To: Dr Navina Evans CBE
Chief Executive Health Education England

From: Anita Charlesworth, Director of Research and REAL

22 February 2023

Independent Assessment of NHS Workforce Projections

Dear Navina,

Thank you for approaching the Health Foundation's REAL Centre to ask for support in assessing the modelling approach undertaken by NHS England to inform the workforce plan. We have hugely valued the opportunity to offer an independent perspective and hope that it helps to provide added robustness to the analysis undertaken by your team.

We agreed from the outset that the REAL Centre will focus on assessing the process underlying NHS England's long term workforce modelling.

The assessment took place over 2 weeks in February 2023 and is based on the projections as of 17th February. While there is no prescribed template for workforce projections' assessment, we took as our starting point the domains of the UK Statistics Authority Code of Practice focusing specifically on the domains of quality and value. We identified the aspects of the code that were most relevant to projections modelling resulting in 10 key lines of inquiry drawn from the code.

It is important to note that this process of assessment, in line with the code of practice, is not the same as model quality assurance. One of the areas we have explored through the process is whether and how the models used for workforce projections have been subject to quality assurance testing, in line with the Aqua Book principles, but we have not undertaken model quality assurance ourselves.

Projections modelling is not an exact science – there is no single, right answer to what the demand and supply of the NHS workforce could be over the next 15 years. The value of projections modelling is in understanding how the drivers of demand and supply could change and how that could influence workforce dynamics to inform policy decisions. For this reason, how the data is used, the extent to which the assumptions used are well evidenced, and the inferences drawn from the modelling are as important as the quality of the underlying data.

We are grateful to your colleagues for the time they have spent providing us with evidence and answering our questions. We want to highlight the professionalism of NHSE analytical colleagues and their evident commitment to producing high quality, meaningful information to support policy making. The assessment we have reached has not been shared with any NHSE colleagues in advance and is ours alone.

Overall assessment

Attached is our assessment in relation to the 10 key lines of inquiry. Overall, we conclude that the projections methodology and data used are a plausible basis to inform the workforce plan, given the current available underpinning evidence.

We have some observations related to how the projections can be improved (innovation and improvement) and how they are communicated (clarity and insight).

Improving the projections

First, the workforce demand and supply projections are not generated from a single model but a suite of models. Clearer documentation on how the different models link would be helpful in ensuring coherence in approach.

Second, the projections we assessed are England-wide workforce projections focused on aggregate demand and supply across a range of staff groups (nurses, AHPs, doctors etc) and services (acute hospitals, mental and community health and primary care). This means the modelling doesn't address distribution across the country. In future, there is likely to be a need to look at regional modelling; both to support local strategies but also as labour market dynamics might vary considerably across the country and require specific policy interventions. For example, increasing the overall general practice workforce is necessary but almost certainly not sufficient to address inequalities in access to primary care without linked policy emphasis on achieving geographic redistribution.

Communicating the projections

Our main concern relates to the approach used to explore the implications of uncertainty for the projections of demand and supply. In particular, there is no systematic consideration of 'downside risk' which is a concern as it may result in 'optimism bias'. Examples of downside risks might include further falls in the retention rate or challenges to recruiting internationally. The objective of projection modelling is to allow policy makers to consider how policy and implementation might need to adapt to different possible futures.

Risks: productivity and wider labour market dynamics

Productivity

The projections of workforce demand are derived from NHSE models that project activity. This methodology requires assumptions about future trends in labour productivity, including the pace and degree of productivity recovery after the pandemic and the underlying trend rate of productivity growth for healthcare over the next 15 years. These are central assumptions in the projections model. Our assessment finds that assumptions about productivity in the interventions modelling poses a key risk, as there is limited evidence about the scale of productivity improvements that will be achieved over the next 15 years.

We know that NHS productivity growth exhibited a high degree of variation even before Covid-19. The modelling is based on the long run trend rate of increase of 0.8%[1]. Between 2010/11 and 2014/15 productivity was considerably above trend growing at 2.0% a year. In the years immediately preceding Covid-19, productivity growth was much lower, increasing by -0.1% a year between 2015/16 and 2019/20.[2]

There is little robust evidence on the underlying determinants of productivity leading to considerable uncertainty about the future, especially given Covid-19. This is particularly true of primary care. In the absence of primary care specific data, the NHSE modelling assumes the same future rate of productivity growth in primary and hospital and community health care (HCHS), which adds even greater uncertainty to the overall modelling.

[1] This figure comes from ONS analysis of cost weighted output across all public health services, not weighted for quality.

[2] https://www.ons.gov.uk/economy/economicoutputandproductivity/publicservicesproductivity/datasets/publicserviceproductivityestimateshealthcareengland

Directly modelling future productivity growth is not currently feasible and is not something we would expect to see. The value of the workforce projections would be greatly enhanced by presenting a range of workforce demand estimates based on different paths (upside and downside) for future productivity growth.

Wider labour market dynamics

In England, in common with most OECD countries, the health care workforce has been growing as a share of the overall labour market. NHSE's workforce demand and supply models focus on the directly employed and independent contractor (GPs, dentists and community pharmacist) workforce.

The projections do not formally consider this workforce in the context of wider labour market dynamics. At present pay, terms and conditions are not factors in the workforce supply modelling. These are important factors in determining whether individuals seek to join and stay in the NHS workforce, particularly for non-clinical professions and occupations. In addition, economy-wide labour market dynamics and their impact on the NHS is another area of inherent uncertainty but very pertinent to the modelling. If the health workforce is expanding, how NHS pay, terms and conditions compare to other sectors will be an important factor influencing how many people, with what skills, apply to train for NHS roles, seek to work in NHS jobs and the leaver rate. Explicit modelling of scenarios for relative pay, terms and conditions is important to increase the policy value of the projections and is currently an omission.

The relationship between the NHS and wider labour market is two way; the NHS is a large employer - while it is influenced by the wider labour market, it also has an influence on other sectors. Understanding the potential impact of NHS workforce demand and supply projections on closely related occupations and sectors in the labour market is important and currently very limited. The NHS is also a key destination for care workers leaving social care; their pay, terms and conditions in the NHS can be very different. For example, NHS health care assistants earn on average £1 an hour more than care workers.

Finally, transparency is a fundamental principle that underpins the code of practice. Transparency is important for trust, but also if the projections are to be well understood and used to support decision making across the system. We welcome your commitment to the principle of transparency, demonstrated in your request for the REAL Centre to undertake this assessment. It will be important that the detail of the workforce projections is made public, along with information on the data and assumptions that underpin it. As you continue to refine the modelling to support future workforce planning, regular and systematic engagement with stakeholders will also be important.

Thank you to all the colleagues in NHSE who engaged so positively and constructively with this exercise. This letter and the attached assessment will be posted on the Health Foundation website when the NHS workforce projections are published.

Very best

Anita Charlesworth