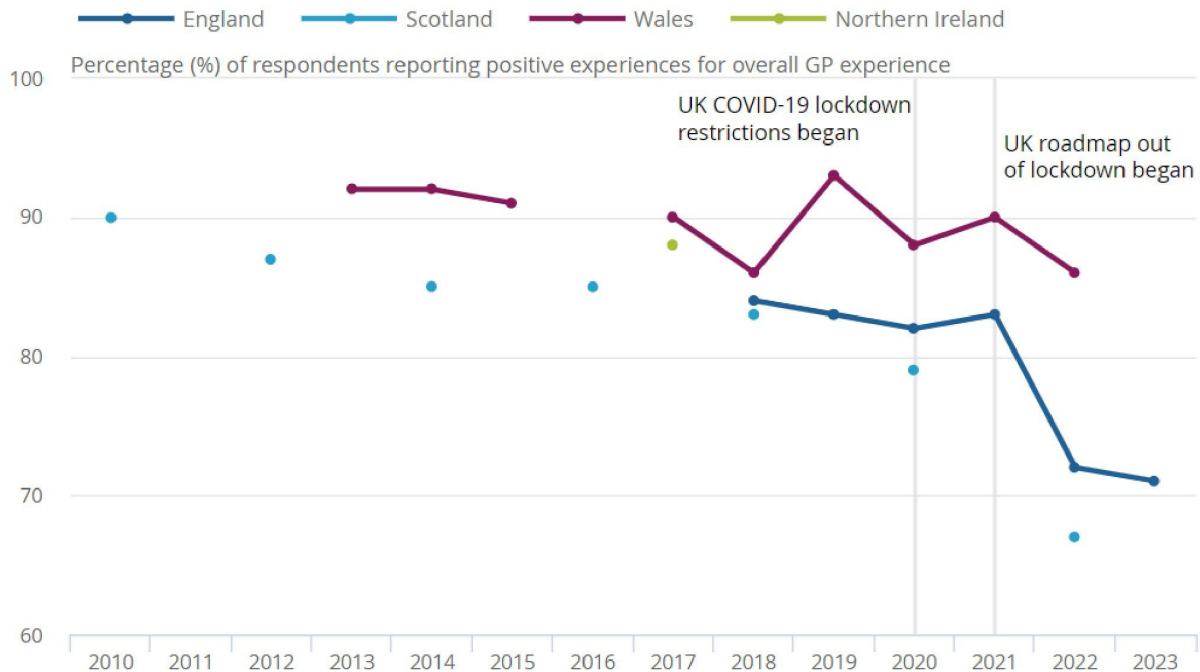


Figure 3: Percentage of respondents reporting positive overall experience of GP services in the UK, 2010 to 2023 (ONS, 2024)

36. Access to general practice is a very great concern for patients and public, primary care providers and commissioners alike. It has been studied by many stakeholders. There are many factors influencing the situation, described in the witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 09/07/2024, paras 360-2 (INQ000485652). Provision of services is usually by blended models, thus including a mix of remote, face-to-face, urgent, on-the-day and pre-bookable appointments. The issue of interest is how to access the provision.
37. A recent Scottish Government working group examined these issues, and whilst some elements are specific to Scotland, the issues and principles are pertinent across the UK nations (Scottish Government, n/d).
38. Their report notes that before the pandemic, the way people accessed General Practice was already changing in some areas with the introduction of telephone first approaches (sometimes called telephone triage, see below), video consultations (usually known as Near Me in Scotland with the Attend Anywhere functionality), Digital Asynchronous Consulting systems (DACs) such as eConsult and askmyGP with online appointment booking and online reviews of conditions using platforms such as MedLink. These systems or applications are trying to replicate or improve on the conventional method of access – ringing up the practice – by asking patients to identify what symptoms or concerns they have, for how long, perhaps to include a photograph if relevant (for a rash), what they may have attempted already to manage these symptoms, whether improving or deteriorating, and to provide enough information for practice staff to prioritise and perhaps ‘stream’ patients to what is thought to

be the most suitable professional member of staff. These technological developments varied across Scotland, and the situation and experience would be assumed to be very similar across the UK countries, with many practices using them whilst many others also continued with traditional ways of providing care with most appointments made by telephone and consultations provided face to face.

39. In the context of the several changes in access (technological, expanded clinical and administrative teams, and new systems and processes), the Scottish Working Group examined and summarised some of the impacts:
 - General Practice Access Short Life Working Group: access principles - General Practice Access Short Life Working Group: access principles - gov.scot (Scottish Government, 2023b).
40. Changes in access arrangements, including the telephone or Digital first options mean there *“is now an **increased range of how, and where, people can access care, but these changes are not always well understood by the public, nor are they always easy to explain.**”*
41. *“These developments have meant that the need for practice administration staff, such as Receptionists, to support people to find the most appropriate service or member of the team to meet their needs has greatly increased. These new roles are now widespread and are sometimes known as signposting or **Care Navigation**. These roles are not clinical decision-making roles but support the clinicians to prioritise the care they provide, particularly when there is limited capacity.”*
42. Further studies across the UK nations were not identified but in my opinion the principles noted from the Scottish work are likely to be transferable. Guides to facilitate improvement of care navigation services have been produced in England, Scotland and Wales by NHS England, Healthcare Improvement Scotland and Health and Education in Wales, respectively (NHS England, 2024a). No specific guides or tools were located for Northern Ireland.
43. Access before the pandemic was a problem. The **pandemic then added further changes and pressures**. In particular, in-person appointments were drastically reduced in the early months (March – July 2020). The ability of the booking systems to respond to these pressures was limited (patients might be unclear whether their appointment was in-person or on the telephone). Many practices switched to same day access only, at least temporarily. In the rapidly evolving early pandemic situation, practices made rapid changes to access and provision. They will have tried to use their clinical systems to best potential, but we can envisage that when so many practices are making changes simultaneously, then the required technical support from system suppliers or in-house may well have been overwhelmed. Regarding the clinical and information systems themselves, these have some potential but are often not nuanced enough to make the system workable for a given local context. Continued development and research are required.
44. At the beginning of the pandemic, enhanced Infection Prevention and Control measures were introduced, including more routinely screening healthcare requests over the telephone before attending a practice. While General Practice remained open, these changes made General Practice more difficult to access at times and created a **misperception that General Practice was “closed” to the public and that services were not operating**. Public

messaging that General Practice was “open” could and should have been clearer. The misperception that it was “closed” may have endured for some people, even for General Practices where access has diversified (with a great range of staff disciplines) and improved capacity for appointments, and when these more stringent Infection Prevention and Control measures have long since eased.

45. Overall, it is fair to say that the process of getting appointments is always a source of great frustration and concern for patients and for practice teams alike. There are no easy answers to this significant problem that many thousands of GP practices continually try to address. To an extent these are the symptom not the cause, and the essential problem is of overall lack of supply (staff time) in relation to increasing need. Workforce capacity issues will be addressed in paragraphs 272 to 297. Development and research on access are very much needed, and there are examples of such work over recent years.

“Telephone First”

46. Before the pandemic there was interest in whether a “telephone first” system of appraising appointment requests could be effective and efficient in enabling patients to see the right person at the right time for their particular problem. Conceptually it overlaps with “total triage” that may also include other means such as electronic messaging as part of the information gathering and decision-making process (see also witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 09/07/2024 , paras 373-8 (INQ000485652). It might also enable some encounters to be resolved (e.g. advice on self-managing milder illness episodes, medication advice, sickness certification) without the need for face-to-face consultations. Given the intense and rising pressures on appointment availability, innovations were considered and there was a receptive environment in pre-pandemic general practice to implement them. As such it was also appropriate that they should be evaluated. A major National Institute for Health Research (NIHR) funded study in England took place before the pandemic (Newbould et al. 2019).
47. I am not aware of studies in Scotland, Wales or Northern Ireland to equivalent scale and depth. I would, however, expect the findings to be largely transferable, subject to adaptation to context including potentially more disadvantaged population groups in the devolved administrations meaning the impacts may be different, perhaps more likely to show overall difficulties with uptake given greater levels of disadvantage.

Pre-pandemic research on telephone consulting

48. The NIHR Telephone First study examined 147 practices in England before and after introducing the Telephone First way of working, also with reference to a control group not using it (Newbould, Ball 2019). It was evaluated over time from national reference data sets. It was a real-world evaluation and not as strong a design as, for example, a randomised controlled trial. Apparent effects could potentially have been confounded by other changes at the time that the intervention was introduced. However, having multiple types of data and analyses is one way to build confidence in the findings.
49. The main outcomes were the routinely gathered data from the GP Patient Survey scores showing patient satisfaction, and use of hospital services (Hospital Episode Statistics). There were also outcomes in smaller subsets of practices studied using the ‘telephone first’

approach with no comparison to controls. These outcomes included the number of consultations and total time GPs spent consulting, and a questionnaire for patients. Interviews to obtain qualitative data were conducted with 43 patients and 49 primary care staff about their experiences with the new system. The study also included an analysis of costs. Patient safety incidents or outcomes were not reported.

Results of Newbould et al NIHR Telephone First study

50. Following the introduction of the 'telephone first' approach, the average number of **face-to-face consultations in practices decreased by 38%** [95% confidence interval (CI) 29% to 45%; $p < 0.0001$] from an average of 13.0 to 9.3 face-to-face consultations per day per 1,000 patients on the practice list, whereas there was a **12-fold increase in telephone consultations** (95% CI 6.3 to 22.9-fold; $p < 0.0001$) from an average of 3.0 to 12.2 consultations / day / 1,000 patients.
51. The average durations of consultations decreased from 10.5 to 8.5 minutes, but, when combined with the increased number of consultations (from 16.5 to 21.8 / day / 1,000 patients), this was estimated to have led to an **overall increase of 8% in the average time spent consulting by GPs**, although there was a large amount of uncertainty (95% CI -1% to 17%; $p = 0.0883$). These average workload figures mask **wide variation between practices**, with some practices experiencing a substantial reduction in workload and others a large increase.
52. Comparing 'telephone first' practices with control practices continuing with their 'usual care' in England in terms of scores in the **national GP Patient Survey, there was an improvement** of 20 percentage points in responses to the survey question on perceived length of time to get to see or speak to a doctor or nurse. Other responses were slightly negative, such as communication with the GP or being able to see the GP of choice. Patients and staff expressed a **wide range of both positive and negative views** in interviews and in the questionnaire.
53. Regarding hospital impacts, the introduction of the 'telephone first' approach in general practice was followed by a small (2%) increase in hospital admissions. There was no initial change in accident and emergency (A&E) department attendance, but there was a subsequent small (2%) slowing in the already increasing trend in A&E attendances. The study found no evidence that the 'telephone first' approach would produce net reductions in secondary care (hospital) costs. These findings contrast with earlier claims made by NHS England and the companies providing Telephone First services that they "have demonstrated a cost saving of approximately £100k per practice". Likewise the claims by the two commercial companies (advertised as Doctor First and GP Access) who provide similar types of management support for practices adopting the new approach "*that the approach dramatically reduces the need for face to face consultation, reduces workload stress for GPs and practice staff, increases continuity of care, reduces attendance at emergency departments and emergency hospital admission, and increases patient satisfaction*" are at best only partially borne out (see further findings below). (NHS England, 2013; Newbould et al. 2017)

Conclusions of Newbould et al NIHR Telephone First study

54. The 'telephone first' approach shows that many problems in general practice can be dealt with on the telephone. However, the approach does not suit all patients and is not a panacea for meeting demand for care, and it is unlikely to reduce secondary care costs. Future research is still needed on **important issues such as how telephone consulting best meets the needs of different patient groups and practices** in varying circumstances, especially patients experiencing higher levels of socio-economic disadvantage, and how resources can be tailored to predictable patterns of demand.
55. A related in-depth qualitative analysis from the same study provided insights from practice staff perspectives on effects, and potential sustainability of the approach (Newbould, Exley et al. 2019):
56. Fifty-three qualitative interviews with staff found that staff at **most practices found “the approach was an improvement on their previous system, but all practices experienced challenges; for example, where practices did not have the capacity to meet the increase in demand for telephone consultations. Staff were also aware that the new system suited some patients better than others. Adoption of the telephone first approach could be very stressful, with a negative impact on morale, especially reported in interviews with the two practices that had tried but stopped the approach.”** [emphasis added]. Interviewees identified enablers to successful adoption including: “*understanding demand, practice staff as pivotal, making modifications to the approach, and educating patients.*” However, practices considering adopting or clinical commissioning groups considering funding a telephone first approach were advised to “**consider carefully a practice’s capacity and capability before launching**”.

Omission of general practice from pandemic preparedness guidance

57. Prior to the pandemic, each nation had the following plans in place:

England

58. First published in 2013, updated in 2017, NHS England produced its “Operating Framework for Managing the Response to Pandemic Influenza” (Reed, 2021) (NHS England, 2017). This framework noted that “pandemic influenza is recognised by the Government as the single most disruptive event facing the UK today” and described various issues around leadership, staffing, roles and responsibilities, communication, stockpiles of antivirals etc. It did not include specific elements concerning primary care impacts and delivery during a pandemic period.
59. ‘Exercise Pica’ assessed NHS primary care preparedness and responses for pandemic influenza in 2018) (Report from Public Health England titled Exercise Pica NHS primary care preparedness and response to pandemic influenza, dated 05/09/2018, INQ000113205). Exercise Pica was sponsored by NHS England, as part of a Public Health England-funded programme directed by the Emergency Preparedness, Resilience and Response Partnership Group, chaired by DHSC. Exercise Pica identified 26 “lessons” (important issues, areas for further consideration or planning for the event of a future pandemic) from a one-day discussion-based exercise. I do not know what this led to in terms of operational planning, delivery of objectives (e.g. development of smartphone applications to assist communications, adaptation of acceptable standards of care during a pandemic, amended death certification regulations etc) and project management and audit of progress, to be ready for the pandemic.
60. Issues that require more development for primary care include management of presenting pandemic illness, management of continuing care and needs, prevention and health promotion activity (including vaccination and other screening programmes), and modification of help-seeking behaviour, channels for and content of communication with patients and public.
61. Preparedness planning also needs to consider adaptations to ‘estates’ – surgeries and technology, including new tools, methods and processes are important in the primary care sector (see also witness statement provided by Professor Philip Banfield on behalf of the British Medical Association, dated 03/05/2024, INQ000477304, para 56). Other areas include role change, adaptation of ways of working and places of work, and risk management including infection prevention and control measures. Specific planning is required to **minimise unequal impacts of future pandemic** on particular population or patient groups such as older persons, people with multiple conditions, or from minoritised ethnic groups. Proactive planning for guidance and documentation to support clinical practice in the event of another pandemic is needed.

Scotland

62. Audit Scotland noted that the Scottish Government had based its initial response to Covid-19 on the 2011 UK flu pandemic preparedness strategy, until more specific planning was instigated at the outset of the pandemic from March 2020 (see witness statement of Caroline Lamb, on behalf of the Director General for Health and Social Care, dated 18/06/2024., INQ000485979, paragraphs 214-6). Thus, the preparedness will have been in and for the context of expected influenza, likely severity, infectivity, affected risk groups and precautions required – all of which proved different in Covid-19 – and very limited primary care specific elements. As with England, the strategy was generic and did not specifically examine primary care preparedness needs. Scotland took part in three pandemic preparedness exercises in the years before the coronavirus outbreak. But not all the actions identified in these exercises were fully implemented. These included measures to ensure access to enough PPE and to quickly address social care capacity, both of which became significant issues during the first wave of Covid-19. (Audit Scotland 2021).

Wales

63. A Freedom of Information request and publication in 2021 notes that Wales was also integrated with the 2011 UK pandemic preparedness strategy (building on experiences from a 2007 UK level pandemic flu exercise ('Winter Willow') and the response to the 2009 H1N1 Swine Flu pandemic. As above, it was therefore highly limited relating to primary care preparedness. Plans were tested during 2016 in Exercise Cygnus, with lessons learned taken forward to an ongoing review of pandemic preparedness. In Wales, a guidance framework was published on 18th March 2020: "COVID-19 preparedness and response: guidance for the health and social care system in Wales" (Welsh Government, 2020a). It also had sections on leadership, business continuity, NHS and social care, communications, surveillance, workforce, reporting and stockpiles, and did not have specific elements concerning adaptations in primary care.

Northern Ireland

64. Similarly, Northern Ireland's Health and Social Care Influenza Pandemic Preparedness and Response Guidance (2013) drew upon the 2011 UK exercise and covered generally the same areas as with the other nations (see above), with no specific reference to primary care (Department of Health, Social Services and Public Safety, 2013).
65. Thus, across the four nations, **preparedness appears to have been largely in terms of a repeat of the influenza pandemic scenario** whereas the SARS-CoV-2 proved substantively different in nature – transmissibility, severity, and range of severity with potentially more asymptomatic transmission than influenza. It **did not specifically address primary care needs** and continuity for non-pandemic conditions, nor the contribution of primary care to the management of patients in the community, as part of the overall health care delivery strategy for population needs (primary care, hospital care, social care) in a pandemic, and also prevention and vaccination.

Planning for 'high-consequence' disease and national emergency

66. The UK government also made preparations for an “emerging high-consequence infectious disease” (National Audit Office, 2021). This is a “*very infectious disease that typically causes the death of a high proportion of the individuals who contract it, or has the ability to spread rapidly, with few or no treatment options, like Ebola and the Middle East respiratory syndrome (MERS)*” (National Audit Office, 2021). Neither of these plans accurately accounted for a virus with the characteristics of SARS-CoV-19.
67. Initially published in 2012 and updated in 2017 and 2018, Scotland’s “Preparing Scotland: Scottish Guidance on Resilience” maps out the response structure for national emergencies. High Consequence Infectious Diseases sub-group of the Scottish Health Protection Network was also established in September 2018 and involved in preparations for national pandemic response. Further national consultation on an updated national pandemic response took place in Summer 2019. (Usher 2023; Ready Scotland, 2016)
68. In Wales, there is an additional “Pan Wales Response Plan” which coordinates initial response in the event of a major national emergency and feeds into the UK Government’s Concept of Operation (CONOPs) structure (Public Accounts Committee, 2012).
69. In Northern Ireland the Department of Health’s “Emergency Response Plan” describes a national response pathway to a health and social care emergency. It was first published in 2015 (Department of Health, 2015a).

Reactive planning

70. In contrast to what appears to have been a lack of particular preparedness for primary care before the pandemic came, once it started, there was, in my personal experience, and I suspect generally experienced by primary care staff, what might be described as a **deluge of documentation to frontline clinicians in primary care**. In my locality (Gwent, Wales) there was a cascade process for information, distributed via emails to NHS email addresses, likely replicated across Integrated Care and Health Boards across the UK. Anticipating that this might happen (from the experience of the 2009 Swine Flu period), I collected these as a GP receiving them in my practice in Cwmbran, Gwent for my Appraisal folder. Appraisal was suspended in 2020 so there was a 2-year period from 2019 – 2021, during which time I collected **439 documents**. This compares with perhaps 10-20 per year in a usual year, before and since the pandemic. Some of these documents relate to university adaptations (in a medical school – so for healthcare research and teaching purposes), and some to more usual clinical topics and updates, but the vast majority was about Covid procedures and pathway adaptations. A sample screenshot is shown:

Select	File Name	Type	Date	Size	Delete
	The New Yorker: Amid the Coronavirus Crisis a Regimen for Real Entry.pdf	file	31 Jan 2022 14:40:15	996.81kB	✖
	ABHB Briefing.docx	file	31 Jan 2022 14:40:15	79.67kB	✖
<input type="checkbox"/>	Corticosteroid-use-for-musculoskeletal-and-rheumatic-conditions-during-C...pdf	PDF	31 Jan 2022 14:40:15	112.13kB	✖
<input type="checkbox"/>	CEM CMO 2020 012 (COVID-19).docx	Text Document	31 Jan 2022 14:40:15	577.24kB	✖
<input type="checkbox"/>	Palliative Care Information and Resources COVID-19 F.pdf	PDF	31 Jan 2022 14:40:15	146.4kB	✖
<input type="checkbox"/>	14-10-2020_CEM CMO 2020 025 (Influenza Season 2020-21 - Guidance to GPs)...pdf	PDF	31 Jan 2022 14:40:15	273.61kB	✖
<input type="checkbox"/>	Yellow cards in COVID CPHA 2020 022a.pdf	PDF	31 Jan 2022 14:40:15	615.37kB	✖
<input type="checkbox"/>	RCGP care prioritisation.pdf	PDF	31 Jan 2022 14:40:15	1.84MB	✖
<input type="checkbox"/>	COVID-19_infection_prevention_and_control_guidance_FINAL_PDF_20082020.pdf	PDF	31 Jan 2022 14:40:15	16.43kB	✖
<input type="checkbox"/>	FAQs from GPs allergies.docx	Text Document	31 Jan 2022 14:40:15	7.76MB	✖
<input type="checkbox"/>	FH feedback.docx	Text Document	31 Jan 2022 14:40:14	13.5kB	✖
<input type="checkbox"/>	NHS COPD, and asthma leaflet.pdf	PDF	31 Jan 2022 14:40:14	85.96kB	✖
<input type="checkbox"/>	Cardiac sounding chest pain but no significant coronary disease.docx	Text Document	31 Jan 2022 14:40:14	26.63kB	✖
<input type="checkbox"/>	PDR Form for 2021 AE signed.docx	Text Document	31 Jan 2022 14:40:14	10.86kB	✖
<input type="checkbox"/>	ABHB daily briefing(1).docx	Text Document	31 Jan 2022 14:40:14	21.9kB	✖
<input type="checkbox"/>	Copy of List of PRINCIPLE Interested Practices sent to Study Team 23.04.20.xlsx	Excel Worksheet	31 Jan 2022 14:40:14	270.23kB	✖
<input type="checkbox"/>	ABHB daily briefing 28 April.docx	Text Document	31 Jan 2022 14:40:14	1.09MB	✖
<input type="checkbox"/>	Resuscitation Council UK Statement on COVID-19 re CPR.pdf	PDF	31 Jan 2022 14:40:14	96.18kB	✖
<input type="checkbox"/>	05-01-2021_Welsh Government - Update on the Clinically Extremely Vulnerable (Shielded) List (05.01.21).pdf	PDF	31 Jan 2022 14:40:14	15.42kB	✖
<input type="checkbox"/>	Asthma self management App letter english.pdf	PDF	31 Jan 2022 14:40:14	158.77kB	✖
<input type="checkbox"/>	Public Health Nursing Health Visiting Update.docx	Text Document	31 Jan 2022 14:40:14	108.87kB	✖
<input type="checkbox"/>	Digital Learning Framework 2020-21 Five Principles (v1 May 2020).pdf	PDF	31 Jan 2022 14:40:14	90.45kB	✖
<input type="checkbox"/>	MDs to GPs re Covid March 20.pdf	PDF	31 Jan 2022 14:40:14	144.4kB	✖
<input type="checkbox"/>	Patient flow for EGAU and EPAU RGH 06.04.20...pptx	PowerPoint Document	31 Jan 2022 14:40:14	-	✖
<input type="checkbox"/>	CU Module-Threshold Checklist.pdf	PDF	31 Jan 2022 14:40:13	-	✖

Figure 4: Sample of documents distributed to frontline clinicians 2019-2021

71. Given this number of documents, mostly rapidly circulated to frontline staff, it was very difficult to see “the wood for the trees” and to appraise all of them to prioritise for practice discussions (to implement as a team), decisions, or simply note for information. For example, there was direction about manual record searches and assessment of individuals as to whether they should be added to the ‘shielding list’ (see later section), or practices participating in the vaccination programmes). Adaptations were required to processes for clinical assessment including clinic site (we were operating at 3 clinic sites – i.e. GP surgery locations – at the time) and personal protective equipment requirements (also across sites). Clearly these were all important and needed practice-based decisions and plans about implementation. Other issues involved engagement with external parties, to negotiate a reasonable way of working, such as providing continuing clinical care in nursing homes, with access to staff and patients when required, or with pharmacies. Other documents were more for individual information, whether about adaptations to rheumatoid drug monitoring, availability of nutrition supplements, availability of email or phone lines for consultant advice etc.
72. Overall, there was a huge amount of documentation, generally important, sometimes urgent. The volume of documentation suggests a strong reactive element, and which would have been more manageable – leading to better quality responses in the service overall – if more of it had been proactive. There was an overall drop in appointments in the early pandemic period (March – June 2020 – see Figure later under Workload) so it can be argued that there was time to manage the documentation and plan accordingly. The overall context is also important though, of high stress and uncertainty in the general practice system (as elsewhere), staff quarantining after potential exposure, early challenges in establishing remote access for records and for communications (Zoom, Teams etc). Covid-19 presentation, and our understanding of its epidemiology was evolving rapidly through 2020. From mid-2020 onwards the issue of Long Covid became evident (publication from August

2020 (Greenhalgh et al, 2020), with further uncertainties and evolving understanding, epidemiological knowledge, and great variability in management options, clinical pathways according to locality etc.

73. Experience in other primary care localities may have been different, but my experience and opinion were that business continuity planning or preparedness planning should have been better. General practices are businesses, contracting with Integrated care or Health Boards for provision of general medical services. As such they are responsible for business continuity planning. I believe the Boards also have a substantial role in supporting such planning, also to achieve an element of consistency across a locality and its general practices. General practice is not currently resilient across much of the sector (see sections 77-93 below) and this support and expertise from Boards is essential.
74. Proactive planning needs to cover management of presenting pandemic illness, including assessment of severity and streaming to the right professional staff member, maintaining management of continuing care and needs, prevention and health promotion activity (including vaccination and other screening programmes), and modification of help-seeking behaviour, channels for and content of communication with patients and public. It needs to consider the adequacy or adaptations required to surgery space and how it is used (e.g. managing 2m spacing in waiting rooms). New tools and processes to support the best use of the technology (telephone systems and other media, clinical care systems) require planning. Other areas include role change, adaptation of ways of working and places of work, and risk management. Primary care has been described as the 'risk sink' of the health care system (Wieringa 2023). Explicit preparedness for managing risk is needed, as are evidence-based triage and scoring systems; and specific attention to address social vulnerability and mitigating inequalities in health and social care provision.
75. Another important area of preparedness concerns research. This is discussed more below under 'Changes in primary care provision during the pandemic' (paragraphs 166 to 172). Primary care clinical practice needs to be based on evidence that comes from studies undertaken in primary care. Infrastructure for large-scale, high-quality research was not available at the start of the pandemic and needed to be rapidly established.
76. When the next pandemic comes, and its surge pressures are experienced, proactive planning (to the degree that it can be undertaken despite uncertainty about the exact nature of the future infection) will enable a better response in an already highly challenged service (see below – resilience and workload).

The resilience of the general practice system at the onset of the pandemic

77. 'Resilience' means the 'ability to bounce back from adversity'. A general framework for examining areas of resilience is to consider the staff, their 'stuff' (equipment), the system and the space (Fong, Summers and Cook, 2024). The British Journal of General Practice has considered the topic in some detail and publishes a themed collection of 14 studies (mainly pre-dating the pandemic). These explored what resilience is considered to look like in the primary care context. Considerations include that resilience in primary care has multiple layers: interventions at individual, team, locality, and whole-system level will be needed to build a sustainable primary care system for the future. (British Journal of General Practice 2023).
78. Current evidence shows that the general practice-based **primary care sector is not very resilient**. There were significant challenges to resilience before the pandemic as witnessed by the many research papers already examining the topic (British Journal of General Practice 2023). The additional developments during the pandemic and continued pressures since the pandemic mean that primary care is now even less resilient. The Royal College of General Practitioners has brought together a position paper (2023) relating to an annual survey of workload pressures, across its UK membership, that significantly determine resilience and sustainability when considered over time.
79. *A quarter of GP practices could close because of workload pressures, warns Royal College of GPs* (RCGP, 2023). In this report the College notes (from the current workload pressures ...), "more than a quarter (26.7%) of respondents told us they feared their practice would be forced to close, with almost 90% citing unmanageable workload pressures as a reason; while 65% said it was because of a GP partner leaving and 63% said it was because of a shortage of salaried GPs". 'Closure' means resigning the contract between the practice and the Integrated Care or Health Board as most GP practices (the GP partners) operate as 'independent contractors' with those Boards. In such circumstances it is then the legal responsibility of the Board to find an alternative contractor for the general medical services for those patients.
80. *Declaration of interest in these issues*: my own practice, of which I was a partner, resigned its GMS contract with Aneurin Bevan University Health Board (Gwent, Wales) in December 2019, terminating its contract on June 30th, 2020. Thus, the resignation preceded the pandemic and was the result of a failed 'merger' of two smaller practices. The merger was attempted to try to ensure greater resilience for the medium-term outlook for the practices involved.
81. In Wales a survey, with 159 responses from a self-selecting sample of GPs was undertaken in December 2020 (RCGP, 2020c). 72% of respondents identified as GP partners, 21% as salaried GPs. The sample reported that they felt they were operating at 108% of capacity pre-pandemic, at 90% in the first peak, and at 127% of capacity in December 2020.
82. Last autumn (2023), the Government in England made emergency funding available to support general practice through the winter. However, more than half (57%) of respondents to a survey said they had not accessed winter support and funding because of a lack of

flexibility in what the funding can be used for, and 35% had not due to the arduous form-filling involved in applying for it (also RCGP, 2023 report).

83. I have not identified specific equivalent data from Scotland or Northern Ireland but would expect the results of these surveys to be largely transferable across UK nations, with certain pressure points such as practices in deprived communities making the situation worse in some areas compared to others. Nevertheless, the challenges are evident in all areas, including the more affluent areas
84. Even when there is money it can be very difficult to get appropriate staff. At a practice or local level, I believe this is the primary driver for low resilience. Others may take the view that under-funding is the primary local driver.
85. **Rates of GP vacancies appear to be rising across the UK.** Estimations of vacancy rates can be hard to establish due to GP practices functioning as independent businesses ('contractors'). Formal NHS reported vacancy data, specific to GP surgeries, are only published for Scotland – here, the vacancy rate (number of vacancy sessions per 100 total GP sessions) has risen from 7.7 in 2019 to 12.1 in 2023 (Public Health Scotland 2021; 2022). There were some publications to suggest the trend is very similar in England and Wales though by less robust methods. No data were identified regarding Northern Ireland.
86. The trend of rising vacancies has also been reported by an annual survey of 376 GP practices in England completed by the medical news agency, Pulse (Jenkins, 2023). In 2023, 18.5% of positions were unfilled, rising each year from 14% in 2021. Importantly, only one in 10 vacancies was being advertised with GPs reporting that they had given up on recruiting due to persistent lack of success. 66% of practices stated that if recruiting were not an issue, they would hire at least one more GP, with 32% stating that they would hire at least two more.
87. Projections of GP workforce shortfall in England by 2031 have been completed by The Health Foundation, an independent charitable organisation (Shembavnekar et al. 2022). These projections estimate workforce numbers compared with population projections. These are split to three plausible scenarios: a standard estimate based on current recruitment rates/policy, an optimistic estimate if recruitment and retention are significantly improved, and a pessimistic estimate if recruitment/retention worsen further.
88. The standard estimation forecasts a **shortfall of 8,800 FTE GPs in 2030/31**, meaning that 1 in 4 of the estimated 37,800 FTE general practitioner posts needed to deliver pre-pandemic standards of care in England would be vacant. The optimistic estimate forecasts a shortfall of 1,200 FTE GPs (3% of the necessary posts). Alarming, the pessimistic estimate forecasts a shortfall of 18,900 FTE GPs in 2030/31, meaning that 50% of the estimated 37,800 FTE general practitioner posts needed to deliver pre-pandemic standards of care in England would be vacant. The Welsh Government has acknowledged these figures in their report estimating the impact of long-term health conditions in Wales over the next 10 years and note that, per a similar projection model, there could be a GP shortfall as large as 48% of the required GP workforce by 2031 (Welsh Government, 2023b).
89. There is, however, some evidence from England of strong interest from doctors to join GP training – described later under Workforce.

90. System-wide, it is also clear that the **proportion of NHS budget spent on primary care has fallen over recent years**. There are various figures cited and this is not my area of expertise. Differences are likely to reflect what is counted as 'primary care', which professions and other community services included. The trends are consistent though and reported by several stakeholders. The proportion of Department of Health and Social Care (DHSC) spending on primary care fell from 8.9% in 2015/16 to 8.1% in 2021/22 (The King's Fund, 2024a). Real terms spending on primary medical care in England has increased from £11.2Bn in 2015/16 to £12.9Bn in 2023/24, a rise of 14.8%, and this rise is substantially less than across other sectors (range 17.1% to 45.3%, average 19.8% (Public Accounts Committee, 2012). The share of funding spent on primary medical care in 2015/16 was 8.8% – and it peaked at 9.2% in 2019/20 as investment under the five-year GP contract deal began. However, by 2021/22 – the most recent year for which finalised spending figures are available – it had fallen to 8.6%. Budgeted spending for 2022/23 suggests an 8.5% share for primary medical care, and an 8.4% share in 2023/24 (RCGP, 2024b). I have not identified equivalent figures for Scotland, Wales and Northern Ireland (A figure from NHS Wales reports approximately 20% of budget across primary care, with a broader definition of what is included than general medical practice, but the proportion is also deteriorating steadily since 2013 (Welsh Government, 2024c). The proportion spent on primary care reached a high of around 11% in the mid-2000s (RCGP, 2019a). There is also reference to this figure (though undated) in the RCGP Statement to the Inquiry, at least for NHS Wales.
91. Whilst the numbers of doctors in secondary care per head of population has increased substantially over several decades, this is not so for GPs (see graph below, Nuffield Trust, 2024).

Number of clinicians per head of population since 1949

07/02/2024

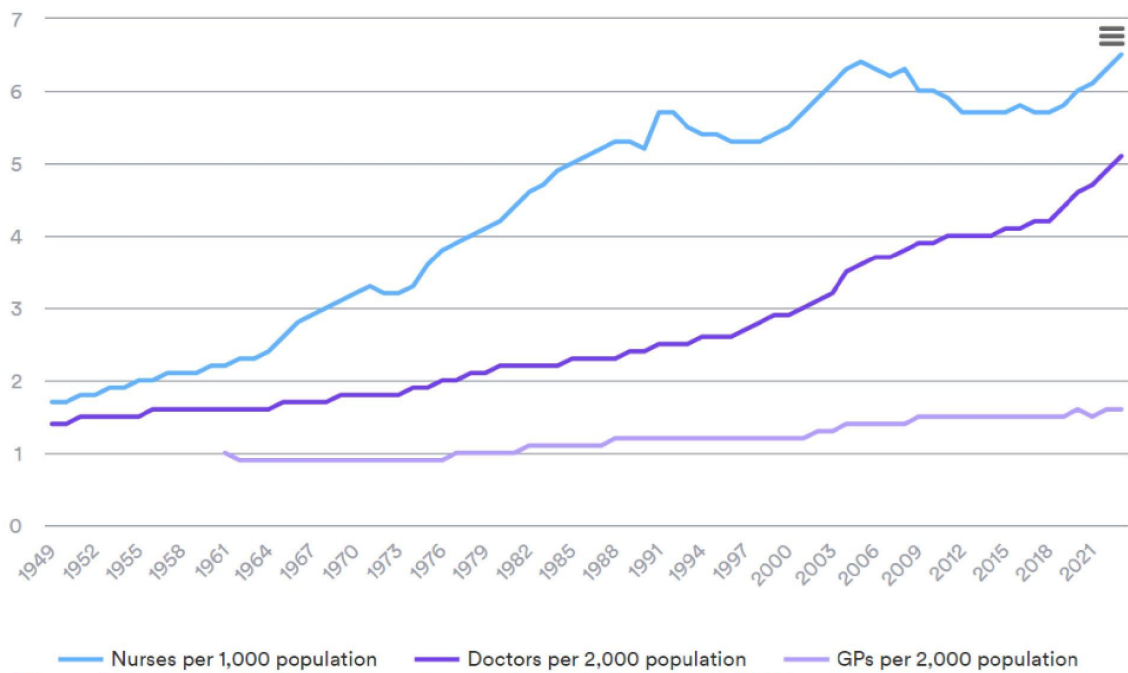


Figure 5: Number of clinicians per head of population since 1949 (Nuffield Trust, 2024) .

92. Collectively, the general practice sector is less resilient now than a few years ago, and this corresponds with resourcing. Better resourcing can support training and development to expand the numbers of staff available (recruitment, retention; across professions in primary care), fit-for-purpose buildings and technology to support quality care and reduce the need to go to hospital, reducing inequalities in funding and care in relation to need in deprived areas. Prevention is better than cure, and a stronger general practice sector will reduce the overall need for hospital care. Supporting primary care is overall cost-effective for society and leads to improved health outcomes for the population.
93. The data such as these suggest it remains a **precarious situation for the resilience and sustainability of primary care services** as we have traditionally viewed and experienced them. Primary care is now even less resilient than before the pandemic. Whether this is directly due to the pandemic, or whether it accelerated a deterioration in resilience is debatable. The changing workloads and related pressures during the pandemic (see below) are likely to have had some impact. It requires urgent and significant attention if the primary care sector is to be resilient enough to be able to respond to a future pandemic and its surge pressures.

Changes in provision during the pandemic

94. The Health Foundation reported in 2021 on the substantial changes in GP access and provision due to the pandemic (Fraser and Fisher, 2021). These data derived from NHS England. I am not aware of data to the equivalent level of depth from Scotland, Wales and Northern Ireland. I suspect the patterns and messages to be replicable in the other countries. Data became available in Scotland from February 2022 and are described as showing the same pattern (see witness statement of Caroline Lamb, on behalf of the Director General for Health and Social Care, dated 18/06/2024, INQ000485979, para 624,). In summary:
95. In total, 31 million fewer primary care appointments were booked in England between April 2020 and March 2021 compared to the previous 12 months – a fall from 310 million to 279 million. London had the lowest drop in total number of appointments, with North East and Yorkshire, East of England and Midlands all seeing a drop in appointments twice as big percentage wise. Numbers of appointments booked had largely recovered to prior levels by the end of 2020 and into 2021 (see Figure 6).
96. The latest figures available from NHS Digital via RCGP confirm this significant drop during 2020, but then returning to the year-on-year increase in appointments provided both for GP appointments and for all primary care that includes Advance Nurse and Mental Health practitioners, pharmacists or others across the range of disciplines (see also paragraphs 221 to 228 on workload and workforce).

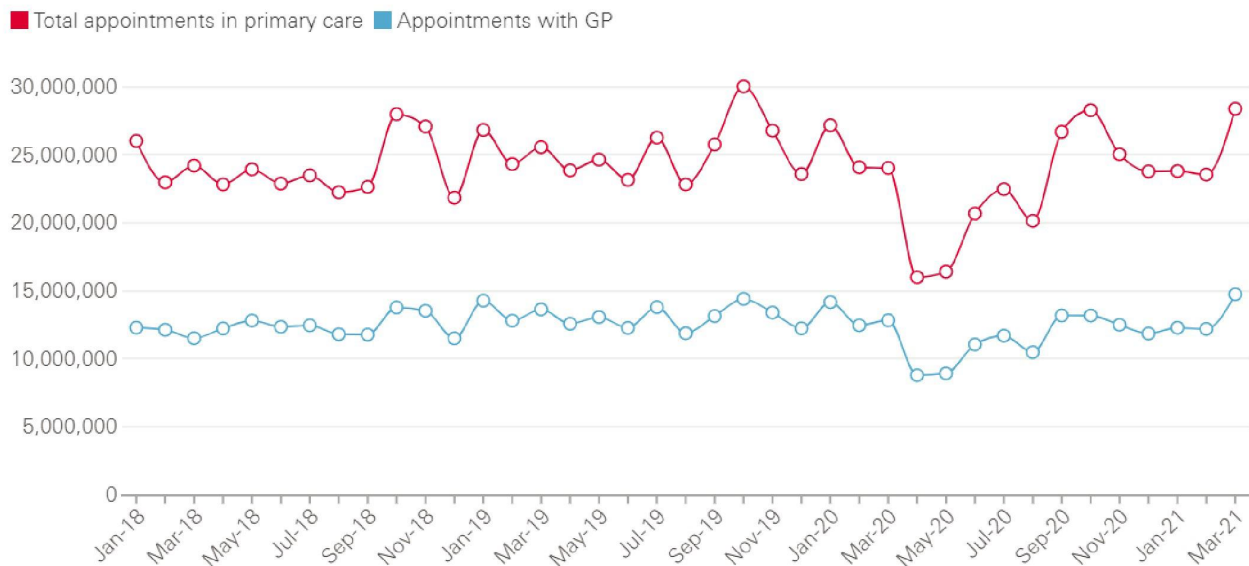
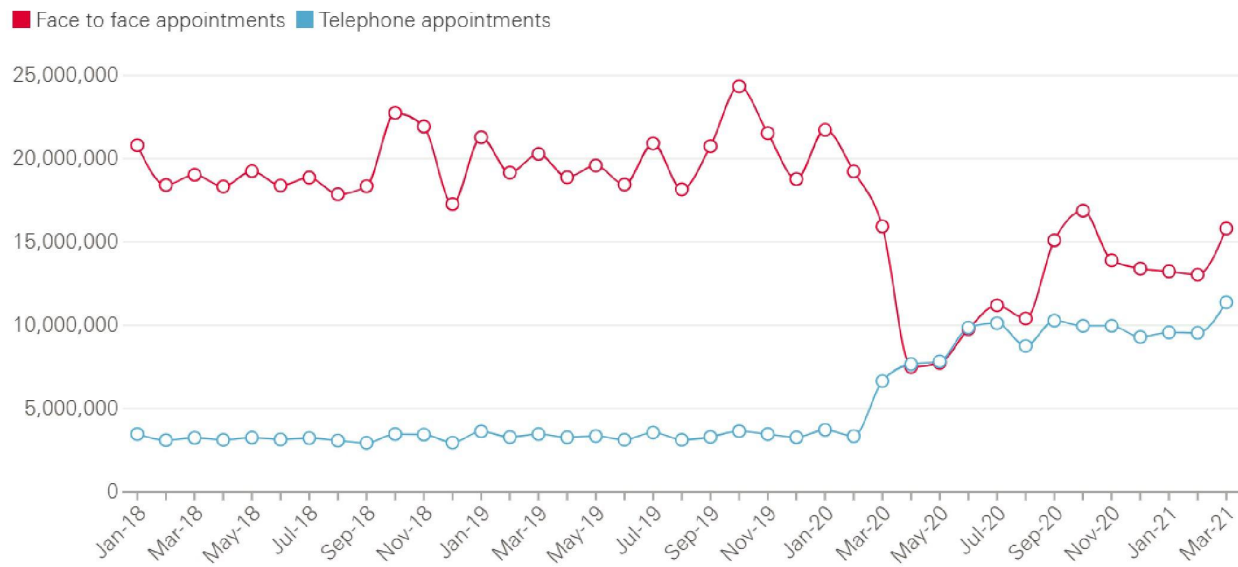


Figure 6: Monthly number of appointments in primary care and GP appointments (Fraser and Fisher, 2021)

97. The witness statement provided by Dr Michael Mulholland on behalf of Royal College of General Practitioners, dated 07/11/2023 (INQ000339027, para 73) presents similar data from NHS Scotland, and states that figures for Wales and Northern Ireland are not published (also confirmed in witness statement provided by Andrew Goodall on behalf of the Welsh Government Health and Social Services Group, dated 10/05/2024, INQ000485721, para 462, but that NHS Covid-19 Datahub had data; see also witness statement of Peter May, Permanent Secretary, Department of Health Northern Ireland, dated 07/05/2024,, INQ000421800, para 393,). I believe the patterns will have been similar in those latter two countries.
98. There were other activities in place of these appointments. For example, there was a huge surge in prescription requests as people rapidly prepared for lockdown. In our practice we dealt with a sudden rise in prescription requests and were producing around 3000 prescription pages per day in late March into April 2020 (usually around 400-500 per day). Community pharmacies therefore will have had significant surge pressures as well. Identification of 'shielding' patients by manual means over and above the data-driven approaches, and responding to calls from patients who felt they should or should not be shielding, was also an urgent need that GP practices addressed at this time (see also witness statement provided by Professor Philip Banfield on behalf of the British Medical Association, dated 03/05/2024, INQ000477304, paras 436-8, 446).
99. The way that appointments were delivered changed during the pandemic years.
100. Partly in response to the challenges in primary care / general practice pre-pandemic, and with the added stresses directly relating to the pandemic, the sector has continued to change and adapt. One early change in many areas concerned location, and whether suspected Covid patients could be seen in separate areas, sometimes separate buildings than patients that were suspected not to have Covid (sometimes called 'HotHubs', red / green spaces or equivalent terms). Practice space will have determined options and feasibility often.
101. A particularly prominent change was the significant shift towards more telephone consulting at the start of the pandemic.
102. March 2021 saw the highest ever number of telephone appointments in general practice; 11.4 million compared to 6.6 million in March 2020 and 3.5 million in March 2019. Between April 2020 and March 2021, 54% of appointments were face-to-face, compared with 79% in the previous year. Whilst showing a return to closer to pre-pandemic levels by the end of 2020, the proportions did not completely return to those levels, suggesting a 'new normal' in which more appointments are being provided by telephone (or video, or other asynchronous methods).

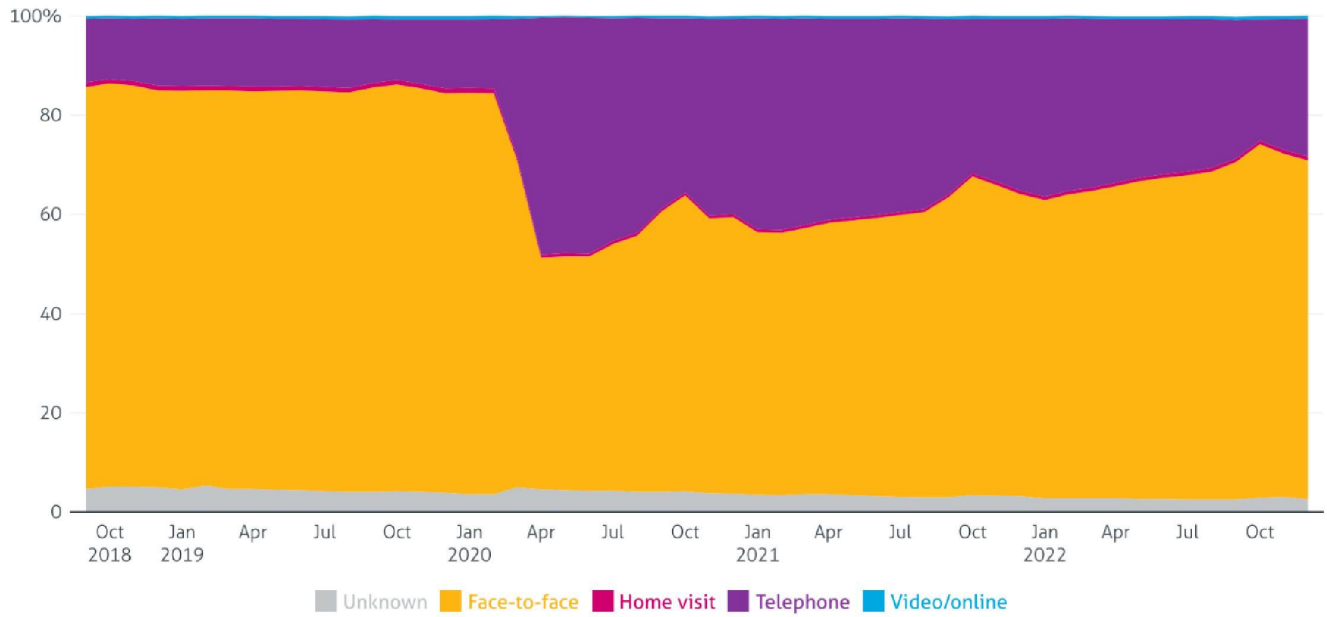


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Source: [NHS Digital, Appointments in General Practice 2021](#)

Figure 7: Monthly number of face-to-face and telephone appointments (Fraser and Fisher, 2021)

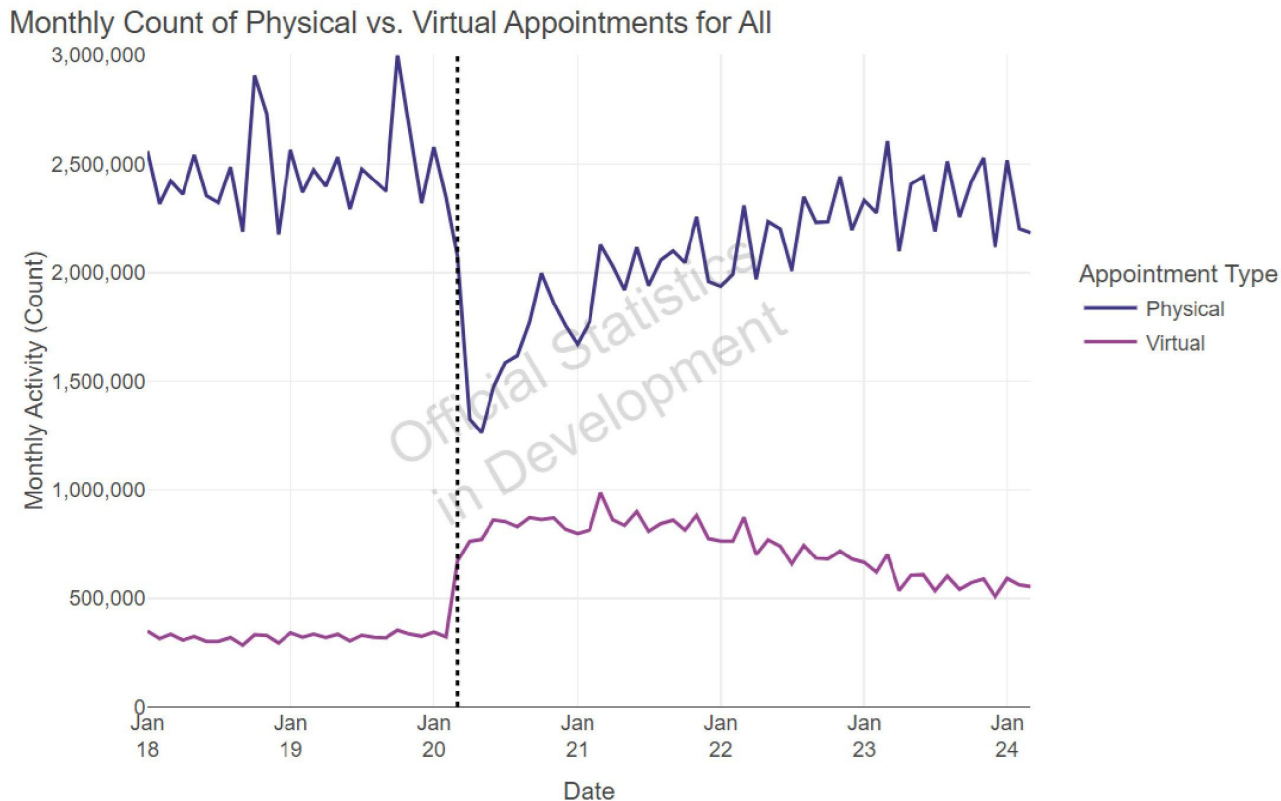
103. In the year to February 2020, **telephone appointments** accounted for only 13.5% of all consultations. In April 2020, this **increased to 47.8%**. Since then, the proportion of telephone appointments has been steadily falling and in December 2022, GP teams conducted 27.8% of appointments by telephone. These data from England are replicated with similar patterns reported from Wales and Northern Ireland (see Statements from Andrew Goodall on behalf of the Welsh Government Health and Social Services Group, dated 10/05/2024, INQ000485721 and Peter May, Permanent Secretary, Department of Health Northern Ireland, dated 07/05/2024, INQ000421800). (Note that as GP appointment systems may set ‘face-to-face’ as the default, and that this may need to be changed manually for other types of encounter, this may over-estimate the numbers of face-to-face and under-estimate the numbers of other encounter types, although if the methodology has remained unchanged then trends in the data are valid). GPs continue to deliver appointments differently post-pandemic (Hoddinott and Davies, 2023a).
104. In Scotland, the rate of virtual consultations (telephone/video combined) sharply rose at the beginning of the pandemic. Whilst decreasing from an initial high in early 2021, it has not returned to pre-pandemic levels (see figure below). Similar trends are reported in Wales with rising numbers of telephone consultations (Welsh Government, 2022). In the most recent available figures from 2021-2022 the rate of telephone consultations rose to 49%, compared to 32% in 2019-2020. I did not identify publicly available data from Northern Ireland for comparison.



Source: Institute for Government analysis of NHS England, 'Appointments in General Practice, December 2022', supported by CIPFA. • Notes: Data was first published in 2018/19.



Figure 8: GP Appointments by mode of delivery, Sept 2018 to Dec 2022 (IFG, 2022)



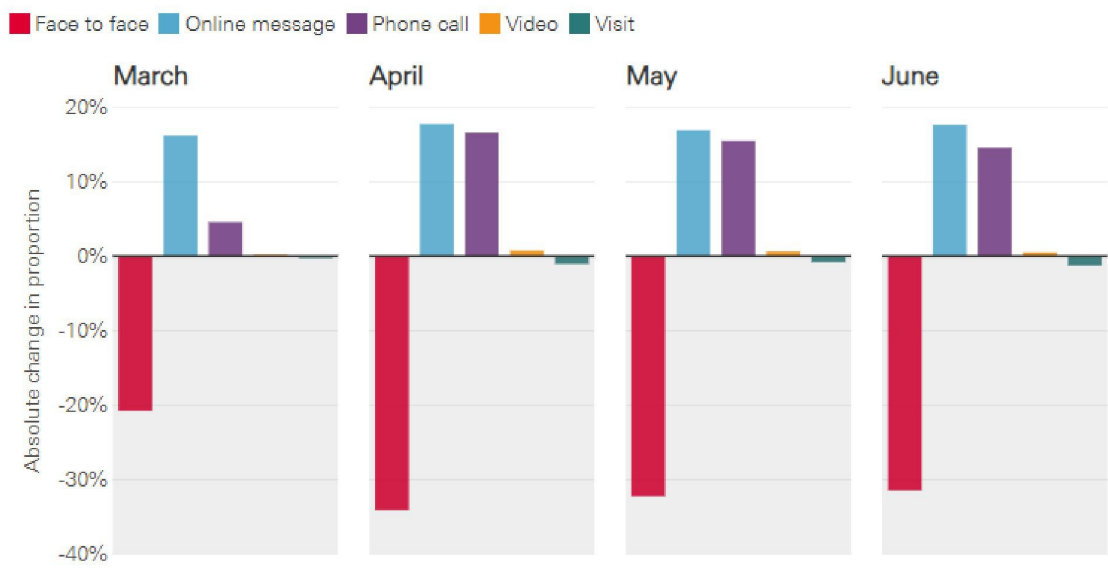
Note: Dashed vertical line indicates March 2020 when the pandemic was declared and lockdown introduced.

Figure 9: Monthly count of physical compared to virtual appointments, January 2018 to January 2024 (Public Health Scotland, 2023)

105. This trend has persisted despite the NHS issuing guidance in May 2021 that all GP practices should offer patients face-to-face appointments and that **patient preferences for face-to-face should be respected**. The move during the pandemic to an ‘online triage’ model (including eConsults etc, see above) may also partly explain the trend. Having completed an online triage form, GPs often follow up with a telephone appointment, which might then lead to a face-to-face appointment. Similar data are presented in the witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 09/07/2024 (INQ000485652), including also the proportions that were face-to-face, remote and home visits. This is a complex dynamic reflecting many influences such as government guidance, contractual responsibilities for GP practices, choices made by GP practices about models of provision, and patient preferences. The influence of the latter on models of provision is possible but how much it is borne out in practice is in my opinion likely to be somewhat limited.
106. In July 2020 The Health Foundation published a study of 51 practices in England already set up with “askmyGP” (an NHS-approved remote consultation supplier) (Clarke, Pariza and Wolters, 2020). The practices were above average in number of patients and numbers of full-time GPs. The findings were that “**consultation rates at askmyGP practices were**

largely maintained, decreasing by less than 1% between 1 March–30 June 2020, compared to the same period in 2019. Month on month changes for March, April, May and June in 2020 compared to 2019 were +3%, 0%, -15% and +11% respectively. Pre- and post- lockdown in March, consultation rates decreased by up to 17%, from 3.77 to 3.14 per person per year” [emphasis added].

107. “In contrast, (English) **national data suggested falls of up to 6%, 33% and 33% in March, April and May 2020** respectively compared to 2019 figures. At askmyGP practices, there was a dramatic **swing away from face-to-face consultations**. Between 1 March–30 June 2020, 8.5% of appointments were held face-to-face, compared to 38% during the same period in 2019. Conversely, use of remote consultation methods increased. Telephone appointments increased from 39% to 51% of the total, online messages from 23% to 40% of the total and video increased 50-fold, although it remained low at 0.5% of the total.” Note also that after an initial acceleration of video-consulting early in the pandemic this progressively declined from 2020-22 (see witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 09/07/2024, para 393 (INQ000485652)



 The Health Foundation © 2020 Source: askmyGP; NHS Digital – Patients registered at a GP practice

Figure 10: Changes in appointment format, March to June 2020 (Clarke, Pariza and Wolters, 2020)

108. I am not aware of studies to equivalent detail from Scotland, Wales and Northern Ireland, but would expect the findings to be largely replicable in the other countries.
109. My personal experience with video-consulting was that it was slightly more difficult to arrange with patients (for example, needing to be sent a link to login) but more particularly that the quality of picture was not good enough to provide additional benefits over telephone. For example, it was not good enough to be able to examine someone’s rash. Thus, whilst potentially useful, it did not make enough of a difference and presented some additional

challenges, and we did not persevere with it. The low figures of usage above suggest this was a common experience.

110. The Health Foundation concluded that in March to June 2020 “**practices familiar with conducting appointments remotely were able to adapt quickly** to the demands of Covid-19 and undertake more care remotely without significantly impacting the total number of consultations delivered. As the pandemic has progressed, these practices appeared to have demonstrated **resilience by responding flexibly to variations in demand**” (Clarke, Pariza and Wolters, 2020). I did not identify more recent or follow-up data to illustrate any trend during the full pandemic period.
111. Another study on the effectiveness of implementing remote consulting was undertaken by Murphy and colleagues (Murphy et al. 2021). This study used both qualitative and quantitative methods in 21 general practices in Bristol, North Somerset and South Gloucestershire, with GPs, nurses or paramedics. It compared the volume and type of consultations in April to July 2020 with April to July 2019. It also included repeated interviews with practice staff in four rounds to investigate practices’ experience of the move to remote consulting, challenges faced, and solutions.

*“There was **universal (initial) consensus that remote consulting was necessary.** This drove a rapid change to 90% remote GP consulting (46% for nurses) by April 2020. Consultation rates reduced in April to July 2020 compared to 2019; GPs and nurses maintained a focus on older patients, shielding patients, and patients with poor mental health. Telephone consulting was considered sufficient for many patient problems, video consulting was used more rarely, and was less essential as lockdown eased. SMS-messaging increased more than three-fold. GPs were concerned about increased clinical risk and some had difficulties setting thresholds for seeing patients face-to-face as lockdown eased.”* (Murphy, Scott et al. 2021)

112. Thresholds for seeing patients face-to-face mean that a **GP (or Advanced Nurse Practitioner) must decide when it is effective and safe to conduct a consultation by telephone** only, or whether a face-to-face element is required (usually for physical examination).

Telephone versus face-to-face versus home visits

113. In certain situations, it may be relatively easy to take a patient’s report into account in deciding clinical management (such as for example the presence of white spots (“exudate”) on the tonsils, if patients or parents can see them) but in others, examination is required to assess properly, such as in abdominal pain, and the need to diagnose the “acute abdomen” (usually inflammation or infection, or blockages) that requires a surgical assessment. Another difficult area concerns consultations for mental health problems. It may seem that this is largely conversation-based, and thus potentially suitable for telephone consulting, but there are important, sometimes critical elements of relationship building that are best (only?) achieved with face-to-face consultations. Telephone consulting may be considered more reasonable when there is already a relationship and good rapport.
114. A particular point during the early pandemic period was **judging the need to assess someone with presumed Covid-19 infection**, especially if they were deteriorating, and the

need both to assess clinically and measure oxygen saturation levels, to decide about the need for escalation to hospital care. Judging that 'threshold' for when a face-to-face consultation is needed is difficult. Clinical risk prediction models were developed but have their limitations as accuracy when developed in one setting may not be transferable to wider populations (Hassan et al, 2020). The pattern of symptoms considered relevant also evolved during the early pandemic period. Judging thresholds for face-to-face consultations may be especially difficult perhaps for less experienced clinicians, but it was also difficult when it had not been a common part of practice for many clinicians before the pandemic. It was a **rapid change, and steep learning curve for many**. The consequences of making a wrong decision can be extremely serious (urgent admissions to hospital, sepsis and other severe complications from delayed or incorrect diagnoses).

115. A further element of judging the suitable format for a consultation, as well as telephone versus in-person, is whether the patient requires a home visit or can attend at the surgery. Usually this centres on physical (sometimes mental health) capabilities to be able to attend surgery, and home visits are restricted to those people who are housebound. This may be a longer-term context (disability, frailty) or may also reflect new serious illness. Judging this severity and need for a home visit can also be difficult. In the early pandemic period, a regular scenario was of someone presumed to have Covid (before testing was regularly available), or with a known positive test, and deteriorating, and considering the need for hospitalisation. Staff might be trying to judge the degree of breathlessness (and as an indicator for oxygen levels) according to the degree of difficulty with talking on the phone, to judge the need to attend at home (or ask the patient to attend at surgery, sometimes for outdoors (car park) assessment). This was of course also in the context of the patient's other illnesses and health status, so assessing people with significant long-term illness, many by now 'shielding' as Clinically Vulnerable patients, presented particular challenges. None of this was ideal. It reflects the highly **ad hoc nature of changing clinical practice, trading off risks** (e.g. adequacy of personal protective equipment in the surgery, outdoors, or at a patient's home versus clinical requirements).
116. I recall a home visit in early April 2020 to an elderly lady with a serious long-term condition and treatment (she would have been a 'shielder'; details omitted to avoid de-anonymisation). She cared for another family member. She was clearly seriously unwell, had deteriorated, had taken to bed, and had poor fluid intake. I attended at home. Personal protective equipment was only a plastic apron, gloves and a non-specialist mask. Family reported that they had not visited for over 3 weeks, simply dropping food at the doorstep (consistent with 'lockdown' regulations). I felt the patient was more likely to have sepsis rather than Covid and she appeared so ill I thought she might die with or without treatment. I sat on the bed, held her hand, and discussed treatment options, admission, or whether the patient's preference might have been for simple conservative treatment, being kept 'comfortable', with conservative management (maybe including antibiotics) to see how things progressed. The patient had capacity and could express her preferences. Given the caring responsibilities, the patient wanted active management, and hospitalisation. This was arranged. Ambulance staff were able to attend quite quickly (unusually so – in the immediate lockdown period their capacity to attend generally seemed better than pre-pandemic owing to fewer calls) and had the same personal protective equipment as me. They transferred the patient to hospital. She was diagnosed with Covid including pneumonia. Sadly, she died about a month later. I report this case **to illustrate the difficulties and complexities of management**, including deciding

about home visiting, risks to self and equipment outside the surgery setting, discussing patient preferences in a **changing health care context and pressures**.

117. When a patient is seriously unwell, or deteriorating, admission is required (unless expressly preferred not by someone with capacity or, if the patient does not have capacity, by someone with lasting power of attorney for health and welfare, if there is an advance directive to refuse treatment, or if there is an advance care plan in place expressing the individual's preferences contrary to admission). GPs or Advanced Nurse or Advanced Care Practitioners will then arrange admission to medical or surgical units as appropriate, and arrange ambulance transfer. The decision to admit may be straightforward, and arrangements are made relatively easily (calling admissions centre and ambulance), and it may take a short time or a few hours, and staff, patients and family understand the situation. Sometimes the decision to admit involves a trade-off of risks, such as the waiting times for transfer or assessment in hospitals (sitting on chairs or trolleys overnight etc) versus need, likely benefits, other harms. Clearly these other harms would have included potential to catch Covid in hospital. I do not recall guidance to discuss such 'nosocomial' infection risks, but it was self-evident at the time, early in the pandemic period. As in the scenario above, sometimes a decision is made for more conservative or explicitly palliative and supportive care. Primary care staff navigate these situations commonly and I believe generally effectively, by acknowledging, exploring and respecting patients' and family wishes. Care can be escalated appropriately when needed, albeit with waiting times for availability of ambulances or nursing teams etc. I note the survey from IFF research about clinicians' experiences of escalation of care, and that constraints on escalation were frequent. On the occasion described above, early in Lockdown (April 2020) I found that ambulance transfer was more available than under usual circumstances and there was no constraint on referral for admission.

Training in remote consulting

118. In the study by Murphy and colleagues, GPs and other staff recognised that telephone/ video consulting requires a different skillset, but it **can be improved with training and practice**. Training needs to address the complexity of conducting remote consultations and the knowledge needed to deliver high-quality remote care for diverse patient groups it needs to be organisationally embedded and utilise non-didactic training, for example, joint clinical sessions, case-based discussions, and in-person, whole-team, on-the-job training (Greenhalgh, 2024). A training resource from the RCGP for example, became available in November 2020 and is still available.
119. There was little training or educational support available at the outset of the pandemic specifically to address remote clinical consulting skills, both for whom it may be reasonable or acceptable and how to consult effectively this way. There was some early guidance (e.g. Guidance by NHS and Royal College of General Practitioners titled Principles of safe video consulting in general practice during COVID-19, dated 29/05/2020, INQ000470458) and some resources describing essential elements (Greenhalgh, 2020; IRIHS Research Group, 2020) but formal training is different and educational support needs to build on established theory and best practice to maximise learning and enable clinicians to gain new skills. Given the rapid change in 'normal' practice to include a large proportion of remote consulting through 2020, GP trainees (registrars) were assessed on remote consulting after that time, and it became a focus of training. There was limited impetus or requirement on established

GPs to undertake the same. It is a learning need. Continuing professional development and appraisal systems could encourage this for the likely event of a future pandemic. In the early stages of the pandemic, educational priorities were largely overtaken by those of clinical delivery and organisation.

120. **Safety** was examined in some studies. One qualitative study in 12 general practices across England, Scotland and Wales found that safety incidents (identified from incident reports and from interviews with staff) had only happened in telephone consulting during the period 2021-23 among those practices participating. Relevant factors included inadequate information gathering, limited clinical assessment, inappropriate pathway (e.g., wrong algorithm) and inadequate attention to social circumstances, complex pre-existing conditions, vague or generalised symptoms, staffing constraints and high demand (Payne et al, 2023). The study also noted that serious harms or deaths were extremely rare. Another study, mainly re-analysing data from other studies, across the UK (mainly England and Scotland), identified key areas for risk that require attention (Rosen et al, 2022). These were:
 - practice set-up and organisation (including digital inequalities of access);
 - communication and clinical relationships;
 - quality of clinical care (including missed diagnoses, safeguarding challenges, over-investigation, and over-treatment);
 - increased burden on the patient (for example, to self-examine and navigate between services);
 - reduced opportunities for screening and managing the social determinants of health; and workforce (including increased clinician stress and fewer opportunities for learning).
121. The authors identified that **risks need to be actively mitigated** by measures that include digital inclusion strategies, enhanced safety-netting, and training and support for staff.
122. A further study based on the Remote by Default study (in England) identified that patient safety was compromised by the driving logic of 'stay home' and 'protect the NHS' (Wieringa et al, 2023), in which both patients and clinicians were encouraged to act in a way that helped reduce pressure on an overloaded system (Wieringa 2023).
123. A figure from the study of Murphy and colleagues represents some of the continuously evolving experiences in the early pandemic period (Murphy et al. 2021). It refers to elements of the "Normalisation Process Theory" that has been used in many aspects of healthcare to help understand whether innovations become 'normal' in practice. These elements cover the "coherence" (do staff understand it similarly?), "cognitive participation" (do they plan to do something about it?), "collective action" (do they work together to achieve it?) and "reflexive monitoring" (do they measure how it is going and respond to this?).

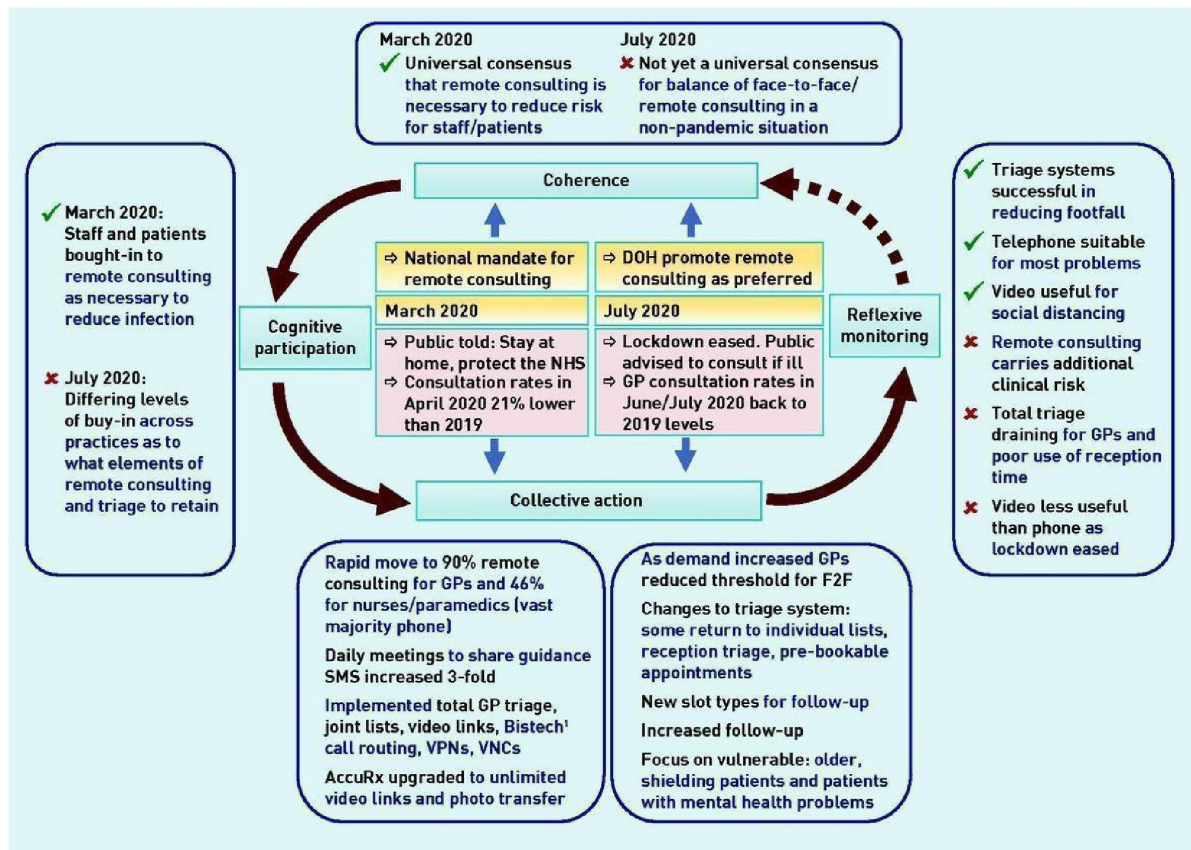


Figure 11: Normalisation Process Theory model of remote consulting. (Murphy et al. 2021)

124. The figure portrays that in March 2020 there was strong impetus to undertake remote consulting, for staff safety, to rapidly upgrade and implement the necessary technology, and the figure showed that significant changes were made.
125. Overall, “the shift to remote consulting was seen as **successful and a focus was maintained on vulnerable patients**. It was driven by the imperative to reduce contagion and may have risks; post-pandemic, it was noted that the model will need adjustment.” (Murphy, Scott et al. 2021).
126. By July 2020, less of a “one size fits all” understanding and approach was evident and that this approach needed to be adapted. The “remote by default” view expressed by the Secretary for Health and Social Care (England) in July 2020 was not evident in practice and not supported broadly by practice teams or by leaders in primary care in the UK (Greenhalgh and Rosen, 2021).
127. A different study found that caution was required about **potential unintended consequences of online consultations** (Turner et al. 2022).
128. This qualitative study in UK primary care (8 practices, undertaken before the pandemic period) found consequences of online consultations included “restricted patient access to

care by making it **difficult for some patients to communicate effectively with a GP and disadvantaging digitally excluded patients**. This stemmed from patient uncertainty about how their queries were dealt with, and whether practices used online consultations as their preferred method for patients to contact the practice. Consequences were identified that limited increases in practice efficiency by creating additional work, isolation, and dissatisfaction for some staff.”

129. Particular patient groups who have trouble with online consultations – termed ‘digitally excluded’ above – include older persons, less educated, less affluent, people whose first language is not English, and others where digital access or privacy cannot be ensured. The study concluded that **“online consultation tools favour simple, well-formulated information exchange that leads to diffuse relationships”** (rather than the usual one-to-one traditional doctor-patient relationship) **“and a more transactional style of medicine”** (a simple task to be completed, such as provision of a medication, or advice about medication, or sickness certification and letters for external agencies like the council rather than requiring a ‘therapeutic relationship’).
130. My opinion is that much of general practice care, and what is most valuable about it, is not transactional in nature. It is relational. There are decades of research on communication and relationships in general practices. There are benefits from established doctor-patient relationships, with continuity over time and across different conditions, and members of the family. These benefits include both experience and satisfaction, but also health outcomes themselves, and improved cost-effectiveness (Baker and Jeffers, 2016). Although these benefits are well-established, they are under threat from the increased fragmentation in general practice, including that clinicians are often not full time now, and the multidisciplinary team make-up (so patients are directed to the person best able to meet that need).
131. A recent population survey about presentation of cancer-related symptoms during the pandemic found inequalities in the use of remote primary care consultations. **“Participants with higher education levels had significantly greater satisfaction with remote consultations”**. There was higher satisfaction among those living in Wales versus Scotland (though from small sample sizes). There were only 21 participants from Northern Ireland, so comparisons are not very valid. Age and occupation levels were not significantly associated with satisfaction. It was concluded that **individuals with lower levels of education may need further support with remote consultations** in primary care to improve their satisfaction or be offered face-to-face consultations (Lifford et al. 2024).
132. These findings also corroborate those in a systematic review of studies before the pandemic, thus indicating a **persistent concern for future adoption of remote consultations** (Parker, et al. 2021).
133. “Remote consultations in general practice were more likely to be used by younger, working people, non-immigrants, older patients, and women, with internet-based consultations more by younger, affluent, and educated groups”. This issue was particularly relevant early in the pandemic for the Clinically Vulnerable (‘shielding’) group of patients. The review noted above was from pre-pandemic studies so does not address suitability for Clinically Vulnerable people, but it would seem likely that remote consultations were helpful for people in this group early in the pandemic as a means for accessing some healthcare.

134. It was considered then that “widespread use of remote consultations should be treated with caution **until the inequalities impact on clinical outcomes and quality of care is known.**” The pandemic stimulated significant change, but such research on groups less able to take up the new ways of providing services is still needed. A focus is needed on what works, when, for whom, and what measures are needed to ensure equitable use across population groups.

Online consulting

135. As well as “telephone first” developments and evaluations described above (both before and during the early pandemic period), there was also interest before the pandemic about whether the potential benefits of “**Digital First**” methods for accessing primary care might outweigh the potential harms. There were some early examples of implementation, for example, in London with 60,000 users (patients), but also **debates about how this would work out** in practice and for whom (*“is it the Uber of general practice that will make it easier for people to get hold of a GP? Or is it going to cause the demise of general practice as we know it by creating a two-tier system?”*) (Baird, 2019).
136. There are concerns about whether Digital First approaches may particularly disadvantage some groups such as older persons or those without access to the internet, smart phones etc, and thus **potentially widen inequalities** in health and health care. These disadvantaged groups are likely to have the greatest health and health care needs. The innovations may therefore be contributing further to the “inverse care law” which applies in general practice as much as it applies everywhere else. Specific support is recommended for example in NHS England’s “Top Tips” (NHS England, 2023c). More research is needed though to fully understand the influences and the effectiveness of strategies to address these inequalities.
137. The inverse care law was conceptualised over 50 years ago and is the principle that the availability of good medical or social care tends to vary inversely with the needs of the population served (Tudor Hart, 1971). Sadly, despite being identified over 50 years ago, and considerable efforts to tackle it, this problem still persists. GP Practices in areas with the poorest communities have on average 14.4% more patients per fully qualified GP than practices in wealthy areas, and they receive 7% less funding to cope with the additional needs of their local populations (RCGP, n/d). Nevertheless, we can remind ourselves of the drivers to examine such innovations - as above, **overall experience of access is deteriorating**”(The Health Foundation, 2024).

Promoting online consulting

138. Implementing remote consultation systems in GP practices is a complex task. In January 2020 NHS England published an Implementation Toolkit (195 slides, the first half intended for GP practices, the second half for commissioners, still signposted via (NHS England, 2023a) to support progress to Online Consultations in Primary Care, intended for practice managers and GP partners to review and implement. The toolkit was also supported by an e-learning module on ‘Remote Total Triage Model in General Practice’ published on the ‘e-learning for healthcare’ website on 26 March 2020. A similar toolkit was produced by TEC Cymru for Wales (Ahuja et al. (no date). In Scotland the Near Me video consulting system has been set up with hubs across Scotland for a range of healthcare encounters (Scottish Government, no date). I have not encountered equivalent resources for Northern Ireland.

139. Publication of the NHS England Toolkit at this time (just before the start of the pandemic) may mean that the Implementation programme was hindered from its original intention and roll out plan (such as a more gradual and incremental approach), although the imperative from the early **pandemic system stresses could also have been a positive stimulus** for very rapid uptake and widescale implementation. The clinical necessity drove this, rather than other influences such as GP practice or patients' preferences. From my other work on Implementation toolkits (NIHR funded study of GPs working in Emergency Departments (Davies, et al. 2024) my personal opinion is that a Toolkit of this scale (& areas to consider, discuss, evaluate etc) presents significant challenges towards effective implementation – it is likely to be too time-consuming, complex (there is much content in most slides), not well-designed for education, dissemination and uptake by end-users (practice staff). General educational principles of good practice and effective learning, as well as implementation science frameworks (see above, e.g. Normalisation Process Theory) would all also support simpler, targeted, more accessible ways of delivering and promoting uptake of a Toolkit.

Evidence about online consulting

140. For various situations or patient requests, there has been interest in whether the service can be provided and completed by 'telemedicine'. This might be 'synchronous' (doctor and patient communicating at the same time) or 'asynchronous' (not in real time together, such as by emails, text (and images) or a dedicated message system linked to the clinical record).
141. A review by Leighton et al examined evidence about **asynchronous telemedicine** before and during the pandemic (Leighton et al. 2024):
142. 27 reports from 23 international studies (9 from UK (i.e. England and Scotland, not Wales or Northern Ireland) and most others from comparable health systems) were included. Asynchronous telemedicine is used by a range of staff and patients. Safety and equity are poorly reported but there were **no major safety concerns**. Evidence from other domains of healthcare quality show effectiveness in making diagnoses, prescribing medications, replacing other consultations, providing timely care, and increased convenience for patients. **Efficiency is impacted by negative effects on workflow**, through poor implementation and patient non-adherence, limiting usability and requiring new administrative approaches from healthcare staff. **Asynchronous telemedicine use increased rapidly from March 2020**, following the Covid-19 pandemic outbreak. Overall use, whether initiated by patients or GP, has fallen back from those peaks during the pandemic period. (*Declaration of interest – I am a co-author of this paper*).
143. A review by Lindenfeld et al examined evidence about **synchronous telemedicine** (largely video-consulting) before and during the pandemic (Lindenfeld et al. 2023):
144. **Synchronous home-based telemedicine for primary care experienced growth during the Covid-19 pandemic**. A review was conducted on the evidence reporting on the feasibility of synchronous telemedicine implementation within primary care, barriers and facilitators to implementation and use, patient characteristics associated with use or non-use, and quality and cost/revenue-related outcomes. 22 studies fulfilled the inclusion criteria (5 from the UK). Synchronous telemedicine was considered **appropriate for visits not requiring a physical examination**. Benefits included decreased travel and wait times, and improved access to care. For certain services, visit quality was comparable to in-person care,

and patient and provider satisfaction was high. Facilitators included proper technology, training, and reimbursement policies that created payment parity between telemedicine and in-person care. **Barriers included technological issues, such as low technical literacy and poor internet connectivity among certain patient populations**, and communication barriers for patients requiring translators or additional resources to communicate.

145. Within this review, some specific issues were noted of relevance to UK settings, albeit mainly in the pre-pandemic context. Donaghy and colleagues studied the use of “Attend Anywhere” technology in Lothian, Scotland. Video-calling was generally found to be superior to telephone consultations but technical issues and difficulty integrating with NHS systems were key barriers (Donaghy et al, 2019). Although patients really liked video-calling, the consultations were considered less ‘information rich’ than face-to-face and infrastructure issues would need to be addressed before the technology and approach can be mainstream in primary care (Hammersley et al, 2019). Likewise Khan found that patient satisfaction improved after implementing telephone consulting on a survey from 75% to 94% but the data are rather dated now (Khan, 2013).

Are some patient groups disadvantaged by online consulting?

146. There are concerns about the **impacts of these developments for specific groups of patients**, and whether some patients may be particularly disadvantaged. A range of studies provides some insights for these questions.
147. A review by Ilali and colleagues (Ilali et al, 2023) included 20 studies about either phone ($n=8$), video-conference ($n=9$) or both ($n=3$). Three studies were from the UK and all of these were published several years ago (2001-13). Among the studies reporting positive outcomes in telemedicine experience, ‘user habit or preferences’ was the most cited barrier, and ‘location and travel time’ was the most cited facilitator. Only one study reported negative outcomes (Foster, Dale and Jessop, 2001). This was one of the UK studies, identifying worry by older patients, who questioned whether primary care clinicians could assess their needs over the phone and ‘make accurate diagnoses in these circumstances’. Only one study reported a positive outcome in health-related and behavioural outcomes, so it was considered that further research was needed. Telemedicine in older adults’ primary care **generally led to positive experiences**, high satisfaction and generated an interest towards alternative healthcare delivery models.
148. A review by Mabeza and colleagues found a **limited evidence base** of 7 heterogeneous studies published between 2000-2018 (Mabeza, Maynard and Tarn, 2022). Three studies were from the United States, 2 in Spain, 1 in Sweden, and 1 in the United Kingdom. The telemedicine interventions investigated were multifaceted. All included synchronous visits with a primary care provider through videoconferencing and/or telephone, combined with other components such as asynchronous patient data transmission. Five studies reported on HbA1c changes (diabetic control), 5 on blood pressure changes, and 3 on changes in lipid levels. Compared to usual care with in-person visits, telemedicine was associated with greater reductions in HbA1c at 6 months and similar HbA1c outcomes at 12 months. Telemedicine conferred no significant differences in blood pressure and lipid levels compared to in-person clinic visits and so telemedicine was considered **not inferior to in-person visits** for the management of diabetes, hypertension, or hypercholesterolemia and was felt to hold promise for continued use of telemedicine **for chronic disease management**.

149. A small qualitative study from New York, USA (18 patients and caregivers; 6 patients with only primary care visits; 5 with only behavioural health visits; 3 with both; and 4 caregivers of children with paediatric visits) found that respondents broadly supported the option of home-based synchronous telemedicine visits in primary and behavioural health care (Berry et al. 2022). **Nearly all respondents appreciated remote visits**, largely because such visits provided a **safe option during the pandemic**. Patients were generally satisfied with telemedicine and believed the quality of visits to be similar to in-person visits, especially when **delivered by a provider with whom they had established rapport**. Although **most respondents planned to return to mostly in-person visits** when considered safe to do so, they remained supportive of the **continued option for remote visits** as remote care addresses some of the typical barriers faced by **low-income patients**.
150. Similarly, another study in Michigan, USA found that telehealth perceptions were generally favourable among rural patients and providers, although **satisfaction was lower among older patients and providers** (Klee et al. 2023). It was felt that telehealth approaches may add **value and efficiency to rural clinical practice**. However, **technology issues** for both patients and providers and gaps in care coordination need to be addressed to promote sustainability of telehealth approaches in rural practice.
151. Three Telemedical Applications (TAs), one synchronous, one asynchronous and one used in delegation were implemented and evaluated in 10 GP practices and two specialists' practices in **rural areas of northern Germany** (Waschkau, Traulsen and Steinhäuser 2022). Overall satisfaction with the TAs was generally high among GPs and specialists although impact on treatment of those TAs needs to be further investigated. Various "lessons learned" can be used as recommendations for further studies, for example, taking time to **identify market-ready technologies** prior to implementation, developing dedicated **training for users**, and preparation of a **technical support plan**.
152. From a **small qualitative interview study in the US** about experiences with telemedicine during the pandemic, patients were more satisfied if they were **able to choose** whether to have an in-person or video visit, while providers worried that allowing patients to choose the visit format could get in the way of care when patients need physical exams or laboratory testing (Muellers et al. 2024). Patients and providers gave different reasons for choosing a visit format, but both agreed that **telemedicine was useful for "quick fixes"** and making decisions together in emergencies. **Healthcare systems should create tools to help patients and providers decide when to use telemedicine**, especially when managing urgent health issues.

Practicalities of online consulting

153. There is therefore a body of evidence about the experiences with telemedicine, both before and during the pandemic. There may be various benefits in convenience, efficiency and managing workloads, and some important considerations to make sure that specific patient groups such as older persons, less affluent, rural communities are not disadvantaged. However, whether it is in fact practical to continue with this potential 'new normal' way of working **depends on fit-for-purpose technology and clinical systems** and applications. From the same RCGP report (2023) cited under Resilience / Workload A quarter of GP practices could close because of workload pressures, warns Royal College of GPs (RCGP, 2023).

154. “Outdated technology and ineffective booking systems are wasting doctors’ time and making it harder for patients to choose to see the same GP or the next available member of the team. Over half (55%) of GP staff said that at least one of their appointment booking systems, either via phone or online, were not fit for purpose. Improving GP practice booking systems and IT is not a silver bullet, but can make a big difference to patient experience.”
155. The BMA also reported similar limitations from its member survey [COVID-19: Impact of the pandemic on healthcare delivery \(bma.org.uk\)](#) (BMA 2023): *“to mitigate infection risk, general practice shifted to remote consulting where feasible, which further exposed the limitations of IT infrastructure within the UK health services”*.
156. NHS bodies and the Royal College of General Practice have acknowledged the need to advance IT and data systems as a priority within primary care. In 2019 the RCGP published Fit for the Future (RCGP, 2021a)— a recommendation on important changes to make General Practice viable and secure for the next 10 years. It includes a recommendation for advances in IT systems within General Practice. These advances are described in more detail in the Digital Technology Roadmap (RCGP, 2021b) which gives more detailed recommendations to necessary IT changes. Published pre-pandemic, this document noted the barriers in uptake in remote consultation in lack of IT infrastructure and adequate training.
157. NHS England has specified Digital Transformation as one of the cornerstones of its “Long Term Plan” (NHS Long Term Plan, n/d). The NHS in Wales has stated its intention to prioritise enhanced connectivity and IT systems including the use of “big data” and AI analytics to improve healthcare outcomes (Welsh NHS Confederation, 2020). Both the NHS in Scotland and Northern Ireland’s Department of Health have similarly committed to prioritising advancing technology to improve healthcare in the documents “Digital health and care strategy” (Scottish Government, 2021) and “eHealth and Care Strategy” (Department of Health, 2016), respectively.
158. A primary care recovery plan for England was announced in 2023 (NHS England, 2023b) (NHS England 2023), in addition to the long-awaited NHS long term workforce plan (NHS England, 2024b). It noted that urgent measures should include “Investment in GP practices’ IT and telephone systems, and the support they need to implement upgrades.”
159. There are very **few current studies about changes post-pandemic in access or telemedicine** opportunities. One scoping review has summarised some of the changes and issues raised. A scoping review is a type of evidence synthesis (review) that seeks to identify and map the available evidence, especially in emerging evidence topics, to identify research gaps and where more specific research questions are important to be answered, whether by new research studies or focused systematic literature reviews. It summarises the literature but does not include quality appraisal of those studies, so the strength of evidence is less certain than with systematic reviews.
160. The aim of this scoping review was to review the literature on the impact of Covid-19 on Primary Care (Khalil-Khan and Khan, 2023). From **31 studies** (majority from Europe, North America and Australasia, and including 12 in the UK) Covid-19 was found to have had substantial impacts on primary care practices, patients and staff.
161. Significant effects were reported on 1) service redesign, 2) long-term illness care provision, 3) healthcare staff well-being and 4) the post-pandemic future of Primary Care.” There were

changes “in consultation styles with patients, the impact on the physical and mental wellbeing of health workers, a shift from isolated practice to teamwork, as well as the ability of healthcare workers to seek prompt help with their health.” Studies also showed “progress in knowledge and experience gained by healthcare workers when tackling Covid-19, and how these can be implemented in possible future pandemics affecting Primary Care.”

Research and changing clinical practice during the pandemic

162. Several primary care research studies were rapidly undertaken as the pandemic progressed. It is essential that **evidence to be used in primary care derives from primary care** study samples as evidence from, for example, hospital studies may not be transferable owing to more severe patient illness.
163. The PRINCIPLE study ‘platform’ was established, led from the University of Oxford, with research sites across the UK. The platform enabled several studies to be undertaken, evaluating possible benefits of simple treatments that could be used in primary care to try to shorten the illness duration and severity, and its complications including hospitalisation and death. GP practices participated in these studies by identifying and recruiting patients, sometimes prescribing the treatment (although more usually managed from the central trial office) and following up patients with clinical outcome information.
164. PRINCIPLE’s studies showed that there were benefits in prescribing budesonide, a steroid (‘preventer’) inhaler commonly used for people with asthma. It did not show benefits generally for antibiotics (doxycycline, azithromycin), colchicine (gout treatment) or ivermectin (antifungal treatment) (The PRINCIPLE Trial, 2024). These trial results generally became available through 2021. These were very rapid timescales in terms of clinical research studies’ usual timescales (commonly 3-5 years), but obviously somewhat after the initial peaks in 2020. During 2020 patients might commonly have been prescribed additional antibiotics, on the basis that they might prevent secondary bacterial chest infections alongside the primary viral Covid-19 illness but the research evidence changed practice by showing that these did not provide benefits for patients with Covid-19 in the community.
165. Other examples of primary care trials include the PANORAMIC study of using molnupiravir (antiviral therapy) in high-risk vaccinated patients in the community with Covid illness (Butler et al, 2023). These patients were high risk because of co-existing other illnesses like diabetes, heart or respiratory disease or aged over 50 years. The trial did not show a benefit for this group of patients in the community. Other evaluations of using these types of antiviral drugs among the highest risk population (largely the ‘shielding’ population) did show some benefits in preventing hospitalisation and deaths (Evans et al, 2023) (Declaration of interest: I was a co-author of the latter study).
166. Another area of research concerned the vaccine trials. The Oxford Astra-Zeneca vaccine was evaluated initially in the UK, Brazil and South Africa (Voysey et al, 2021). In the UK there were 19 study sites across England, Wales and Scotland. Some primary care staff contributed (outside usual practice commitments) to study processes such as health screening of volunteers for the trial (probably mainly May, June 2020). Clearly this was an urgent study of greatest importance. Rapidly establishing the infrastructure and capacity to undertake it, and navigating regulatory requirements, in multiple areas of the UK was a substantial challenge.

167. This is far from an exhaustive summary of research available regarding primary care management, which is being covered further in module 4 of the Inquiry. Numerous other studies undertaken across the UK are cited elsewhere in this report, including a range of methods such as qualitative (e.g. interviews with staff and patients), prevalence studies, using routine data in the NHS to assess whether health outcomes changed from before to after an intervention was delivered, and literature reviews of a collection of studies.
168. The points are that it is vital that **primary care clinical practice is wherever possible informed by evidence (research) directly from primary care settings** so that the patient groups and ways of delivering treatments are comparable. Many primary care staff contributed to the delivery of these studies. The amount and quality of evidence available progressed rapidly during the pandemic, including in primary care. What is considered apparently '**best practice**' **changes in the light of studies publishing** their results. The best quality evidence comes from these large scale (often UK-wide) studies, and these require an infrastructure to deliver them. This **infrastructure was not available at the start of the pandemic and needed to be rapidly established**. As studies have wound down now, the infrastructure also reduces again. It needs to at least be available to respond quickly again in the event of a further pandemic, coming out of 'hibernation'. This can be achieved by **resourcing research infrastructure** that may be researching other areas (i.e. non-Covid primary care) but which provide capacity for rapid re-focusing in the event of a pandemic.

Patients who were missed during the pandemic

169. Regarding numbers and types of patients presenting in general practice during and since the pandemic, some studies examined whether patients stayed away and for how long during the early pandemic pressures.

Long term conditions

170. One study explored the effects of Covid-19 on the **recorded incidence of 17 long-term conditions**, including stroke, diabetes, chronic lung disease, chronic kidney disease, ischaemic heart disease (angina and heart attacks), rheumatoid arthritis, inflammatory bowel disease (Crohn's and Ulcerative colitis), depression and anxiety (Qi et al. 2023) (Declaration of interest – I am a co-author of this study).
171. This was based on the premise that much attention was rightly given to pressures and capability of services to maintain treatment targets and throughput regarding both cancer treatment and elective surgery, but little attention appeared to have been given to long-term conditions, such as those above, much of which takes place in primary care.
172. The study was an observational retrospective population data linkage study on the population of Wales using primary and secondary care data within the Secure Anonymised Information Linkage (SAIL) Databank. This database in Wales is excellent for its coverage of almost the whole population as a study sample. I am not aware of equivalent analyses in England, Scotland or Northern Ireland but would expect the patterns to be very similar in those countries too.
173. Monthly rates of new diagnosis (incidence rates) between 2020 and 2021 were examined for each long-term condition. Incidence rates post-2020 were compared with expected rates predicted using analysis of pre-2020 trends. A total of 5,476,012 diagnoses from 2,257,992 individuals was included. The number of new cases of each condition fell from 2020 to 2021 and below the average predicted rates across all conditions. The largest relative deficit in incidence was in chronic obstructive pulmonary disease corresponding to 343 (95% confidence interval=230 to 456) undiagnosed patients per 100,000 population, followed by depression, type 2 diabetes, hypertension, anxiety disorders, and asthma. **A GP practice of 10,000 patients might have over 400 undiagnosed long-term conditions that would in normal times have been diagnosed.** No notable differences between sociodemographic profiles of post- and pre-2020 incidences were observed.
174. Thus, there was a **potential backlog of undiagnosed patients with multiple long-term conditions**. If patients are undiagnosed, they cannot be coded onto the clinical system and then included in systematic screening, monitoring and clinical management according to evidence-based guidelines. The RCGP Covid-19 Resources hub noted 2 million fewer people with high blood pressure were recorded as having controlled blood pressure during the pandemic period (RCGP, n/da).
175. The authors of the SAIL Databank study concluded from these data about the scale of the deficit, that they indicate that **resources were required to tackle anticipated workload** as part of Covid-19 recovery, particularly in primary care. It is not clear that such resource provision has been made, and while some of the patients' conditions will have been identified

by now, a residual missing group remains likely. It is not known the extent to which this backlog of cases may by now (2022-24) have presented anyway, whether by primary care surveillance (regular blood tests etc) or through hospital admissions.

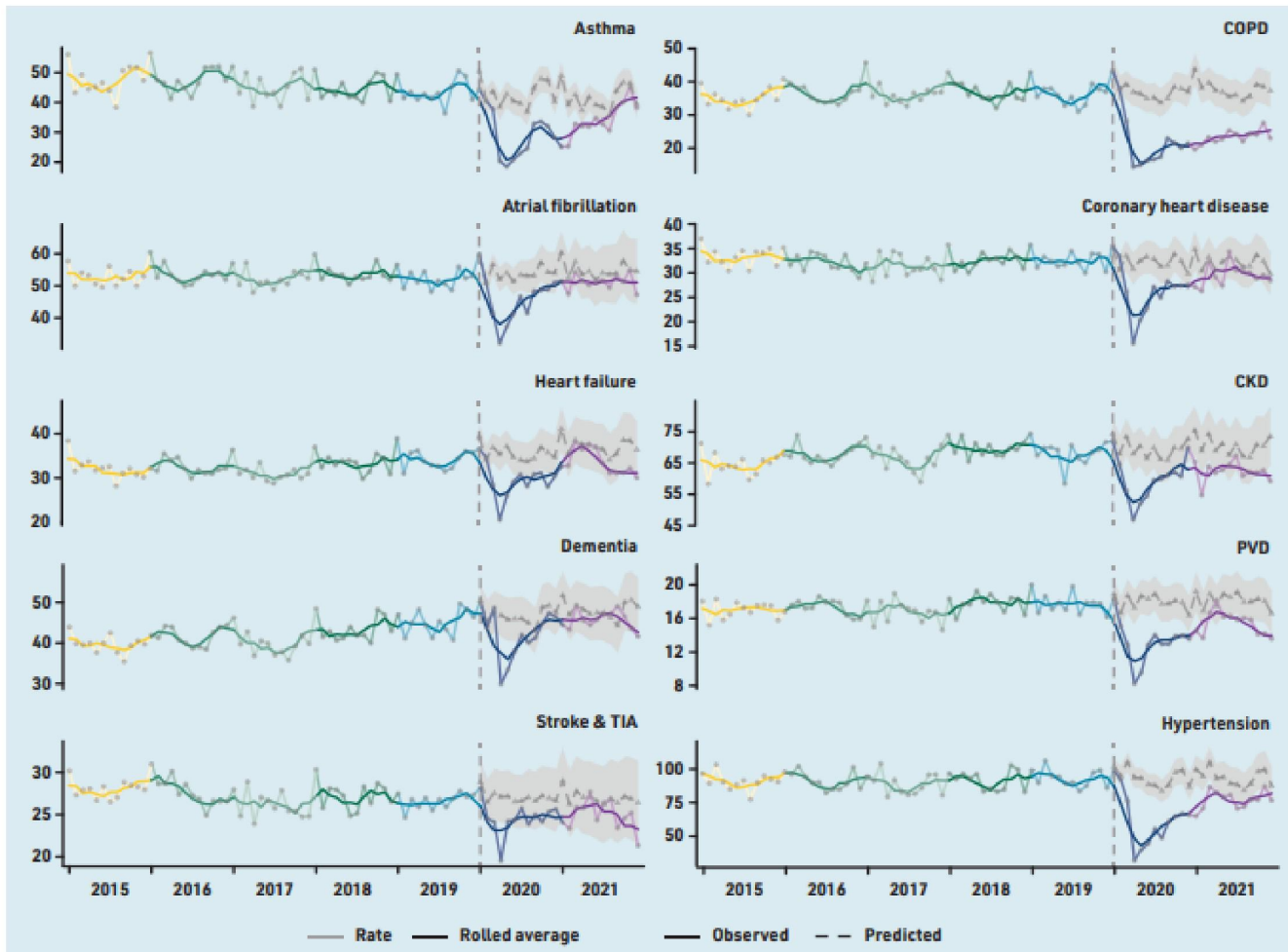


Figure 12: Dips in recorded incidences of long-term conditions in early 2020, not rebounding to demonstrate a ‘catch-up’ effect. (Qi et al. 2023) (Legend: TIA = transient ischaemic attack (“mini-stroke”); CKD = chronic kidney disease; PVD = peripheral vascular disease (“hardening of arteries”) in the legs)

Cancer symptoms

176. Another paper examined changes in presentation of cancer symptoms, asking respondents about their experiences of symptoms of concern (Quinn-Scoggins et al, 2021).
177. This UK population-based survey was conducted during August and September 2020 examining patients’ help-seeking behaviour for potential cancer symptoms during the previous 6 months (both quantitative and qualitative analyses). There were 7,543 adults recruited via Cancer Research UK, Health Wise Wales (research platform) and social media. Survey measures included experiences of 15 potential cancer symptoms (both more specific

such as a lump or bleeding, and non-specific like fatigue, weight loss), and patients' help-seeking behaviour, barriers and prompts to help-seeking.

178. **Results were stark:** of 3,025 (40.1%) participants who experienced a potential cancer symptom, **44.8%** (1,355/3,025) **had not contacted their general practitioner (GP)**. Odds of help-seeking were higher among participants with disability (adjusted Odds Ratio (aOR)=1.38, 95% CI 1.11 to 1.71) and who experienced more symptoms (aOR=1.68, 95% CI 1.56 to 1.82), and lower among those who perceived Covid-19 as the cause of symptom(s) (aOR=0.36, 95% CI 0.25 to 0.52). (Analyses were 'adjusted' or weighted to account for differences between the study sample and the whole UK population for age, gender, ethnicity and UK country.)
179. Barriers included worries about wasting the doctor's time (1,158 out of 7,543 respondents, 15.4%), putting strain on healthcare services (945, 12.6%) and not wanting to make a fuss (907, 12.0%). Interviewees reported reluctance to contact the GP due to concerns about Covid-19, fear of attending hospitals and described '**putting their health concerns on hold**'.
180. Equivalent figures before the pandemic are not available, but the substantial drops in "2 week wait" referrals (see below) indicate this was a profound change in help-seeking behaviour by patients. Thus, many people had avoided healthcare services despite experiencing potential cancer symptoms during the Covid-19 pandemic. This demonstrated the need for nationally coordinated campaigns to signal that services were open safely for those with unusual or persistent symptoms.
181. Another study examined electronic health records (Nicholson et al, 2022). This cohort study from electronic health records data from 8,192,069 patients from 663 English practices calculated weekly consultation rates, cumulative consultations and referrals for 28 clinical features from the NICE suspected cancer guidelines. It compared time periods in 2020 with 2019. **Consultations for cancer clinical features decreased by approximately 24%** between 2019 and 2020, particularly in the 6–12 weeks following the first national lockdown. **Urgent referrals for clinical features that may indicate cancer decreased by approximately 10%** between 2019 and 2020.
182. Other authors also identified profound declines in urgent "2-week-wait" referrals for early cancer diagnosis, which had not returned to pre-COVID-19 levels through 2020 (Lai et al, 2020). Reasons for this were considered as, reflecting patients' deciding not to seek care due to the perceived risk of infection but could also be in part due to difficulty in securing appointments due to "reprioritised health systems".
183. Overall, **once patients consulted with primary care, GPs or Advanced Nurse practitioners urgently referred a similar or greater proportion** of patients compared to previous years. Despite this there was a **lower-than-expected number of urgent referrals in 2020**, warranting sustained efforts to encourage the public to consult their GP with cancer clinical features.
184. These changes in experiences and behaviours reflect changes in perceptions of general practice services during the early pandemic period. The study by Duncan and Cheng (2021) was reported as a pre-print and now has two peer review comments made, though is not actually in a journal yet. It examined public perceptions of the changes in general practice in

England early in the pandemic period, and its findings may shed some light on the influences leading to those changes in presentations (long term conditions and cancer related symptoms) noted above.

185. Two online surveys were developed and conducted in August and September 2020. The perceptions of 150 members of the public were obtained. 105 had considered contacting general practice, although **half avoided this or delayed doing so** for longer than usual. While some patients did so 'to help the NHS', **others experienced reduced access for reasons including concerns about telephone consultations and about Covid-19 safety.**
186. **Some, however, reported benefitting from remote consultation availability** and regular texts/emails from their practice. 68% (102/150) of respondents were unaware that patients with Covid-19 were seen separately from other patients during general practice appointments. 27% who had avoided or delayed contact said they would have felt more comfortable contacting general practice had they known this. Thus, experience and use of the adapted general practice models varied. Some patients felt their access to healthcare was reduced, often due to technological requirements. For some who found attending face-to-face appointments difficult however, remote contact was advantageous. Assessment of adapted delivery model accessibility and **clearer public messaging about the changes may help reduce inequalities.**

Pulse oximeters for Covid-19 care at home

Introduction

187. In general, this report focuses on systemic issues affecting primary care during the pandemic, not on the clinical care provided specifically to Covid-19 patients. Module 3 of the Inquiry has an expert report on intensive care, which describes the pathophysiology of Covid-19 and treatment provided in hospitals. It also has an expert report on care for patients with Long Covid. Module 4 of the Inquiry will have an expert report on therapeutic drugs given in the community and in hospitals, and the clinical trials used to test them.
188. I have been asked to comment specifically on the use of pulse oximeters for the care of patients with Covid-19 in their own homes. The following paragraphs provide a brief contextual introduction to the care GPs usually provide to patients with respiratory infection in the community.
189. General practice provides the majority of care required for patients with undifferentiated (i.e the pathogen is not initially known, but usually it is bacterial or viral) respiratory infections in the NHS, seeing large seasonal waves of patients every year. Covid-19 reflected this to some extent, albeit not initially in a seasonal pattern. Most patients with respiratory infection seeing a GP or Advanced Nurse or Advanced Care Practitioner will have symptoms on the milder and/or earlier end of the spectrum. These clinicians will also often see more severely ill patients who are then referred to hospital, or very frail patients nearing the end of life due to other health problems, who develop a respiratory infection but for whom escalation to hospital may not be in their best interests or reflect their goals of care.
190. General practice staff need to assess patients with an acute respiratory infection. This often includes checking their oxygen levels in the surgery or on a home visit as part of their examination, and prescribing any required treatment such as a course of antibiotic tablets. Antibiotics are not effective for the viral infection Covid-19, but they may be given if a clinician suspects that there may also be a susceptible secondary bacterial infection contributing to the illness. It was not until later in the pandemic (2022 onwards) when sufficient evidence was available that NICE recommended GPs to start specific treatments for Covid-19 in the community, such as Paxlovid (nirmatrelvir/ritonavir), though these were available via research studies for participating GP practices. Throughout the pandemic GPs would routinely prescribe medication to manage symptoms like fever or breathlessness.

Adoption of pulse oximeters for Covid-19 care in the community

191. Very early in the pandemic there was considerable interest in adding home monitoring of patients' oxygen levels with 'oximeters' to the usual care that GPs were providing. The purpose was to try to identify those patients who were deteriorating rapidly or significantly with Covid-19 disease and who would warrant secondary care assessment and treatment. This built on what was becoming fairly common practice for some patients – mostly those with chronic obstructive pulmonary disease – who used oximeters at home as part of monitoring their condition and home oxygen treatment, with support from a respiratory

specialist nurse and related clinical team. The use of pulse oximeters at home for patients with Covid-19 was considered for patients who were apparently relatively well, not needing admission, and the intention was to allow early detection of low oxygen saturation levels (sometimes also called 'silent hypoxia') and escalation of care as necessary. Partly informed by an evaluation of services established on an ad hoc basis in some localities during the first Covid-19 wave, there was a national roll-out of these services by NHS England leading up to winter 2020/2021 and the second wave (see below – Covid Oximetry at home - 'CO@h'). Oximetry is intended to be part of package of care, support (including patient education to undertake oximetry), monitoring and clinical assessment and review. There was also a different area of interest, that is in whether home oximetry to measure oxygen may enable safe and earlier discharge from hospital to home (still under secondary care responsibility), often called 'COVID Virtual Wards' (CVW), discussed below.

192. Oximeters are sensors applied usually to a fingertip to assess the level of blood oxygen (and also pulse rate). Generally, someone's oxygen level should be close to 100%. During the pandemic it was felt that a primary care patient with oxygen levels consistently below 94% (or below 88% in the presence of chronic lung disease) required further assessment for severity and complications of Covid-19, and consideration as to whether they should be referred for hospital assessment (Greenhalgh, 2021). Oximetry has been a routine part of general practice clinical assessment, especially for acute illness including respiratory infection, for many years. GPs, nurses, paramedics, health care assistants and increasingly many patients (notably those with asthma or chronic obstructive pulmonary disease) commonly use oximeters.



Figure 13: Typical example of a pulse oximeter

193. There was early interest in the potential for oximeter readings in primary care to aid decision making, including sometimes to avoid the need for direct clinical examination. It was envisaged that a patient could be monitoring their blood oxygen, recording readings, and reporting to the GP or other staff if there were a deterioration or sustained lower levels (<94%). GPs or staff might also plan to contact daily or at intervals to discuss a patient's condition, including their oxygen levels. The exact nature and frequency of contacts would vary, sometimes supported by local guidelines, other times discussed and agreed with

patients or families. The issue was principally about supply and availability of oximeters, and then supporting people to use them accurately, regularly, understanding the changes about which to raise concern, and who and how to contact.

194. There was a **very limited evidence base at the outset of the pandemic**. Aware of this, for example, I was involved in submitting a proposal for evaluation to primary care leads in the Welsh Government in late 2020, but funding could not be identified to conduct the evaluation. There was a scheme of ensuring that practices in Wales had a 'stock' of oximeters (in my practice we had 20 delivered, from memory also early 2021) to be able to loan to patients for home monitoring purposes. This occurred without rigorous evaluation of effectiveness, safety and patient experience.
195. An early review by Health Technology Wales (Health Technology Wales, 2020) identified very little high-quality evidence to support oximetry home monitoring, but noted four early studies in progress that would report soon at that point. The Welsh government's position not to endorse the use of self-monitoring at home using pulse oximeters in the context of COVID-19 was confirmed in a response to another Senedd member's query on this subject by the then Health Minister, Vaughan Gething (Gething, 2020). I was also involved in a review by the Wales Covid-19 Evidence Centre for the Technical Advisory Group that advised Ministers in the Welsh Government. This rapid summary of available evidence early in the pandemic concluded that safety and cost-effectiveness were still uncertain and that there was still limited evidence to support the use of home monitoring using pulse oximetry in people with COVID-19 symptoms to guide future management (Wales Covid-19 Evidence Centre, 2021).

Possible racial differences in the ability of oximetry to detect low oxygen levels

196. One specific piece of evidence became available in December 2020 concerning possible racial differences in the ability of oximetry to detect low oxygen levels (Sjoding et al, 2020). A letter or short report to the New England Journal of Medicine reported a study from Michigan, USA which found that oximetry failed to detect significant true low oxygen levels (measured from blood test as compared with oximetry) in 11.4% of Black patients and 3.6% of White patients. The British Medical Journal reported on this report at the same time. Awareness and adoption of this evidence likely varied across the primary care workforce. There is therefore a risk that lack of awareness led to increased clinical risks by continuing to monitor primarily with oximetry in BAME patients. As above, oximetry monitoring was always intended to be part of a package of care, support, monitoring and clinical assessment and review. However, if clinicians did primarily monitor via oximetry and without awareness of the potential racial disparities in validity, this could have further increased disparities in outcomes of Covid-19 for BAME patients, who would have encountered more complications with later detection of deteriorating oxygen levels and the need for care escalation. There is a need for further research about the extent of this risk leading to harm, but if so, this represents a specific patient safety element of future guidance for use of oximetry.
197. Uncertainty over the accuracy of oximetry for patients with darker skin tones is noted in the witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 09/07/2024 , para 970, 976-985, and 989-90 (INQ000485652) and that advice was issued from NHS England in December 2020, including that management for all patients should continue to be holistic (by the patient's condition, not just numbers driven) and with

appropriate safety-netting for all patients. I have not identified evidence about the extent of awareness or lack of awareness among primary care staff, and whether this may have affected patient safety particularly in patients with darker skin tones.

198. A substantial literature on this topic has developed over the last 3 years. Al-Halawani and colleagues reviewed 30 studies assessing effect of skin pigmentation on accuracy of pulse oximetry (Al-Halawani et al, 2023). Eighteen of the 30 included studies, mostly from hospitalised patients, showed statistically significant effects of skin pigmentation on accuracy of oximetry. The authors conclude that there is likely to be an effect of skin pigmentation on accuracy of pulse oximetry.
199. Of note, three large studies (Burnett et al, 2022), (Wong et al, 2021) and (Henry et al, 2022) including 151,070, 87,971 and 26,603 patients respectively all found higher rates of 'occult hypoxaemia' (normal pulse oximetry readings with concurrently abnormal low blood-gas measured oxygen saturations) in patients with greater skin pigmentation.
200. The UK Government, in response to this growing body of evidence, commissioned an independent report on equity in medical devices, published in March 2024 (Department of Health and Social Care, 2024). This report acknowledged the significant body of evidence about pulse oximetry and set out seven recommendations on optical devices (i.e. those taking a reading measured through a patient's skin):
 - 200.1. "Regulators, developers, manufacturers and healthcare professionals should take immediate mitigation actions to ensure existing pulse oximeter devices in the NHS can be used safely and equitably for all patient groups across the range of skin tones.
 - 200.2. MHRA and approved bodies for medical devices should strengthen the standards for approval of new pulse oximeter devices to include sufficient clinical data to demonstrate accuracy overall and in groups with darker skin tones. Greater population representativeness in testing and calibration of devices should be stipulated. (note: this is an issue regarding use of oximetry in primary / community care where illness severity may be less than in hospitalised patients so there could be differences in the way oximetry works, and this needs to be evaluated to confirm whether the problem is as important as the evidence notes it to be in the mainly hospitalised patient study groups).
 - 200.3. Innovators, researchers and manufacturers should co-operate with public and patient participants to design better, smarter oximeters using innovative technologies to produce devices that are not biased by skin tone
 - 200.4. The professional practice bodies in the UK, such as the Royal Colleges, should convene a task group of clinicians from relevant disciplines - including medical physicists, public and patient participants, developers and evaluators - to carry out an equity audit of optical devices in common use in the NHS, starting with dermatological devices (note: this is not the specific focus of interest for the Inquiry and its questions about oximeters, but addresses inequities in general in relation to arrange of devices, this one for example about diagnosing skin lesion), to identify those at particular risk of racial bias with potential for harm,

which should be given priority for further investigation and action (the point for further research is important for all such devices)

- 200.5. Renewed efforts should be made to:
- increase skin tone diversity in medical imaging databanks used for developing and testing optical devices for dermatology, including in clinical trials
 - improve the tools for measuring skin tone incorporated into optical devices
- 200.6. Once in use, optical devices should be monitored and audited in real-world conditions to evaluate safety performance overall and by skin diversity (this is very relevant for primary and community care patients). This will ensure any adverse outcomes in certain populations are identified early and mitigations implemented
- 200.7. A review should be conducted by the relevant academic bodies of how medical education and continuing professional development requirements for health professionals currently cover equity issues arising in the use of medical devices generally and skin diversity issues in particular, with appropriate training materials developed in response.” (Department of Health and Social Care, 2024)

It is important that steps are taken to ensure that all relevant agencies are aware of these recommendations, and that there is training for GPs and practice staff to ensure they are aware of the strengths and limitations of oximetry in home monitoring.

The COVID Oximetry @home (CO@h) programme

201. In England, various remote home monitoring models (notably the COVID Oximetry @home (CO@h) programme, see below) were set up during the first wave of Covid-19 to assist GPs to remotely monitor patients considered at high-risk of deterioration at home. This was intended to: (1) avoid unnecessary hospital admissions and promote appropriate admissions (appropriate care at the appropriate place), and (2) escalate cases of deterioration at an earlier stage to avoid invasive ventilation and ICU admission.
202. A multi-site mixed methods study conducted between July and August 2020 (first pandemic wave) (Vindrola-Padros et al. 2021) identified various facilitators and barriers to its implementation. The study combined interviews (n = 22) with staff delivering these models across eight sites in England with the collection and analysis of data on staffing models and resource allocation.
203. Facilitators to implementation included:
- Active role played by dedicated clinical leads
 - Significant support and buy-in from senior management and CCGs
 - Good communication between clinical team members

- Paper/ video information for patients to explain the concept of home monitoring how to take pulse oximeter measurements
204. Barriers / challenges to implementation:
- Unclear referral criteria and processes
 - Staff struggled to deliver seven-day service due to workforce availability
 - Lack of published data to support design of remote monitoring models
 - Challenging and time consuming to collect data
 - Integration of service data with existing patient administration systems was generally poor (Vindrola-Padros, Sidhu et al. 2021).
205. The same research group evaluated the experience with implementation of “COVID Oximetry @home (CO@h) services”, with an early evaluation in 2021 (Oximeters at home PowerPoint Presentation). There was **large variability in the models implemented** in relation to the design and intensity of monitoring, workforce numbers and skill mix, start date, uptake levels and enrolment criteria (e.g. national age criteria were broadened in nearly all areas studied). It was expected that CO@h may reduce mortality and lead to better use of secondary care services, however this robust national evaluation, delivered by three evaluation teams, did not identify these effects. A full report of the evaluation was published in 2023 (Fulop et al, 2023).
206. There was a **lower uptake** of services than expected, **spread across a wider group of patients than envisaged** in national guidance. The evaluation process was complicated by low uptake and/or missing data along with the wide range of CO@h services offered and the challenges of developing new data flows alongside rapid service implementation. Although the study recorded a number of deaths and the number of patients discharged from the virtual wards, **no direct attribution was made as to whether direct harms** from the service may have occurred. As a result, we do not know whether the **lack of significant findings** represents a lack of impact of the actual programme on the outcomes examined or inability of the research to detect an impact.
207. There was evidence of disparities in access and uptake to the CO@H services. Fulop et al report: *“Despite these local adaptations to services (to adapt to context and to try to meet local need), disparities were reported across patient groups. Age ($p < 0.001$) and level of education ($p < 0.001$) were related to whether patients reported a problem with the service, and health status, ethnicity, gender and level of education were associated with engagement with services, and age ($p = 0.005$) and ethnicity ($p = 0.001$) were associated with patient reports of understanding information* (Fulop, 2023).
208. People accessing CO@h and the workforce supporting it valued CO@h. **Patients and carers felt that the service and human contact provided them with reassurance** and that it was mostly easy to engage with. However, patients’ ability to engage with the service was conditional on a range of factors including support from family/friends and staff, being in relatively good health, and understanding how to engage with the programme. The workforce

generally felt confident in their new roles within CO@h, with 75% of staff reporting increased job satisfaction. Identified staff needs included increased access to **competency based training** and clinical oversight.

209. Walton et al conducted a rapid mixed-methods study in England (conducted from March to June 2021) of patients' experiences of home monitoring services (Walton et al. 2022).
210. The study comprised a cross-sectional survey (n=1069, 18% response rate) and semi-structured interviews with patients (n=59) and carers (n=3). Findings were that 'Care' **relied on support** from staff members and family/friends (74% of patients). Patients and carers reported positive experiences (93%) and felt that the **service and human contact reassured them** (91%) and was easy to engage with. Yet, some patients and carers identified problems with engagement (e.g., **hesitancy to contact practice staff if deteriorating** for enhanced care, or difficulties with staff; percentages not reported in paper; termed a 'minority').
211. Engagement was influenced by patient factors such as health and knowledge, support from family/friends and staff, availability and ease of use of informational and material resources (e.g., equipment) and service factors. Remote monitoring **may not be appropriate for everyone** (e.g. those without support). Service developers should consider the type of condition when designing pathways – e.g., services for acute conditions may require support from staff to ensure that patients are escalated for further care as necessary. Services must plan logistics for delivery and collection of equipment, ensure sufficient information provision and that patients know what they need to do and that they feel able to engage with the service. Services need to gauge a person's support network and any concerns around home monitoring when assessing eligibility for the service.
212. A population level analysis of the Covid Oximetry at Home programme found **generally low uptake** among eligible people (2.5%, though slightly higher among older persons, persons of non-white ethnicity, overweight or clinically extremely vulnerable patients; (Clarke, 2023; Beaney 2022; Beaney 2023). In this study, during the period of implementation, receiving the programme was not associated with (did not prevent) mortality or length of hospital stay. In fact, the period of implementation was associated with increased health service utilisation with a 12% increase in both emergency department attendance and emergency hospital admission. An increase in utilisation does not indicate a problem with the programme as it may be expected to have identified some patients at least for additional input who may not otherwise have received it.
213. Elsewhere a possible mortality reduction was shown (2%), though this was not statistically significant (Sherlaw-Johnson et al, 2022). There were also slight increases in admissions (3%), length of stay and reduced in-hospital mortality (down 3%) but again none of the findings were statistically significant.
214. In the Republic of Ireland, there was consideration that remote monitoring of oxygen saturation in cases of COVID-19 pneumonia may facilitate discharge (sometimes to what are called 'virtual wards'), relieving the burden on bed demand and allowing safe follow-up for this disease in which the sequelae are unknown (O'Carroll et al. 2020).
215. Some evaluation of virtual wards was undertaken in England. Whilst these are different from CO@h, and under secondary care responsibility not general practice, nevertheless in a

rapidly evolving clinical landscape, and system pressures, many new initiatives (including these programmes), GPs will have become involved in the CVW initiatives (responding to patient enquiries, calls for re-assessment etc.). There was a national roll out of 'COVID Virtual Wards' (CVW) during England's second COVID-19 wave (Autumn 2020 – Spring 2021). These services used remote pulse oximetry monitoring for COVID-19 patients following discharge from hospital. The researchers found no evidence of a relationship between the availability of CVW and subsequent rates of readmission for COVID-19 (Georghiou, et al. 2022). That is, CVW may not have achieved the impacts hoped for. It is important to note though that governance arrangements generally mean this innovation (CVW) was not actually under the responsibility of GPs. Arrangements may vary by locality, subject to local agreement, but usually a patient discharged in this way is still under the care of consultants, either hospital-based, or in the "Intermediate Care" services.

216. Alboksmaty et al published a review of 13 studies of home oximetry in 2022_(Alboksmaty et al. 2022). The studies included pre-prints and were published up to April 2021.
217. These 13 studies involved a total of 2,908 participants and none were randomised controlled trials (that is the best form of evidence to assess interventions). Four were from the UK, all in England (one included adoption of a triage pathway translated from Italian, illustrating perhaps the ad hoc nature of rapid service design and also evaluation at the time; one was from a single "large general practice in north-west England"). These indicate the low 'level of evidence', not fully transferable to the CO@h programme as specified, and that caution is required in interpretation of findings. Nevertheless, the review substantiated the safety and potential of pulse oximetry for monitoring patients at home with Covid-19, identifying the risk of deterioration and the need for advanced care. It was considered that the use of pulse oximetry **could potentially save hospital resources for patients who might benefit the most** from care escalation; however, the authors **could not identify explicit evidence** for the effect of pulse oximetry remote monitoring on health outcomes **compared with other monitoring models** such as virtual wards, regular monitoring consultations, and online or paper diaries to monitor changes in symptoms and vital signs.
218. A specific area of interest was regarding care in care homes – a frequent point of contact for GPs, including during the pandemic. A research team at RAND conducted a survey of care home managers and undertook a programme of online interviews with care home and NHS staff at case study locations. Pulse oximeters had been used in many responding care homes before the pandemic, but that use significantly widened during the pandemic. Pulse oximeters were reported by care home managers and staff to be **straightforward to use and to provide reassurance** to residents and their families, as well as to staff. Additional support provided through the NHS COVID Oximetry @home programme was welcomed at the care homes receiving it, but over **half of survey respondents were unaware** of the programme (RAND, 2023).
219. In The Lancet Digital Health systematic review described above (Alboksmaty et al. 2022), the authors also made a series of **recommendations about Oximetry home monitoring services**. These have good face validity ('make sense'), deriving sometimes from occasional studies, and, by implication, were sometimes not evident in the way oximetry was used during the pandemic (it was highly variably implemented across sites).

220. Alboksmaty and colleagues made recommendations in their Lancet review for setting up and evaluating outcomes in an at-home remote patient monitoring (RPM) system for Covid-19 patients using pulse oximetry:

- Structure
 - Infrastructure preparedness and technology development needed for monitoring
 - Build an online portal, mobile app, or a monitoring platform to monitor peripheral blood oxygen saturation (SpO₂) readings and link them with patient health records readings.
 - Providing sufficient human resources for monitoring patients (staff-to-patient ratio)
 - To be adjusted on the basis of severity of illness and the expected risk of deterioration among monitored patients.
 - Safe delivery of pulse oximetry to the participating patients
 - To plan for safe delivery of pulse oximetry to patients within a convenient period of time from enrolment.
 - Patient education on self-using pulse oximetry
 - All patients should be trained well in SpO₂ measurement to ensure the accuracy and effectiveness of the system, and to ensure patient safety. This training can be via educational videos, online calls, or written guidance.
- Process
 - Continuation of monitoring for a sufficient period of time to detect deterioration
 - The average period of actual monitoring among all the included studies in the review was 12.7 days, and this is suggested as the minimum when developing a monitoring programme.
 - Standardising the method and frequency of measuring and recording SpO₂
 - For each remote patient monitoring (RPM) model, patients should assess their at-rest SpO₂ after sitting or resting for 5–10 min, and after walking for 20–60 seconds. The frequency of SpO₂ assessment varied from once per day to up to four times per day in some models.
 - Ensuring patient safety by offering a 24/7 emergency line for participants
 - Participating patients should have access to a 24/7 (ie, 24 h every day) emergency telephone line for their concerns, as well as regular medical emergency lines.
- Outcomes
 - Percentage of patients who needed escalated care after reporting a critical SpO₂ concentration
 - An SpO₂ threshold should be predetermined to identify and escalate care for patients who might be at risk. It was set as an at-rest SpO₂ of 92% or less in most models (and more than 3% after exertion), although some models set an alarm for attention when SpO₂ reaches 94% or for additional safety.
 - Number of online consultations needed per patient during the monitoring period
 - In non-emergency situations, online consultations should be considered as a first option for clinical assessment. These consultations can be escalated to a face-to-face visit or a hospital referral on a case-by-case basis.
 - Percentage of patients who needed hospital referrals

- o Future research and policy regarding RPM should include the percentage of patients who needed hospital referrals as one of the outcome measures of effectiveness.
- o Median days to hospitalisation among the patients
- o The median number of days to hospitalisation must be reported to assess the effect on patients' quality of life and use of health-care services, with 6 days suggested as a benchmark.

The impact of the pandemic on the general practice workforce

Actual workload / provision

221. Appointment activity data are summarised and updated regularly at Appointments in General Practice (NHS England Digital, 2023). Example data show that in January 2023, 29.6 million appointments were estimated to have happened in England, 45.3% being booked on the same day they were provided, 91.9% attended, 47.7% were with a GP and 21.1% by a nurse, and 69.4% were face-to-face. In May 2024 there were 30.8 million appointments, 44.3% taking place on the day they were booked, 44.7% with a GP and 19.6% with a nurse, and 65.1% face-to-face (NHS England Digital, 2023). At approximately one million consultations per day, these figures overall were more than **half a million more appointments per week than pre-pandemic**, and rising (NHS England 2023b).
222. Overall appointment numbers are available from NHS Digital (English general practices), via RCGP.

Estimated total number of appointments in general practice by year (2019 to 2023)

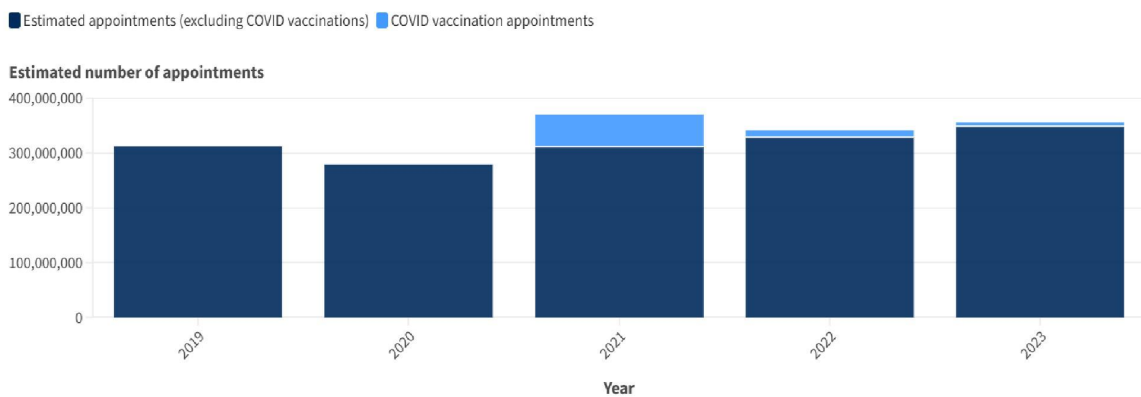


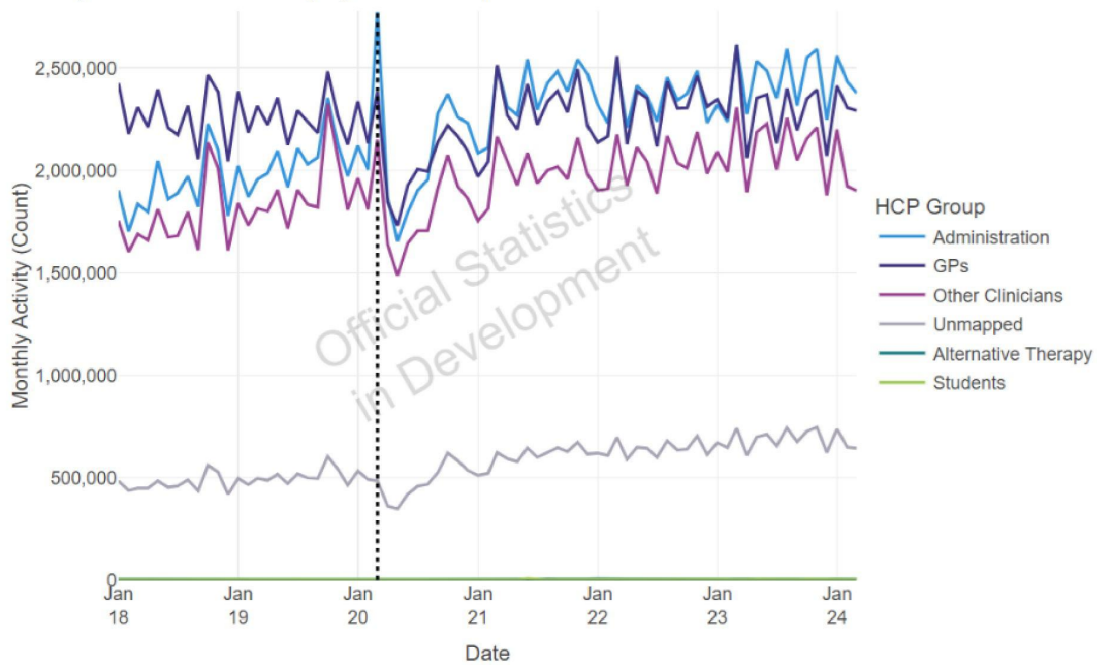
Figure 1: General practice staff delivered 356 million appointments in 2023, which is 14% more than in 2019 [1].

Figure 14: Estimated total number of appointments in general practice by year (2019 to 2023) (NHS England Digital, 2023)

223. Similar impressions are gained, though from less robust (self-reported) data, from RCGP in Wales (RCGP, 2020c) Most respondents felt their patient-facing workload was around 40% lower in the first lockdown period, but had returned to normal by August (75% of respondents), and by December 2020 was considered to be at an average of 127% of capacity (compared to 108% pre-pandemic). Equivalent data were evident in an early survey by RCGP in July 2020, with respondents across the four UK nations (RCGP, 2020a). Respondents also reported that they felt generally less stressed and burnt out, and better able to deliver quality of care during this early pandemic phase.
224. Other data from Scotland assessed the rates of direct versus indirect encounters in “in-hours General Practice”, from before to during and then after the pandemic period. *Direct*

encounters are the most comparable to a standard GP/Health Care Professional appointment and are defined as “some form of direct contact for clinical care between clinical staff and patient or a third party” versus *indirect*, defined as “other work that the practice does that does not involve direct contact with the patient. It includes all admin work both by clinical and non-clinical staff”. Both are key to the overall workload of the General Practice team. The data suggest an **overall and persisting increase** since pre-pandemic levels to combined direct and indirect encounters (Public Health Scotland, 2023).

Monthly Count of All Activity by HCP Group - Scotland



Note: Dashed vertical line indicates March 2020 when the pandemic was declared and lockdown introduced.

Figure 15: Monthly count of all activity by HCP group (Public Health Scotland, 2023)

225. The division of encounter by health care professional group in Scotland suggests a slight rise on average in GP encounters but a more pronounced and persisting increase in the number of encounters for administrative and other clinical staff from pre to post pandemic.
226. There are no comparable data available for Wales or Northern Ireland.
227. Within these numbers however there is also evidence of changing nature of conditions accounting for the workload, such as for example the emergence of “Long Covid” through 2020, thus to some extent replacing other demand (RCGP 2020b).
228. The Royal College of General Practitioners has published its report (2023) on issues particularly from general practice perspectives (Royal College of General Practitioner, n/db), among an overall strategy for the NHS Workforce NHS England, 2024b).

Ageing population and rising levels of illness

229. The RCGP notes a number of pressures on demand: the total amount of ill-health, measured by the number of years lived with a disability, has increased by over a sixth between 1990 and 2016, driven by a growing and ageing population. Between 2003–04 and 2015–16, the number of people with a single chronic condition grew by 4% a year, and the number with multiple chronic conditions grew by 8% a year. By 2035, the proportion of over 65s with two or more long-term conditions is projected to rise to over two thirds. The number of people aged over 85 is estimated to grow 55% by 2037, as part of a continuing trend of population growth which outstrips comparable countries (NHS England, 2024b). These pressures are consistent with the above figure of appointments provided, which, apart from the drop in 2020, shows a quite consistent year on year increase in provision. Although 2020 was an anomaly, the **pandemic itself appears overall to have not otherwise changed the rate of increase.**
230. The RCGP notes that general practice itself is currently under huge strain. The volume of patient contacts is greater than 10 years ago – between 2007 and 2014, clinical workload rose by at least 16%. However, between 1996 and 2016 the number of FTE GPs per 1,000 people declined by 5%, while the equivalent figure of hospital doctors per 1,000 people rose by 72%. As more patients present with multiple and complex conditions, the intensity of the work has also grown, and practices have taken on responsibility for activities previously undertaken in secondary care, for example, the monitoring of drug regimes, disease-specific follow-up and post-operative care. A 2013 study (Salisbury, et al) found that an average GP consultation involves a discussion of approximately **2.5 different problems, across a wide range of disease areas, in just 12 minutes**, with each additional problem being discussed in just two minutes (Salisbury et al. 2013).
231. These trends continue and will do so for the foreseeable future. There is a **long-term rising prevalence of several conditions**. The Health and Care Research Wales Evidence Centre undertook a review and evidence map in 2023 of forecasted trends in prevalence of cancer (breast and prostate), cardiovascular (including stroke, atrial fibrillation, heart failure), also diabetes and high blood pressure, dementia, mental health and depression and multi-morbidity (Health Care Research Wales, 2023). (*Declaration of interest: I am the Director of the HCRW Evidence Centre*). This review was to assist with planning of NHS Wales need and capacity over the next 10 years, utilised by Ministers and NHS Executive. Gaps in research were also evident and can inform research needs. I am not aware of equivalent work in the other three UK countries, but I have not searched directly. The example shows the value of using the studies that are available in planning for health service capacity over 10 years and more, including in primary care where nearly all of these conditions have at least some management.
232. However, more multiple complex conditions mean the number of conditions per consultation will be higher now than those earlier figures from 2013, and the time available per problem will be less, though exact current figures are not available.
233. Unsurprisingly, these factors are having a negative impact on patients and their GPs. Half of younger GPs and two fifths of older GPs say that at least once a week, **insufficient time with a patient affects their quality of care**, and 58% of younger GPs say that they are referring more cases compared to two years ago as a direct result of higher workloads.

Despite evidence of a strong association between continuity of care and lower mortality rates, the number of patients able to see their preferred GP in England fell by 27.5% between 2012 and 2017. At the same time, **ease of access to general practice has been declining** across most parts of the UK, as discussed earlier.

234. RCGP survey data from 2023 show (RCGP 2024a):
- 56% of GPs say they don't have enough time in appointments to adequately assess and treat patients.
 - 57% of GPs say they don't have enough time in appointments to build the patient relationships they need to deliver quality care.
 - 46% of GPs say they don't have enough time in appointments to ensure patient safety.
235. GPs reported that not having sufficient time is having an impact on the quality of patient care that can be delivered.
236. The RCGP also notes: "GPs and their hard-working staff carried out 4.6 million (9%) more appointments in December 2022 and January 2023 compared to in 2019, however, the number of fully qualified full-time-equivalent GPs has dropped by 843 in the same period (Royal College of General Practitioners 2023) (see also Workforce data below). The Royal College has published Fit for the Future: GP Pressures Report 2023 (RCGP, n/db), setting out recommendations for Government to tackle the workforce and workload crisis in general practice, and support GPs and their teams to meet the healthcare challenges of the 21st century.
237. Based on a survey of more than 2,600 GPs and other practice team members from across the UK, the College's new report acts as a snapshot of what frontline staff have faced during one of the most difficult winters (2022-23) experienced in the NHS, and what they think needs to happen to make general practice more sustainable. Respondents describe a profession in crisis, with unmanageable workload and workforce pressures fuelling an exodus of fully qualified GPs. Whilst these data post-date the pandemic, they are relevant to current resilience of the primary care sector and **resilience in the event of a future pandemic**.
238. Some sources indicate some **uncertainty about whether total numbers of patients seen have increased**, owing to the issues of telephone and face-to-face consultations. GP teams carried out more appointments in 2022 than before the pandemic, but it is unclear whether they saw more patients (Hoddinott and Davies, 2023a).
239. After a decline in 2020, the number of general practice appointments delivered in 2022 rose above the amount carried out in 2019. This was true for both GP appointments (which rose from 155.1 million in 2019 to 160.9 million in 2022, a 3.7% uplift) and appointments with other practice staff, such as practice nurses, physiotherapists or counsellors (which increased from 136.8 million in 2019 to 157 million in 2022, a 14.8% rise). As before, it is **not clear that the pandemic has had a direct effect** on what were clear trends from before to since the pandemic.

240. The BMA has noted that some of this rise in primary care footfall may reflect lack of capacity in secondary care, meaning that GPs also saw increased demand because of cancellations elsewhere. They were also responsible for many patients whose health issues had been exacerbated by lockdowns, and who had nowhere else to go for care. (BMA 2023).



Source: Institute for Government analysis of NHS England, 'Appointments in General Practice, December 2022', supported by CIPFA. • Notes: Data was first published in 2018/19.



Figure 16: GP Appointments by provider, Sept 2018 to Dec 2022 (IFG 2022)

241. While the number of appointments increased in 2021/22, these data are not directly comparable to previous years. With a 'telephone-first approach', GP teams can end up conducting two shorter appointments for some patients – an initial telephone appointment followed by a face-to-face appointment – which would previously have been recorded as one longer appointment. It may therefore be difficult to tell whether GP teams are actually seeing more patients, or just recording more appointments because patients require both telephone and in-person appointments to resolve their health problem.
242. However, some data from the telephone first evaluation cited earlier indicate that overall consultation time may have increased through adoption of the system.

Physical and mental health of primary care staff

243. One expected impact of workload changes would be on mental health, well-being and sickness absence rates. Absence rates are, however, difficult to identify owing perhaps to the independent contractor status of most general practices. General practice staff are not included in the main repository for NHS Absence data (NHS England n/db). These data would likewise be difficult to ascertain across Scotland, Wales and Northern Ireland. Isolation episodes are not included (when someone was required to isolate owing to infection or exposure, but may have been able to undertake remote working). Note also that the impact of even a single person's sickness absence or isolation requirement can have a very large

effect on capacity, staff well-being and patient care, particularly in the smallest general practices.

- 244. The overall **NHS staff Absence rate** for England was **5.0% in September 2023**, the same as in September 2022 (5.0%), though the figures do not reflect considerable changes during this time and since (see graph below). NHS England however shows an ongoing and sustained rise in sickness absence rates since 2018.
- 245. Collectively we can see an overall trend, notwithstanding some deviation of graph lines during the pandemic itself, of rising rates of sickness absence in England, Scotland and Wales comparing before and after pandemic levels.

Sickness Absence rate (%) by month

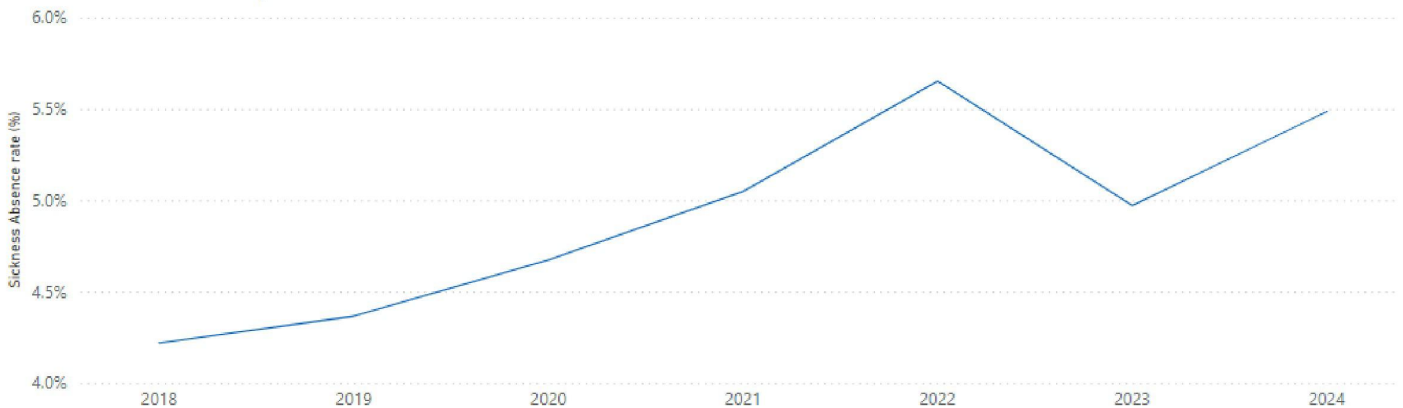


Figure 17 Graph from NHS England Sickness Absence Rates, January 2024 Interactive tool (NHS England n/db) [Accessed: 11 June 2024]

- 246. Data in Wales demonstrate a rise in NHS staff sickness absence rates during the pandemic, peaking post-pandemic in 2022. Levels have not returned to pre-pandemic levels.

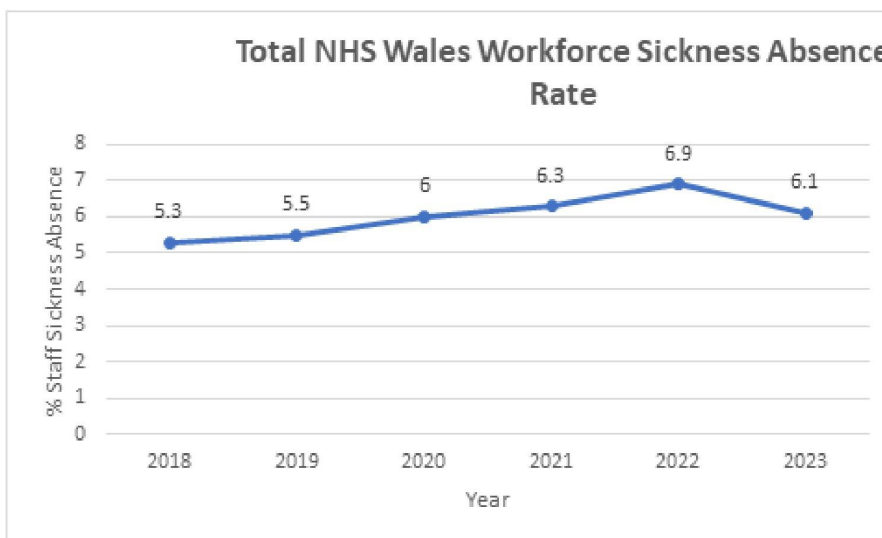


Figure 18: Figure adapted from StatsWales.gov information (Welsh Government, 2024d) [Accessed: 11 June 2024].

247. Similar trends can be seen within NHS staff in Scotland, with sickness absence rates reaching their highest ever levels, and markedly above the target rate of 4.0%.

Sickness absence rate for NHS Scotland workforce, year ending 31 March 2013 to 31 March 2023



Figure 19: Graph from NHS Scotland Workforce Latest Statistics at 31 March 2023 (NHS Education for Scotland, 2023c) [Accessed: 11 June 2024].

248. No comparable percentage rates were identified for Northern Ireland.
249. The BMA reported on impacts across the medical profession. It studied only medical professionals, as this is the BMA's membership; methods were mainly qualitative with respondents reporting their experiences. The BMA noted effects across **physical and mental health domains** (BMA 2023).
250. The pandemic posed an immediate threat to the physical health of medical professionals, both those who were themselves 'clinically extremely vulnerable' and those not. Those working on the frontline were **acutely vulnerable to Covid-19 infection**, and by virtue of this working situation this was an above average risk compared to the general population. Many caught Covid-19; a significant proportion of those developed **long Covid** and experienced severe and long-term symptoms.
251. The physical effects of the pandemic were not felt equally among healthcare staff. Infection and **mortality rates were higher amongst ethnic minority healthcare staff**. There is a

range of opinion about the contributing factors, and the witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 07/02/2024 (INQ000412890, para 805) notes the potential of genetic susceptibility factors. In studies of the wider population, not limited to healthcare workers, there is some evidence of this (Ishak et al 2022). However, calculated genetic risk scores only explain a small proportion of the risk of death or severe disease from Covid-19 (Farooqi et al, 2023). In addition, there is evidence that after adjusting for the significantly increased risk of infection (from more multi-generational households, more public-facing jobs, and other social factors), ethnic minority populations may not be at particularly higher risk of severe disease or death once infected compared to White populations (Ward et al, 2021) (Mathur et al, 2021) (Irizar et al, 2023). This indicates the importance of addressing social factors, including the risk of infection at work.

252. Older staff were also at high risk from Covid-19 infection and poor outcomes (Statistical graphs and charts prepared by the UK Covid-19 Inquiry for presentation, undated, INQ000292765_0001). Many older staff came back from retirement to help regardless. Some older GPs died, possibly because of infections caught at work. The witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 07/02/2024 (INQ000412890, para 877) reports 357 out of 474 (i.e. 75%) of the health and social care workers who died of Covid-19 and whose deaths were reviewed by the National Medical Examiner were suspected of having been exposed to Covid-19 at work. Variations in outcomes may also in part reflect differential treatment by others. Of the 1.2 million staff employed by NHS, 20.7% belong to Black, Asian and minority ethnic (BAME) background. However, analysis of deaths of NHS staff during the pandemic shows that 64% of those who died belonged to BAME background. This disproportionately high mortality has been attributed to discriminatory deployment of staff from non-white ethnic background to frontline (Ali et al, 2021; Kapilashrami et al, 2021; NHS England and NHS Improvement, 2021; Chaudry et al, 2020) (or other situations of vulnerability like poorer access to personal protective equipment (see also witness statement provided by Professor Philip Banfield on behalf of the British Medical Association, dated 03/05/2024, INQ000477304, para 471; and noted in witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 07/02/2024, INQ000412890, para 833). Ethnic minority staff are more likely to work in junior roles, occupy lower pay bands and are underrepresented in senior, managerial clinical and non-clinical roles (Chaudhry et al, 2020; Qureshi et al, 2021; Otu et al, 2020; NHS England and NHS Improvement, 2021; Dey and Sinah, 2020). Related to those features, access to PPE may have been more difficult, or may have been perceived to be more difficult.
253. National and local NHS organisations did take extensive measures to mitigate these risks (see, for example witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 07/02/2024, paras 807-810). However, ethnic minority staff may also have difficulties in accessing support offered (witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 07/02/2024, INQ000412890, para 840). Whilst the label is not used in those cited publications, a pre-print version of a systematic review, citing 20 studies from 2020-21 of mostly moderate to low quality, identifies that this in effect shows **elements of 'institutional racism'** (Adewole et al, 2024). A related systematic review (also pre-print from the same research group, also not primary care specific) summarised the effectiveness of anti-racist interventions for ethnic minority healthcare staff

(Lalli et al, 2021). The review noted 16 studies, of low quality, some at individual level (e.g. workshops and mentoring schemes), at institutional level (e.g. policies and initiatives to enhance diversity) or at both levels. The lack of good quality evidence means that high quality research is still required to evaluate these interventions and long-term effectiveness. (Declaration of interest: the authors of these reviews included colleagues in the Health & Care Research Wales Evidence Centre).

254. The BMA advocated for **good occupational health systems** in the NHS that can act quickly to protect staff both during and outside of health emergencies, and for mechanisms to make the experience of working in the NHS less variable by background or protected characteristic to mitigate these inequities.
255. The BMA also noted that the pandemic had a considerable impact on the mental health and emotional wellbeing of the medical profession. Worryingly, this impact on staff mental health worsened as the pandemic progressed. Many doctors suffered from mental health conditions like anxiety or depression, which were caused or made worse by the pandemic. Other impacts include moral injury, burnout, long covid, feelings of guilt if having to shield whilst colleagues remain on the frontline, feeling vulnerable if high risk but still pressurised to work in an unsafe environment etc.
256. The BMA's report included comments from participants in general practice (as well as from others). These comments are all from GPs and are both striking and numerous:
- "Risk assessments should be mandatory as soon as a person is employed. Policies should be in place for pregnant women, age ranges and ethnic minorities prior to any pandemic."
 - 'Without increased staffing, it is hard to protect some staff without adversely affecting remaining staff by hazardous workload levels.'
 - 'We will never get completely equitable protection until we have equitable representation – sadly, many of our medical institutions are still dominated by white men.'
 - 'I had to stop working as my mental health was so impacted. I have now resigned and feel I am unlikely to return.'
 - 'Losing so many patients and some colleagues was very hard. The day that I signed 3 death certificates for the residential home in one day, I cried'
 - 'I have seen some difficult things in the past few years. I have made some decisions that I would not have had to make in pre-pandemic times. These have all caused me significant moral injury.'
 - 'Moral distress. Being forced to practice in ways I would never believe I would have accepted. Contributed to me leaving clinical medicine.'
 - 'My partner is clinically vulnerable as are my elderly parents. I have been afraid throughout at the possibility of catching covid and risking the wellbeing of those I love.'

- 'I feel burnt out and everybody I work with seems tired and finding it difficult to deal with the backlog of patients.'
- 'I had loss of self-esteem and feelings of guilt from being a WFH (work from home) shielder, aggravated by colleague resentment of my shielder status.'
- 'Severe impact. Physical health has deteriorated and psychologically am close to burnout. I coped for almost a year but it's now taken a toll and I don't know how much longer I can keep working as a doctor.'
- 'The total disregard by government for our safety and cries for help has been so demoralising.'
- 'Extremely demoralising as a GP to have worked very hard for the last 2 years adapting to a new world/technology and ways of seeing patients to help keep everybody safe and meet demand to then be derided in the press and by politicians as lazy and told to get our act together and see patients face to face. This attitude in the press and by politicians is doing possibly irreparable damage to the morale of GPs and the respect/attitude patients have for us.'
- 'After the first wave of the pandemic, and after the "clap for the NHS" ended, the abuse of myself and staff has ramped up enormously, fuelled by governmental propaganda and briefing against General Practitioners.'

257. The comments give a compelling picture of the impacts on GPs. They are not necessarily representative, but they raise important issues for further consideration.
258. These issues are highly pertinent to general medical practice. GP wellbeing is in a state of crisis. This predated the pandemic – a survey of GPs taken in England by Hall et al in 2019 demonstrated that at 93.8% were classed as likely to be suffering from at least a minor psychiatric disorder with 72.7% respondents reporting severe exhaustion (Hall et al, 2019). Another pre-pandemic study similarly demonstrated high levels of emotional exhaustion (46%) and depersonalisation (42%) and low levels of personal accomplishment (34%) in a survey-based study of 564 UK-based GPs. (Orton et al., 2011). Burnout – defined as “a psychological syndrome characterised by emotional exhaustion, depersonalisation and a reduced sense of professional efficacy that can appear in caregivers” (Maslach, 1979) – is seen in increasingly high levels in the GP population. (Karuna et al., 2022; Shen et al., 2022).
259. This represents a major problem in the context of an ageing population with more complex medical needs and already stretched healthcare systems in the United Kingdom. It is also highly pertinent in terms of preparedness for the pressures of a future pandemic.
260. Higher levels of burnout are seen in GPs working with patient populations that have a higher burden of chronic illness (Pedersen et al., 2020). Rates of burnout are higher in GPs where staff shortages are present (Picquendar et al., 2019). Crucially, patient safety outcomes are worse in a GP population suffering from burnout (Iliffe & Manthorpe, 2019; Salyers et al., 2017). Burnout has also been cited as a key reason that GPs are leaving the workforce (Dale et al., 2015, 2016; Iacobucci, 2021).
261. A Dutch systematic review comprising 60 studies, looking at specific determinants of burnout in GPs internationally highlighted two types of factors - occupation specific and generic -

leading to higher levels of burnout in GPs (Verhoef & Blomme, 2022). Occupation specific factors included demanding patients, emotional job demands and patient behaviour. Generic demands included workload, complexity of workload and empathy. Further to this, Le Floch et al examined the views of GPs in several European countries (not including the UK) as to which factors contribute to making General Practice a rewarding career and improve overall job satisfaction (Le Floch et al, 2019). This study highlighted two types of factors - those focused on work itself such as responsibility, workload and income, and those focused on the practitioner themselves such as work life balance and intellectual stimulus.

262. The Covid-19 pandemic worsened GP wellbeing and increased levels of burnout (Jefferson et al., 2022). The GMC Workplace report noted that burnout is at its highest level in doctors since measurements began in 2019 (General Medical Council, 2023). One study that examined GPs' perspectives via their social media contributions over the course of the pandemic found that many alluded to COVID-19 exposing and exacerbating weaknesses in the GP workforce that were already present:
263. *"Many posts referenced a decline in GP numbers over recent years, expressing the view that primary care staffing levels were critical before the pandemic and COVID-19 exacerbated these problems. GPs reported attrition, due to factors such as workload, underfunding, low morale and lack of appreciation"* (Golder et al., 2023)
264. The role of mass media has also been examined as a contributor to poor GP wellbeing. One study examining newspaper articles referencing General Practice noted that when the crisis in primary care services was discussed, it was portrayed as the fault of GPs themselves, whereas the crisis in secondary care services was typically portrayed as the fault of the government. Furthermore, where GPs themselves were quoted in mass media, they were typically defending their profession whereas secondary care doctors were typically sharing their expertise (Barry & Greenhalgh, 2019).
265. The BMA advocated for **general wellbeing support** to be available for staff at all levels across all UK health services, along with specific support to recover from the pressure of delivering care during a pandemic, assessments of workforce shortages and safe staffing requirements, and support for doctors in tackling the backlog of care (BMA 2023).
266. Tackling burnout and improving staff wellbeing within primary care is of fundamental importance in improving system resilience and preparing for any future pandemics. Factors that contribute to poor psychological wellbeing and negative psychological outcomes in GPs such as burnout are poorly understood. The 2019 GMC report "Caring for Doctors Caring for Patients" noted three key needs central to doctor wellbeing (West and Coia 2019):
 - Autonomy or control – the need to have control over our work lives, and to act consistently with our work and life values.
 - Belonging – the need to be connected to, cared for, and caring of others around us in the workplace and to feel valued, respected and supported.
 - Competence – the need to experience effectiveness and deliver valued outcomes, such as high-quality care.

267. This report was targeted at all doctors – the factors that contribute to deterioration in wellbeing, job satisfaction and burnout are perhaps more nuanced for GPs, due to the differing way of operating within the current model of primary care provision within the UK – working in discrete, smaller General Practices, partners, salaried and other roles, and the need to run these as effective profitable businesses compared to a doctor working in a larger secondary care facility. There is likely to be considerable overlap, however.
268. A recent systematic review investigated the current international evidence for interventions to improve General Practitioner wellbeing (Naehrig et al, 2021). Naehrig et al divided these interventions into those aimed at the individual, those aimed at an organisational/practice level and those requiring more overarching systemic input. Of the 19 studies included, most (13) relate to **interventions aimed at the individual, using mindfulness-based interventions, cognitive behavioural therapy (CBT) based interventions or coaching**. These types of interventions showed the most robust evidence of improving burnout and improving measures of wellbeing in the GP community. At a practice/organisational level, two studies looked at interventions to improve workflow and efficiency within practices – these showed some evidence of improved job satisfaction in GPs. Two studies assessed the additional impact of clerical staff to support GPs in administrative tasks and note taking. One showed evidence of improved job satisfaction and the second showed evidence that work/life balance in the participant GPs improved. Lastly, two UK studies assessed the effect of a systemic pay for performance scheme (QOF) in 2004 and 2008. These showed initial benefits on job satisfaction in the earlier study, but this appeared less sustained in the latter study.
269. Naehrig et al commented on the remarkable lack of research in this area, particularly considering the international nature of the issue. It is also worth noting that the studies included were at high risk of bias and only two of 19 were UK based. Therefore, the findings must be taken with some caution. It is also important to mention that Naehrig et al emphasise the difference between interventions that are focused on **burnout** and those that improve **wellbeing** – these are often considered synonymous. The authors describe the difference as like **treating an illness rather than seeking to prevent it** and the latter may prove a more effective tactic. Most of the evidence relates to specifically treating burnout and similar negative mental health metrics; nevertheless, the interventions that are effective for burnout are likely to be effective for enhancing wellbeing. The authors stress that more focused research on maintaining and promoting wellbeing specifically, using validated wellbeing scoring metrics, is necessary.
270. Naehrig's review agreed with an earlier systematic review from 2016 by Murray and colleagues which presented evidence from four studies (none was UK based) (Murray, Murray and Donnelly, 2016). This paper found beneficial effects on wellbeing, mostly from educational interventions focused on (for) the individual, such as CBT training and use of work-life balance retreats. Two further systematic reviews looking specifically at the use of mindfulness interventions to improve all doctor groups found beneficial effects of these types of interventions on wellbeing (Lomas, et al, 2018; Scheepers, et al, 2020). Although these studies are not specifically focussed on GPs, the evidence for use of specific mindfulness interventions both at improving wellbeing and at treating burnout appears consistent.
271. More specifically to the UK, Hall and colleagues examined GPs' own perspectives on what they felt would be helpful to improve wellbeing (Hall, et al, 2019). The resultant findings can

be split into those which help the individual and those implemented at a more systemic level. Individual level interventions included peer support, increasing coffee breaks and improved team working arrangements. Schemes such as 'informal peer support' may be helpful for well-being and to prevent burnout and should be evaluated (Hussan et al, 2024).

272. Systemic interventions included improved funding for primary care, improved staffing numbers, improvement of negative portrayal of GPs in mainstream media and improved support for allied services such as social services to prevent issues better dealt with by these services featuring in the day-to-day responsibilities of GPs. Another more recent observational UK study including 406 UK GPs described higher levels of wellbeing in GPs taking more regular breaks from sitting positions, and less burnout in GPs who exercise more regularly (Biddle, et al, 2023).
273. Regarding the wider primary care staff force, mindfulness interventions have been shown to improve wellbeing in multiple allied healthcare groups including nurses, healthcare discipline students and other allied health professionals (Aikens, et al, 2014; Ghawadra, et al 2020; Green & Kinchen, 2021; Hevezi, 2016; Klein, et al 2020; Luken & Sammons, 2016; Regehr et al, 2014; Slatyer, et al, 2018; van der Riet, et al 2018)
274. Although there is some evidence on factors and interventions that can improve staff wellbeing within primary care staff, little has been implemented on a wider scale within the UK. All nations except Northern Ireland have a specific health worker mental health service (Health for Health Professionals in Wales and Practitioner Health in England and Scotland). These are not specific to primary care, however. The RCGP has a resource list of services for GPs to access such as the Samaritans and the BMA helpline, but these are generic (RCGP, n.d d.). The Looking After You coaching programme was initiated in NHS England for primary care staff in April 2020, but this has now been merged into a generic scheme for NHS staff (date uncertain from website) (NHS England, no date a).
275. Tackling burnout and improving staff wellbeing within the general practice sector is of fundamental importance in improving system resilience and preparing for a future pandemic.

Career development, training, and the numbers of GPs intending to leave the profession.

276. In the light of comments about the impacts on staff well-being, including reported intentions to leave the profession, recruitment, development and retention of staff are highly important.
277. The RCGP Tracking survey (RCGP 2023) has several important findings:
 - 41% of GPs reported being dissatisfied in their current role (highest among GP [partners at 52%], compared to 58% who said they were satisfied.
 - The proportion of GPs who reported being dissatisfied has significantly increased from just 26% in 2021.
 - Almost one in three GPs (32%) described their mental wellbeing as poor while working in their role over the past month, slightly increased from 28% in 2021.

- Most GPs (78%) reported having access to continual professional development and training that meets their needs; however time was a major limiting factor, with 60% of GPs not having enough time to undertake training alongside practice work.
 - 37% of all GPs said they are unlikely to still be working in general practice in five years (up from 21% in 2019), including 30% of GPs under the age of 35, 47% of GP partners, and 28% of registrars. Various reasons were given, including general practice being too stressful (52% of GPs), retiring (36%), working too many hours (33%), finding general practice unrewarding (29%). There was variable awareness of GP returner, retainer and stay in practice schemes (around 50%). 47% of GPs said they are 'likely' to still be working in five years. 76% expect working in general practice to get worse over the next few years, especially for GPs working in rural areas (81%).
278. There is evidence of good recruitment to GP training (see below). This increase in trainees is offset by the rising level of young GPs leaving the workforce prematurely. A record high 10.5% of the under-40 GP population left the workforce in the 12 months to March 2023 (Hoddinott and Davies, 2023b). This is likely to reflect increasingly difficult working conditions and increasing burnout – a phenomenon seen in higher prevalence in younger GPs and trainees. A survey of 3200 GP trainees taken across the UK demonstrated 72.9% stated that they were experiencing burnout and stress with 66.4% stating that they were working outside of their scheduled hours most or every day (BMA media centre, 2024).
279. As described under Resilience in Primary Care, there is evidence from England, Scotland and Wales of rising vacancies in GP practices seeking GP staff (General Practice Workforce Survey Scotland 2019; 2023; The Health Foundation 2022); Welsh Government 2023).
280. As before, these findings do not in themselves reflect an impact of the pandemic and may be more reflective of continuing long-term trends. However, the relevance is that it significantly **affects the capacity and resilience of the primary sector for a future pandemic**, both ability to prepare and to provide when the surge pressures arrive.
281. Again, I refer to the RCGP report on workload pressures: A quarter of GP practices could close because of workload pressures, warns Royal College of GPs (RCGP, 2023).
282. The Royal College noted the parallel strategic plans of the primary care recovery plan for England in 2023, and the NHS long term workforce plan. RCGP advocated that these plans must tackle the challenges facing primary care in both the short and long-term. Urgent measures should include:
- A commitment to a properly funded plan to enable general practice to respond to surges in demand as they occur.
 - Investment in GP practices' IT and telephone systems, and the support they need to implement upgrades.
 - The urgent roll-out of new and improved, properly funded retention schemes that halt the decline in the GP workforce.
 - A reduction in unnecessary box ticking requirements and unnecessary workload to free up GPs' time for patient care.

- A new public education campaign designed by patients and healthcare professionals to advise patients when and how to self-manage illness and when to access general practice or other services.

Workforce data

283. Various figures from England, Scotland, Wales and Northern Ireland are largely consistent. Whilst there is evidence of variation across the UK countries (see graph below), the trends mainly show small **increases in the head count** of numbers of staff (mainly GPs, some data also for primary care nursing) but they also show a **drop in total sessional time** (full-time equivalents, especially for fully qualified GPs) provided overall, despite that increase in headcount.

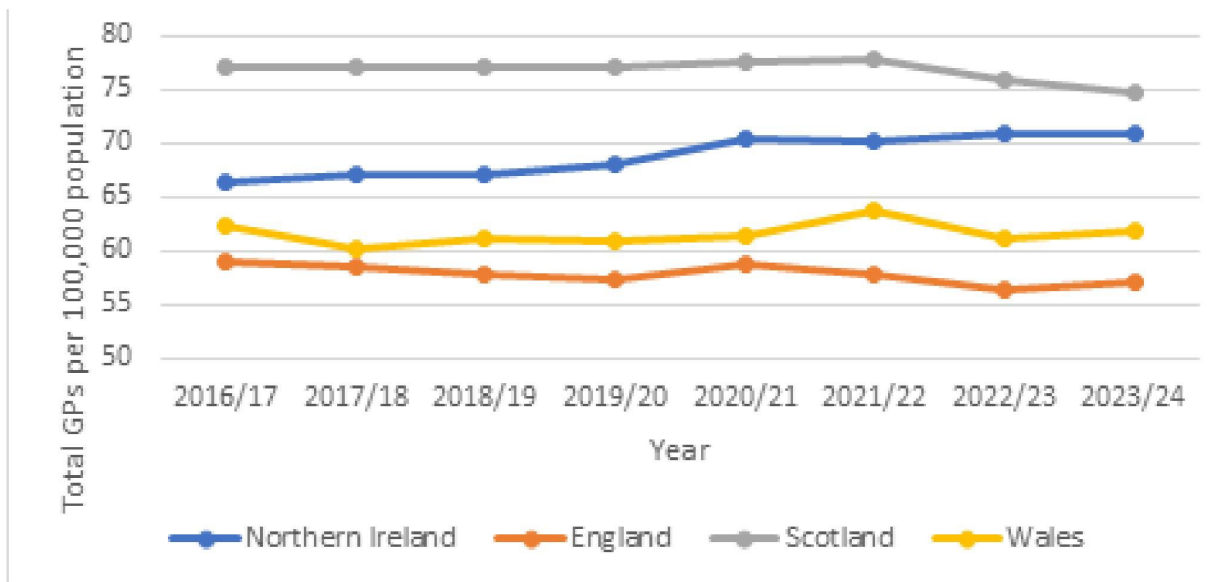


Figure 20: Total GPs (headcount, not FTE) per 100,000 population in UK nations. Figure adapted using data from Department of Health: Publication of FPS General Medical Services for Northern Ireland, Annual Statistics 2023/24 (Department of Health, 2024) [Accessed: 11 June 2024].

284. With fewer GPs working full time, this translates to a significantly reduced GP workforce. In England, **fully qualified FTE GPs (excludes trainees) have continued to fall year on year since 2015**, per NHS Digital figures.
285. In December 2015 there were 29,364 FTE fully qualified GPs falling to 27,606 in the most recent figures from April 2024 (NHS England Digital, 2024). The number of FTE GPs in Wales has fallen from 1,610.8 in December 2021 (when these data were first collected) 2021 to 1,541 in March 2024 (Welsh Government, 2024a)(the most recent available data). A similar trend is evident in Scotland – between 2013 and 2023 the FTE GP number has fallen from 3,603.7 to 3,478.4 (NHS Education for Scotland, 2023a). In Scotland the GP headcount has gone up by 2.6% but the estimated GP Whole-Time-Equivalent (WTE) has decreased by 3.3% between 2019 and 2022. This gap is due to some GPs reducing their number of sessions per week and GPs leaving the workforce who were delivering on average more sessions per week than the new GPs joining. This pattern is reflected in the changing profile of the GP workforce over time, which now has more female than male GPs (female GPs work fewer sessions on average than male GPs). (Public Health Scotland, 2022).
286. No FTE GP data were identified for Northern Ireland.
287. Data from NHS Digital for general practices in England also show **overall higher numbers of GPs but decreasing numbers of qualified GPs and full-time equivalents**.

288. The following graphs are from the RCGP tracker:

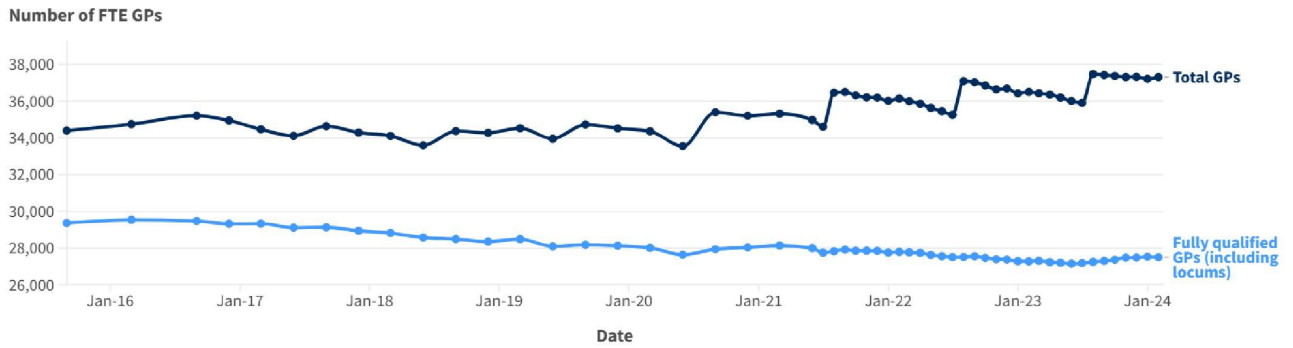


Figure 3: Whilst the total number of GPs in general practice has been increasing due to increasing numbers of trainees, the number of fully qualified GPs (including locums) has been steadily declining. As of February 2024, there are 27,502 fully qualified full time equivalent GPs, 2.2% less than in December 2019. As of February 2024, there are 37,306 full time equivalent GPs (including trainees), 8.1% more than in December 2019 [2].

Figure 21: Numbers of all and fully qualified FTE GPs from September 2015 to February 2024 (RCGP, 2024a)

289. Similar figures are presented in the witness statement provided by Professor Sir Stephen Powis on behalf of NHS England, dated 09/07/2024, para 508 (INQ000485652), regarding both full-time equivalent GPs and a separate graph for nurses plus advanced nurse practitioners. Both show largely static numbers from March 2019 to June 2022.
290. The BMA cites data from NHS Digital over almost 10 years, suggesting little growth in the overall GP workforce over this time.

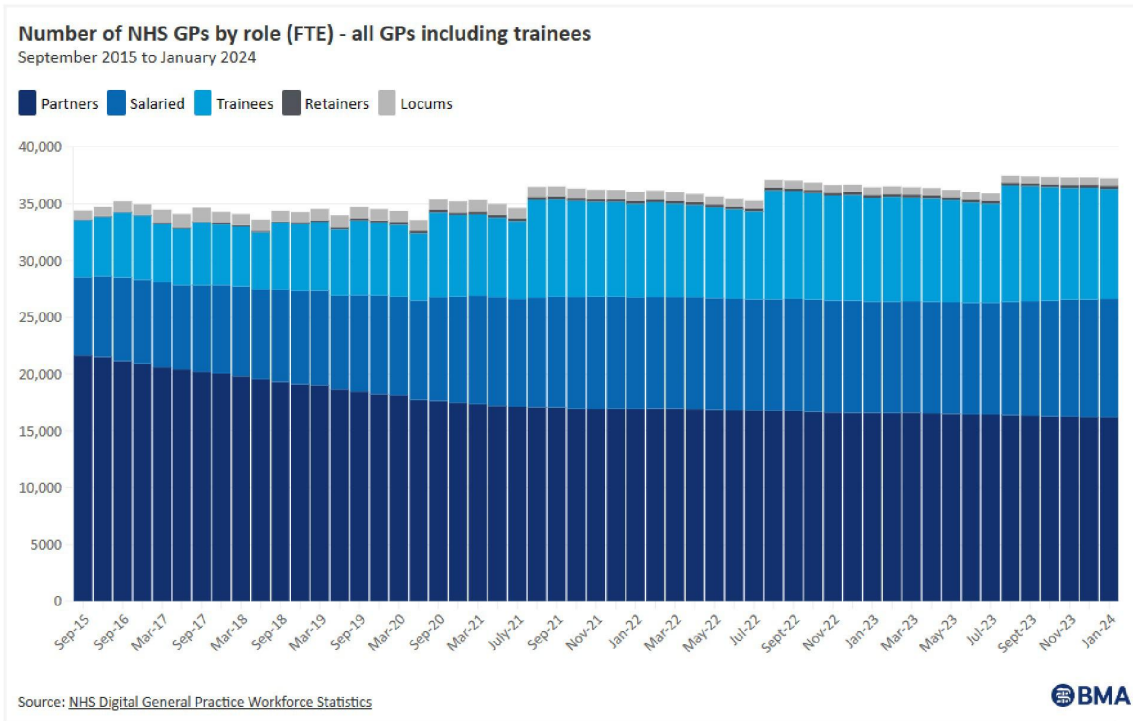
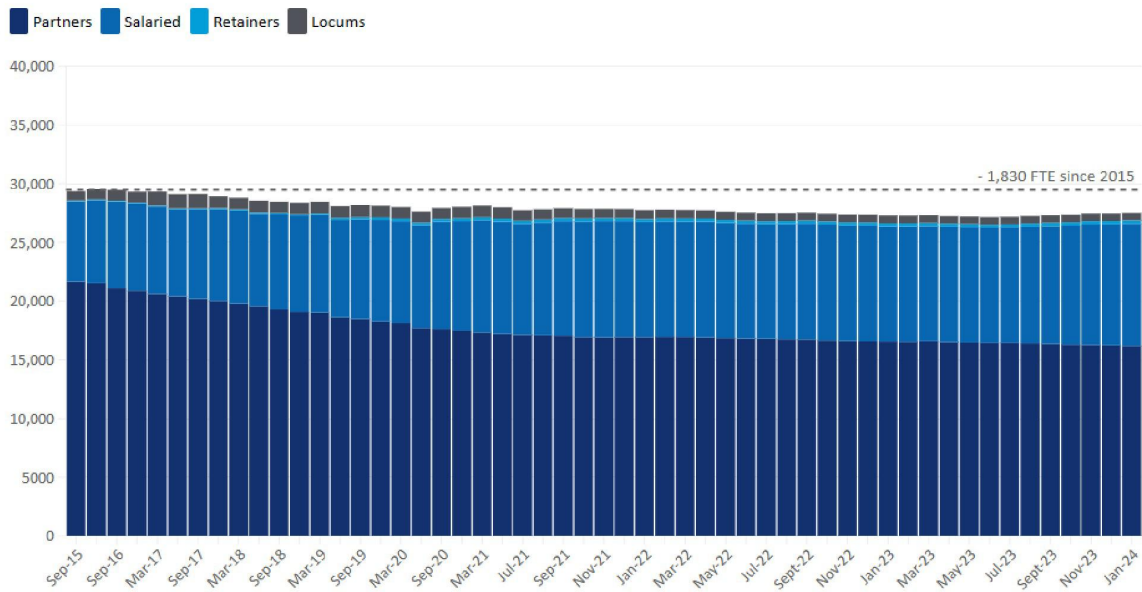


Figure 22: Number of GPs by role (FTE) – all GPs including trainees (RCGP, 2024a)

291. Full time equivalent data suggest a long-term trend towards declining numbers. There is **little evidence of a direct impact of the pandemic period** (that would be seen by a step change or change of gradient in the graphs) although the uneven time intervals in the graph make this difficult to analyse.

Number of NHS GPs by role (FTE) - fully qualified GPs only

September 2015 to January 2024



Source: NHS Digital General Practice Workforce Statistics



Figure 23: Number of GPs by role (FTE) – fully qualified GPs (RCGP, 2024a)

292. The make-up of the GP medical workforce is changing. Despite an increase in the overall number of doctors working in General Practice, in January 2024 there were the equivalent of 1,830 fewer fully qualified full-time GPs than there were in September 2015 (when the current data collection method began). Numbers of fully qualified GPs have started to increase recently though – January 2024 marks seven months of sustained increase in full-time equivalent fully qualified GPs, with an additional 381 fully qualified GPs joining the workforce during this time.
293. The **GP partner workforce has been shrinking** since 2015 when this dataset began, with the loss of 5,479 FTE GP partners during this time with a rise in salaried and trainee grade doctors. In January 2024 there were 16,176 FTE GP partners compared to 16,579 in January 2023: a total loss of 403 FTE GP partners in the past 12 months alone. On a headcount basis, this is a loss of 435 GP partners. **Over 10 years, around a quarter of the GP partner workforce has been lost.**
294. These trends are replicated across England, Scotland and Wales (see graphs below); I did not identify equivalent data to judge whether the same pattern is evident in Northern Ireland, but it would seem likely, given the consistency across the other countries.

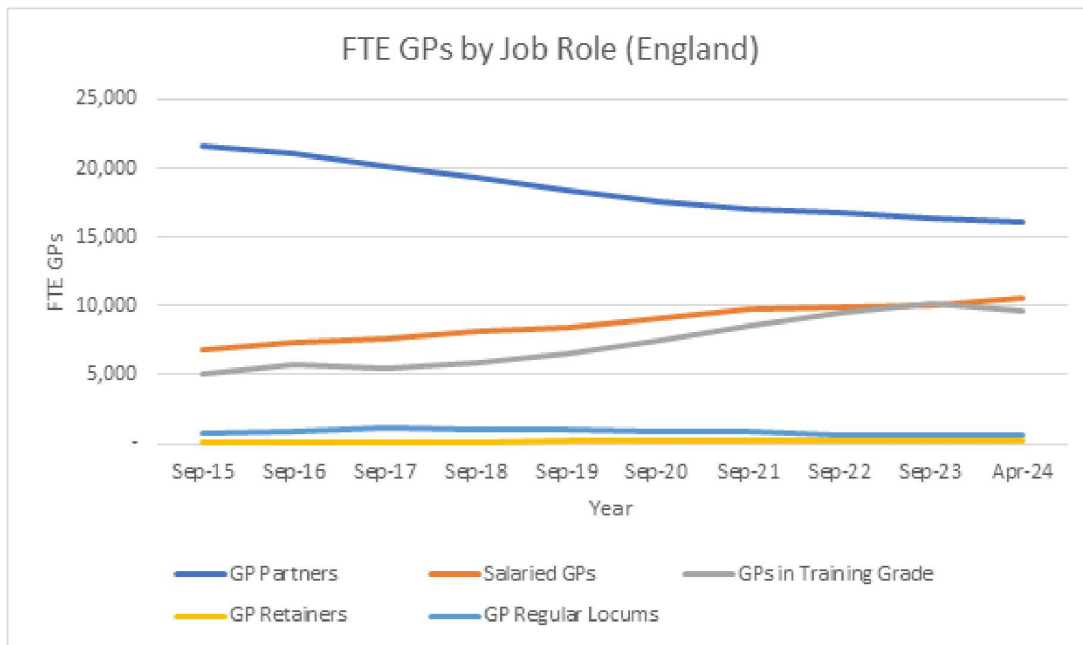


Figure 24: Graph adapted from NHS England General Practice Workforce, 30 April 2024 data (NHS England Digital, 2024) [Accessed: 12 June 2024].

295. Numbers of GP Partners in Wales have also fallen over the last 2 years, whilst the number of non-Partner GP roles and trainees in primary care has risen. FTE GP numbers have remained approximately stable over the last 3 years. No FTE GP workforce data were identified pre-2021.

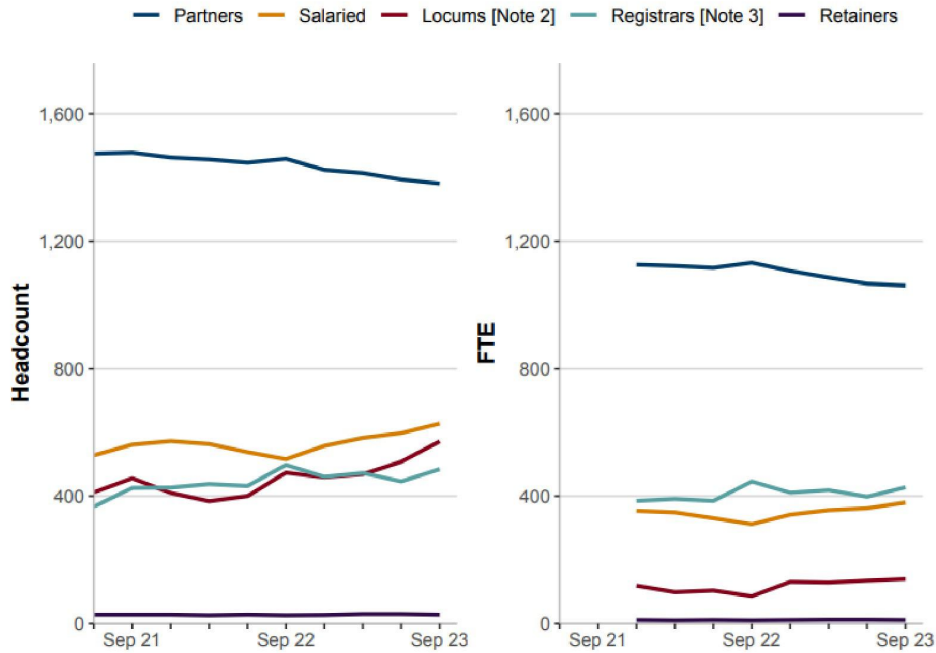


Figure 25: Graph from Welsh Gov: General practice workforce: as at 30 September 2023 (NHS England Digital, 2024) [Accessed: 11 June 2024].

296. Similar trends are evident in Scotland where GP Partners (*performers*) have steadily fallen, with rising numbers of Salaried (*performer salaried*) and Trainee (*performer registrar*) GPs.

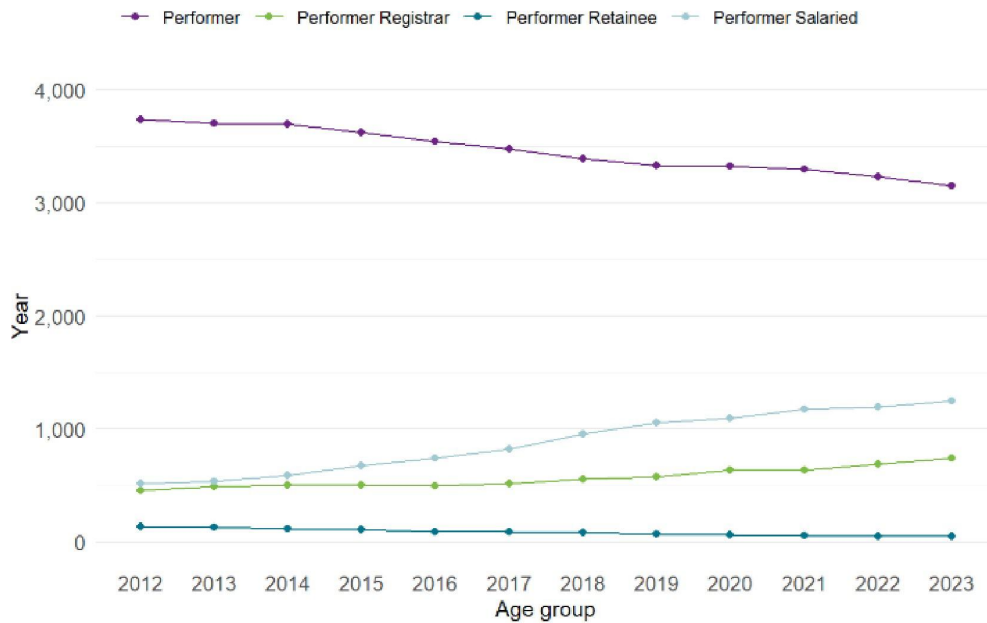


Figure 26: Number (headcount) of GPs in Scotland by GP designation, 2012 to 2023 (NHS Education for Scotland, 2023a) [Accessed: 12 June 2024].

297. Overall, and over a long period of time, numbers of patients per fully qualified GP are rising:

Patients and workload in general practice data²

Number of patients per FTE fully qualified GP (September 2015 to February 2024)

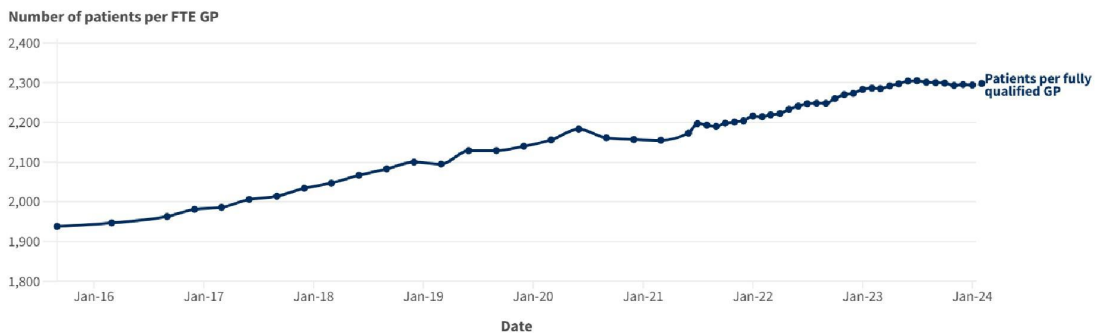


Figure 2: The average number of patients per GP has seen a steady increase since 2015. There are 2,298 patients per GP as of February 2024, which is an increase of 7% since 2019 [2].

Figure 26: patients and workload in general practice data (RCGP, 2024)

298. Similar figures relating to numbers of staff (headcount), full-time equivalent workforce, and numbers of patients per GP are reported in the witness statement provided by Dr Michael

Mulholland on behalf of Royal College of General Practitioners, dated 07/11/2023 (INQ000339027, paras 10-15) regarding Scotland, Wales and Northern Ireland. That fewer doctors are looking after greater numbers of patients is also shown by BMA figures (also from NHS Digital, and thus NHS England only):

Fewer doctors are looking after greater numbers of patients

Change in average number of patients per practice and GP to patient ratio
September 2015 to April 2024

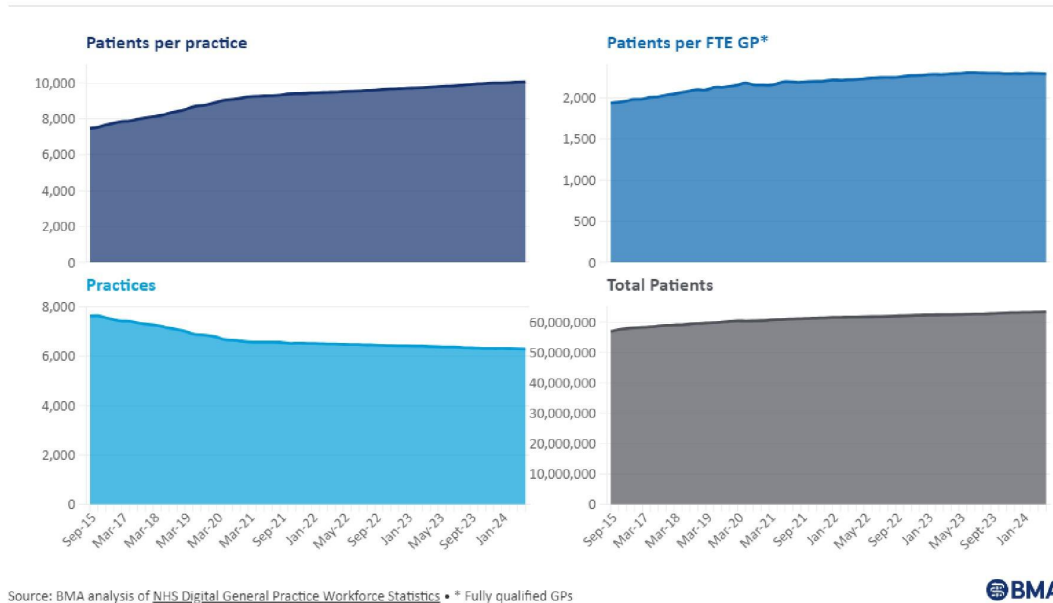


Figure 27: Average patients per practice and GP to patient ratio (RCGP, 2024)

- 299. These figures of rising numbers of patients per GP are a different presentation format for the same problem noted in the opening Section about primary care in which fewer GPs per 100,000 population were noted, notably lower than in equivalent higher income countries and health systems such as Australia, New Zealand and Canada.
- 300. The workforce in general practice is diversifying. In England, FTE Nursing staff employed in General Practices have risen since December 2015 from 15,197 to 16,946 and other FTE direct patient care staff have rapidly grown from 9,373 to 17,031 (NHS Digital 2024). Nursing staff have increased in Scottish General Practices from 1,455 in 2015 to 1,702.4 in 2023 (Public Health Scotland 2022, NHS Education for Scotland 2023). Data from Wales (see graph) demonstrates a similar trend. Whilst there has been a very slight increase in the number of nursing staff employed in Welsh GP practices, the number of other staff involved in direct patient care has dramatically increased (see graph; these include pharmacists, paramedics, mental health practitioners, health care assistants etc.). This reflects the increasingly multi-disciplinary approach in General Practice where allied healthcare professionals are fulfilling some of the roles traditionally performed by GPs to attempt to make up the shortfall. No comparative data were identified for Northern Ireland.

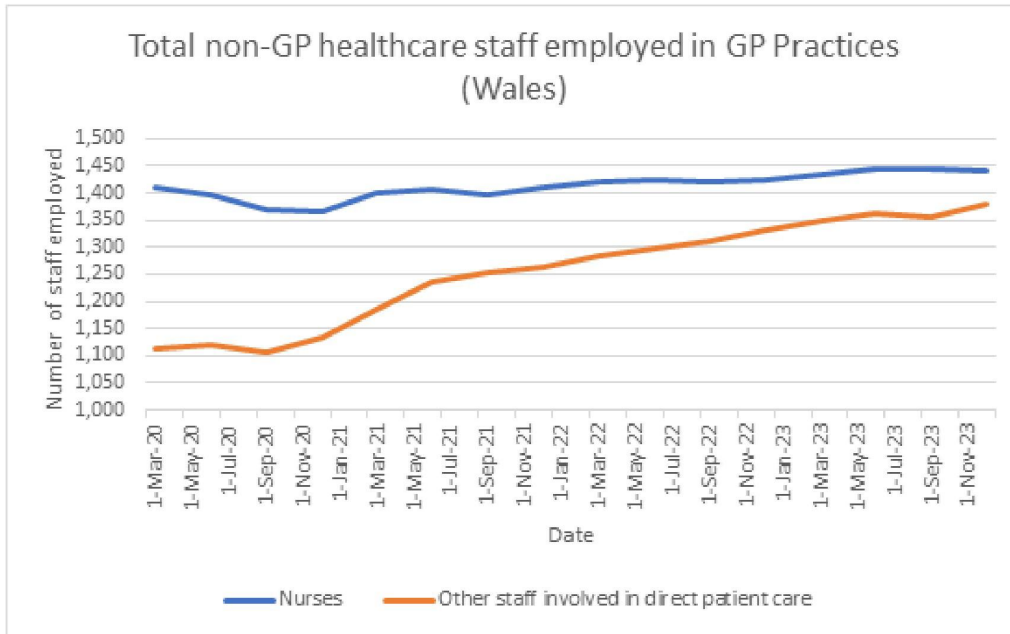


Figure 28: Figure adapted from StatsWales data (Welsh Government, 2020c) [Accessed: 12 June 2024]

Multidisciplinary Team (MDT) staff numbers²

Numbers of nurses and direct patient care staff (September 2015 to February 2024)

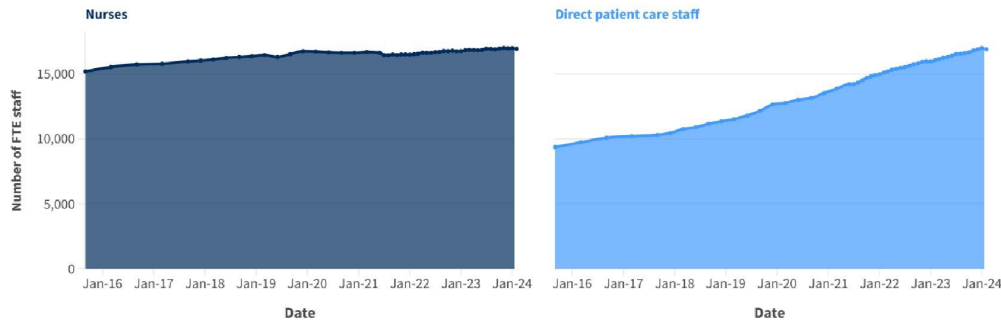


Figure 4: The number of nurses and direct patient care staff have increased since 2015. There are 16,947 FTE nurses working in general practice as of February 2024, which is 1.1% more than in December 2019. There are 16,913 FTE direct patient care staff working in general practice as of February 2024, which is a 34% increase from December 2019 [2].

Figure 28: Multidisciplinary Team (MDT) staff Numbers (RCGP, 2024)

301. As well as increasing numbers of patients per GP, the decreasing numbers of fully qualified GPs has major implications for the ability of the GP workforce to supervise (educational and clinical supervision, mentoring, etc) the non-medical workforce whose numbers are rising.
302. As well as declining full-time numbers and rising numbers of patients per GP, we need to keep in view the predictable and continuing rise in need owing to **long-term rising**

prevalence of several conditions. As noted in the Section: Ageing population and rising levels of illness, the Health and Care Research Wales Evidence Centre undertook a review and evidence map in 2023 of forecasted trends in prevalence of cancer (breast and prostate), cardiovascular (including stroke, atrial fibrillation, heart failure), also diabetes and high blood pressure, dementia, mental health and depression and multi-morbidity (Health Care Research Wales, 2023). (Declaration of interest: I am the Director of the HCRW Evidence Centre). All these conditions are predicted to become more common, and most have at least some management in primary care. It is vital that planning for health service needs and capacity accounts for these trends over the next 10 years and more.

303. In summary, there are numerous data about the workforce, with different comparison periods. It is not a specialist subject of my own, and I give a limited opinion from various data and key publications from domain specialists (e.g. RGCP, n/db). Overall, the most detailed data are mainly available from England but are largely mirrored (or sometimes worse, reflecting higher levels of practice area deprivation) in Scotland, Wales and Northern Ireland and they appear to show a **steady increase in head counts of GPs and primary care nurses**, and probably also a **decline in full-time equivalents staff numbers, especially GPs**, in the primary care workforce. There is a long-term strategy also to enhance the primary care workforce as a key part of the overall NHS workforce (NHS England, 2024b). Whether these enhancements can be delivered at the scale intended and needed to **keep pace with the increasing demand (growing and ageing population with increased multi-morbidity), is uncertain**. In the light of the problems and concerns about resilience in the general practice sector noted above, the **future resilience to withstand system pressures of a potential future pandemic seems doubtful**.
304. Urgent efforts are required to enhance general practice services for the present challenges and so that the general practice sector can prepare and be available and functioning when the next pandemic occurs.
305. The BMA has identified key areas for ensuring the general NHS workforce and service delivery are fit for the future, especially for pandemic pressures (BMA 2023). These cover:
- Ensuring health services are safely staffed and able to respond effectively to future pandemics:
 - Recruitment must stay in line with properly modelled assessments of the workforce needed to meet current and future patient demand.
 - Staff retention must be improved by addressing issues such as pay erosion, punitive pension rules and flexible working arrangements, and ensuring that staff feel valued by the service and the government.
 - Expand all aspects of the medical training pipeline to increase capacity for domestic training of doctors in the UK.
 - Junior doctors and medical students must be assured that their efforts to support care delivery during the pandemic will not disproportionately affect their careers due to time away from formal training.

- o Redeployed staff, who were not always given adequate training for their new, temporary roles, must not be left vulnerable to legal challenges for any negative outcomes.
 - o General wellbeing support must be made available for staff at all levels, regardless of location, to ensure staff are able to recover from the pressure and burnout of delivering care during a pandemic.
 - o Obstacles that prevented a greater uptake of returners programmes must be addressed and processes streamlined to ensure that staff can more easily return if they wish.
- Increasing capacity to respond to future pandemics:
 - o Governments across the UK must develop a credible plan to meaningfully increase hospital capacity and avoid a reliance on private sector capacity.
 - o Action must be taken to grow core bed stock to a level that will cope with year-round demand.
 - o UK health services' estates must be improved, and the backlog of maintenance costs must be addressed.
 - o IT infrastructure must be updated to further enable more flexible and streamlined remote working and video consulting.
 - o Additional funding is required across the UK to help health services work through the backlog of non-Covid care.
306. Many of these issues are not primary care specific but their principles would be transferable to a strong primary care service. Work is required to show progress in each of these areas as they apply to primary care. (BMA, 2024a).
307. Increasing primary care workload and concerns over falling GP numbers in real terms have been noted internationally. This has led to recommendations for changes to training policy for medical postgraduates in several countries:
- “in 2022, the Advisory Council on Medical Manpower Planning in the Netherlands recommended to the government that nearly half of all postgraduate residency training places should be allocated to general practice over the period 2024-27, up from 40% in 2021 (ACMMP 2022). In France, since 2017 at least 40% of all postgraduate training places must be allocated to general medicine. In Canada, nearly 45% of residency training places filled in 2023 were in family medicine, although a number of places remained unfilled (CaRMS 2023). In many countries, attracting a sufficient number of medical graduates to fill available training places in general medicine remains a challenge, given the lower perceived prestige and remuneration” (OECD 2023).*
308. There is evidence that GP training places are in demand in the UK. 10,514 applications were made for 3,935 GP speciality training posts in 2023. This 'competition ratio' has increased 23% since 2022 and has risen year on year for 8 years (see graph below, England only; Specialty Applications n/d). Despite the need to increase GP numbers the number of funded posts was 4.9% lower in 2023 than 2022 (4,137 posts available). Furthermore, despite UK government commitments in 2020 to train an additional 6,000 GPs, there have only been an additional 2,718 FTE GPs in England as of April 2024. (BMA, 2024b).

Year ▼	Level ▲	Applications ▲	Posts ▲	Competition Ratio ▲
Nothing selected ▼	Level			
2023	ST1	10,514	3,935	2.67:1
2022	ST1	8,549	4,137	2.07:1
2021	ST1	7,640	4,269	1.79:1
2020	ST1	5,770	3,836	1.50:1
2019	ST1	5,166	3,861	1.34:1
2018	ST1	4,987	3,763	1.33:1
2017	ST1	5,097	3,857	1.32:1
2016	ST1	4,863	3,802	1.28:1
2015	ST1	5,112	3,612	1.42:1
2014	ST1	5,477	3,391	1.62:1
2013	ST1	6,447	2,787	2.31:1
		Total: 69,622	Total: 41,250	

Figure 29: GP application competition ratios (Specialty Applications n/d)

309. The competition ratio urgently needs to be capitalised upon, recruiting as many trainees as possible, if they meet entry criteria.

Conclusions

310. The worldwide evidence is that the **stronger the primary care system the stronger the overall health system is** to improve health outcomes, reduce costs, and maximise equity for the population. These findings have been robust over time and across health systems. 'Strength' of primary care covers various features including higher ratios of primary care physicians to population (and proportion of the total doctor workforce in primary care), stronger relationships and continuity with GPs, quality of preventive care (screening, health promotion) and early management of health problems.
311. The UK has for a long time had a primary care (GP) system characterised by these strengths. Most people in all four UK countries are registered with 'their' local general practice. They contact them for acute illness, ongoing illness, screening, prevention and health promotion activities, and a range of other concerns and administrative requirements (certification etc). There have previously been quite clear relationships and continuity with specific doctors for many patients. Patients have usually been seen in booked appointments in the GP surgery, sometimes at home when they are unable to travel to surgery.
312. However, the situation is changing in response to several pressures. The ageing population, with rising numbers of conditions per person means that requirements for primary care appointments are rising rapidly, and the workforce numbers are not keeping pace. There are small rises in staff numbers, but full-time equivalent staff numbers, and numbers of fully qualified staff are decreasing. Numbers of patients per GP are rising.
313. **Access** (provision in relation to need) **and experience of access are deteriorating**. There has been interest in whether some (or much) or the work of GPs can be undertaken through telephone or other 'remote' consulting methods. Some pre-pandemic evaluations indicate that this is feasible for many patients and consultations, though particular attention is required for groups of patients who may struggle with this and be disadvantaged (older persons, digitally excluded, etc.). There is an "inverse care law" in which provision of care varies inversely with clinical need and this is as evident in primary care as everywhere else. We must be careful not to exacerbate it, though we must still seek service improvements in general.
314. There was **little evidence of pandemic preparedness that specifically related to primary care** capacity, requirements, role change, adaptation of ways of working and places of work, risk management, involvement in vaccination.
315. Given rising need and demand, and largely static or declining workforce capacity, **resilience in general practices is a problem** and increasingly so. Some GPs report themselves as working at a quarter above full capacity as things are now. Dissatisfaction with the job is causing many to consider leaving the profession(s) in the near future. This has been a general trend over several years, but the pandemic pressures also affected staff including impacts on physical and mental well-being, likely depleting the little reserve there was even further.
316. The **primary care sector needs urgent attention** and significant support if it is to be resilient to withstand surge pressures in the event of a further pandemic. Resilience at practice level is primarily a reflection of workload in relation to capacity to deliver, with

consequent stresses, lack of time with patients making the job seem unfulfilling as quality of care is affected, also making personal professional development more difficult. At a system level, the **proportion of NHS (England) budget spent on general medical practice has dropped from around 11% in 2004 to 8.8% in 2015-16 and to 8.4% 2023-24**. Real terms increases in spending in primary medical care are less than those in all other sectors. Resourcing primary care is cost-effective at societal level and improves health outcomes for the population.

317. Primary care provision changed considerably in the pandemic. There was a drop in appointments provided in March - June 2020, but which returned to usual levels after that. A notable change was the **switch of most consultations to telephone** (or other remote) consulting methods. It would have been impossible to maintain the volume of appointments that was achieved, given other constraints (lockdown, 2m spacing etc), without a switch to telephone consulting. Proportions of telephone consulting decreased from that high level in March – June 2020 but remain substantially above pre-pandemic levels (at 30-40%). There is potential for telephone or remote consulting to generate efficiencies of time and resource. Challenges in telephone and remote consulting have been identified, including whether they can fully meet patients' needs (e.g. where one-to-one interaction is particularly important such as mental health consultations), whether there are specific risks that must be mitigated, clinicians' needs for training in these methods, and **how to support digitally excluded and disadvantaged groups such as older persons in using services**. Specific training needs in relation to telephone consulting, and deciding about its feasibility and appropriateness, have been identified.
318. There was a change in the nature of consultations too, with a focus on acute illness especially and some new conditions like Long Covid. There was **less presentation of long-term conditions and symptoms potentially suggesting cancer**. It is not clear if the latter deficits have been restored now, and targeted resourcing may still be needed to catch up on the 'backlog'.
319. Regarding acute illness and patient assessment, there were many programmes for integrating oximetry into remote patient monitoring. There were few specific indications of patient safety risks with this approach, and that it was feasible, though reach and impact overall were perhaps quite limited owing to poor uptake. It did not appear to make substantial impacts on clinical and resource use outcomes. Again, the **needs of disadvantaged groups** and support required to engage successfully with oximetry were identified and will need active support in the event of a further respiratory illness pandemic. Specific attention is required regarding guidance on the use of oximetry in BAME patients.
320. Research infrastructure especially for large-scale high-quality trials in primary care was not in place at the start and was rapidly established at the start of the pandemic.
321. Overall, primary care workload has been rising steadily since pre-pandemic years. It is not clear that the pandemic caused a further rise in workload above the prior trends. Workforce numbers have been decreasing, especially fully qualified and full-time equivalent staff numbers. Numbers of patients per full-time GP continue to increase. Numbers of partners in general practice are declining continually, raising several concerns including about capacity to supervise and mentor the diversifying primary care team. The numbers of younger members of staff leaving general practice are worrying for the sustainability of the workforce.

However, one positive is that the numbers of applications to general practice training appear strong and increasing, so efforts to enhance training capacity could be effective towards restoring workforce numbers. This is urgent though. Prevalence of most long-term conditions, including cancer and mental health conditions, are predicted to rise over the next 10 years. These all appear to be more indicative of continuing long-term trends rather than a direct impact of the pandemic.

322. There were clear physical and mental health impacts on medical staff during the pandemic, and GPs were among those. There is evidence of burnout among primary care staff and the evidence of benefits on wellbeing through interventions at individual level such as mindfulness, informal peer support, CBT across the primary care health disciplines should be utilised to enhance capacity for this support.
323. Collectively these coinciding influences significantly **affect the capacity and resilience of the primary sector for a future pandemic**, both the abilities to prepare and to provide when the surge pressures arrive.

Recommendations to improve the delivery of primary care in a future pandemic

Recovering after the Covid-19 pandemic

324. Telephone and other **remote or telemedicine methods** for consultations have considerable potential to assist with the problem of access to general practice as need and demand increase, but Integrated Care and Health Boards, primary care networks or clusters, and GP practices should give specific attention to the needs of minoritised population groups to ensure that they are not further disadvantaged.
- 324.1. The National Institute for Health and care Research (NIHR) should prioritise research on the effectiveness of initiatives to prevent or mitigate such inequalities, including whether 'traditional channels' of access and communication can be effectively retained for certain groups of patients that need this. Risks must be actively mitigated by measures that include digital inclusion strategies, enhanced safety-netting, and training and support for staff.
- 324.2. The Royal College of General Practitioners should lead in further **developing training** in remote consulting / telemedicine, working with other key stakeholders for appraisal and revalidation across the 4 UK countries. The training is needed to provide knowledge and skills that deliver high-quality remote encounters to diverse patient groups, and this could be facilitated (or incentivised – non-monetarily) through continuing professional development and appraisal mechanisms. The advantages of non-didactic training, for example, joint clinical sessions, case-based discussions, and in-person, whole-team, on-the-job training have been identified as likely to be especially valuable.
325. All the four UK governments should give policy priority to addressing likely **backlogs in primary care** (especially long-term condition diagnosis and subsequent routine evidence-based care pathways) which have not recovered post-pandemic. It is essential that any backlogs are identified and addressed if primary care is to be ready for a future pandemic and surge pressures. Rapid evaluation of those continuing needs is needed first (which patients are still 'missing', or not part of monitoring and preventive systems? What is needed most for these patients?), with a view to targeting resources most effectively. This likely needs specific additional resourcing to address the backlog. This is not necessarily with GP time – administrative and healthcare assistant time may be most productive, inviting patients to attend for screening blood tests etc.
- 325.1. Need and demand continue to rise rapidly, out-stripping supply and resources. All Governments and system leaders (Integrated Care, Health and social care Boards, royal colleges, unions and patient organisations) across the UK must promote an honest conversation and debate with the public about the need for a realistic approach to restoring non-Covid care, what is highest priority and **delivers most value**, and support for staff in tackling the backlog of care.

Planning and preparedness

326. **Business continuity planning** or preparedness planning should have been better. This is the responsibility of GP practices as independent contractors to the NHS. Given low resilience in the sector, it is important that guidance for preparedness, capability and capacity for exceptional demand and business continuity planning is actively supported by Integrated Care and Health Boards, potentially also via or with primary care networks or practice clusters, to translate planning into genuine operational preparedness for the next pandemic
- 326.1. Proactive planning needs to specifically cover primary care implications and cover management of presenting pandemic illness, management of continuing care and needs, prevention and health promotion activity (including vaccination and other screening programmes), modification of help-seeking behaviour, channels for and content of communication with patients and public and administration. It also needs to include aspects of adaptations to 'estates' – surgeries and technology, including new tools, methods and processes (see also witness statement provided by Professor Philip Banfield on behalf of the British Medical Association, dated 03/05/2024 INQ000477304, para 56). Other areas include role change, adaptation of ways of working and places of work, and risk management.
327. Integrated Care Boards and Primary Care Networks (England), Health Boards (Scotland, Wales), and the HSC (Northern Ireland), should work with GP practices and clusters of practices in their area to specifically **plan for the unequal impacts** of a future pandemic on particular population or patient groups, such as older, poorer or ethnic minority groups, and how these can be mitigated.
- 327.1. The Integrated Care and Health Boards also need to proactively plan for **guidance and documentation** to efficiently support clinical practice in the event of another pandemic. The feasibility of central sources of guidance, resources, risk management tools, learning materials, and case studies (etc.) should be explored, including whether the RCGP (UK) may be well-placed to be the designated repository across the four UK countries.
328. The four UK governments need to co-ordinate across the UK for **primary care research preparedness** for a future pandemic, working with, the existing UK-wide and national research funding channels (National Institute for Health and Care Research, Health and Care Research Wales, NHS Research Scotland, HSC R&D division, UK Research and Innovation). Primary care research infrastructure was not available at the start of the pandemic and needs to be available to respond quickly again in the event of a further pandemic, coming out of 'hibernation'. This can be achieved by resourcing research infrastructure that may be researching other areas (i.e. non-pandemic primary care), but which provide capacity for rapid re-focusing in the event of a pandemic onto clinical trials, prevalence studies, topics suitable for qualitative methods (like patient experiences) and other key questions and range of potential methods and to navigate regulatory changes of research.

329. The National Institute for Health and Care Research should prioritise themed research that may **enable preparedness in clinical practice**, such as work on evidence-based triage and scoring systems, their validity and effectiveness to support clinical practice. These may not be feasible until the characteristics of a new pandemic become clear, but evaluation of what worked, for whom, in which circumstances and lessons for a future pandemic is important.
- 329.1. The National Institute for Health and Care Research should also prioritise themed research on the differential effects of the pandemic on ethnic minority staff groups; there is also a need for high quality research on the effectiveness of anti-racist interventions for ethnic minority staff.
- 329.2. Royal Colleges (GPs, Nursing) should lead in establishing an expert group of researchers, GPs with special interest, commissioners, patients with lived experience of using **oximetry** during the pandemic and other stakeholders to identify lessons from current experience and research, to develop guidance for effective and equitable implementation of oximetry in the event of a future respiratory pandemic. Specific areas require planning such as the infrastructure requirements and technology development needed for monitoring, providing sufficient human resources for monitoring patients (staff-to-patient ratio), safe delivery of pulse oximetry to participating patients, patient education to use pulse oximetry, clarifying how long it should be used for, emergency helpline, standardising the measuring and recording of results and patient outcomes.
- 329.3. The evidence base regarding oximetry remains poor, from the wide variation in models of adoption, and methods of evaluation when put into practice during the Covid-19 pandemic. The National Institute for Health and Care Research should also prioritise themed research, including its validity in BAME patients and mitigations to prevent inequalities in practice and outcomes, and research will be required to evaluate whether it can be safely, effectively and equitably implemented in the future for all patients.
330. The National Institute for Health and Care Research should prioritise themed research on the **patient safety** implications relevant to a future pandemic, including remote consulting and remote patient monitoring (including oximetry), especially with disadvantaged groups (older persons, digitally excluded etc), and the effectiveness of interventions to enhance patient safety.

Resilience now and for preparedness

331. Resilience in general practice is poor and needs **urgent and substantial efforts** to improve it, both to restore primary care to meet current needs which are outstripping capacity, and for primary care to be able to respond to the pressures of a future pandemic on the scale of Covid-19.
332. If general practice is to be ready to respond to a future pandemic, the 4 UK governments need to prioritise in policy and deliver on **expanding and sustaining the workforce** in all its disciplines before the next pandemic begins. These urgent efforts need to include staff recruitment and retention and supporting and developing primary care staff across the disciplines – general practice, nursing and allied health, administrative groups. Initiatives

to enhance these are essential, with evaluation of their effectiveness. The 4 UK governments need to work closely with system leaders (Royal Colleges, post- and under-graduate providers, unions, professional Councils) to resource and deliver capacity for education, training and supervision, in order to expand the workforce

333. Strategic efforts are required from all four UK governments, and which are both sustained and effective over long periods of time, to enhance the full-time equivalent workforce, which has not happened in recent years despite clear policy pledges to do so, and sufficiently to meet the long-term rising levels of need and demand. The workforce needs to expand fast enough to meet the challenges of increasing workload now and to retain these staff to achieve the resilience required for general practice to be fit-for-purpose in the event of a future pandemic. Existing schemes that directly reimburse additional posts upon appointment or additional hours from existing staff, such as the Additional Roles Reimbursement Scheme in England, the temporary (2022-25) Additional Capacity Fund in Wales (administered through Health Boards, see witness statement provided by Andrew Goodall on behalf of the Welsh Government Health and Social Services Group, dated 10/05/2024, INQ000485721, para 467) or the Primary Care Improvement Fund (Witness statement of Caroline Lamb, on behalf of the Director General for Health and Social Care, dated 18/06/2024 – INQ000485979, para 632) offer potential models and Governments should explore further development and sustaining of such approaches across all the primary care disciplines. These are examples of schemes that Governments should work with key stakeholders (Royal Colleges, post- and under-graduate providers, unions, professional Councils) to develop further for their own administrations (England, Scotland, Wales, Northern Ireland) and sustain, to meet population and service needs, with opportunity for all the disciplines currently working in UK general practice to be recruited.
334. This involves **planning for student and training place numbers**. Training numbers have risen in recent years but not sufficiently to expand the workforce (i.e. more continue to leave as well). Education and training capacity needs to be increased dramatically, and across disciplines. There is evidence of strong interest to join GP training schemes, and this should be capitalised upon urgently. This requires policy and delivery on pledges from the four UK Governments, including resources both for the teaching workforce at undergraduate level, and for the training places, educational supervisors and related roles at post-graduate levels. Higher Education Funding Councils across the UK and post-graduate deaneries, relevant bodies in devolved nations (e.g. Health Education and Improvement Wales) will need to plan and deliver on this training to enhance overall staff numbers that the situation demands.
335. Regarding medical training, there are **quotas** in some comparable countries for a minimum threshold of training places that must be in primary care (e.g. 40-45%). There should be consideration by Governments, RCGP and other key stakeholders about an appropriate proportion for the UK and policy commitment and delivery on this target.
336. All **training and supervision capacity** in general practice needs to be effectively resourced – explicitly, not implicitly. A particular challenge in general practice concerns supervision requirements relating to continued development and broadening of the primary care workforce (e.g. for pharmacists, advanced nurse practitioners in training for primary care, physician associates, depending on practice development goals) as well as

the training requirements for GP registrars. All these staff members in training require educational supervision, mentoring etc, usually at least including GPs (there may be discipline specific supervisors as well) and usually by GP partners whose numbers are inexorably declining over several years. Governments need to commit to genuine, **realistic resourcing of this capacity for training, supervision and mentoring** across these primary care disciplines, working with post-graduate deaneries (or sometimes undergraduate sectors) to create achievable and effective supervision and training requirements and plans. Health and Care Boards and Royal Colleges are also relevant stakeholders to this multi-disciplinary issue and should contribute to the planning. Evaluation can be integrated into budgeting for educational provision.

337. **GP partners** are critical to the overall expansion and development of general practices, to be fit for purpose in the event of a future pandemic. Specific efforts and interventions to encourage, support and retain GP partners are required, with evaluation of the effectiveness of these interventions. (The partner workforce is predominantly GP-based, with some Advanced Nurse or other Practitioners also taking these roles in some practices and the point here is generic about partners in practice). The four UK governments should support in policy, and adequately resource contractually the realistic time commitments of Partners for training, supervision, administration and management, business continuity planning (many of these at both practice and locality level) so that partnerships are viable and sustained to be fit for purpose.
338. These resource commitments are part of an overall need to restore primary care funding as a proportion of overall NHS expenditure. It was of the order of 11% (in England; lower in Wales, data from Scotland and Northern Ireland only available more recently – 2013 and 2010 respectively) some 20 years ago (RCGP, 2019), was 8.9% in 2015/16 and has now fallen to 8.4%, possibly lower depending on country or region examined. Investment in primary care is cost-effective for society and achieves better health outcomes for the population. The 4 UK governments need to commit to restoring the **proportion NHS budget spent on primary care** to that earlier order of 11%, to tackle system pressures now and as a means to ensuring there is a primary care service fit for purpose in the event of another pandemic.
339. The 4 UK Governments should prioritise health policy that addresses the “**inverse care law**” – that availability of care varies inversely with the clinical need of the population. This is highly relevant to preparing for a future pandemic, for example planning for provision for people in poorer areas, from ethnic minorities and other minoritised groups, and seeking to ensure that **inequalities do not characterise its outcomes** as they did in Covid-19. Overall resourcing of the NHS, and decisions about allocation to primary care, minoritised populations etc require Governments to prioritise these in policy. Integrated Care and Health Boards, bodies with responsibility for public health (UK Health Security Agency, Public Health Scotland, Public Health Wales, HSC Public Health Agency) should continually characterise their populations, health needs and provision of health care in relation to those needs. Those with responsibilities for commissioning and providing health care (predominantly Integrated Care and Health Boards) should prioritise, allocate and implement resources to meet the health and care needs of the locality, to mitigate the inverse care law. UK Governments should revise funding formulae (e.g. Carr-Hill) for GP practices to mitigate the inverse care law.

340. There must be **more accessible emergency support** to practices. When practices need emergency support, they need simple, brief processes to apply for it. Integrated Care and Health Boards must ensure timely availability and accessibility of emergency support. Such support may be financial, that practices utilise to meet staffing needs, or it may be through staff being redeployed from Boards to support practice work (clinical or administrative). Emergency support may be needed to meet rising need and demand in both seasonal surges and year-on-year increases in demand, and as such may be understood as necessary to ensure a fit for purpose primary care system is available and functioning adequately when the next pandemic occurs. It may also be understood as necessary for the event of a future pandemic with its additional and potentially extreme surge pressures.
- 340.1. As and when there may be another pandemic, system pressures can be expected, requiring a further short-term increase of workforce capacity. Efforts to support **return to the workforce** (e.g. of those recently retired or left general practice) need to be leaner and more effective than they were in 2020 when certification and re-training challenges were problematic (see also witness statement provided by Dr Michael Mulholland on behalf of Royal College of General Practitioners, dated 07/11/2023, INQ000339027, paras 134-139). The General Medical Council, Royal Colleges (medical and nursing) and Integrated Care and Health Boards need to review such requirements and processes, and their ability to rapidly enable staff to return to work if they choose. Integrated Care and Health Boards should make operational plans that can enable and prioritise older staff members, and those with other risk factors, including the Clinically Vulnerable or from ethnic minority groups, to undertake remote consulting, which could aid the short-term expansion of the workforce and enhance safety.
341. In the longer term, UK Governments should undertake continuous and transparent assessments of general practice workforce levels and shortages. Governments should work with the public health bodies (UK Health Security Agency, Public Health Scotland, Public Health Wales, HSC Public Health Agency) to identify future **safe staffing requirements in relation to need and demand**, at least annually. Governments should prioritise these safe staffing levels in health policy and fully resource them. Workforce data such as those from NHS Digital cited earlier provide a platform for this analysis, including numbers of staff across disciplines, whether fully qualified and full-time equivalent, patient numbers per staff and in relation to predicted trends in population and levels of illness over the foreseeable future. Regional and locality data are important so that variations in care provision can be identified for targeted support by Integrated Care and Health Boards, again specifically addressing 'inverse care law' issues. If Scotland, Wales and Northern Ireland have data in equivalent detail and accessibility such monitoring should occur in the devolved administrations too or be developed to achieve this. Governments and the public health bodies should undertake or commission ongoing evidence synthesis work (literature reviews) to enable continuous updating of knowledge of forecasted trends in prevalence of the major workload challenges (cancer types, long term conditions including mental health, urgent care). This could be commissioned and delivered via the NIHR Evidence Synthesis Programme (9 centres in England and Scotland) and other evidence / review groups.

342. All four UK Governments need to be undertaking detailed primary care workforce analyses, and working with system leaders (RCGP, RCN, BMA etc) to address shortfalls (as above) and to characterise the workforce with greater detail. For example, improved data collection practices are needed to ensure comprehensive and accurate data including coding on ethnic minority groups across disciplines which are presently lacking. Such data are required for preparedness planning for a future pandemic.
343. Technological improvements are also required to ensure many practices can indeed respond to such pressures and address urgent needs to improve access to the right care at the right time with the right professional. Further development of telephone systems, online booking systems, video-consulting, patient information materials, clinical and patient decision aids are required. This will require Governments to co-ordinate, and work with suppliers and primary care staff (likely through leaders and representatives) to identify needs and fit-for-purpose solutions, and bring them quickly to market.
344. The National Institute for Health and Care Research should prioritise themed research on remote consulting including when it works, for whom and with what support required for particular, especially disadvantaged, patient groups (older persons, digitally excluded etc).
345. As well as workforce capacity and new ways of working such as with technological developments, the existing workforce needs specific support (see next paragraphs) to restore personal resilience of staff – across general practice, nursing and allied health and administrative disciplines.
346. Firstly, the four UK Governments should identify in policy and identify resources that can provide nationally funded primary care **occupational health services** (as also called for by the Royal College of General Practitioners (witness statement of Dr Michael Mulholland on behalf of Royal College of General Practitioners, dated 07/11/2023, INQ000339027, para 111). All UK health services, including primary and community care, need good occupational health systems that can act quickly to protect staff both during and outside of health emergencies. To mitigate inequity in the future, to the design and delivery of these occupational health services must make the experience of working in the NHS less variable by background or protected characteristic. Governments should lead in this, working with Integrated Care and Health Boards in delivery, and in consultation with stakeholders such as BMA, RCGP etc. It needs to be evaluated and monitored for delivering effective, accessible, fairly distributed services. Evaluation should be integrated into budgeting for service provision.
347. Secondly, for staff well-being, both physical and mental, enhanced general **wellbeing support** needs to be available for staff in primary care services, along with specific support to recover from the pressure of delivering care during a pandemic. Various possible strategies, interventions and support schemes to enhance wellbeing and minimise burnout have been proposed and should be resourced for implementation with evaluation. These include:
- Improved funding to primary care to improve staffing levels and workload levels and thereby improve wellbeing. As above this requires Governments to prioritise these in policy and Integrated Care and Health Boards to implement and allocate resources.

- Adequate staffing to allied agencies such as social services, in itself, and also to improve primary care workload. This also requires Governments to prioritise it in policy and Local Authorities to implement and allocate resources.
- High quality research to determine which interventions are effective to improve wellbeing in GPs and other primary healthcare staff – ringfenced funding should be allocated for this purpose. The National Institute for Health and Care Research should prioritise themed research on this topic.
- Funding should be allocated to implement primary care staff wellbeing programmes, based on existing evidence such as mindfulness-based interventions and informal peer support schemes, which have the most robust current evidence base. This requires Governments to prioritise these in policy and resource them, and Integrated Care and Health Boards to allocate resources and implement the programmes.
- Interventions that teach skills to enhance wellbeing and manage burnout should be systematically implemented early in education and training of primary care staff – early prevention rather than cure is likely to be more effective. This should be prioritised by under-graduate education and post-graduate training providers, across healthcare disciplines. Professional councils (General Medical Council, Nursing and Midwifery, etc) can facilitate this prioritisation with the providers through their curricular responsibilities.

List of figures

Figure 1: Overall rating for arrangements to see a GP in Scotland (Scottish Government, 2024)	14
Figure 2: Patients' experiences of general practice (Magadi and Magadi, 2022)	15
Figure 3: Percentage of respondents reporting positive overall experience of GP services in the UK, 2010 to 2023 (ONS, 2024)	16
Figure 4: Sample of documents distributed to frontline clinicians 2019-2021	24
Figure 5: Number of clinicians per head of population since 1949 (Nuffield Trust, 2024) .	29
Figure 6: Monthly number of appointments in primary care and GP appointments (Fraser and Fisher, 2021)	30
Figure 7: Monthly number of face-to-face and telephone appointments (Fraser and Fisher, 2021)	32
Figure 8: GP Appointments by mode of delivery, Sept 2018 to Dec 2022 (IFG, 2022)	33
Figure 9: Monthly count of physical compared to virtual appointments, January 2018 to January 2024 (Public Health Scotland, 2023)	34
Figure 10: Changes in appointment format, March to June 2020 (Clarke, Pariza and Wolters, 2020)	35
Figure 11: Normalisation Process Theory model of remote consulting. (Murphy et al. 2021)	40
Figure 12: Dips in recorded incidences of long-term conditions in early 2020, not rebounding to demonstrate a 'catch-up' effect. (Qi et al. 2023) (Legend: TIA = transient ischaemic attack ("mini-stroke"); CKD = chronic kidney disease; PVD = peripheral vascular disease ("hardening of arteries") in the legs)	50
Figure 13: Typical example of a pulse oximeter	54
Figure 14: Estimated total number of appointments in general practice by year (2019 to 2023) (NHS England Digital, 2023)	63
Figure 15: Monthly count of all activity by HCP group (Public Health Scotland, 2023)	64
Figure 16: GP Appointments by provider, Sept 2018 to Dec 2022 (IFG 2022)	67
Figure 17 Graph from NHS England Sickness Absence Rates, January 2024 Interactive tool (NHS England n/db) [Accessed: 11 June 2024]	68
Figure 18: Figure adapted from StatsWales.gov information (Welsh Government, 2024d) [Accessed: 11 June 2024].	69
Figure 19: Graph from NHS Scotland Workforce Latest Statistics at 31 March 2023 (NHS Education for Scotland, 2023c) [Accessed: 11 June 2024].	69
Figure 20: Total GPs (headcount, not FTE) per 100,000 population in UK nations. Figure adapted using data from Department of Health: Publication of FPS General Medical Services for Northern Ireland, Annual Statistics 2023/24 (Department of Health, 2024)	

[Accessed: 11 June 2024].	78
Figure 21: Numbers of all and fully qualified FTE GPs from September 2015 to February 2024 (RCGP, 2024a)	79
Figure 22: Number of GPs by role (FTE) – all GPs including trainees (RCGP, 2024a)	80
Figure 23: Number of GPs by role (FTE) – fully qualified GPs (RCGP, 2024a)	81
Figure 24: Graph adapted from NHS England General Practice Workforce, 30 April 2024 data (NHS England Digital, 2024) [Accessed: 12 June 2024].	82
Figure 25: Graph from Welsh Gov: General practice workforce: as at 30 September 2023 (NHS England Digital, 2024) [Accessed: 11 June 2024].	83
Figure 26: Number (headcount) of GPs in Scotland by GP designation, 2012 to 2023 (NHS Education for Scotland, 2023a) [Accessed: 12 June 2024].	84
Figure 26: patients and workload in general practice data (RCGP, 2024)	84
Figure 27: Average patients per practice and GP to patient ratio (RCGP, 2024)	85
Figure 28: Figure adapted from StatsWales data (Welsh Government, 2020c) [Accessed: 12 June 2024]	86
Figure 28: Multidisciplinary Team (MDT) staff Numbers (RCGP, 2024)	86
Figure 29: GP application competition ratios (Specialty Applications n/d)	89

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