

In Short Supply

Estimating the shortfall of registered nurses
in the NHS in England

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Key facts

Importance of understanding and addressing nurse shortfalls

- Registered nurses are the backbone of health and many other care and public services and account for **half (49%) of professionally qualified clinical staff** in NHS hospital and community services in England.
- A recent study analysing data from 185 adult acute units in England found that eliminating nurse understaffing would have **avoided one in five of the deaths** that occurred and – once reduced lengths of stay are accounted – actually saved money.
- NHS England reported around 23,000 nurse vacancies in June 2026, but **vacancy statistics understate the true shortfall** because they exclude frozen, unfunded and otherwise suppressed posts.

Exploring the scale of the shortfall

- Around 27,900 additional nurses would be needed across non-specialist acute trusts to reach care-hours-per-patient-day levels associated with **better hospital outcomes**.
- Nurse staffing is **unevenly distributed** across England. Around 28,600 additional nurses would be required to bring all local areas (Integrated Care Systems) up to at least the current national average staffing level, or 60,500 to match the level in the North West.
- Nearly 300,000 more registered nurses would be needed across the UK to reach the Organisation for Economic Co-operation and Development (OECD) average for licensed nurses relative to the population size or 399,000 more to achieve the **level in Ireland**.
- The nursing workforce has grown substantially more slowly than **other clinical professions**. Since 2009, nurse numbers increased by 33%, compared with 60% for doctors.
- Had nurse numbers grown at the same rate as doctors over this period, England would have more than 77,000 additional nurses today. The equivalent figure going back to 1995, is a shortfall of 279,000 nurses.
- NHS **activity has increased much faster** than nurse numbers. Between 2009-10 and 2023-24, hospital and community service output rose by 42%, compared with 23% growth in nurse numbers. The difference equates to around 55,000 nurses (rising to 186,000 using a mid-1990s baseline).

Implication

- **Whichever approach is used, the conclusion is the same: England has a substantial shortfall in registered nursing labour**, requiring at least tens of thousands more nurses and sustained long-term workforce investment.
- Investment is needed to both fill existing shortfall and meet increasing demand. Modelling exercises have typically projected the need for an annual increase in nursing of around 3%; however, in the year to May 2026 NHS nurse numbers grew by just 1%.

Introduction

Registered nurses are integral to the delivery of key public services; accounting, for example, for half (49%) of professionally qualified clinical staff in NHS hospital and community services. As of March 2026, there were in the region of 624,000 registered nurses with an address in England, with around 413,000 directly employed in NHS hospital and community services and a further 24,000 in general practice¹.

But while these numbers demonstrate the huge scale of the nursing workforce, a key question remains: are there enough? And while this paper does not seek to provide a single estimate on any shortfall, by examining several approaches to assessing whether nurse numbers are sufficient, it aims to answer that primary question.

Impact on patients, staff and financial sustainability

Nurse shortfalls matter; the costs of shortages are borne by patients, by nursing staff working under increasing pressure, by colleagues across health and care services, and ultimately by taxpayers who bear the consequences of inefficiency, avoidable ill health and poorer outcomes. A systematic literature review found “an overall picture of a beneficial effect from higher registered nurse staffing on preventing patient death” (Dall’ora et al., 2022). More specifically – and as the Royal College of Nursing (RCN) recently highlighted in its synthesis of current guidance on nurse-to-patient ratios (RCN, 2026b) – evidence on the impact of nursing staffing on patient and nurse outcomes includes:

- each additional patient per nurse was associated with 12% higher odds of in-hospital mortality, 7% higher odds of 60-day mortality, 7% higher odds of 60-day readmission, and longer lengths of stay (Lasater et al., 2021)
- a 10% increase of missed nursing care was associated with a 16% increase in the odds of a patient dying within 30 days of admission (Ball et al., 2018)
- nursing homes with high levels of registered nurses had significantly lower rehospitalisation and emergency department visit rates (Yang et al., 2021)
- NHS trusts in England with statistically higher standardised mortality rates have on average around one-hour fewer of registered nurse care per patient day than those with significantly lower mortality rates (Pereira et al., 2026)
- our review of the use of nursing red flags – first introduced for adult inpatient care but subsequently recommended for wider adoption – found that public reporting was inconsistent and often absent; however, in some cases, these safety critical incidents are widespread with monthly trust numbers in the hundreds.

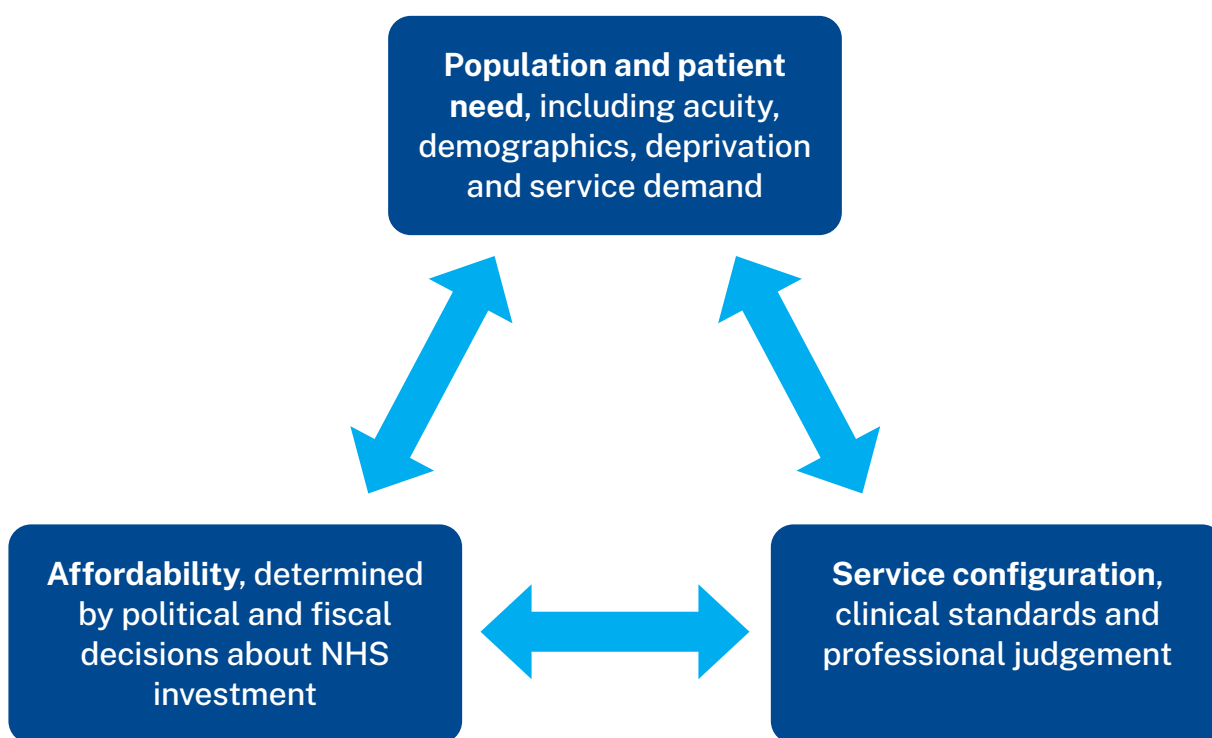
The impact of too few registered nurses is felt by staff, services and taxpayers too. Nurses working in hospitals with fewer registered nurses per patient were more likely to report higher levels of burnout and intent to leave their job (Lasater et al., 2021). Meanwhile, a recent study analysing data from 185 adult acute units in England found that reducing nurse shortages saved lives (one in five deaths could have been avoided), was highly cost-effective and, if benefits of reduced lengths of stay are included, actually saves money (Saville et al., 2025).

¹ 22,715 directly employed by general practice and a further 1,527 employed by primary care networks (some individuals may work part-time in both and therefore be double counted). All data in this paragraph are headcount. (NHS England, 2026e) (NHS England, 2026f)

Why it is important to know how many nurses are needed

The question of “how many nurses are needed” is not straightforward to answer and extends beyond simply counting vacancies. In reality, the number reflects a balance between population need, service configuration and affordability (Figure 1). There are cautionary lessons from history in terms of achieving this balance (or not) including an employer-led forecast in 2012 – linked to agreed financial plans that incorporated unrealistic cost reductions – which underestimated the actual demand for adult acute nurses by around 23,000 by 2015 (Nuffield Trust, 2018). An accompanying paper looking at shortcomings in workforce planning and resulting ‘boom and bust’ cycle for nursing is available [here](#). This balancing act is also a dynamic task with emerging technology and strategic and policy shifts directly impacting on all three core considerations.

Figure 1. Key workforce planning considerations



Challenges aside, a robust assessment of how many registered nurses are needed is a necessary step for providing a stronger basis for policy and investment decisions. And this assessment should be informed by the strong evidence base demonstrating nursing’s positive impact on quality, safety, and cost-effectiveness, as previously mentioned. The basis of doing this is discussed in the concluding remarks, and the analysis here instead focuses on what can be derived about the sufficiency of current nurse numbers based on: unpicking the published vacancy data; care hours patients receive; geographical variation; international comparisons; trends for other clinical professions; overall NHS activity levels; and previous in-depth modelling exercises. Each of these analytical avenues is limited but, together, they present a clear picture.

The reported shortfall

There are currently a substantial number of reported vacancies, although these underestimate actual demand. Management information reported by NHS England suggests there were around 23,000 registered nurse vacancies in June 2026 (NHS England, 2026a)². However, these recorded vacancies reflect only part of the picture as they capture actively recruited posts thereby excluding frozen, unfunded, or otherwise suppressed positions.

The reported vacancy data include posts filled with temporary staff while, on the other hand, do not capture absences³. The latter is significant: the 5.8% absence rate across nurses in the year to April 2026 was equivalent to one in 17 nurses (NHS England, 2026b). And, as shown below, these vacancy figures are at the lowest end of estimates for the shortfall from the various approaches used in this paper.

2 The reported data includes midwives and health visitors.

3 Previous analysis based on one-off data from May 2021 suggested that there may have been in the region of 8,000 to 12,000 full-time equivalent nurse posts unfilled (either with substantive or temporary staff) although again this figure does not capture where planned staffing levels underestimate what is actually needed (Palmer, 2022).

Estimating the staff gap using care hours

History reinforces the importance of increasing nursing numbers to meet safe staffing levels. Previous analysis has suggested that increases in nurse staffing from 2013 to 2015, which coincided with the publication of national safe staffing guidance, could have led to 1,760 fewer deaths per year in English hospitals (Ball, 2020). However, data on the total number of hours spent delivering frontline care suggest substantial shortfalls.

Information on care hours per patient day which captures time spent on direct patient care and activities such as preparing medicines, sharing care information and updating patient records – includes both temporary and permanent staff. While the data only covers hospital wards where patients stay overnight and there are limited assurances on the robustness of the data, it can be used to provide an indication of relative workforce levels.

Previous research found that trusts with statistically lower standardised hospital mortality rates had a higher level of nurse staffing – a median 5.65 registered nurse care-hours-per-patient-day compared to 4.59 for those with statistically worse patient outcomes (Pereira et al., 2026). While the 5.65 level should not be interpreted as an endorsed or recommended safe staffing level, given its link to mortality rates it provides a useful, empirically derived benchmark associated with better observed outcomes.

Focusing on a staffing snapshot from April 2026 from 117 non-specialist acute trusts, we found that around three-quarters (85) of trusts' average care-hours-per-patient-day fell below the 5.65 threshold, up to an equivalent of a 60% shortfall in registered nurse staffing (NHS England, 2026c). In total, we estimate that around 27,900 additional full-time equivalent nurses would be required for all of these trusts to be at least at this staffing threshold.

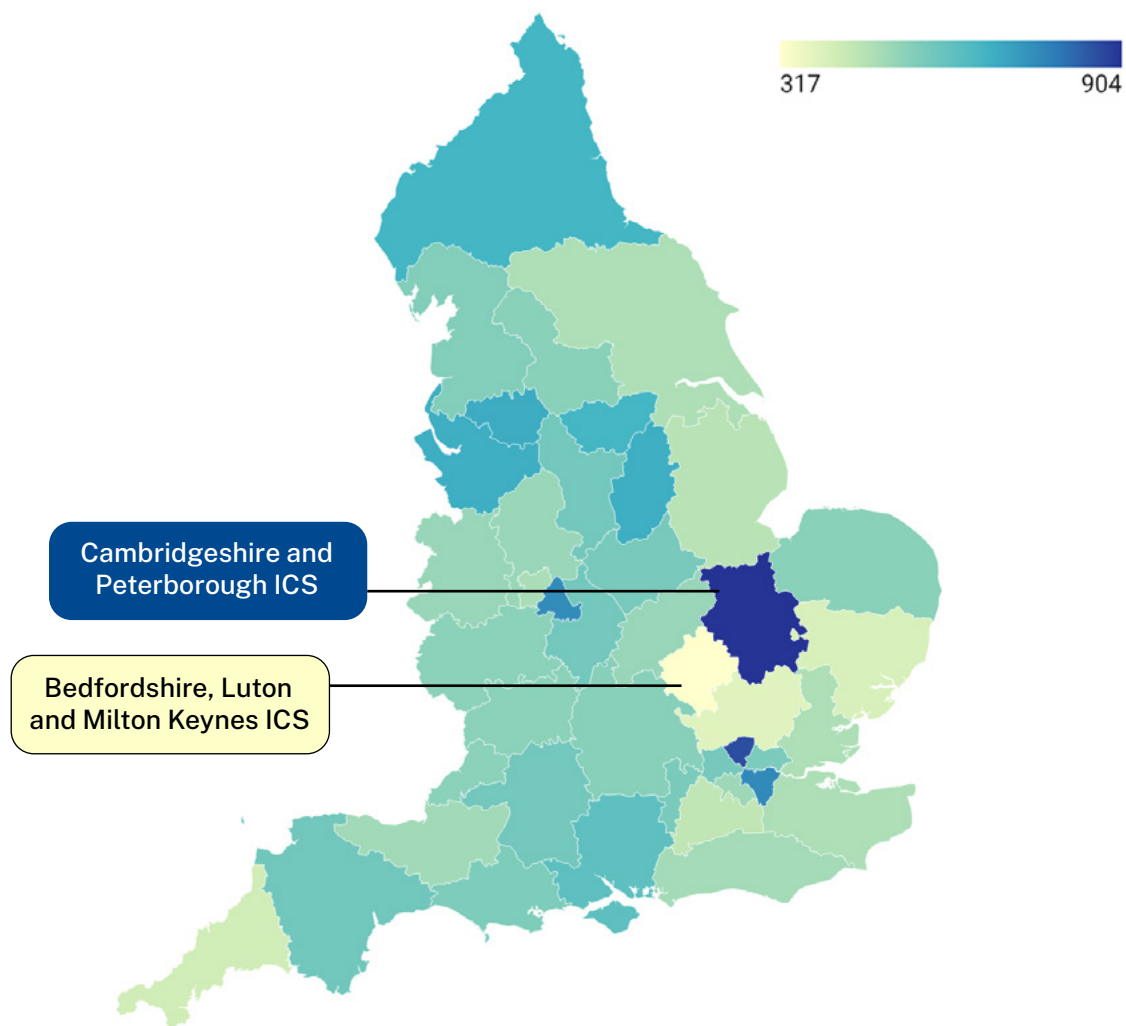
The RCN is currently undertaking further work, including commissioning research from the University of Southampton, looking at safe staffing ratios and, specifically, the thresholds which could help provide further estimates on the number of nurses required to even meet the minimum appropriate staffing levels.

Relative shortfall

It is also possible to estimate the scale of nursing shortfall by comparing between geographies, professions and countries. Some of the variation may be explained by differences in service configurations and efficiency, unmeasured or unaccounted local factors affecting patient need or other influences on workload, as well as a different balance between nurses and other staff groups. However, on the latter, various studies have found that the number of registered nurses specifically is the key predictor of patient and service outcomes (Dall'ora et al., 2022).

Removing geographical imbalance

Figure 2. Nurses weighted population in each integrated care system (ICS) per 100,000



Notes: The darker the area, the greater the number of nurses relative to the size and needs of the population. Based on September 2025 workforce data which includes health visitors. Weighted population based on 'core services weighted population' which includes health inequalities adjustment. Source: Royal College of Nursing based on (NHS England, 2026g) (NHS England, 2025b), created with Datawrapper

There is substantial, unexplained variation in the nursing staffing levels between regions and localities. Across England there are on average 579 nurses and health visitors in NHS hospital and community services per 100,000 people. After adjusting for population needs, which reflects factors such as proportion of older residents or levels of deprivation, the East of England region appears to have the lowest staffing levels, with just 487 nurses per 100,000 people, compared to 653 per 100,000 weighted population in the North West region.

Looking at a more granular geographical level, by Integrated Care System (ICS), the unequal distribution is even more marked. In particular, it ranges from 317 in Bedfordshire, Luton and Milton Keynes to 904 in Cambridgeshire and Peterborough – notably, these two ICSs directly neighbour each other, showing that these disparities can be stark even within the same geographic region (Figure 2).

While the average or highest regional staffing levels should not necessarily be considered as a sufficient or endorsed safe staffing level, to provide an indication of the scale of variation, focusing on regional-level analysis we estimate that around an additional 14,700 nurses would be needed to bring all regions up to either the current national average or 47,400 for all areas to level up to the North West regional average. While at a smaller geographical level, an additional 28,600 nurses are estimated to be needed for all ICSs to reach the national average, or an extra 60,500 nurses to reach the North West regional average.

Benchmarking to other professions

The nursing workforce also appears to have suffered from substantial relative under-investment compared to other clinical staff. In the last year alone, the overall number of professionally qualified clinical staff in NHS hospital and community services has grown at twice the rate of nurses (2.0% v. 1.0%), with the disparity compared to the trend for doctors (3.5%) greater still (NHS England, 2026d)⁴.

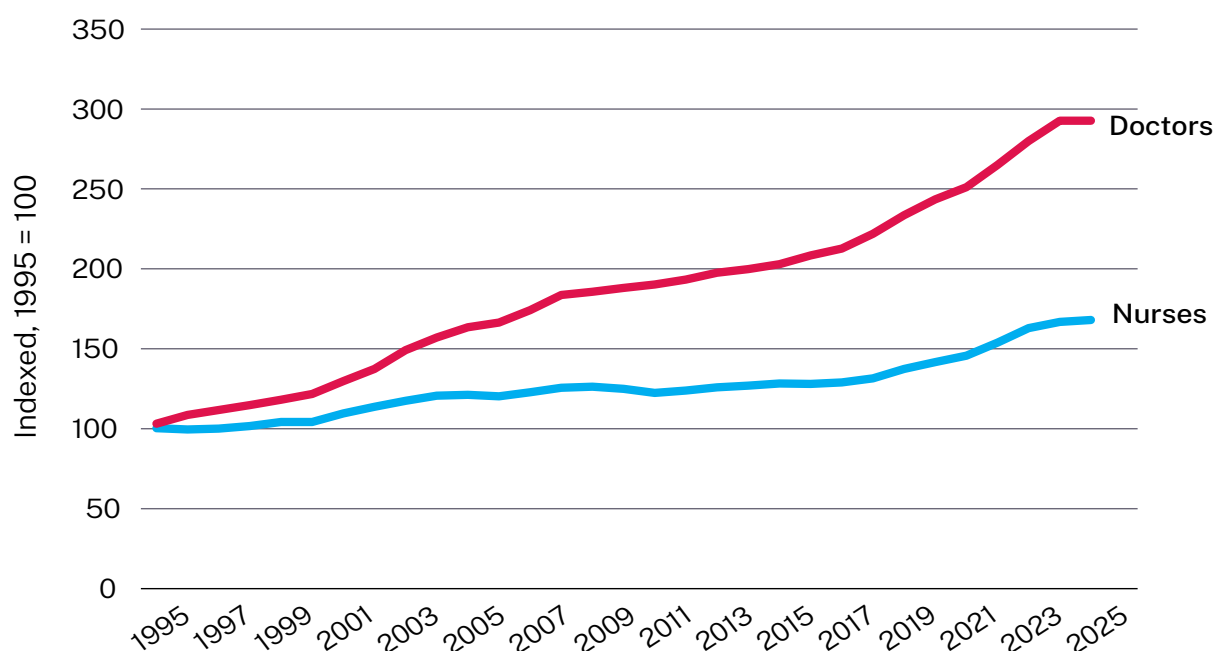
Since 2009 the increase in the number of ambulance staff (62%), doctors (60%) and wider scientific, therapeutic and technical staff group (52%) have outstripped the rise in nurse numbers (33%)⁵. Had nurse numbers kept pace with the increase seen for doctors over this period there would be over 77,000 additional nurses across the NHS in England.

Looking at a longer timeframe the picture for nurses is worse still. In fact, the NHS in England would have around 279,000 more nurses had their numbers kept pace with growth in the medical workforce since 1995, with the nurse-to-doctor ratio falling from 4.2:1 to 2.4:1 over the three decades across hospital and community services (Figure 3).

⁴ Figures are for the 12 months to May 2026.

⁵ Ambulance staff combines both professionally qualified and support to ambulance staff (due to reclassification of roles during this period). To account for different annual cycles in staffing numbers by profession, the trend is for September 2009 (the earliest available) to September 2025.

Figure 3. Trend in nurse and doctor numbers in the NHS hospital and community services in England



Notes: Data are taken from three different NHS publications covering 1995 to 2005, 2001 to 2011 and 2010 to 2026 and data collection and reporting can change. By using an overlapping year (i.e. 2010) we were able to make an adjustment to seek to account for differences between the current and previous data collections. Figures are for September. Source: Various NHS England documents (NHS England, 2006) (NHS England, 2012) (NHS England, 2026d)

Benchmarking internationally

The most relevant data for making international comparisons include UK-wide figures; however, this largely reflects the position in England given it is by far the largest of the four UK nations. While international comparisons need to be treated with caution, due to differences in underlying need, access to services, and data definitions and collection methods⁶, they remain a useful benchmark. The most relevant international data reports on three categories of nurse staffing levels:

- 'professional' nurses (excluding, for instance, nursing associates) providing direct patient care
- 'practising' nurses which is a broader category that also captures nursing associates for instance
- 'licensed' nurses which also would include those working in the private sector and bank staff, for example.

⁶ Also, unlike the information reported elsewhere in this paper, the reported data is also UK-wide as opposed to specific to the situation in England.

While the UK figures for numbers of ‘professional’ and ‘practising’ nurses (see definitions in UK context above) – which fall below the OECD average – represent an underestimate as they exclude those working, for example, in the private sector – this caveat does not apply to the total number of licensed nurses (see Table 1). On that latter measure, around an additional 298,000 registered nurses would be needed to reach the OECD average or 399,000 to achieve the level in Ireland, which is one of the countries with comparatively high nurse staffing levels. These figures should be interpreted as illustrating the scale of the UK’s relative staffing disadvantage internationally rather than estimates of immediate workforce demand.

Table 1. Additional nurses required to meet international benchmarks of OECD average and a selected higher staffed country (Ireland)

	Data note (UK year)	Current nursing level per 1,000 population			Implied UK shortfall versus benchmarks	
		UK level	OECD average	Ireland	OECD average	Ireland
Professional nurses	Only captures substantive, registered nurses working in NHS in England (2024)	7.6	8.9	14.2	88,700	458,600
Practising nurses	As above but also captures nursing associates (2024)	9.3	9.7	14.2	27,400	339,300
Licensed nurses	All registered nurses (2023)	10.7	15.0	16.5	298,200	399,400

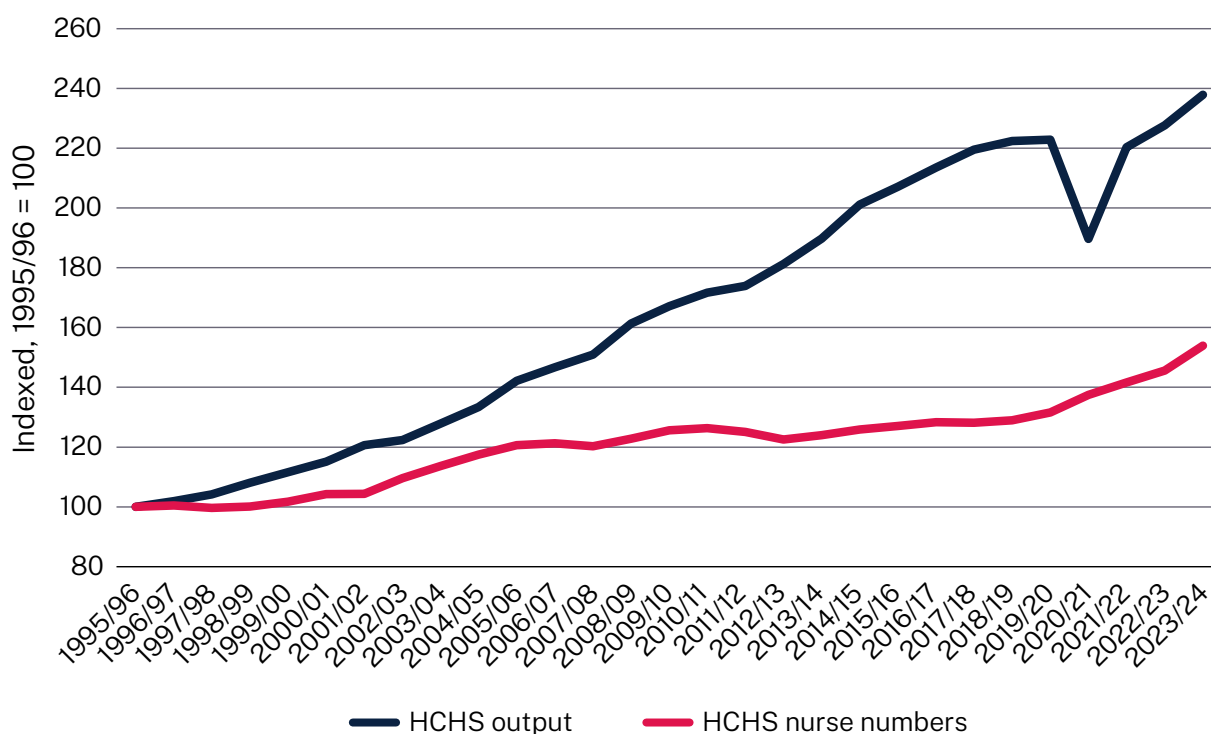
Notes: OECD average excludes United Kingdom. For some countries, the data relates to the previous year. UK figures for professional and practicing nurses exclude bank staff and those in, for example, social care and private or third sector. Source: (OECD, 2026)

Compared to demand

The increased demand for care – and therefore staff to deliver services – is not only a consequence of a growing and ageing population. Healthy life expectancy has fallen over the past decade reflecting, in part, trends in specific physical and mental health conditions (Office for Budget Responsibility, 2024). For example, data from the Adult Psychiatric Morbidity Survey suggests that the proportion of 16- to 64-year-olds with a common mental health condition increased from 17.6% in 2007 to 22.6% in 2023/4, while the proportion of those with symptoms reported receiving treatment roughly doubled (from 24.4% in 2007 to 47.7%) (NHS England, 2025a).

Nurse numbers have failed to keep up with overall hospital workload. The Office for National Statistics (ONS) health care productivity measure publications include an estimate for the growth in outputs over time, which accounts for both the increased number and complexity of care provided. Looking specifically at hospital and community settings, the increase in output between 2009-10 and 2023-24 was nearly twice the level seen for nurse numbers (42% versus 23%). This should only be considered as a crude comparison and it is not clear from the data, for example, what proportion of this growth may be accounted for by activity unrelated to nurses. However, if nurse numbers had kept pace with the overall activity since 2009-10, then we would have in the region of 55,000 more nurses over that period (or 186,000 more if repeating the analysis over a longer timeframe with a 1995-96 baseline).

Figure 4. Comparison between activity and nurse staffing levels in NHS hospital and community services in England



Notes: Output is measured using the number of health care activities performed, weighted by the cost of each activity. For details on, and sources for, trend in nursing numbers see notes for Figure 3. Source: NHS England data and Office for National Statistics (2024)

The demand for nurses has been predicted to increase considerably. While it was outside the scope of this immediate work to undertake a full modelling estimate, we have collated (see Table 2) some of the key existing exercises. For example, the *NHS Long-Term Workforce Plan* modelling suggested a need for annual growth in nurse numbers in the region of between 2.5% and 5.7% dependent on assumptions and which field/setting of nursing. In reality, the number of nurses grew by 3.8% in the four years from March 2022 although this was driven by a government target and concerningly, as already mentioned above, NHS nurse numbers increased by just 1.0% in the last year (to May 2026).

Table 2. Key workforce modelling output for nurses

Author	Staff group	Timeframe	Additional nurses required	Average annual percentage increase	Basis for demand projection
NHS England <i>Long-Term Workforce Plan 2023</i>	Adult nurses	2021-22 to 2036-37	101-114,000	2.6-2.9%	Population projections, non-demographic growth assumptions and service plans plus a productivity assumption
	Children's		28-29,000		
	Community		47-52,000	3.5-3.8%	
	Critical care		12-13,000	2.5-2.7%	
	Mental health and learning disability		25-27,000	5.4-5.7%	
Health Foundation REAL Centre <i>NHS Workforce Projections 2022</i>	Nurses in hospital and community settings and general practice	2021-22 to 2030-31	112,200	3.4%	Age, gender and, where available, morbidity and mortality for different services plus a productivity assumption

Notes: Additional nurses required includes the number to fill the baseline year shortfall as well as covering future growth. Source: NHS England (2023) and Health Foundation (Shembavnekar et al., 2022)

Conclusions

There is no single estimate for the number of nurses the NHS needs. Indeed, the precise figure depends not only on understanding patient and service demand but also on how well nurses are allocated across services and settings, and financial constraints. While each approach to assessing the nursing shortfall has limitations, whichever lens is applied the broad conclusion is the same: the NHS in England faces substantial nursing shortfalls.

The magnitude of the gap varies depending on the estimation method. Approaches focused on staffing keeping pace with activity or to meet certain safe staffing thresholds suggest a need for tens of thousands more nurses. However, comparisons with other countries and professions indicate that the actual deficit is an order of magnitude higher. These estimates reflect different analytical approaches and should not be directly compared or interpreted as alternative vacancy counts. However, taken together, these analyses suggest that the current shortages are not merely a short-term staffing challenge but reflect a sustained and systematic underinvestment in the nursing workforce.

The findings of this report make clear that the challenge of securing safe and effective nurse staffing is far from over. Any suggestion that the workforce is now sufficient risks diverting attention from the urgent need for ongoing investment and robust workforce planning, with serious implications for patient safety, service delivery and the future resilience of the health and care system.

Policy interventions

The purpose of this paper was not to establish a new national workforce target. However, the findings provide a stark warning and the apparent workforce challenges will require action. Some of the analytical approaches point to specific areas for recommendations, including that the forthcoming workforce plan sufficiently addresses workforce deployment, taking into account regional differences, and targets areas with the lowest staffing levels. The RCN has previously recommended a range of measures to improve nurse supply and retention, including:

1. legislation making the Secretary of State accountable for workforce planning and supply alongside service and financial planning
2. national and local workforce planning must not be skewed by unrealistic cost reduction or productivity assumptions that underestimate actual demand for nurses. Instead, it needs to be based on, for example, a coherent workforce deployment model, including the balance of different professions, and capture all key settings where registered nurses work, such as social care
3. decisions about services, staffing, safety and quality to no longer be made without senior nursing expertise
4. uplifting nursing student financial support (excluding any tuition elements) by at least an additional £5,000 per year, on top of existing non-loan based financial support

5. a loan forgiveness model to improve retention of early career nurses and reduce debt for nursing staff whereby nursing staff have their student loans written off in recognition of their service in publicly funded health and care settings
6. universal, well-supported and protected preceptorships for all newly registered nursing staff for at least 12 months
7. every nursing graduate to be able to enter an appropriate band 5 (or equivalent) role (and for those having to accept a job outside of a 'reasonable commute' be given relocation expenses)⁷.

The RCN also has a role to play and will, alongside continuing to shine a spotlight on nurse shortages, be taking forward its commitment to 'safety critical redlines' and publishing further guidance of nurse staffing levels to protect patients and staff from harm caused by low registered nurse levels (Ball, 2025). As alluded to in the introduction, the College also recently published a synthesis of current guidance in the UK on registered nurse-to-patient ratios (RCN, 2026b).

Workforce planning

It is also imperative that local and national leaders support efforts to improve workforce planning and, specifically, to understand the true extent of nursing workforce shortfalls. Understanding how many nurses are needed is fundamental to efficient and effective delivery of health and care services as well as an array of other public services to which they contribute. Reliable estimates of current and future nurse numbers are required to inform decisions on education and training, career and role progression pathways, international recruitment and retention strategies. They can also help distinguish between productive upfront investment in nursing staff and the avoidable downstream costs associated with shortages, such as increasing agency spend and delayed or inadequate care.

However, workforce planning has largely failed. A companion paper recently published by the RCN looks at the 'boom and bust' cycle of nursing numbers, including how failure to take an appropriate long-term view on staffing needs, and the subsequent short-term decision-making that has at times suppressed training places or recruitment. In turn this has led to future staff shortages and potentially periods in which newly registered nurses struggle to find employment followed by periods of hurried recruitment (RCN, 2026a).

In part, efforts to improve workforce planning are limited from the outset with the published vacancy data providing an incomplete picture, omitting, for example, bank staff and nurses in general practice. NHS leaders owe it to patients, staff and the public to develop a better understanding of the shortfalls in nursing numbers. Until that failure is better recognised and addressed, any ambitions to deliver safe, effective, and sustainable care will be a pipe dream.

⁷ Reasonable commute considered as within 30 miles from their home, or within one hour's travel time, and relocation expenses should be up to £10,000 (tax free) which is on a par with the amount available to resident doctors.

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