

A decorative graphic in the top left corner featuring a large grey circle, a green ring, and several smaller cyan circles of varying sizes.

Long-term trends in GP practice consultation rates

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Document control

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Executive summary

Introduction

GP practice consultations are, by some distance, the most common interaction between the NHS and the population it serves. During these consultations, patient's acute conditions are diagnosed and treated, their long-term conditions are managed, preventative interventions are delivered, and referrals to secondary care are made. Patient satisfaction with access to GP practice consultations is a long-standing problem, but this issue has become more acute since the COVID-19 pandemic. Most consultation appointments are booked by telephone, but in a recent survey, 50% of patients reported difficulties getting through to their GP practice by telephone, up from 30% in 2018.ⁱ

One might expect that the NHS would have a detailed and comprehensive understanding of the levels, types, and distribution of this important service. Whilst there have been many advances in recent years, there remain important gaps in our knowledge. In this paper we explore the long-term trends in GP practice consultation rates. We use two research databases, Clinical Practice Research Datalink (CPRD) Gold and Aurum, to estimate consultation rates between 1995 and 2022. We consider all interactions between a patient and a healthcare professional: face-to-face consultations in the GP practice, consultations conducted by telephone, or using digital technologies, and visits made to the patient. We set our results alongside (1) estimates from other studies, (2) new data on GP appointment rates, (3) GP patient survey results, (4) information about the GP practice workforce and its workload, and (5) data on other important forms of GP Practice activity.

Key findings

Practice consultation rates, the average number of consultations per patient per year, increased steadily and for many years until 2012, corroborating results from earlier studies.

Between 2012 and 2019, consultation rates fell, reversing the gains seen since 2008. As far as we are aware, this is the first study that highlights a fall in GP practice service levels over this period.

From 2020, the two sources of data that we used to estimate consultation rates, produce substantially different results, with one showing continued reductions and the other showing rapid increases in consultation rates. Analysis of other sources of information

fails to resolve the matter. Experimental data from NHS Digital suggests GP practice appointments have increased, but responses to the GP Patient Survey, and data on prescription and referral rates imply that consultation rates have decreased.

That no clear consensus emerges from these analyses of post-pandemic trends, may indicate an issue with the primary unit of activity of GP practices, a patient consultation. For many years, this unit of activity had a clear and consistent meaning. Between 2008 and 2019, counts of consultations from different systems and sources provide similar results and similar trends. But the widespread adoption of remote consultations and digital technologies, the emergence of Primary Care Networks, and the rapid expansion of the allied healthcare professional workforce, have led to radical changes in service models. Future analyses of activity trends and equity of access may require the development of new activity units that better reflect the operations of modern general practice.

This analysis considers changes in the rate of consultations per patient per year. The remaining papers in the series will explore how rates of consultations have changed relative to patient need, the consequences of these changes on hospital activity, and changes in the productivity and continuity of GP practice service provision.

Implications for Midlands Integrated Care Boards

In this paper we estimate long-term trends in consultation rates for England as a whole. The datasets that these estimates are based on, CPRD Gold and Aurum, do not support trend estimation for individual Integrated Care Boards. National consultation rate trends prior to the pandemic are clear however; rising between 1995 and 2012, before falling until 2019. Many of the factors that influenced these trends, national policy, contracting and funding arrangements, would have impacted all areas. In the absence of robust local data, ICBs should assume that similar pre-pandemic trends were present in their area.

Interpreting trends after the pandemic is more challenging. NHS Digital's data suggests that appointment rates increased modestly between 2019 and 2022, in all ICBs in the Midlands, except Nottingham and Nottinghamshire. ICBs should note however, that these figures are at odds with data from the GP Patient Survey that shows substantial reductions in patient reported appointment rates since 2019. Data from one of our two CPRD models, along with analysis of prescription and referral rates also indicate post-pandemic reductions in access. There is sufficient contrary evidence to suggest that ICBs should be cautious when interpreting trends in NHS Digital's experimental appointments data.

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1. Sources of information on GP practice consultation rates

Primary medical services in England are delivered by approximately 7,000 general practices, each providing care to an exclusive list of registered patients. A wide range of information pertinent to a patient's care needs, is recorded by GP practice staff in computer-based clinical information systems. This includes information about interactions between patients and their practices, such that in theory it should be possible to understand how GP practice consultation rates have changed over time. The reality however is somewhat more challenging.

There are three main suppliers of these systems to UK practices, EMIS, TPP (SystemOne) and INPS (Vision), although a number of new suppliers have recently entered the market. Each of these systems captures information about patient-practice interactions in a subtly different way. Furthermore, within each system, it can be difficult to differentiate interactions that we might regard as a consultation from other forms of activity. Innovations in practice, delivering consultations by telephone and online, and by an increasingly diverse professional groups have heightened the challenge of definitively and consistently identifying consultation-like activity. But perhaps the biggest obstacle to gaining a comprehensive knowledge of GP practice consultations is that this data is not centrally collated nor made routinely available to analysts in the NHS. The key barrier here is a lack of public and political consensus about the balance of benefits and risks, primarily to privacy, of such a central collation exercise.

Despite these challenges, it is possible to draw some inferences about GP practice consultation rate trends. Each of the main clinical system suppliers makes available, extracts of carefully anonymised data from a sample of participating practices via a series of research databases, such as CPRD, THIN, ResearchOne and OpenSafely. Access to these research databases can be purchased, and each has strict governance processes to ensure that the data is used for purposes that fall within scope of the data processing agreement with participating practices.

Since October 2018 NHS Digital has published monthly counts of GP Practice appointments, by Clinical Commissioning Group, mode, staff type, and a number of other variables. An appointment is not the same as a consultation, but these two currencies are closely aligned, such that trends in appointment rates should follow those of consultation rates.

Information about the frequency or recency of GP practice consultations are also collected via patient surveys. The most consistent and robust source of this information is the GP Patient Survey conducted by Ipsos. This survey has been conducted since 2007, with the primary objective of assessing patient experience and satisfaction with GP services, although the survey also includes some contextual questions about the timing of a patient's most recent contact with the practice. Whilst these surveys rely on patient recall of contact with GP services, the reported results should nonetheless approximate actual consultation rates.

The NHS in England also collects and reports data on two other forms of GP practice activity that we might expect to be closely correlated with consultation rates: referrals to secondary care organisations and prescriptions. These events tend to take place as a result of a consultation.

2. The results of earlier studies

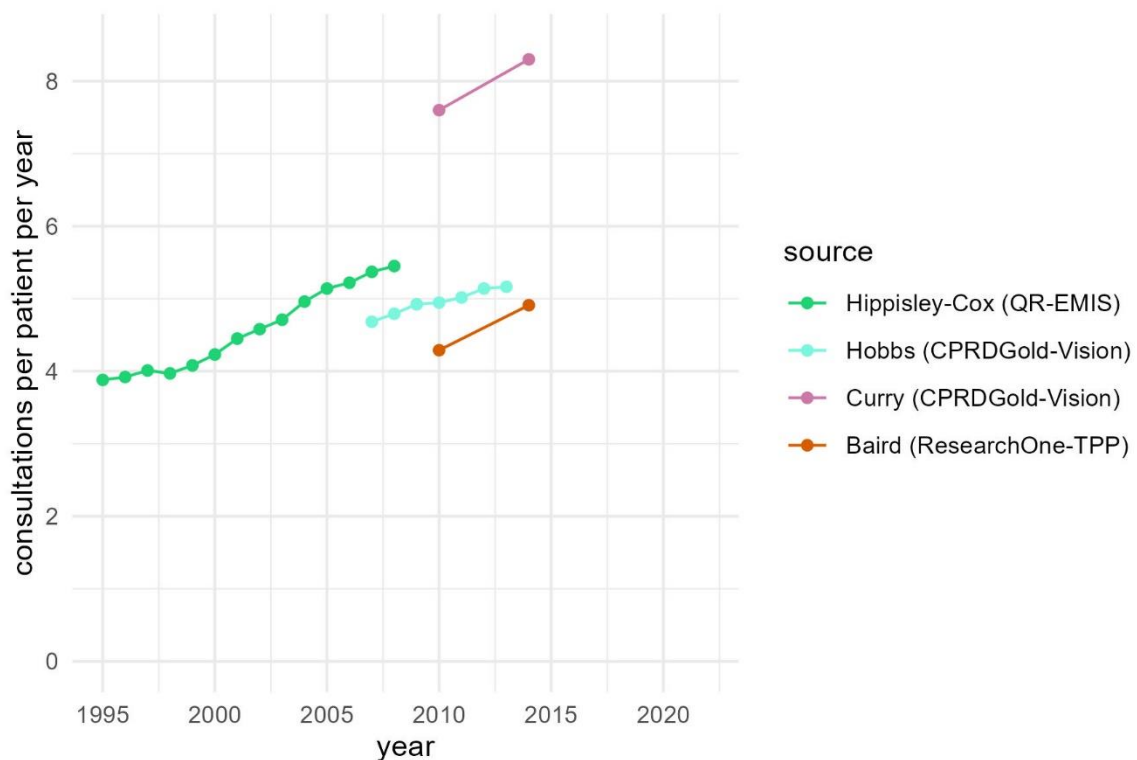
Five published studies (see table 1) have estimated and tracked GP practice consultation rates in England over periods ranging from 4 to 14 years.

Table 1: Published studies tracking GP Practice consultation rates in England

Lead author	Year of publication	Research database	Underlying GP clinical system	Period
Hippisley-Cox ⁱⁱ	2008	QResearch	EMIS	1995 to 2008
Curry ⁱⁱⁱ	2015	CPRD Gold	INPS-Vision	2010-11 to 2013-14
Hobbs ^{iv}	2016	CPRD Gold	INPS-Vision	2007-08 to 2013-14
Baird ^v	2016	ResearchOne	TPP-SystemOne	2010 to 2014
Vestesson ^{vi}	2023	CPRD Aurum	EMIS	2018-19 to 2021-22

Figure 1 below shows the results of the first four of these studies, published between 2008 and 2016 and spanning periods from 1995 to 2014.

Figure 1: GP Practice consultation rate trends from studies published 2008 - 2016



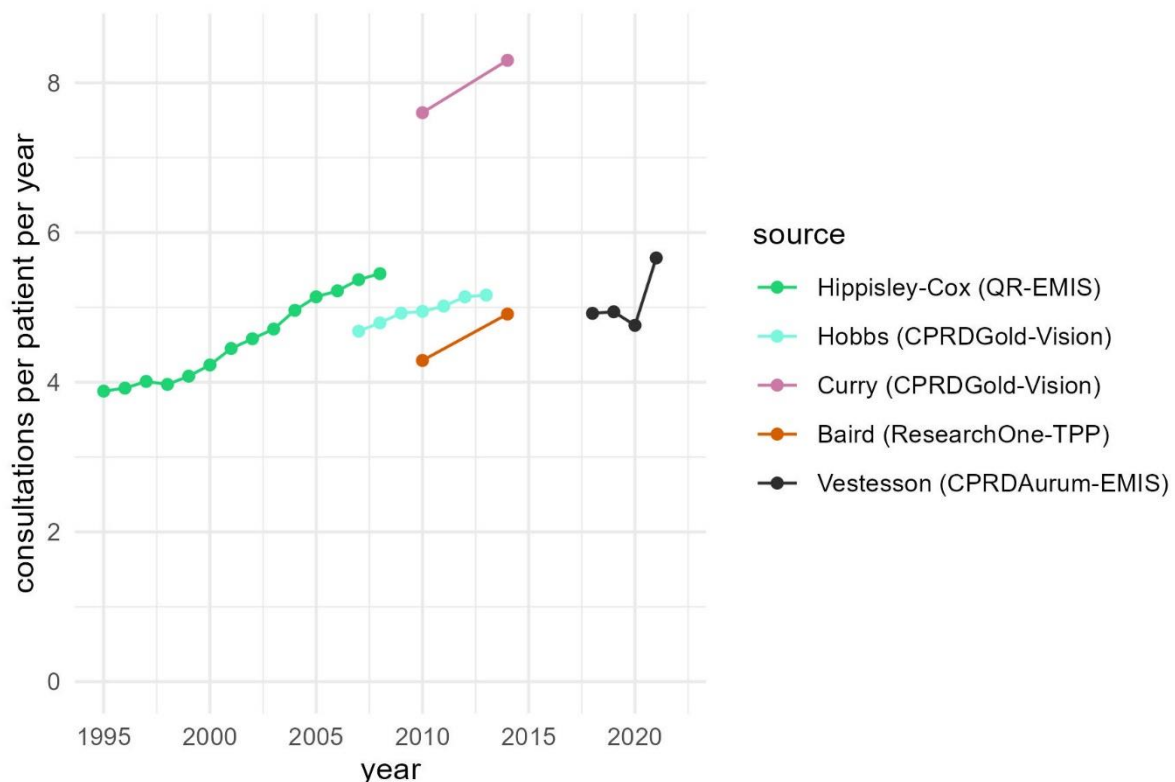
The results are expressed as crude rates, the average number of consultations per patient per year.

There are two observations that can be drawn by comparing the results of these four studies. (1) All four studies conclude that consultation rates were increasing over the period assessed. (2) Where the study periods overlapped, the individual studies' estimates did not align, and in some cases vary considerably. There are many possible explanations for these variations including differences in statistical methods, in the inclusion / exclusion criteria used to define a consultation, in coverage of the research database used, in the methods used to extract and collate data from the underlying clinical record systems, and differences in the structure of these systems.

To support reliable inferences about trends in GP Practice consultation rates between 2014 and 2018, we have estimated these rates in a consistent fashion from two sources, CPRD Gold (Vision) and CPRD Aurum (EMIS), over the whole period from 1995 to 2022

In figure 2, we add the results from the most recent study, published in 2023 and covering the period from 2018-19 to 2021-22.

Figure 2: GP Practice consultation rate trends from studies published, 2008 - 2023



The addition of data from this most recent study prompts three further observations. (3) None of the studies provide consultation rate estimates between the period from 2014 to

2018. (4) The first estimate from the most recent study, for the period 2018-19, is similar to or below the estimates at the end years (2008, 2013-14 and 2014) from the earlier studies. (5) The most recent study indicates a reduction in consultation rates in 2020-21, when the SARS-CoV-2 virus and the associated social distancing measures disrupted many forms of healthcare provision. This was followed by a sharp increase in 2021-22, the largest year-on-year change estimated by any of the 5 studies.

It might be tempting to draw conclusions about the trend in consultation rates during the period where no estimates are available (i.e., to mentally draw a line between the earlier and the later studies), but the lack of consistency between the estimated rates for the earlier studies should caution against such a strategy.

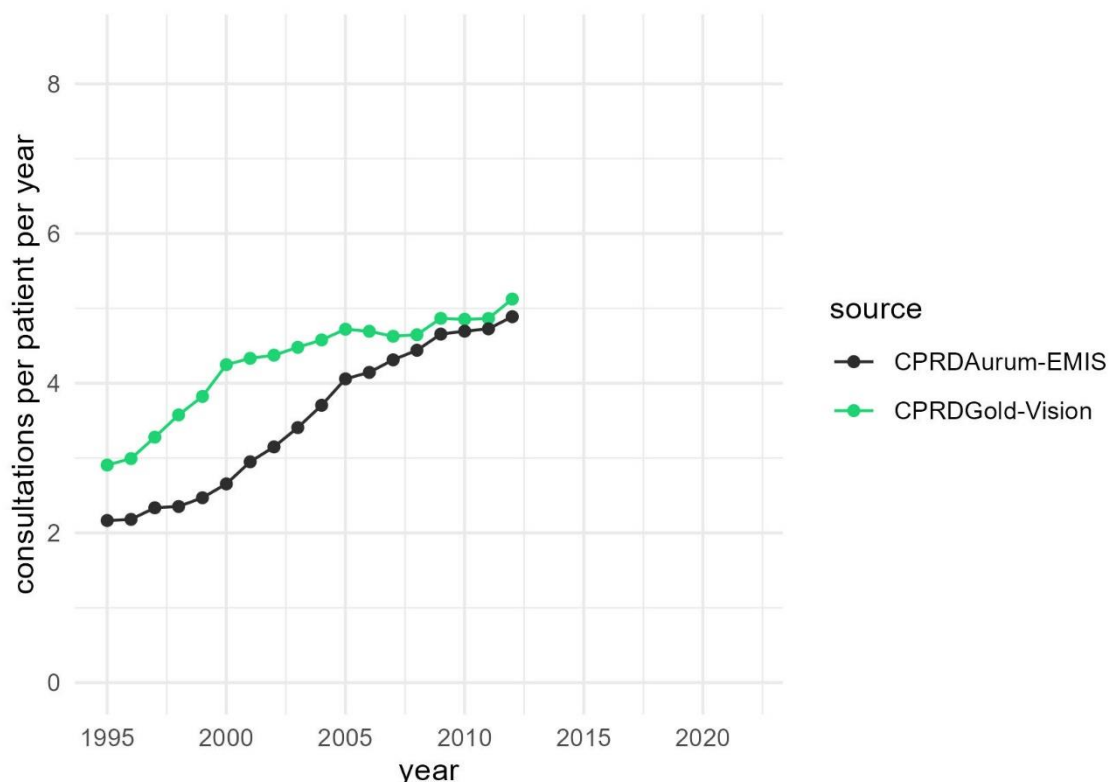
3. GP practice consultation rate trends

We use two research databases to underpin our analysis, CPRD Gold and CPRD Aurum, which contain patient records from a subset of Vision and EMIS practices respectively. Large random samples¹ of anonymised patient records were drawn from each of these databases. We reveal the results of our analysis in three stages covering an expanding time window.

Trends between 1995 and 2012

Figure 3 illustrates the results over the period from 1995 to 2012. The results from the two sources indicate increases in GP Practice consultation rates over this period, corresponding with the results from the 4 earlier studies described above. Furthermore, in the period from 2008 to 2012, the results are very closely aligned.

Figure 3: GP Practice consultation rates, England, 1995-2012

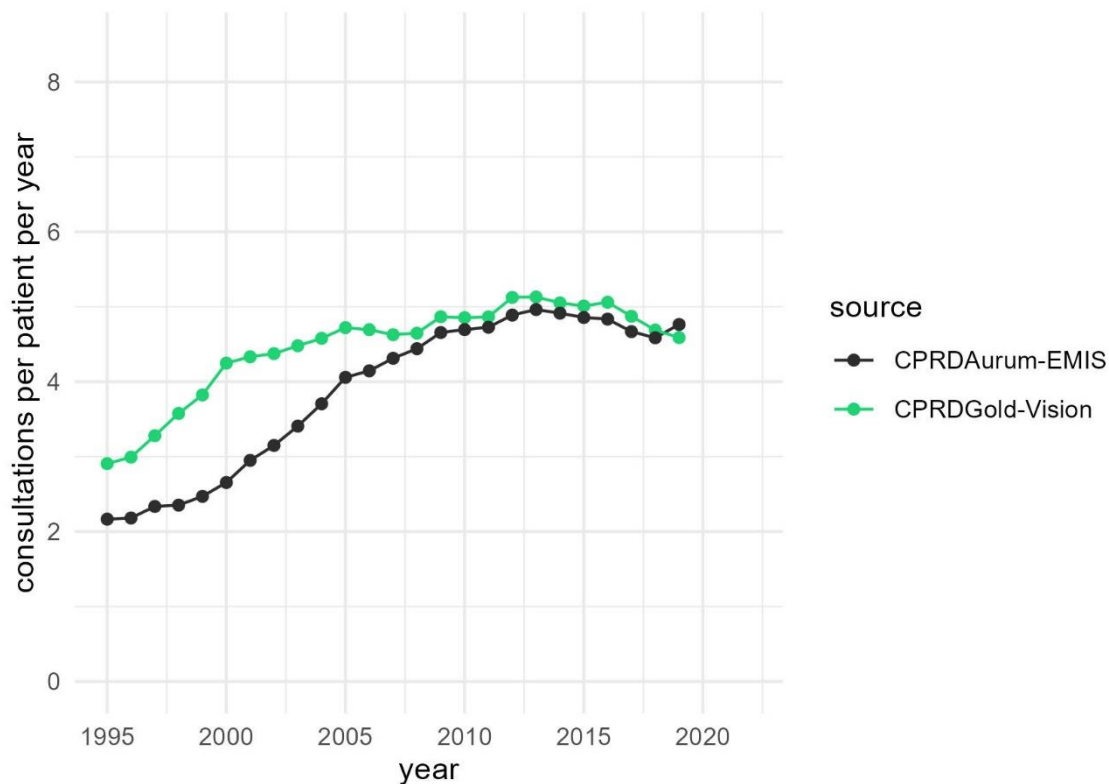


¹ Year-stratified, exposure weighted random samples of approximately 20,000 patients per year per dataset. Exposure is defined as the in-year duration of a patient's GP practice registration.

Trends between 2012 and 2019

Figure 4 expands the time window to include the period up to 2019. Whilst there is some loss of alignment between the two sources, the analysis suggests that GP Practice consultation rates reduced over the period between 2012 and 2019, with rates in 2019 similar to those seen in 2008.

Figure 4: GP Practice consultation rates, England, 1995-2019

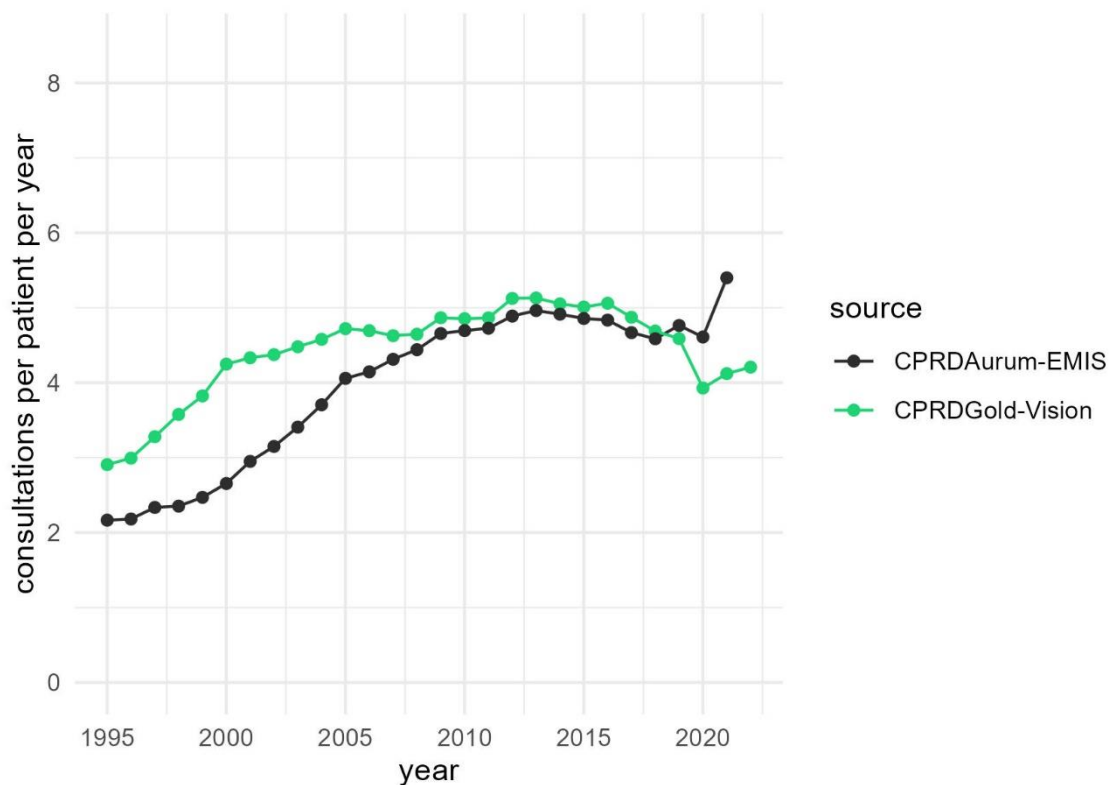


To our knowledge this is the first study that has observed a long run decline in consultation rates over this period.

Trends between 2019 and 2022

Figure 5 expands the time window further to include the period up to 2022. Over the most recent period from 2019 to 2022, the consultation rates estimates from the two sources diverge. Estimates from CPRD Gold (Vision practices) show a sharp reduction in consultation rates in 2020. By 2022, rates remained below pre-pandemic levels. In contrast, the estimates from CPRD Aurum (EMIS practices), indicates a substantial uptick in consultation rates in 2021.

Figure 5: GP Practice consultation rates, England, 1995-2022



In the appendix, we show that our results closely match those observed in earlier studies where the source and time period coincide (Vestesson - CPRD Aurum between 2018 and 2021 and Hobbs - CPRD Gold between 2007 to 2013).

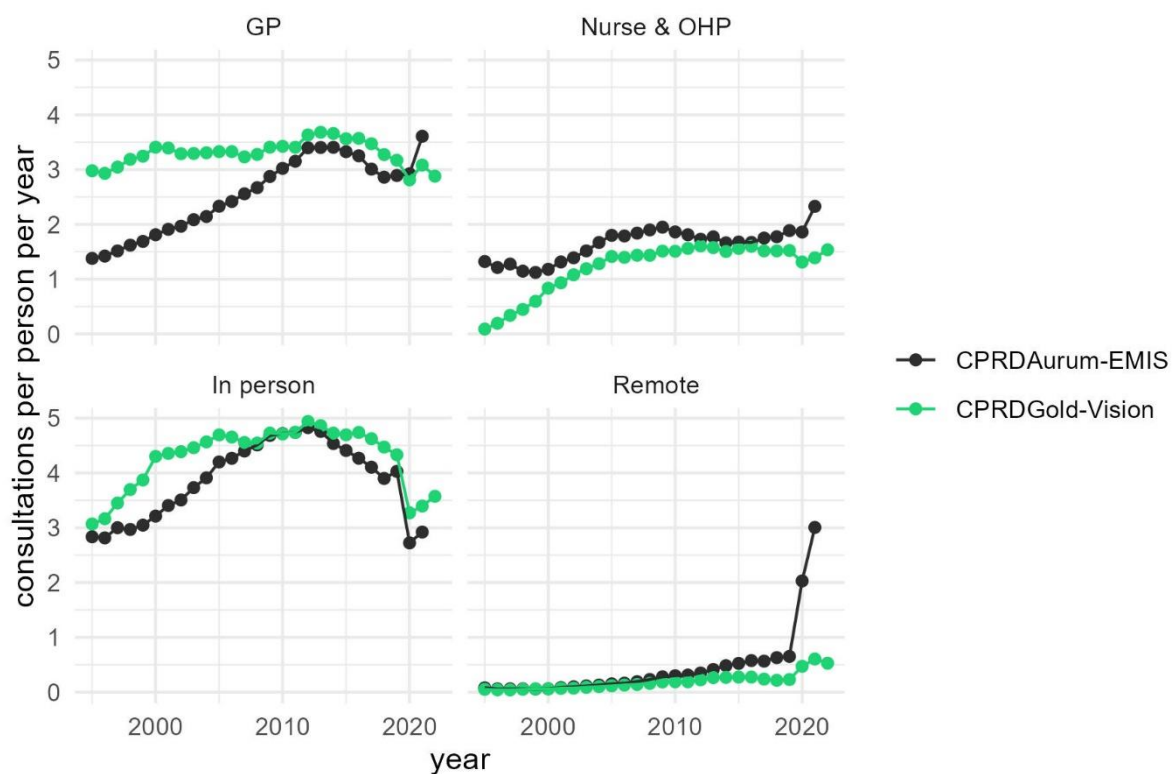
How might we understand and interpret this recent divergence? One option would be to accept the results at face value. i.e., that the consultation rates of Vision and EMIS practices diverged during this period. Another, more subtle explanation would focus instead on a divergence in recording practices. We note that a substantial proportion of the increase in consultation rates observed via CPRD Aurum can be accounted for by the introduction of a new consultation type code. This code indicates that an AccuRx consultation has taken place. AccuRx is an electronic messaging system used by practices to facilitate electronic communication with patients. No such code appears in the CPRD

Gold dataset. The development of these new communication vectors stretches the definition of a consultation and raises questions about the comparability of the results. A third potential explanation focuses on the impact of COVID vaccinations during 2021. Our analysis attempts to exclude these events from our consultation counts. This can be done with confidence in CPRD Gold, but with less certainty in CPRD Aurum. It is possible then that the divergence, and the CPRD Aurum uptick in consultation rates are in fact an artefact of the vaccination programme. The final possible explanation relates to the coverage of CPRD Gold. Over time the number of English practices using the INPS-Vision system had reduced, and the number of practices submitting data to CPRD Gold has reduced from more than 550 in 1995 to less than 30 in 2022. Whilst our analysis attempts to control for these effects, if the trends in the small sample of remaining Vision practices are atypical then this has the potential to bias our results.

Trends in consultation rates by staff type and delivery mode

In figure 6 below, we show estimated consultation rates from CPRD Gold and Aurum, disaggregated in two ways: by staff type (GP vs nurse / other healthcare professional) and by delivery mode (in person vs remote). Whilst GP consultation rates have reduced since 2012, the rates of consultations delivered by nurses and other healthcare professionals have been more stable. In person consultations, delivered in the GP surgery, or during visits to the patient's home for example, have reduced markedly since 2012 from above 5.5 consultations per year to below 4. Meanwhile, remote consultations delivered by phone, or online have increased. Estimates of remote consultation rates are substantially higher from CPRD Aurum, and the gap has grown since 2020. It would appear that this difference is the dominant source of the discrepancy in overall consultation rate estimates from the two sources since 2020.

Figure 6: Consultation rates by staff type and consultation mode, England, 2008 - 2022



Despite this discrepancy, both sources indicate rapid growth in the frequency of remote consultations. Research indicates that patients often approve of telephone and online consultations^{vii viii ix}, although concerns about quality and safety remain.^{x xi}

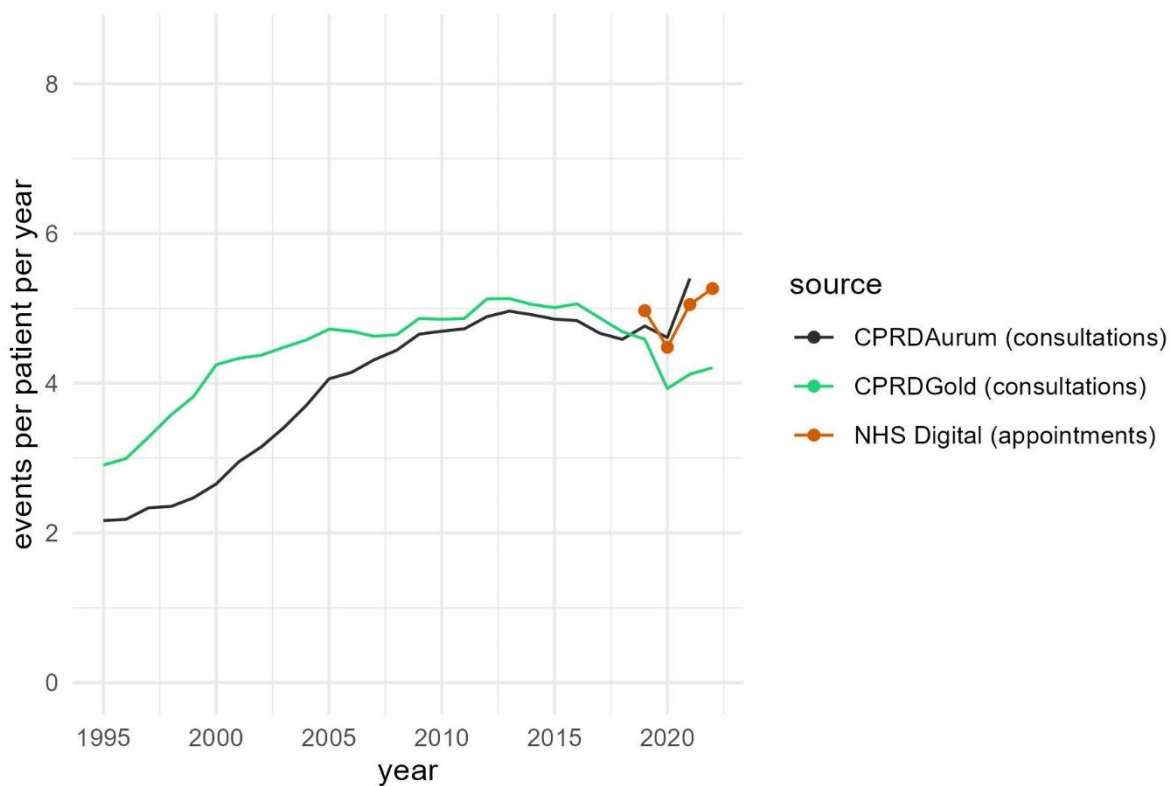
4. Other sources of information

Appointment rates

NHS Digital² have reported GP Appointment rates since October 2021. These data were initially aggregated at ICB subregion level, but data for individual practices have been made available more recently. These datasets are classed as experimental by NHS Digital.

Whilst in theory, all consultations require an appointment, the reverse is not always true. Sometimes, patients fail to attend (or DNA) an appointment. To improve comparability, therefore, we exclude appointments reported by NHS Digital that were DNA'd and where the appointment status was not known. (see figure 7).^{xii} The attended appointment counts aim to exclude contacts for COVID vaccinations. However, the issues that impact on our ability to exclude COVID vaccination consultations with confidence from CPRD Aurum, may also impact on efforts to exclude COVID vaccination appointments from EMIS practices.

Figure 7: Consultation rates (1995-2022) and appointment rates (2018-2022), England



² Now known as NHS England Digital.

We might expect appointment rates, to follow the consultation rate trends derived from CPRD Aurum more closely than those derived from CPRD Gold, since EMIS (the underlying source of CPRD Aurum data) holds the largest market share amongst clinical system suppliers.

Since 2019, attended appointment rates from NHS Digital, have bisected the modelled consultation rates using CPRD Gold and Aurum, although NHS Digital's figures tend to be more closely aligned with the CPRD Aurum modelled rates.

Two recent analyses published by the Health Foundation report close alignment between consultation rates derived from CPRD Aurum and NHS Digital appointments data between January 2019 and January 2021.^{xiii xiv}

Patient reported consultation rates

Patient reported consultation rates offer another means of corroborating our consultation rate estimates. As part of the GP Patient Survey, carried out on a regular basis by Ipsos, a large and representative group of GP practice patients are asked when their last general practice appointment took place.^{xv} Figure 8 shows the proportion of patients who reported having an appointment within the last 3 months, during surveys taking place between 2011 and 2023. This would appear to support our earlier finding that GP practice consultation rates declined between 2012 and 2019. (Note that the 2020 survey result related to fieldwork that took place in the first few months of 2020, before the impact of the COVID-19 pandemic was felt.) Furthermore, this data is more in line with the overall CPRD Gold estimate, in that patient reported appointment rates remain below pre-pandemic levels.

Figure 8: Proportion of patients reporting a GP practice appointment in the last 3 months, England, 2011-2023

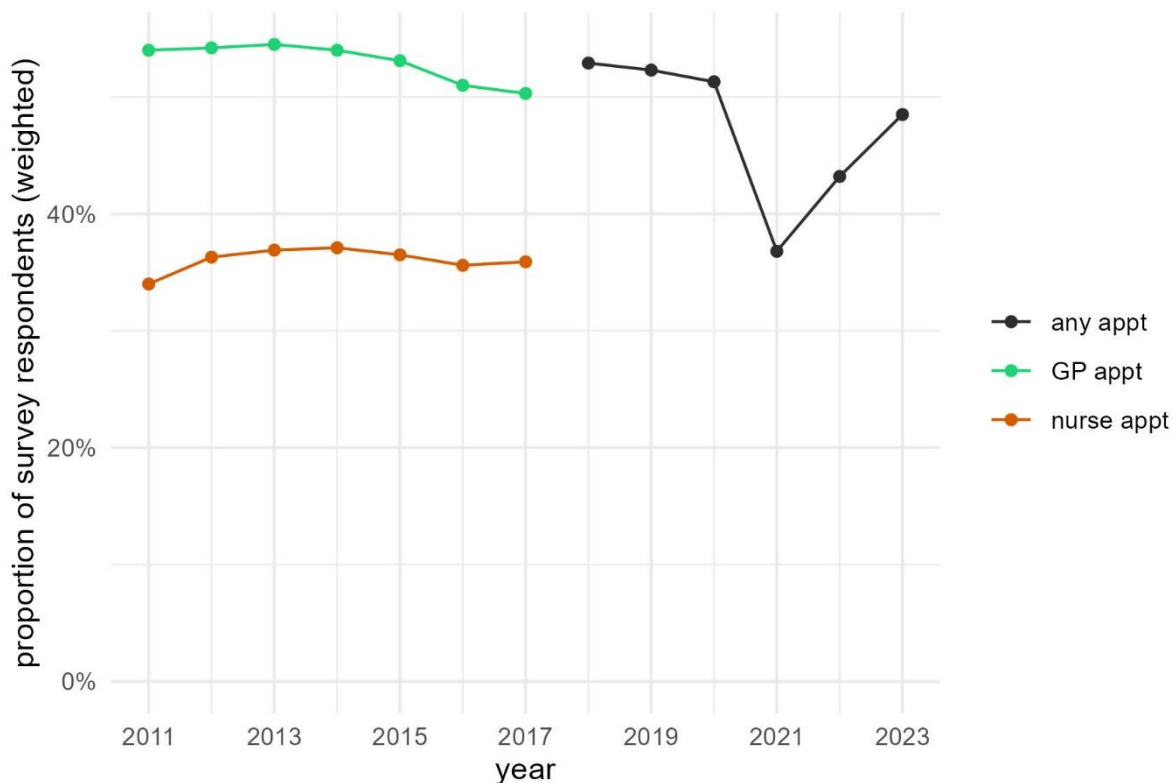


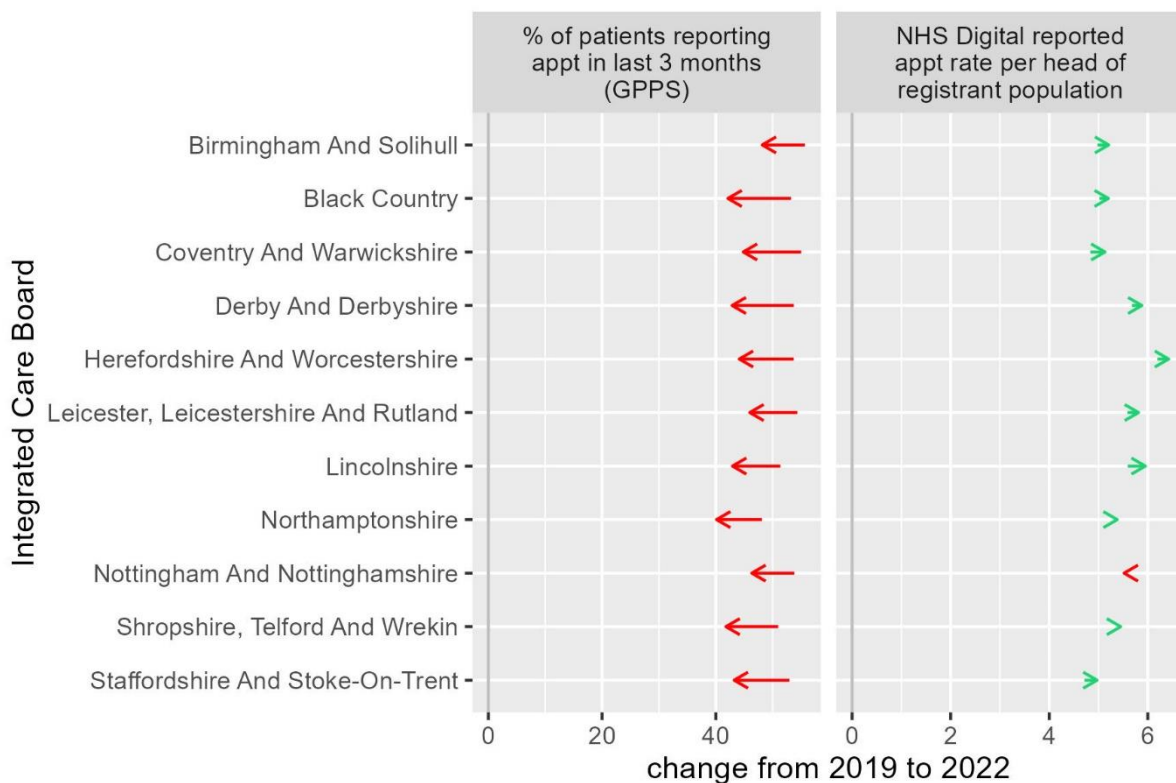
Table 2 compares the share of consultations that were delivered in person or remotely in 2021 from the GP Patient Survey and our two models. The GP Patient Survey results bisect the estimates from the two models. If the GP Patient Survey provides an unbiased estimate, then we might conclude that the CPRD Aurum model overstates remote consultation activity whereas the CPRD Gold model understates it.

Table 2: Distribution of consultations by consultation mode 2021 | England | 2021

Consultation mode	GP Patient Survey	CPRD Gold model	CPRD Aurum model
% in person	63.9%	84.3%	48.8%
% remote	36.1%	15.7%	51.2%

Figure 9 compares changes in two metrics between 2019 and 2022: (1) the proportion of patients who report having an appointment in the last 3 months as part of the GP Patient Survey, and (2) the rate of attended appointments reported by NHS Digital³. Whilst NHS Digital data suggests an increase in appointment rates for all but one of the Midlands ICBs (range 0.0% to +6.4%), substantially fewer patients report having had an appointment in the last 3 months (range -13.5% to -20.9%).

Figure 9: Change (2019 to 2022) in patient reported appointments in the last 3 months and in NHS Digital reported appointment rates by Integrated Care Board



³ Crude rates per head of registrant population

At first glance the trends from the GP Patient Survey and NHS Digital's appointment data, appear incompatible. How might the results be reconciled? We offer two theories.

- (1) If consultations have become more concentrated amongst a small high-need subset of patients, then it is possible that consultation rates overall have increased, whilst most patients report reductions in access. We note however that even patients who are likely to fall into these high-need subsets such as those aged over 85 years or with a long-term illness or disability, report reductions in appointments.

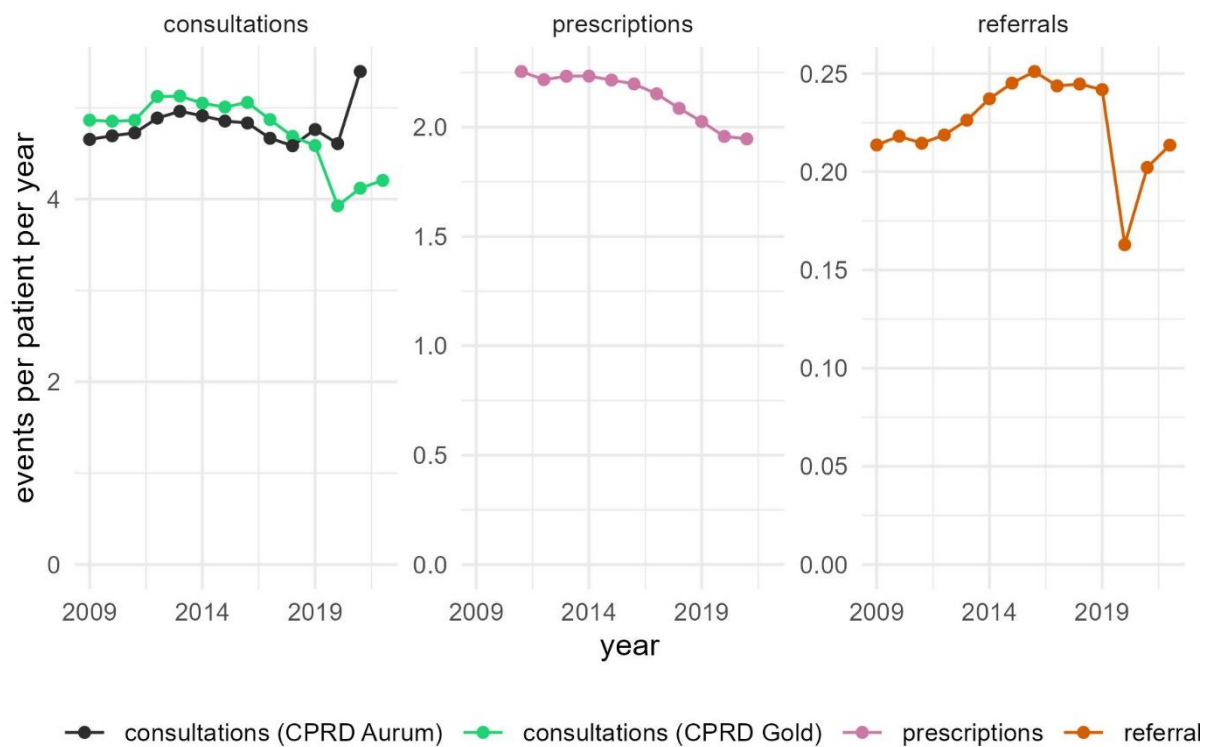
- (2) Triage by telephone or remote messaging has become a common feature of GP practice operations in recent years. Patients are first screened by a clinician before an appointment is offered, allowing some needs to be addressed without a face-to-face consultation. The benefits here are expressed in terms of avoiding unnecessary face-to-face appointments, delivering productivity gains and in some cases, more convenient care for patients. But patients who go on to receive an appointment, now receive two contacts⁴, which in the past would have been delivered as one interaction. This effect would serve to increase patient appointment rates, but the close temporal proximity of the two events would mean that there would be only minimal impact on the proportion of patients who report having an appointment in the last 3, 6 or 12 months.

⁴ Recent guidance from NHS England confirms that this scenario should be considered as two appointments. <https://www.england.nhs.uk/gp/gpad/more-accurate-general-practice-appointment-data/appointment-book/>

Other forms of GP practice activity

Figure 10 below sets trends in consultation rates alongside the rate of two other common patient-facing activities carried out by clinicians in GP practices, prescriptions and referrals.^{xvi, xvii} The downward trends in prescriptions issued per patient mirrors those seen in consultations, although it is worth noting that changes in the number of items per prescription mean that the number of prescription items per patient has risen. Referral rates continued to increase until 2016 before declining.

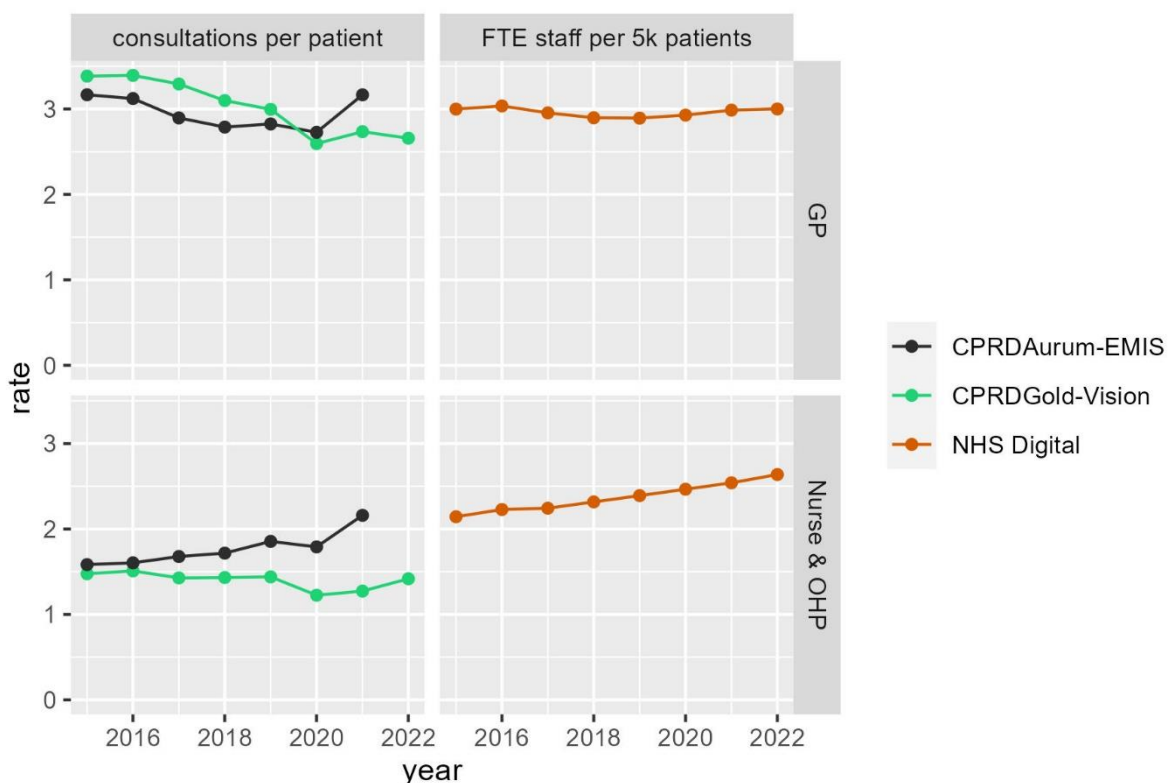
Figure 10: Consultation, prescription, and referral rates, England, 2009 to 2019



Workload of GP practice staff

Data on the number of full-time equivalent staff employed by GP practices has been published in a consistent format by NHS Digital since 2015. We might expect changes in consultation rates to be associated with changes in the availability of staff. Figure 11 below compares the trends in consultation rates from our two sources (CPRD Gold and CPRD Aurum), with the number of staff available to deliver those consultations since 2015. The analysis is segmented by staff type: GPs vs nurses and other healthcare professionals.

Figure 11: Consultations and full-time equivalent GPs, nurses and other healthcare professionals per patient, England, 2015-2022



Both sources of consultation data (CPRD Gold and CPRD Aurum) suggest a reduction in GP consultation rates between 2015 and 2019. The ratio of GPs to patients also fell over this period, but at a slower rate. The increase in the number of GPs per patient was not commensurate with the rapid increase in consultations seen in CPRD Aurum in 2021.

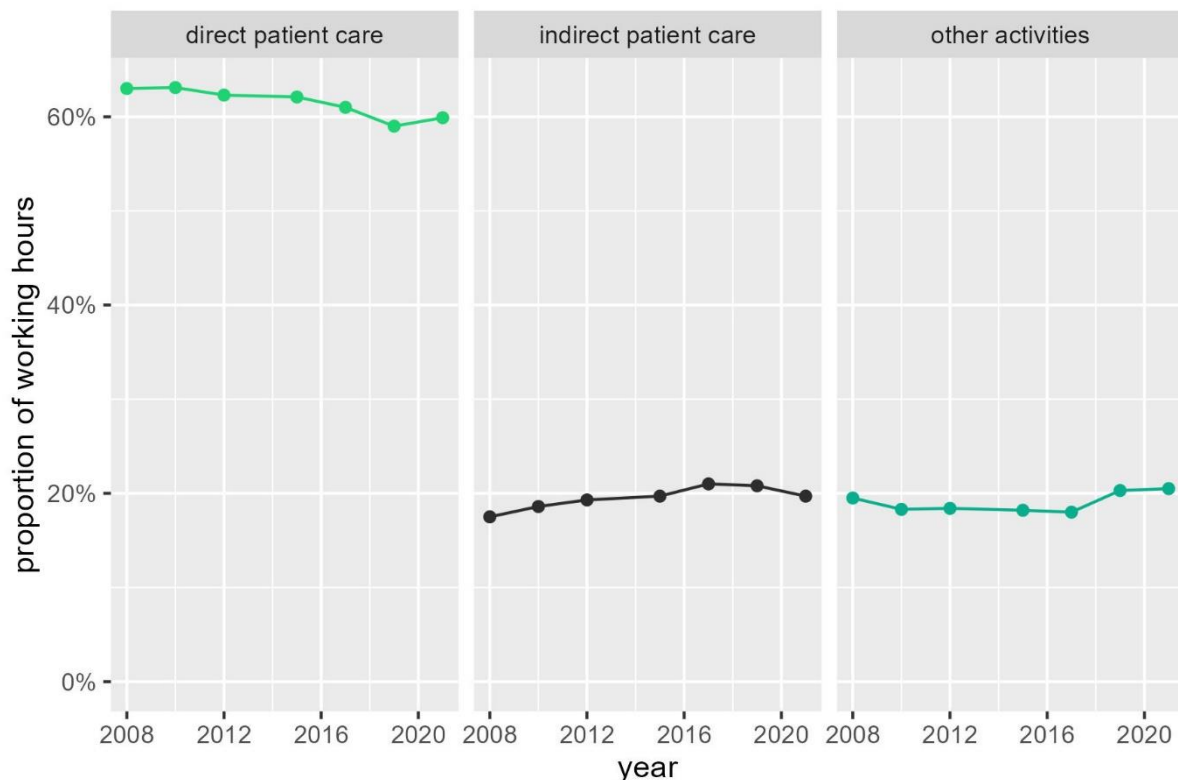
Whilst there has been an increase in the number of full-time-equivalent GPs since 2015, this increase is driven entirely by growth in the number of trainee and locum GPs. The number of permanent, fully-qualified, full-time equivalent GPs has reduced by 6% between 2015 and 2022.

The ratio of nurses and other healthcare professionals to patients increased steadily from 2015 to 2022.⁵ These increases fall more in line with consultation rates obtained from CPRD Aurum, for these staff types.

The GP Worklife Survey, conducted biennially by the Policy Research Unit in Health and Social Care Systems and Commissioning (PRUComm), at the University of Manchester, provides insight into the allocation of GP working hours to different tasks.^{xviii} The survey was completed by c. 2300 GPs in 2021. Respondents were broadly representative of the GP workforce, although younger GPs, salaried GPs, and GPs working in London and the Midlands were somewhat underrepresented.

Figure 12 below, indicates that the proportion of GP working hours that is allocated to direct patient care reduced from 63.0% in 2008 to 59.9% in 2021. Over the same period increases were seen in the proportion of time spent on indirect patient care (i.e. patient related activities conducted outside of consultations such as referral letters, and arranging hospital admissions).

Figure 12: Allocation of GP working hours, England, 2008-2021



⁵ These figures do not include nurses and other healthcare professionals employed by Primary Care Networks. NHS Digital report that the FTE number of such staff increased from 279 in March 2020 to 10,186 in March 2022.

Source: 11th National GP Worklife Survey, 2021, PRUComm

Since 2015, GPs report spending an increasing proportion of their time in external meetings (from 3.5% in 2015 to 4.4% in 2021) and on administration (from 8.4% in 2015 to 9.2% in 2021).

This data, taken together with information about the trends in the number of full-time equivalent GPs per patient, would appear to align better with the downward trends in GP consultation rates derived from CPRD Gold.

Summarising the evidence on post-pandemic consultation rate trends

In tables 3 and 4 below, we summarise the evidence gathered in this report relating to trends in consultation rates after the pandemic, along with contextual information that indicates the reliability of the source.

Approximately half of the sources suggest increases and the other sources indicate decreases. Moreover, none of the sources can provide unequivocal evidence. Some are direct measures, but poor data coverage or quality provide room for doubt. All other sources are proxy measures for consultation rates and so can provide indirect evidence only.

Table 3: Data suggesting downward trends in GP practice consultation rates since 2019

Source	Contextual information that might influence interpretation
CPRD Gold analysis	CPRD Gold is a well-established research database, but the practices that participate are increasingly small in number and unrepresentative of the practice population.
GP Patient Survey	Long standing, large, representative survey of GP patients, that includes a question about when the patient last had a GP appointment at their GP practice (rather than how often). Some changes in question formulation mean long term trends have gaps. Surveys of this type can suffer from recall bias, although only changes in recall bias would impact on the reliability of trends.
Prescriptions and referral rates	Not direct measures of consultations, but these activities commonly take place during or as a result of a consultation. Given that casemix has increased we might expect the rate of prescriptions and referrals to outpace growth in consultations.
GP workforce and workload	Full-time equivalent GPs per head of population have increased marginally faster than the population, but this is offset by GPs spending a smaller proportion of their time on direct patient care.

Table 4: Data suggesting upward trends in GP practice consultation rates since 2019

Source	Contextual information that might influence interpretation
CPRD Aurum analysis	CPRD Aurum is a new, less well-developed research database, but with high levels of participation. Many items on codelists are not yet assigned for analysis, introducing uncertainty in activity counts.
NHS Digital Appointments	A data collection that was established in 2018, but still regarded by NHS Digital as experimental. Coverage is high and adjustments made for gaps in coverage. Counts appointments rather than consultations. Data on whether an appointment was attended is incomplete.
AHP workforce	The number of full-time equivalent allied healthcare professionals has increased sharply. Changes in activity levels per FTE are not well understood.

The lack of consensus across the various sources considered may indicate an issue with the activity unit of interest. Whilst the operations of GP practices have constantly evolved, the predominant form of service delivery was a face-to-face consultation between a GP and a patient, delivered within the GP practice. Home visits were also a constant feature of service delivery, but small in number. Telephone appointments and consultations with nurses became increasingly frequent, but before the pandemic, these forms of activity represented only the minority of patient contacts. These changes accelerated rapidly during and after the pandemic and combined with the emergence of new digital technologies and Primary Care Networks, to radically reshape service delivery models. In this new context, the validity and utility of a patient consultation as a unit of activity for analytical purposes comes into question. New units of activity may be required to underpin meaningful analysis of activity trends and equity of access from this point forward.

5. Discussion

The history of GP practice consultation rates has three distinct epochs, covering the years 1995-2012, 2012-2019 and 2019-2022. In the first epoch we found that consultation rates increased. Four previous studies also found that consultation rates increased over this period. We estimate that rates increased from approximately 2½ consultations per person on average in 1995 to 5 in 2012. The levels estimated by earlier studies vary somewhat, largely as a result of differences in the way consultations are defined.

In the second epoch, from 2012 to 2019, consultation rates reduced, from approximately 5.0 in 2012 to 4.7 in 2019. The 2019 rate was similar to that seen in 2009. As far as we are aware, this is the first study, using data from GP practice clinical information systems, that has reported reductions in GP practice consultation rates over this period. This finding concords with reductions in patient reported appointment rates from the GP Patient Survey, and with reductions in prescription rates (not to be confused with the rates of prescription items). The rate of referrals from GP practices to secondary care also reduced from 2016, although these rates did rise between 2012 and 2016, at odds with consultation and prescription rates. This may indicate changes in referral thresholds or casemix. Over this period, there was also a steady move away from consultations delivered by GPs and/or in-person, in favour of consultations delivered by telephone and by nurses and other healthcare professionals.

The story of consultation rate trends in the third epoch from 2019-2022, incorporating the COVID-19 pandemic, is less clear. Analysis of data from CPRD Gold, derived from a shrinking subset of practices using the Vision clinical information system, indicates that consultation rates fell substantially in 2020, and by 2022 had not recovered to pre-pandemic levels. The observed 2022 rate was similar to that seen in 2000. In contrast our analysis of data from CPRD Aurum, derived from a subset of practices that use the EMIS clinical information system, shows a rapid uptick in consultation rates, to 5.4 consultations per patient in 2021. If accurate this year-on-year increase would be twice that seen in any year since 1995. Two other sources, a journal article, covering the period from 2018-19 to 2021-22, that also used CPRD Aurum as its source, and NHS Digital's GP appointments data, which were first published in late 2018 and rely heavily on data from EMIS practices, also show a sharp increase in activity after the pandemic, to levels exceeding pre-pandemic rates. These increases however appear to be at odds with trends in patient-reported GP practice appointment rates and with rates of other patient-facing GP practice activities, prescriptions, and referrals. The variance between the results observed from the two model appears to be driven by differences in the rates of remote consultations. Whilst both sources show increases in remote consultations, these are much larger in

CPRD Aurum. We note that half of the total increase in consultations from our CPRD Aurum analysis is attributable to the introduction of a new consultation code, for AccurX consultations, an electronic messaging system that practices use to communicate with patients.

Policy-makers and commissioners will want certainty about post-pandemic consultation rates, so that their plans and strategies can be built on a firm footing. At present, it seems that data and analysis cannot provide this certainty. NHS Digital's appointments data has become the primary source of information about GP practice activity levels in recent years. But NHS Digital still regard this data collection as experimental, and several alternative sources cast doubt on the trends indicated by these data. It may be necessary for policy-makers and commissioners to keep an open mind about post-pandemic activity levels and trends until new data or analysis can provide greater clarity. This analysis does however, provide new and clear evidence of trends prior to the pandemic.

The challenge of understanding consultation rate trends since 2019, highlights the importance of clear and consistent definitions which adequately differentiate between the diverse types of patient-facing activities. New activity units may be required to underpin robust future analyses. We note that in recent months NHS Digital's appointments data attempts to group appointments into a variety of distinct forms.

This analysis provides essential context for initiatives that seek to address patients' concerns about access to their GP practice. It also raises several subsequent questions that we plan to explore in the remaining papers in this series. In particular, these papers will attempt to answer the following questions:

- 1) How have consultation rates changed relative to need and how do need-adjusted consultation rates vary between ICBs?
- 2) How have changes in consultation rates affected patients and hospital systems?
- 3) How has GP practice productivity changed over time and how much does it vary between ICBs?
- 4) How does the concept of continuity of care fit into debates about GP practice consultation rates, access, and productivity?

Appendices

Methods and data sources

Information about the methods and data sources used in this analysis is available in an accompanying document.

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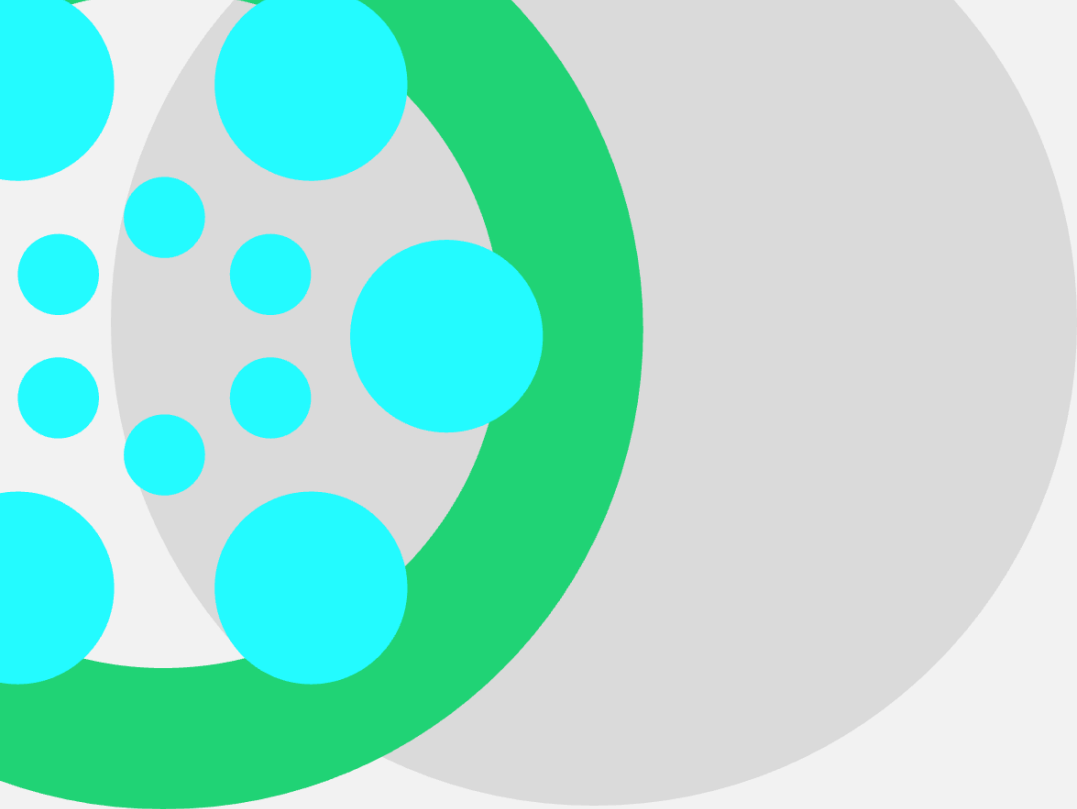
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References

- ⁱ NHS and Ipsos. GP Patient Survey Analysis Tool. 2023. <https://www.gp-patient.co.uk/analysisistool>
- ⁱⁱ Hippisley-Cox J, Jumbu G, Trends in Consultation Rates in General Practice 1995/1996 to 2007/2008: Analysis of the QRESEARCH database. The NHS Information Centre. September 2008. <https://digital.nhs.uk/data-and-information/publications/statistical/trends-in-consultation-rates-in-general-practice/qresearch-report-on-trends-in-consultation-rates-in-general-practices-uk-1995-2008>
- ⁱⁱⁱ Curry N (2015) 'Fact or fiction? Demand for GP appointments is driving the 'crisis' in general practice'. Nuffield Trust comment, 3 March 2015. <https://www.nuffieldtrust.org.uk/news-item/fact-or-fiction-demand-for-gp-appointments-is-driving-the-crisis-in-general-practice>
- ^{iv} Hobbs R, Bankhead C, Mukhtar T, Stevens S, Perera-Salazar R, Holt T, Salisbury C. Clinical workload in UK primary care: a retrospective analysis of 100 million consultations in England, 2007–14. *The Lancet* Volume 387, Issue 10035, P2323-2330, June 04, 2016 [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(16\)00620-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00620-6/fulltext)
- ^v Baird B, Charles A, Honeyman M, Maguire D, Das P. Understanding Pressures in General Practice. King's Fund May 2016. <https://www.kingsfund.org.uk/publications/pressures-in-general-practice>
- ^{vi} Vestesson EM, De Corte KLA, Crellin E, Ledger J, Bakhai M, Clarke GM Consultation Rate and Mode by Deprivation in English General Practice From 2018 to 2022: Population-Based Study. *JMIR Public Health Surveill* 2023;9:e44944. doi: 10.2196/44944 <https://publichealth.jmir.org/2023/1/e44944>
- ^{vii} Anderson J, Walsh J, Anderson M, Burnley R. Patient Satisfaction With Remote Consultations in a Primary Care Setting. *Cureus*. 2021 Sep 8;13(9):e17814. doi: 10.7759/cureus.17814. PMID: 34660024; PMCID: PMC8498974. <https://www.cureus.com/articles/69574-patient-satisfaction-with-remote-consultations-in-a-primary-care-setting#!/>
- ^{viii} Imlach F, McKinlay E, Middleton L, Kennedy J, Pledger M, Russell L, Churchward M, Cumming J, McBride-Henry K. Telehealth consultations in general practice during a pandemic lockdown: survey and interviews on patient experiences and preferences. *BMC Fam Pract*. 2020 Dec 13;21(1):269. doi: 10.1186/s12875-020-01336-1. PMID: 33308161; PMCID: PMC7733693. <https://bmcprimcare.biomedcentral.com/articles/10.1186/s12875-020-01336-1>
- ^{ix} Moschogianis S, Darley S, Coulson T, Peek N, Cheraghi-Sohi S, Brown B. Patient experiences of an online consultation system: qualitative study in primary care post-COVID-19. *BJGP*.2023.0076. December 2023. <https://doi.org/10.3399/BJGP.2023.0076>
- ^x Payne R, Clarke A, Swann N, et al Patient safety in remote primary care encounters: multimethod qualitative study combining Safety I and Safety II analysis *BMJ Quality & Safety* Published Online First: 28 November 2023. doi: 10.1136/bmjqs-2023-016674 <https://qualitysafety.bmj.com/content/early/2023/11/26/bmjqs-2023-016674>
- ^{xi} Campbell K, Greenfield G, Li E, O'Brien N, Hayhoe B, Beaney T, Majeed A, Neves AL The Impact of Virtual Consultations on the Quality of Primary Care: Systematic Review *J Med Internet Res* 2023;25:e48920 <https://www.jmir.org/2023/1/e48920/>
- ^{xii} NHS Digital. Appointments in General Practice, October 2023. Published November 2023. <https://digital.nhs.uk/data-and-information/publications/statistical/appointments-in-general-practice/october-2023>
- ^{xiii} Watt T, Firth Z, Fisher R, Thorlby R, Kelly E. Use of primary care during the COVID-19 pandemic. The Health Foundation. 17 September 2020. <https://www.health.org.uk/news-and-comment/charts-and-infographics/use-of-primary-care-during-the-covid-19-pandemic>
- ^{xiv} Watt T, Kelly E, Fisher R. Use of primary care during the COVID-19 pandemic: May 2021 update. The Health Foundation. 4 May 2021. <https://www.health.org.uk/news-and-comment/charts-and-infographics/use-of-primary-care-during-the-covid-19-pandemic-may-2021>
- ^{xv} NHS and Ipsos. GP Patient Survey Analysis Tool. 2023. <https://www.gp-patient.co.uk/analysisistool>
- ^{xvi} NHS Business Services Authority. English Prescribing Dataset. <https://opendata.nhsbsa.net/dataset/english-prescribing-dataset-epd-with-snomed-code>
- ^{xvii} NHS England. Monthly Outpatient Referrals Data. <https://www.england.nhs.uk/statistics/statistical-work-areas/outpatient-referrals/mrr-data/>

^{xviii} Odebiyi B, Walker B, Gibson J, Sutton M, Spooner S, Checkland K. Eleventh National GP Worklife Survey 2021. PRUComm. April 2022.
<https://prucomm.ac.uk/assets/uploads/Eleventh%20GPWLS%202021.pdf>



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