Key points

- We summarise key findings from our analysis of long-term workforce supply and demand in general practice in England to 2030/31, focusing on patient care staff (GPs, general practice nurses and other patient care staff).

- In all of the three scenarios we consider, the supply of GPs and general practice nurses is projected to fall short of demand up to 2030/31.

- In particular, under current policy, the NHS faces a shortfall of over 1 in 4 GP and general practice nurse posts by 2030/31. In our pessimistic scenario this increases to around 1 in 2 GP and nurse posts. This raises serious concerns around patient safety, the quality of care and equity of access.

- In our optimistic scenario the GP shortfall can be substantially mitigated by 2030/31, but this calls for sustained policy action to boost GP retention and encourage the successful integration of newer roles in multidisciplinary practice teams.

- Policy choices around staff recruitment, retention, training, funding and equity in general practice have a vital role to play in addressing workforce pressures in the medium term.
Context
We present analysis of long-term workforce supply and demand in the NHS in England to 2030/31, focusing on patient care staff in general practice (GPs, general practice nurses and other patient care staff) and registered nurses working across all sectors.

We consider how policy choices might affect recruitment and retention of these staff groups under alternative scenarios (we present projections rather than forecasts):

- **Current policy scenario** – assuming continuation of historical trends and existing policies
- **Optimistic scenario** – assuming further policy intervention that achieves increased recruitment and retention
- **Pessimistic scenario** – assuming negative impacts to future workforce supply arising largely from incomplete realisation of existing policy potential, a lack of longer term planning, and COVID-19.

We do not set out a recommended course of action but instead discuss the implications of alternative policy choices for NHS workforce supply-demand gaps.
We reflect on two high-profile government targets for the general practice workforce

The 2019 Conservative party manifesto committed to:

- Recruiting 6,000 more FTE GPs in England by the end of 2023/24 relative to 2018/19

- Recruiting 26,000 more FTE direct patient care staff into specific roles in primary care networks by the end of 2023/24 relative to 2018/19, with funding delivered through the Additional Roles Reimbursement Scheme (ARRS).

Accounting for these targets, our projections focus on two endpoints: 2023/24 (the short term, approaching the end of the current parliament) and 2030/31 (the long term, the end of the decade).

Our analysis questions this ‘top-down’, target-driven approach to NHS workforce expansion and highlights its weaknesses relative to comprehensive workforce planning.
We focus on patient care staff in general practice

- General practice in England has consistently faced workforce pressures, likely to have been exacerbated by the pandemic.

- While general practice vacancy data are not available, the number of fully qualified, permanently employed GPs per 100,000 patients in England fell from 47 to 44 between December 2017 and December 2021.

- However, with the introduction of primary care networks and the ARRS in 2019, other direct patient care staff numbers in general practice have increased rapidly.
Our approach
Comparing workforce demand and supply allows us to understand the workforce gap and consider policies that could help address it.

**Workforce demand** (GPs and nurses)
A function of projected changes in healthcare activity, driven by:
- Underlying demand pressures (demographics and morbidity trends)
- Additional demand pressures (e.g., NHS Long Term Plan commitments)

**Workforce supply**
A function of recruitment and retention:
- GPs
- Nurses in general practice
- Other direct patient care staff

\[\text{Demand} - \text{Supply} = \text{Workforce gap}\]
(in order to maintain 2018/19 standards of care using existing models)

What policies could help address this gap?

3 scenarios
We have modelled workforce supply through a mix of in-house modelling and publicly available data to consider different supply channels.

Clinical staff in general practice (GPs, nurses and other direct patient care staff)

We use publicly available data from NHS Digital and HEE to obtain projections of the supply of fully qualified, permanently employed GPs (qualified permanent GPs) and direct patient care staff in general practice (excluding nurses) to 2030/31.

General practice nurse supply projections are obtained from the REAL Centre nurse supply model.

Our GP supply projections explore future changes in GP supply through alternative supply channels:

1. **Domestic training**: changes in the number of GP specialty trainees, the GP trainee attrition rate and workforce joiner rates.
2. **GP retention**: retention of GPs currently practising in England (captured by changes in GP leaver rates).
3. **International recruitment**: recruitment of GPs with a primary medical qualification from outside the UK.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Optimistic scenario</th>
<th>Pessimistic scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attrition rate from GP specialty training</strong></td>
<td>Declines by 0.3 percentage points a year from 2023/24 onwards</td>
<td>Increases by 0.3 percentage points a year from 2023/24 onwards</td>
</tr>
<tr>
<td>(around 13% a year in the ‘current policy’ scenario)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Workforce transition rate</strong></td>
<td>Increases by 0.3 percentage points a year from 2023/24 onwards</td>
<td>Declines by 0.3 percentage points a year from 2023/24 onwards</td>
</tr>
<tr>
<td>(proportion of GP trainees who receive their CCT and join the workforce) (around 74% a year in the ‘current policy’ scenario)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Labour market participation rate</strong></td>
<td>Increases by 0.3 percentage points a year from 2023/24 onwards</td>
<td>Declines by 0.3 percentage points a year from 2023/24 onwards</td>
</tr>
<tr>
<td>(headcount-to-FTE conversion factor) for newly qualified GPs (assumed to be 0.8 FTE in the ‘current policy’ scenario)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: these assumptions were informed by and validated through stakeholder engagement.
Assumptions for general practice workforce supply scenarios: I

<table>
<thead>
<tr>
<th>Variable</th>
<th>Current policy</th>
<th>Optimistic</th>
<th>Pessimistic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FTE GP supply</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of GPs joining the workforce</td>
<td>Newly qualified (through GP training)</td>
<td>Increases from 1,400 to 2,100 a year (2021/22–2030/31)</td>
<td>Increases from 1,400 to 2,300 a year (2021/22–2030/31)</td>
</tr>
<tr>
<td>Other</td>
<td>Decreases from 260 to 250 a year (2021/22–2030/31)</td>
<td>Increases from 260 to 300 a year (2021/22–2030/31)</td>
<td>Decreases from 260 to 200 a year (2021/22–2030/31)</td>
</tr>
<tr>
<td><strong>GP leaver rate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-retirement age</td>
<td>Average leaver rates for 2018/19–2021/22 apply (2022/23–2030/31)</td>
<td>Declines by 1 percentage point (2022/23–2030/31)</td>
<td>Increases by 5 percentage points (2022/23–2030/31)</td>
</tr>
<tr>
<td>Retirement age</td>
<td></td>
<td></td>
<td>Increases by 2 percentage points (2022/23–2030/31)</td>
</tr>
<tr>
<td>International GP recruitment</td>
<td>No net change</td>
<td>100 additional FTE GPs trained in other countries recruited to the NHS every year</td>
<td>100 additional FTE GPs trained in other countries leave the NHS every year</td>
</tr>
</tbody>
</table>

Note: these assumptions were informed by and validated through stakeholder engagement.
### Assumptions for general practice workforce supply scenarios: II

<table>
<thead>
<tr>
<th>Variable</th>
<th>Current policy</th>
<th>Optimistic</th>
<th>Pessimistic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FTE supply of nurses and other direct patient care staff in general practice</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General practice nurse supply</td>
<td>Derived from nurse supply current policy scenario for changes in nurse leaver rates</td>
<td>Derived from nurse supply optimistic scenario for changes in nurse leaver rates</td>
<td>Derived from nurse supply pessimistic scenario for changes in nurse leaver rates</td>
</tr>
<tr>
<td>DPC staff supply</td>
<td>Staff covered by the ARRS</td>
<td>The 26k target is met by 2023/24 and thereafter, FTE staff numbers grow at 6.4% a year (the annual trend for 2016–2019)</td>
<td>The 26k target is missed by 10% by 2023/24 and thereafter, FTE staff numbers grow at 1.4% a year (5 percentage points below the annual trend for 2016–2019)</td>
</tr>
<tr>
<td>Other staff</td>
<td>Staff numbers grow at 2.6% a year to 2030/31 (the annual trend for 2016–2019)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expanded use of multidisciplinary teams in general practice – implications for GP demand</td>
<td>Restricted to ongoing workforce expansion through the ARRS</td>
<td>Increased need for supervision and integration results in a 5% in increase in GP demand by 2023/24 (relative to the current policy scenario)</td>
<td>Inadequate integration of newer roles and a lack of policy support result in a 5% in increase in GP demand by 2023/24 (relative to the current policy scenario); a lack of longer term planning leads to sustained GP workload pressures</td>
</tr>
</tbody>
</table>

Note: these assumptions were informed by and validated through stakeholder engagement.
Projections: general practice workforce supply
In the short term, across all scenarios, the existing GP supply-demand gap is projected to worsen over time

<table>
<thead>
<tr>
<th></th>
<th>Current policy scenario</th>
<th>Optimistic scenario</th>
<th>Pessimistic scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GP demand</td>
<td>GP supply</td>
<td>GP demand</td>
</tr>
<tr>
<td>2021/22</td>
<td>31,300</td>
<td>27,000</td>
<td>31,300</td>
</tr>
<tr>
<td>Shortfall</td>
<td>-4,200</td>
<td>-4,200</td>
<td>-4,200</td>
</tr>
<tr>
<td>2023/24</td>
<td>33,700</td>
<td>26,400</td>
<td>35,200</td>
</tr>
<tr>
<td>Shortfall</td>
<td>-7,300</td>
<td>-8,300</td>
<td>-9,700</td>
</tr>
<tr>
<td>2030/31</td>
<td>37,800</td>
<td>27,100</td>
<td>34,400</td>
</tr>
<tr>
<td>Shortfall</td>
<td>-10,700</td>
<td>-3,300</td>
<td>-20,400</td>
</tr>
</tbody>
</table>

Demand and supply estimates and projections for qualified permanent GPs in England, 2021/22–2030/31 (numbers are rounded)

- Our analysis suggests that there was a shortage of around 4,200 GPs in 2021/22. In the current policy scenario, this shortfall is projected to increase to around 7,300 GPs by 2023/24.
- In our optimistic scenario, the GP shortfall in 2023/24 stands higher at around 8,300. While this may seem counterintuitive, it reflects GPs facing increased supervision and training responsibilities for newer roles in the short term relative to the current policy scenario.
- In our pessimistic scenario, the GP shortfall is projected to increase to around 9,700 by 2023/24. This reflects increasing GP workloads, exacerbated by rising leaver rates between 2021/22 and 2023/24.

Source: Authors’ analysis based on data from NHS Digital and Health Education England.

Note: The numbers in the table are rounded and refer to FTE qualified permanent GPs (ie all GPs excluding GPs in training and locum GPs).
In the longer term, mitigating the GP supply-demand gap will require a sustained focus on improved GP retention and effective integration of newer staff roles in general practice.

In the current policy scenario, the GP shortfall rises to around 10,700 FTE by 2030/31. In the pessimistic scenario it increases to around 20,400 FTE. This underscores how a lack of policy focus beyond 2023/24 coupled with increased GP leaver rates, inadequate integration of newer roles, worsening GP trainee attrition and workforce transition rates could lead to sustained falls in GP supply.

However, our optimistic scenario suggests that the existing shortage of GPs can be contained to around 3,300 FTE GPs by 2030/31. Key to this is the implementation of future policies targeting improved general practice staff retention and successful integration of newer roles in multidisciplinary general practice teams.
In all scenarios, we project a shortage of general practice nurses to 2030/31

Our analysis paints a concerning picture of the sustainability of nurse supply in general practice over the coming decade.

In the current policy scenario, the number of FTE nurses in general practice is projected to decline by around 0.4% a year over the decade to 2030/31. Even in the optimistic scenario, we project only a slow increase in nurse supply in general practice from around 16,600 in 2021/22 to around 17,000 by 2030/31.

In the pessimistic scenario, our model projects that nurse supply in general practice will decline by just over a quarter (26%) to around 12,000 by 2030/31. This is driven primarily by current trends and our assumptions regarding increases in nurse leaver rates in this scenario.
Other direct patient care staff numbers have increased rapidly in general practice in the past 2 years, but the outlook beyond 2023/24 is uncertain.

- Our analysis highlights the inherent uncertainty in the continuing expansion of staff numbers in direct patient care roles in general practice beyond 2023/24, rooted in the current lack of workforce planning beyond 2023/24.

- Effective integration of these roles in general practice teams will be crucial in containing the GP supply-demand gap.

- Regional or local shortfalls in GP, nurse and other direct patient care staff numbers are likely to exhibit substantial variation. While this is outside the scope of our modelling, it will require increased policy attention in the future.
5 Implications
What do our findings imply for general practice workforce planning?

1. Addressing general practice workforce shortages requires comprehensive long-term planning and acknowledgement that improvement will take many years.

2. Top-down targets are unlikely to be effective in addressing workforce supply-demand shortfalls. Policymakers should account for geographic and sector variation in workforce supply and demand.

3. Policies need to be fully costed and funded to be implemented effectively.

4. Joined-up policymaking needs to be underpinned by substantive research on the drivers of workforce supply and demand as well as rigorous projections analysis.

5. Substantial gaps in accessible data about the NHS workforce should be acknowledged and mitigated.
What are the wider implications of our findings?

- In all scenarios, the supply of GPs and general practice nurses is projected to fall short of demand through this decade.

- Under current policy, the NHS faces a shortfall of around 10,700 FTE GPs in 2030/31 (over 1 in 4 projected GP posts) and 6,400 FTE nurses (over 1 in 4 projected posts). In the pessimistic scenario this rises to around 20,400 FTE GPs (around 1 in 2 GP posts) and 10,100 FTE nurses (nearly 1 in 2 posts).

- This raises serious concerns around future primary care provision in terms of patient safety, the quality of care and equity of access.

- Sustained policy action targeting improved retention will be key to mitigating the GP and nurse shortfall.

- Equally, effective integration of other patient care roles in multidisciplinary teams will also be vital. Our optimistic scenario projects a lower GP shortfall of around 3,300 FTE (around 1 in 10 GP posts), assuming that successful integration of newer DPC roles helps lower GP demand by 9% by 2030/31.

- Policy choices around staff recruitment, retention, training, funding and equity in general practice have a vital role to play in addressing workforce pressures in general practice in the medium term.