

Written evidence submitted by Dr Stephen Bradley, GP & Clinical Research fellow at University of Leeds (ECS0034)

About this submission

I am a Clinical Research Fellow at the University of Leeds and a GP in a practice which serves a population which faces significant deprivation, including patients who are homeless, people who have drug and substance misuse disorders, asylum seekers and recent immigrants. I am currently undertaking a PhD, funded by Cancer Research UK, examining cancer diagnosis in primary care. The evidence is presented predominately from the perspective of English general practice. The views expressed do not necessarily reflect those of my employers or funder.

1. General Practice workforce

The role GPs is crucial in achieving timely diagnosis of cancer, which in turn is vital to ensure that patients have the best chance of surviving cancer. Most patients with cancer see their GP before being diagnosed,(1) and we know that patients who are diagnosed through emergency departments instead of seeing their GPs have much poorer outcomes.(2) Screening programmes have an important role in early detection but screening only identifies a minority of cancer cases. The majority of cancer diagnoses are made because of symptoms, and the first port of call for most patients with symptoms is their GP.(3) Therefore it is vital to recognise that General Practice staff as important members of the wider cancer team.

Many symptoms of cancer are symptoms that are common and non-specific. For example, cough is the most common symptom of lung cancer, but cough is also an extremely common symptom in the entire population.(4) It is not feasible for all patients who have such symptoms to undergo extensive investigations, particularly in UK's health system which has relatively limited radiology capacity compared to other high income countries.(5) GPs are generalists who are trained in managing risk and tailoring their approach based on patient preferences for investigation and the likelihood of serious disease being present. To ensure patients with cancer have the best chance of being diagnosed early, and therefore of surviving, it is absolutely crucial that we have enough GPs to meet patient demand.

One concern that has been raised about our 'gatekeeper' model of care is that patients may feel dissuaded from seeing their doctor. In particular in the UK there is evidence that patients worry about wasting their doctor's time.(6) Patients can't always know which symptoms are serious, so any barriers that make it less likely that they talk to their GP is concerning. During the pandemic staff shortages have meant that general practices have increasingly been forced to offer emergency only, or on-the-day appointments.(7) Patients who have symptoms that may have been present for some time, or that are concerning but not are painful or causing immediate risks to health might find it hard to justify that they need an emergency appointment and it is not always realistic to expect patients to be able to appraise the seriousness of their symptoms on their own.

The number of patient contacts for GPs is higher than ever-there were almost 10% more consultations in August 2020, compared to the previous August.(8) However, there is justifiable concern that the current difficulties many patients are facing in getting appointments along with the public's understanding of how busy the healthcare system is might be contributing to delays in cancer diagnosis.

How should we count GPs?

Throughout this evidence numbers of GPs refers to the numbers of full time equivalent staff who are fully qualified GPs. In some instances reporting of the numbers of GPs has referred to included staff who are not fully qualified.(9) Other doctors who are working in general practices who are not fully qualified GPs can include junior doctors one year after their qualification (Foundation Year Two) and doctors who are undergoing training to become GPs (sometimes called GP registrars, or GP trainees). In terms of providing access to consultations for patients the meaningful figure is the number of GPs who are fully qualified, since trainees require supervision and training from fully qualified GPs. Trainee doctors in general practice are considered supernumerary and employers are not be counted in assessments of necessary staffing levels.(10)

Although a full time equivalent working week for GPs is notionally based around two ‘sessions’ of four hours and ten minutes per day(11) in reality most GPs work much longer hours than this, often 12 hours a day or more.(12, 13) In order to have sustainable careers most GPs choose working weeks that are formally less than full time, though a ‘part time’ GP who has a three day week would still be likely to working around 40 hours.(14) It is also common for GPs to have ‘portfolio careers’ where they combine their patient facing clinical roles with other responsibility, such as leadership or education. While pressures on staff result in long and intense working days these trends look set to continue and the number of full time equivalent GPs is likely to remain substantially lower than the actual headcount of GPs.

What are the government’s targets for GP workforce and will these be met?

In 2016 the GP Forward View aimed for an increase in the numbers of GPs by 5,000 by 2020.(15) There were 28,115 and GPs in England 2015/16 (quarter 2) which had fallen to 27,420 in the first quarter of 2020/21. This means that the deficit in government’s target was 5,695 or -14%.(16)

In 2019 the government made a manifesto commitment to increase GP numbers by 6,000 by 2024/25. Taking the third quarter of 2019/20, when the manifesto commitment was made as a baseline, there were 27,856 GPs. If we were to assume that this target was intended to translate into a steady increase in numbers over that five year period, this would be an increase of 1,200 per year, or 300 per quarter. If we were on track to reach the target of 6,000 extra GPs by 2024/25 we would have had 2,100 by the third quarter of 2021/22 (the latest period for which staffing data is available). The actual number of GPs at that time was 27,699. This is 157 fewer GPs than there were at the time of the manifesto commitment, or a deficit of 2,257 on that target (-7%).(16)

Target	Baseline number of	Baseline plus target	Actual number of GPs by	Difference between actual	Percentage achievement
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	GPs		target date	achieved and target	of target
5,000 extra GPs by 2020	28,115	33,115	27,420	-5695	-14%
6,000 extra GPs by 2024/5	27,856	33,856			
2,100 extra GPs by 2021/22 (Q3)*	27,856	29,956	27,699	-2257	-7%

Table 1: Targets for GP recruitment

*Listed to indicate progress to date towards target of 6,000 additional GPs by 2024/5

In order to achieve the target of 6,000 GPs by 2024/5 we would need to recruit 6,157 GPs in the next three years. Given that to date, targets for GP numbers have not only not been achieved, but actual numbers have fallen compared to baseline, there seems to be no realistic prospect that the target of 6,000 extra GPs compared to 2019 by 2024/5 will be achieved.

Achievements in General Practice recruitment

Although it is not appropriate to count current trainees towards the achievement of GP staffing targets, it is important to recognise that increases in numbers of trainees recruited into GP training have been achieved. Health Education England reported a record 4,000 trainees entering GP training in 2020/21(17) and targets for recruitment have been met in each year that these have been set since 2017.(18) Although most GPs who begin training do become fully qualified GPs, the number of 'full time equivalent' GPs providing direct patient care provided from this intake will be much lower, since long and intense working days mean that most GPs choose notionally 'part time' clinical jobs, or portfolio careers that combine their clinical work with other non-patient facing work.

The government has also substantially increased the number of places for medical students and many of these students are likely to eventually become GPs, although from entry into medical school it will take at least ten years for these students to become qualified fully qualified GPs.

What about other staff who work in general practice?

The roles of many other clinical and non-clinical staff are vital to modern general practice. The availability of a range of staff with whom patients can have contact could help support earlier cancer diagnosis if they have the necessary competencies and skills to do so, or if they can recognise when to involve another colleague. One barrier that other health professionals such as physician associates (PAs) and nurse practitioners may face is that many do not possess the registration required to request investigations like x-ray and ultrasound.(19)

The GP forward view (2016) set a target of 20,000 more health professionals (excluding GPs) to be working in General Practice by 2023/24. Increases in the numbers of these staff have been achieved, with 5,728 more than in 2016, although this still falls over 10,000 short of the number of non-GP health professionals we should have to be on track to reach the 2023/24 target.(16)

Outside of the general practice team, staff who undertake investigations that GPs request are essential to support early cancer diagnosis. In its 2020 workforce census, the Royal College of Radiologists reported a 5% increase in the radiology workforce over the previous year. However it also highlights 433 consultant radiologist vacancies across UK hospitals, which means that around 10% of consultant posts are unfilled. The college estimates that there is a current shortage of 1,939 consultant radiologists, which is equivalent to 33% of the workforce and they forecast a shortage of 3,600 radiologists, a shortfall of 44% by 2025.(20)

Are there other ways to improve access for patients who might have cancer?

General practices in England have been required to offer remote consultation since April 2020, with the intention of increasing access for patients.(21) While there is evidence that such routes do make it easier for some patients to consult, and they be an efficient way for doctors to address some straightforward problems(22) creating additional routes to consultation do not address the fundamental problem that there are not enough GPs to meet patient demand.

Additionally, there is concern that such routes could divert capacity to addressing the needs of populations that may be at lower risk of serious disease, such as younger ‘tech savvy’ patients, at the expense of patients who are more likely to have cancer such as older patients and socio-economically deprived populations who have less access to computers and smart phones.(23)

It can be hard for many patients to mention symptoms they are concerned about, particularly if they are worried about cancer. Alternatively in the course of a consultation patients may mention symptoms that they are not particularly worried when presenting regarding another problem, but which a GP recognises to need investigation, for example a smoker who mentions that they have a cough. GPs who know their patients might notice that their patient does not look well, or has lost weight. With remote consulting these cues that make GPs think about cancer in face to face consultations are often not apparent and some patients might find it harder to talk freely about what is worrying them, or mention other problems besides the stated reason for their appointment.(24)

Plans have recently been announced for a ‘cancer hotline’ in England for patients to call if they have concerning symptoms.(25) This could be a way to help address the difficulty that patients have in accessing GP appointments, although it does rely on patients being able to recognise that their symptoms could be due to cancer, which might not always be a realistic or reasonable expectation. It also should already be the case that if patients tell their GP practice that they are concerned they could have cancer that they would be prioritised for a GP appointment.

GP staffing and the challenge of improving cancer outcomes

Achieving earlier cancer diagnoses for patients may be the best way we have to improve cancer survival. General Practice has a central role in achieving earlier cancer diagnosis and much of the improvements we have achieved over the two decades have been down to GPs identifying cancers earlier and referring and investigating appropriately.(26-28) Unfortunately we do not have enough GPs. Not only are we failing to meet targets on increasing GPs, but numbers are actually falling overall.(16) Addressing staffing shortfalls is of fundamental importance to improving cancer

outcomes. In particular, meeting the ambitious aspiration of diagnosing three quarters of cancers in stage I or II by 2028 will be made even more difficult by the shortage of GPs.

Increasing numbers of GPs will be challenging. From medical school, fully qualified GPs take at least a decade to train. Since we have amongst the lowest numbers of doctors per capita out of OECD countries many of our other medical specialties are consequently also understaffed and also desperately need trainees.(29) With more than a third of GPs are planning to retire early, largely in response to pressures of the job, we need to focus on retaining our existing GPs by improving working conditions.(30) This will require policy makers to engage seriously with tackling GPs' workloads by eliminating some of the tasks which bring no, or negligible clinical benefit to patients.

Fortunately, in many respects improvements that improve the quality of patient care are also likely to result in greater satisfaction for GPs. For example there is increasing evidence that achieving greater GP continuity of care is linked to improved survival for patients, fewer emergency admissions to hospital *and* greater levels of patient and GP satisfaction.(31-33) Continuity of care has been eroded due to staffing challenges and the pressure to provide timely access to appointments, but it is possible to improve continuity of care despite these difficulties.(34) Greater continuity of care could be achieved by many more practices if there were greater incentives and support to measure and achieve this.

2. Diagnostics

Compared to their counterparts in many other high income countries, GPs in the UK have much more limited access to investigations. In most areas GPs are permitted to request x-ray, ultrasound, gastroscopy and colonoscopy but there can be long waits for these tests. Chest x-ray is one of the most common cancer tests that GPs request and the number of chest x-rays that are requested are very variable, even when for differences between practice's populations are taken into account.(35) This could be important as there is some evidence that increasing the number of chest x-rays performed in patients who have symptoms could help identify the disease earlier.(36) Evidence already exists that patients who attend practices which request more gastroscopies have better outcomes for cancers of the stomach and oesophagus cancers.(37)

Direct access for other tests like computed tomography (CT) is variable, but commonly GPs may be unable to request these tests directly, or access may be rationed, for example by requiring discussion and approval from a radiologist. CT scans do involve radiation so they should not be used unless they are necessary, but the underlying reason for such strict rationing is that CT capacity is low in the UK particularly compared to other high income countries.(5)

While such issues are long standing, the backlog in cancer investigations has been significantly worsened because of the pandemic.(38) Table 2 lists the proportion of patients in England who were waited more than six weeks for common tests that are used for cancer diagnosis.(38) These statistics are not specifically for investigations requested by GPs. In many cases, waits for investigations from general practice are much longer than those requested from hospital.

Test	Waiting more than 6 weeks
CT	19.4%
Non-obstetric ultrasound	18.9%
Colonoscopy	38.1%
Flexible sigmoidoscopy	36.3%
Gastroscopy	35.7%

Table 2: Proportions of patients in England waiting 6 or more weeks for common investigations used in cancer diagnosis (NHS England & NHS Improvement)

Figure 1 illustrates the impact that the pandemic has had on waiting times for investigations. Although some improvement is evident compared to 2020, the number of those waiting six or more weeks for investigations remains much higher than before the pandemic.

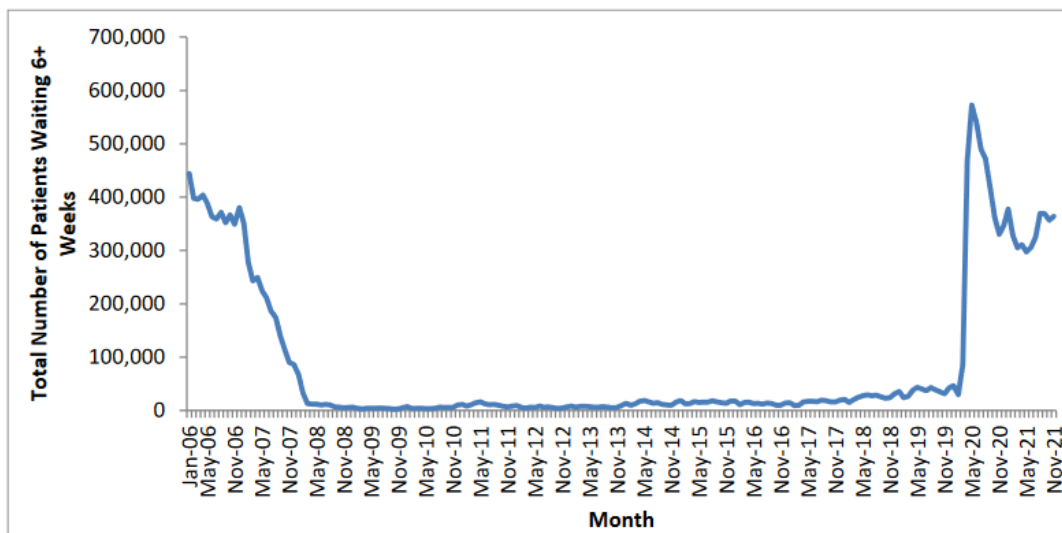


Figure 1: Total number of patients waiting 6 weeks or more for 15 key diagnostic tests Nov 06 – Nov 21 (NHS England & NHS Improvement)

Policy developments in primary care cancer diagnostics

Within the last decade multi-disciplinary cancer (MDC) centres have been introduced in England. MDCs accept referrals from GPs who are worried that their patient may have cancer, but the underlying cancer type is unclear. MDCs are a concept that have been introduced from Denmark, which has a health system with similar ‘gatekeeping’ role for GPs as the UK. The MDCs are designed to allow GPs to refer patients even when they have ‘vague’ or non-specific symptoms, like weight loss, and to avoid the situation in which patients have to be referred to multiple specialties before

the site of the cancer is identified. Emerging evidence from MDCs is encouraging and they warrant emulation throughout the rest of the UK, although ongoing evaluation will be essential.(39)

Another development is the announcement in October 2021 that 40 community diagnostic centres will open in England in Spring 2022.(40) This chimes with calls to move imaging capacity into the community and could bring benefits both in terms of convenience for patients and reducing delays for GP requested investigations.(38, 41) Possibly the most important barrier these plans face in improving outcomes overall are the limitations in available of radiology staff and equipment. The Royal College of Radiology has identified some ways in which investments in technology and software along with improved planning could help mitigate these restrictions and optimise capacity that is available.(41)

3. Conclusions

Outcomes for many cancers have improved over the last two decades but we still lag behind many other high income countries. Substantial investment will be required in order to improve cancer outcomes but this will not be enough unless it is accompanied by realistic long term realistic workforce planning and measures to improve working conditions.

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Declarations of interest

I am undertaking a PhD supported by the multi-institutional CanTest Collaborative which is funded by Cancer Research UK (C8640/A23385). I work as a General Practitioner. I am a co-investigator on a study which is funded by Yorkshire Cancer Research (Patient-centred models for surveillance and support of cancer survivors with bowel and breast cancer). I have previously received funding from the Mason Medical Foundation to undertake a study on chest x-ray and lung cancer diagnosis. I have previously served as an executive committee member of the Fabian Society, which is a political think tank.

References

1. Lyratzopoulos G, Neal RD, Barbieri JM, Rubin GP, Abel GA. Variation in number of general practitioner consultations before hospital referral for cancer: findings from the 2010 National Cancer Patient Experience Survey in England. *The Lancet Oncology*. 2012;13(4):353-65.

2. McPhail S, Elliss-Brookes L, Shelton J, Ives A, Greenslade M, Vernon S, et al. Emergency presentation of cancer and short-term mortality. *British journal of cancer*. 2013;109(8):2027-34.
3. Routes to Diagnosis: 2006 to 2017 results
4. Chowienczyk S, Price S, Hamilton W. Changes in the presenting symptoms of lung cancer from 2000–2017: a serial cross-sectional study of observational records in UK primary care. *2020;70(692):e193-e9*.
5. International comparisons of capital in health care: why is the UK falling behind? : Health Foundation; [Available from: <https://www.health.org.uk/publications/long-reads/international-comparisons-of-capital-in-health-care-why-is-the-uk-falling-behind>].
6. Forbes LJJ, Simon AE, Warburton F, Boniface D, Brain KE, Dessaix A, et al. Differences in cancer awareness and beliefs between Australia, Canada, Denmark, Norway, Sweden and the UK (the International Cancer Benchmarking Partnership): do they contribute to differences in cancer survival? *British journal of cancer*. 2013;108(2):292-300.
7. Armitage R. Is the shift to urgent appointments in general practice what patients really want? [Available from: <https://bjgpilife.com/is-the-shift-to-urgent-appointments-in-general-practice-what-patients-really-want/>].
8. GP appointment levels higher than pre-pandemic [Available from: <https://www.bma.org.uk/bma-media-centre/gp-appointment-levels-higher-than-pre-pandemic>].
9. Health and Social Care Committee. Oral evidence: Clearing the backlog caused by the pandemic, HC 599 [Available from: <https://committees.parliament.uk/oralevidence/2942/pdf/>].
10. Supernumerary status for GP trainees [Available from: <https://gp-training.hee.nhs.uk/sheffield/wp-content/uploads/sites/21/2020/02/Supernumerary-status-for-GP-trainees-letter-to-Hillary-Diack-1.pdf>].
11. Job planning for GPs [Available from: <https://www.bma.org.uk/pay-and-contracts/job-planning/job-planning-process/job-planning-for-gps>].
12. An alternative day in the life of a GP 2018 [Available from: <https://www.kingsfund.org.uk/publications/articles/alt-day-life-gp>].
13. GPs working average 11-hour day, major survey reveals [Available from: <https://www.pulsetoday.co.uk/news/workload/gps-working-average-11-hour-day-major-survey-reveals/>].
14. Reality of GP working hours more complex than ‘days worked’, says College [Available from: <https://www.rcgp.org.uk/about-us/news/2021/november/gp-working-hours-reality-complex.aspx>].
15. General Practice Forward View. 2016.
16. NHS staff tracker [Available from: <https://www.nuffieldtrust.org.uk/nhs-staffing-tracker/general-practice>].
17. Record number of 4,000 GPs accepted on training placements [Available from: <https://www.hee.nhs.uk/news-blogs-events/news/record-number-4000-gps-accepted-training-placements>].
18. Record 4,000 trainees started GP training this year, says HEE 2021 [Available from: <https://www.pulsetoday.co.uk/news/workforce/record-4000-trainees-started-gp-training-this-year-says-hee/>].
19. Guidance for non-medical referrers to radiology: British Institute of Radiology; [Available from: <https://www.bir.org.uk/media-centre/position-statements-and-responses/guidance-for-non-medical-referrers-to-radiology/>].
20. Clinical radiology UK workforce census 2020 report [Available from: https://www.rcr.ac.uk/system/files/publication/field_publication_files/clinical-radiology-uk-workforce-census-2020-report.pdf].
21. Investment and evolution: a five-year framework for GP contract reform to implement The NHS Long Term Plan 2019 [Available from: <https://www.england.nhs.uk/wp-content/uploads/2019/01/gp-contract-2019.pdf>].

22. Turner A, Morris R, Rakhra D, Stevenson F, McDonagh L, Hamilton F, et al. Unintended consequences of online consultations: a qualitative study in UK primary care. 2022;72(715):e128-e37.
23. Khan N, Jones D, Grice A, Alderson S, Bradley S, Carder P, et al. A brave new world: the new normal for general practice after the COVID-19 pandemic. 2020;4(3):bjgpopen20X101103.
24. Jones D, Neal RD, Duffy SRG, Scott SE, Whitaker KL, Brain K. Impact of the COVID-19 pandemic on the symptomatic diagnosis of cancer: the view from primary care. *The Lancet Oncology*. 2020;21(6):748-50.
25. Mahase E. Government announces cancer hotline staffed by specialist nurses. 2022;376:o186.
26. Smith L, Sansom N, Hemphill S, Bradley SH, Shinkins B, Wheatstone P, et al. Trends and variation in urgent referrals for suspected cancer 2009/2010–2019/2020. 2022;72(714):34-7.
27. Round T, Ashworth M, L'Esperance V, Møller H. Cancer detection via primary care urgent referral and association with practice characteristics: a retrospective cross-sectional study in England from 2009/2010 to 2018/2019. 2021;71(712):e826-e35.
28. Arnold M, Rutherford MJ, Bardot A, Ferlay J, Andersson TML, Myklebust TÅ, et al. Progress in cancer survival, mortality, and incidence in seven high-income countries 1995–2013;2014 (ICBP SURVMARK-2): a population-based study. *The Lancet Oncology*. 2019;20(11):1493-505.
29. Moberly T. UK has fewer doctors per person than most other OECD countries. 2017;357:j2940.
30. More than a third of GPs considering early retirement within a year, BMA reveals [Available from: <https://www.pulsetoday.co.uk/news/workforce/more-than-a-third-of-gps-considering-early-retirement-within-a-year-bma-reveals/>].
31. Barker I, Steventon A, Deeny SR. Association between continuity of care in general practice and hospital admissions for ambulatory care sensitive conditions: cross sectional study of routinely collected, person level data. 2017;356:j84.
32. Huntley A, Lasserson D, Wye L, Morris R, Checkland K, England H, et al. Which features of primary care affect unscheduled secondary care use? A systematic review. 2014;4(5):e004746.
33. Sandvik H, Hetlevik Ø, Blinkenberg J, Hunskaar S. Continuity in general practice as predictor of mortality, acute hospitalisation, and use of out-of-hours care: a registry-based observational study in Norway. 2022;72(715):e84-e90.
34. How to improve continuity in general practice? [Available from: <https://www.nuffieldtrust.org.uk/news-item/how-to-improve-continuity-in-general-practice>].
35. Bradley SH, Barclay M, Cornwell B, Abel GA, Callister ME, Gomez-Cano M, et al. Associations between general practice characteristics and chest X-ray rate: an observational study. 2022;72(714):e34-e42.
36. Kennedy MPT, Cheyne L, Darby M, Plant P, Milton R, Robson JM, et al. Lung cancer stage-shift following a symptom awareness campaign. 2018;73(12):1128-36.
37. Shalihdi M, Thompson E, Kapoor N, Powell G, Sturgess RP, Stern N, et al. Variation in gastroscopy rate in English general practice and outcome for oesophagogastric cancer: retrospective analysis of Hospital Episode Statistics. *Gut*. 2014;63(2):250-61.
38. Diagnostics: Recovery and Renewal – Report of the Independent Review of Diagnostic Services for NHS England.
39. Chapman D, Poirier V, Vulkan D, Fitzgerald K, Rubin G, Hamilton W, et al. First results from five multidisciplinary diagnostic centre (MDC) projects for non-specific but concerning symptoms, possibly indicative of cancer. *British journal of cancer*. 2020;123(5):722-9.
40. Merriel SW, Lee L, Neal R. Community diagnostic centres: bringing diagnostics closer to home. 2021;71(713):534-5.
41. Policy priorities for clinical radiology 2021–2026 [Available from: <https://www.rcr.ac.uk/sites/default/files/policy-priorities-clinical-radiology-2021-2026.pdf>].