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Institute for Employment Studies

Beyond Brexit: Assessing key risks to the nursing workforce in England

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With thanks to James Buchan

Summary

This analysis considers how two key factors - Brexit and population growth - could impact the NHS. For the first time, this paper brings together analysis at the national and trust level to map the regions and NHS trusts in England most vulnerable to the associated risks of Brexit and population growth.

Specifically, our analysis focuses on two projected future trends:

- A **reduced supply of EU nurses** post Brexit. IES research earlier this year[1] indicated that there are a number of workforce supply issues which might have a significant impact on the nursing workforce in England, given that it is ageing and is increasingly reliant on the recruitment pipeline from Europe.
- Population growth-related demand for health services, driven by a projected **increase in the population aged 85 and over,** will disproportionately increase the healthcare demands placed on the NHS in some of the trusts that are most likely to experience nurse shortages.

The analysis presented here is intended to be a starting point for discussion within the NHS, in the light of the Brexit vote, rather than as the 'final word' on the subject. That said, analysis of these two projected trends alone reveals that Brexit and population growth may be two of the greatest challenges to many English NHS trusts in meeting growing demand for nursing resources. Our analysis indicates where and to what extent Brexit could squeeze the supply of EU nurses in the NHS in England, and a growing population of those aged 85 and over will increase healthcare demands on already pressurised NHS resources.

Our findings reveal that the NHS trusts most 'at risk' from these demographic changes are spread across English regions. Some, such as Milton Keynes University Hospital NHS Foundation Trust, Burton Hospitals NHS Foundation Trust, and Wrightington, Wigan and Leigh NHS Trust face very rapid population growth amongst the over-85s and have above average employment of European Economic Area (EEA) nurses.[2] Others, including Royal Brompton and Harefield NHS Foundation Trust in London, and Queen Elizabeth Hospital King's Lynn NHS Trust, have very high proportions of EEA nurses and above average elderly population growth.

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[1] Marangozov R, Williams M and Buchan J (2016), *The labour market for nurses in the UK and its relationship to the demand for, and supply of, international nurses in the NHS*. Institute for Employment Studies:

[2] The EEA includes all European Union (EU countries) and also Iceland, Norway and Liechtenstein. The term 'EEA nurses' is defined in this paper as those with nationality from one of the EEA Member States, with the exception of Ireland. Irish nurses are recorded together with British nurses in the HSCIC data.

The uncertainty that Brexit has stimulated places real pressure on NHS workforce planners to examine and to 'model' a number of nurse workforce supply and demand scenarios. This would enable them to put in place attempts to mitigate the negative impact of 'worst case' scenarios, which will be particularly important given that the NHS already faces a number of well-publicised challenges over funding and ever-increasing demand for its services.

Introduction

The UK's decision to leave the EU was unprecedented and unplanned for. As such, its impact on the NHS is unclear, not least because the implications of 'Brexit' are unknown, both in general terms and more specifically for EU nationals currently working in the UK and those who may wish to in the future. As such, Brexit could present a number of challenges to the NHS, some of which are yet to be identified and quantified. However, there are particular vulnerabilities in the current NHS that may leave it exposed to some of the unintended consequences of Brexit. This is highly apparent in the nursing workforce in England, where there is already evidence that cyclical patterns of labour shortages have left it increasingly reliant on nurses from the EEA. At a national level, the NHS in England is already short of nurses and the current stock of nurses is ageing. In 2014, there was a reported shortfall among nurses, midwives and health visitors of 7.2 per cent[3] and a 2016 report by NHS Improvement concluded that nursing demand is rapidly outstripping supply.[4] Evidence suggests that the current shortage is largely attributable to an increased demand for nurses caused by the post-Francis[5] emphasis on safe staffing, and restricted supply because constrained budgets at both Government departmental level and at trust level have led to too few nurse training places being commissioned and fewer nursing posts.[6] The Migration Advisory Committee (MAC) recommended in March 2016 that the government issue 15,000 visas over the next three years to nurses from outside the EU to ease short-term workforce pressure, but this was never intended to be a long-term solution.

To compound these challenges, it is also clear that the nursing workforce in England is ageing. Figure 1, below, shows that the proportion of nurses aged 50 and over increased from just over 20 per cent of all nurses in 2005 to nearly 30 per cent of nurses in 2014.

The Normal Pension Age[7], or retirement age for currently-employed NHS nurses is 60 for most members of the NHS Pension Scheme (although some retire early), so nearly one in three nurses will reach 60 and be due to retire over the next 10 years, according to IES analysis[8].

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[3] National Audit Office (2016), *Managing the supply of NHS clinical staff in England*. London: NAO

[4] NHS Improvement (2016), *Evidence from NHS Improvement on Clinical Staff Shortages*. A workforce analysis. London: NHS Improvement.

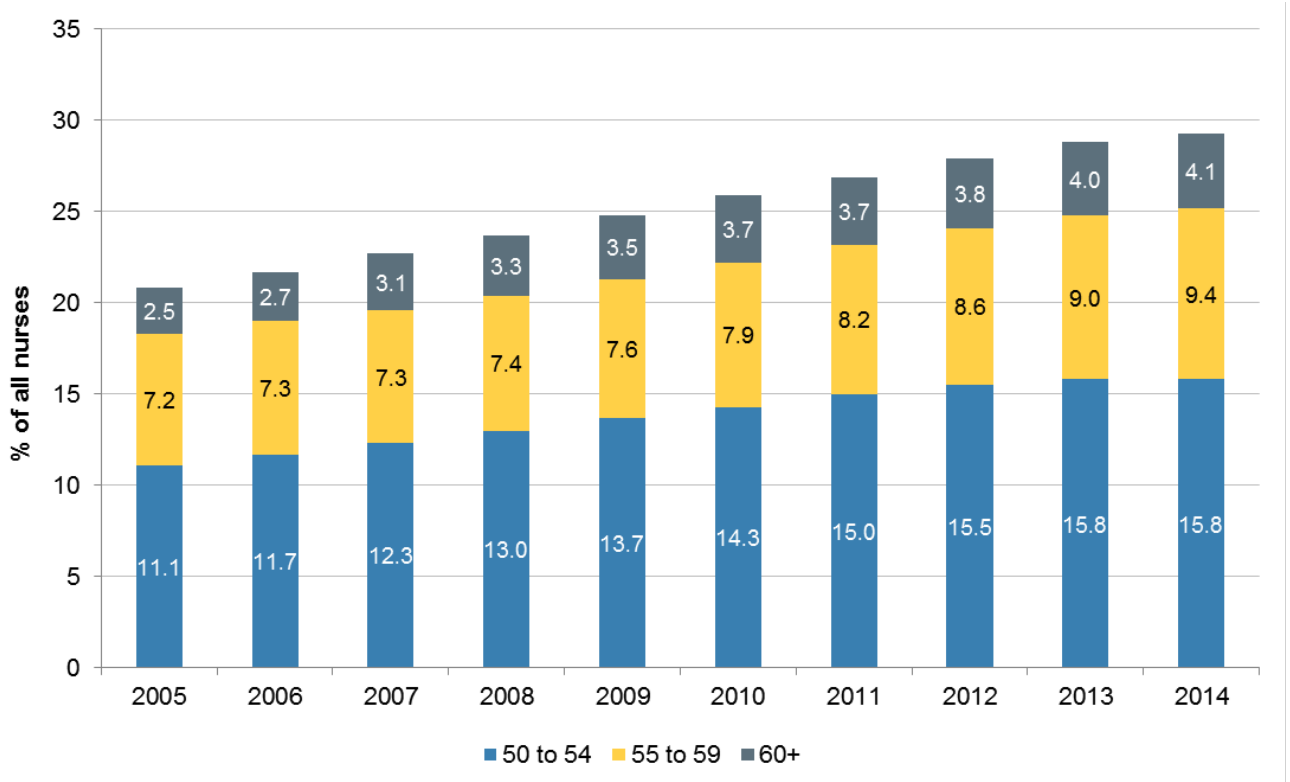
[5] Francis R (2013), *The Mid Staffordshire NHS Foundation Trust Public Enquiry*. London: The Stationery Office.

[6] NHS Improvement (2016), *Evidence from NHS Improvement on Clinical Staff Shortages. A workforce analysis.* London: NHS Improvement.

[7] The Normal Pension Age is the age which nurses can retire from the NHS and have their pension paid without any reductions (which may apply if they retire earlier than this age).

[8] Marangozov R, Williams M, Buchan J (2016) *The labour market for nurses in the UK and its relationship to the*

Figure 1: Proportion of qualified nursing, midwifery and health visiting staff in England aged 50 and over, 2005-14



Source: HSCIC Non-medical Staff Detailed Results, 2005-14

The current and projected shortage of nurses has left the NHS nursing workforce in England particularly vulnerable to any disruption to its recruitment pipelines, both from the EEA and outside of it. It is questionable whether it will be possible to rely on a 'homegrown' workforce alone to meet our future demand for nurses because of the government's plan to remove student nursing bursaries in 2017.

So, at best, the NHS in England faces considerable uncertainty over its future **supply** of nurses. On the **demand** side of the equation, the impact of population growth on the need for NHS resources is a little clearer, but no less worrying. In the analysis below we look at whether the NHS trusts in England with greatest exposure to nursing shortages are simultaneously likely to be vulnerable to higher than average growth in those parts of the local population – the over-85s – most likely to make intensive use of healthcare resources. We have chosen this group because economic analysis shows that remaining life expectancy (ie proximity to death), rather than ageing alone, is a better predictor of increases in healthcare spending and resource use.[9]

demand for, and supply of, international nurses in the NHS: Final report. Institute for Employment Studies

[9] Grey A, (2004), 'Population ageing and Health Care Expenditure', Ageing Horizons, 2, pp 15-20.; Lis M, (2016), *Age or Time to Death – What drives Health care expenditures? Panel data evidence from OECD Countries,* IBS Working Paper 04/2016, Warsaw: Instytut Badan Strukturalnych.

A reduced supply of EU nurses will hit the NHS hard

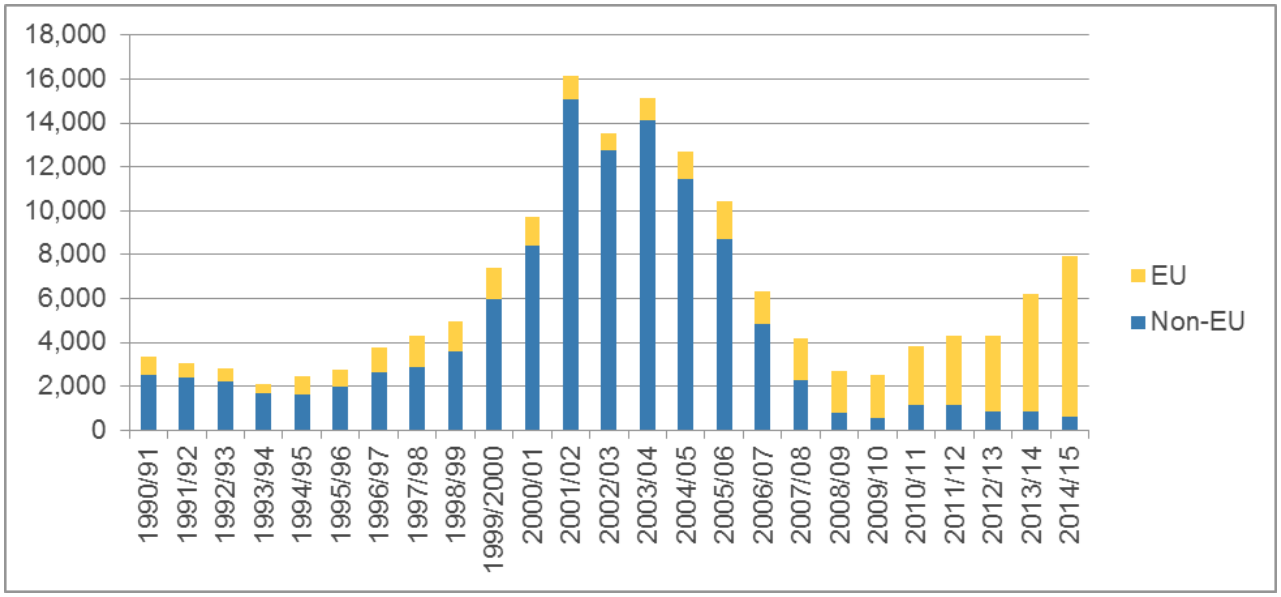
Whatever form Brexit eventually takes, it could well lead to a reduced supply of labour from the EU. Given the current uncertainty around the status of EU workers, many EU nurses may voluntarily choose not to take up positions in the UK, while those already working here could make plans to return home if they feel unwelcome or no longer see a future in the UK. The UK Government could also restrict their entry, either through abandoning free movement or through imposing new entry criteria for EU workers, post Brexit. Even the prospect of sending some EU workers home has not been ruled out by the Government. In this sense, we could be facing two waves of interrupted supply of EU nurses: one prompted by the ongoing uncertainty around the status of EU workers, and one prompted by the UK Government framing and implementing a series of policy options post Brexit. Indeed, one think tank has suggested the NHS could collapse without EU workers and has recommended that all EU workers be granted British citizenship if they have lived in Britain for six years.[10]

Because of the current nurse shortages, mentioned above (and the three to four-year period which it currently takes to train, recruit and register UK-trained nurses), a reduced supply of labour from the EU could hit the supply of nurses in the NHS particularly hard because **the NHS is increasingly reliant on the recruitment pipeline of nurses from Europe**. Indeed, EU nurses currently make up 4.5 per cent of the total nursing workforce in England. This may not sound like a lot but this is up from just over one per cent in 2009.[11] Moreover, looking at flows of EEA nurses (as indicated by the Nurse Registration data), these have reflected a shift in the composition of overseas nurses towards EEA nurses and away from those from the rest of the world (Figure 2).

[10] Murray C (2016), *Becoming one of us: Reforming the UK's citizenship system for a competitive post-Brexit world.* London: ippr.

[11] IES analysis of HSCIC data. Irish nurses are recorded together with British nurses in the HSCIC data.

Figure 2: Annual registration of EEA and non-EEA nurses, 1990-2015



Source: Marangozov R, Williams M and Buchan J (2016), The labour market for nurses in the UK and its relationship to the demand for, and supply of, international nurses in the NHS

The 4.5 per cent figure also masks wide geographic differences between NHS trusts, with some much more reliant on this recruitment pipeline from Europe than others because of:

- Higher turnover in nursing staff in the South East and London regions. This is likely to be because of higher numbers of younger nurses (the data suggests that the leaving rate is highest among younger and older age cohorts, with stress and burnout being particularly high in newly qualified nurses[12]). It is also likely to be linked to higher costs of living in the South East and London, as well as the fact that there are more teaching hospitals in London, where nurses may be looking to gain experience and training, but not necessarily stay for the longer term.[13]
- A trust's own approach to workforce planning, including retention, management and HR policies and how international recruitment fits in with that, and what the trust's previous experience of international recruitment has been. It also depends on what resources a trust has to dedicate to workforce planning, which varies from trust to trust.[14]
- Local demographics and the 'attractiveness of a trust'. For example, some large, acute teaching/foundation trusts are able to offer new recruits and trainee nurses more experience across different specialisms, which made them more attractive to new

[12] Health Education England (2014), *Growing Nursing Numbers*.

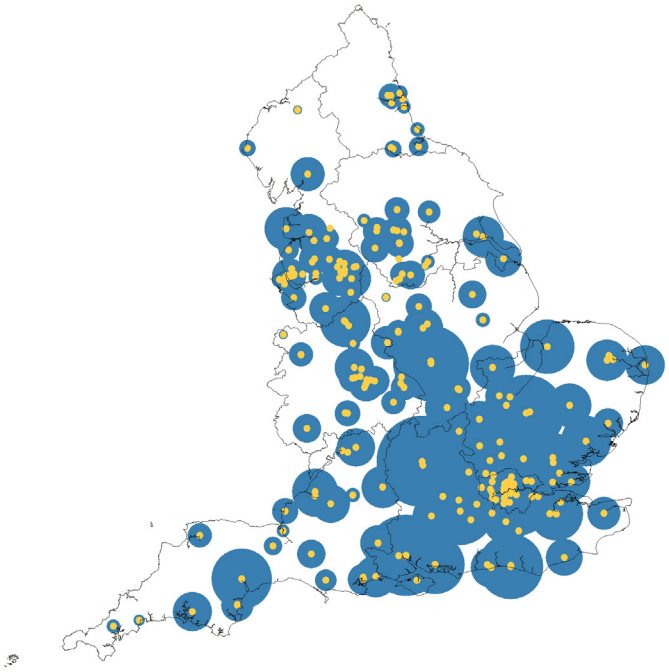
[13] Marangozov R, Williams M and Buchan J (2016), *The labour market for nurses in the UK and its relationship to the demand for, and supply of, international nurses in the NHS*. Institute for Employment Studies

[14] Marangozov R, Williams M and Buchan J (2016), *The labour market for nurses in the UK and its relationship to the demand for, and supply of, international nurses in the NHS*. Institute for Employment Studies.

recruits than those that did not and so less likely to have to recruit from abroad. Trusts in big urban centres also reported the advantages of good transport links, settled diverse communities and a busy location in being able to 'pull' nurses in[15].

Our analysis, which geographically maps demographic and labour market data to trust catchment areas for the first time, reveals that NHS trusts in the London, Thames Valley and the East of England regions are most likely to be affected by Brexit because they are the most dependent on the recruitment pipeline from Europe (see Figure 3). The map of England below shows the locations of trusts (yellow dots indicate the geographical centre) that had the largest stock[16] of EEA nurses in 2015, with the blue circles proportional to the total number of EEA nurses. The figures show that the concentrations of EEA nurses are highest in trusts located in the South East of the country, and particularly those located in London.

Figure 3: Stock of EEA nurses among NHS trusts in England, 2015



Source: IES analysis of HSCIC workforce data.

The data shows that particular NHS trusts are likely to feel the impact of Brexit more than others. For example, in the Royal Brompton and Harefield NHS Foundation Trust, 20 per cent of their nurses are from the EEA; similarly in Queen Elizabeth Hospital King's Lynn NHS Foundation Trust, 18 per cent of their nurses are from the EEA. Queen Elizabeth Hospital King's Lynn also saw the largest increase in the use of EEA nurses, with the

[15] Ibid.

[16] In terms of absolute numbers.

proportion increasing from just 1.3 per cent in 2009 to the current level of 18 per cent. Other trusts that experienced large increases in their proportions of EEA nurses are Papworth Hospital NHS Foundation Trust and North Middlesex University Hospital NHS Trust.

These data illustrate potentially severe supply problems among the nursing workforce in England depending on the choices the UK government makes and the nature of the labour migration arrangements the UK eventually negotiates as part of Brexit talks. Yet these workforce supply pressures may be further compounded by some of the demand-side challenges likely to be faced in some of the very same NHS trusts on which our analysis has focused.

A growing population aged 85+ will increase healthcare demands

Below, we assess the risk of both Brexit on NHS trusts in England (as indicated by a high usage of EEA nurses) and rapid population growth of those aged 85 and over in the trust catchment areas. Table 1 identifies the 20 trusts most vulnerable to both future nurse shortages, post Brexit, and rapid population growth among those aged 85 and over.

Table 1: NHS trusts in England most vulnerable to future nurse shortages and rapid population growth

	Pop Growth 85+ 2016-26 (%)	EEA Nurses 2015 (%)
Milton Keynes Hospital NHS Foundation Trust	53.0	8.2
Royal Brompton and Harefield NHS Foundation Trust	39.1	20.3
Burton Hospitals NHS Foundation Trust	51.6	6.1
Luton and Dunstable University Hospital NHS Foundation Trust	48.9	7.6
Wrightington, Wigan and Leigh NHS Foundation Trust	52.3	4.0
West Suffolk NHS Foundation Trust	45.1	11.0
Papworth Hospital NHS Foundation Trust	40.6	15.4
Mid Essex Hospital Services NHS Trust	45.6	10.3
Buckinghamshire Healthcare NHS Trust	45.4	9.3
Queen Elizabeth Hospital King's Lynn NHS Foundation Trust	35.9	18.4
Oxford University Hospitals NHS Trust	40.4	13.1
Imperial College Healthcare NHS Trust	44.0	9.1
Whittington Hospital NHS Trust	42.3	10.3
Hampshire Hospitals NHS Foundation Trust	48.0	4.5
Bedford Hospital NHS Trust	43.3	9.1
Frimley Health NHS Foundation Trust	40.7	10.5
Royal Free London NHS Foundation Trust	40.2	10.0
Salisbury NHS Foundation Trust	42.2	7.9
Weston Area Health NHS Trust	41.7	8.0
London North West Healthcare NHS Trust	42.6	7.0

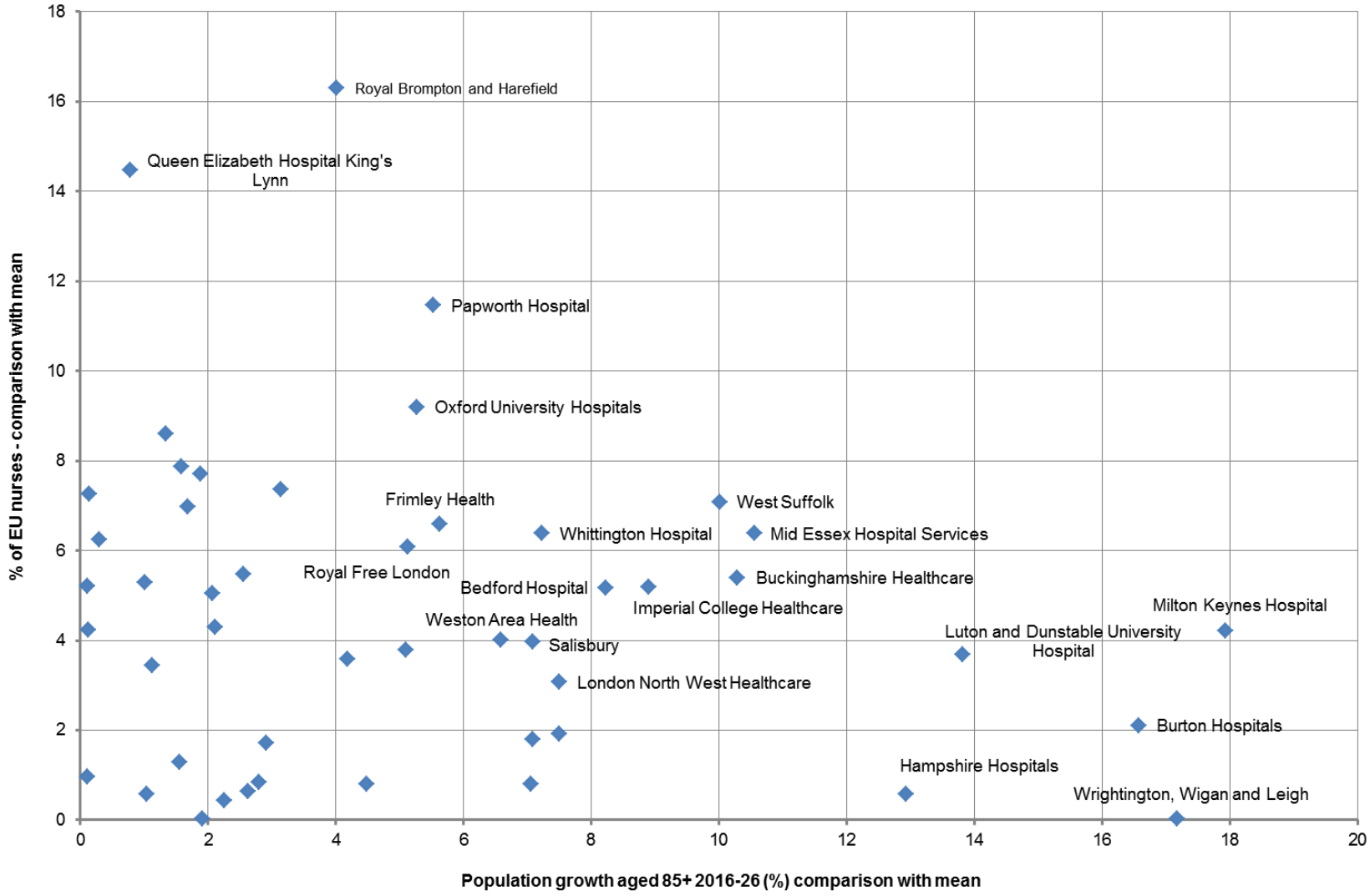
Source: IES analysis of HSCIC workforce data and ONS population projections

Figure 4 shows the relationship between the proportion of EEA nurses and projected population change over the next ten years, ie 2016 to 2026. It is focused just on the top right hand quadrant, that is those trusts with values above the mean for both indicators.

There are a number of NHS trusts, spread across England, that face very rapid population growth and above average employment of EEA nurses. In the South East, these are Hampshire Hospitals NHS Foundation Trust and Milton Keynes University Hospital NHS Foundation Trust; in Bedfordshire, this is Luton and Dunstable University Hospital NHS Foundation Trust; in the West Midlands this is Burton Hospitals NHS Foundation Trust; and in the North West, this is Wrightington, Wigan and Leigh NHS Trust.

Around Cambridgeshire, Queen Elizabeth Hospital in King's Lynn and Papworth Hospital both have less rapid population growth but very high employment of EEA nurses. In London, there are also a number of NHS trusts with very high employment of EEA nurses such as the Royal Brompton and Harefield, University College London Hospital, North Middlesex University Hospital, and Chelsea and Westminster Hospital.

Figure 4: Relationship between the proportion of EEA nurses in English NHS trusts in 2015 and projected change in population aged 85+ in trust catchment areas over the next ten years (2016-2026)



Source: IES analysis of HSCIC workforce data and ONS population projections

Summary and implications for workforce planners

The data analysis presented here makes for a stark warning about impending risks to the NHS, post Brexit. Of course Brexit has not happened yet. But the uncertainty it has stimulated places real pressure on NHS workforce planners to examine and to 'model' a number of nursing workforce supply and demand scenarios. Inevitably, this will be necessary at UK level, within England and the devolved administrations, at the level of health economies and by individual trusts. In doing so, it should be remembered that scenario analysis is not about the precise prediction of training places, recruits, vacancies etc. It is about examining contingencies or 'what-ifs' and allowing managers to put in place attempts to mitigate the negative impact of 'worst case' scenarios.

The NHS faces a number of well-publicised challenges over funding and ever-increasing demand for its services. At worst, the severe interuption to the future supply of nurses that Brexit may represent will require a radical re-think of the way we plan, recruit, train and deploy nurses at least in the medium-term. It will also place pressure on migration policy towards non-EU immigration, which is likely to increase if the supply from Europe is squeezed. But even if the worst case does not materialise, our assessment is that we know enough about how difficult things might get to warrant serious and urgent action now in terms of modelling workforce supply and demand scenarios.

However, there is one final point for sober consideration regarding the impact of Brexit on the NHS nursing workforce: our data analysis *underestimates* the impact of future nursing shortages and this point has been driven home by the recent coverage of the funding crisis in social care. The coverage of our data is limited to the NHS nursing workforce in England only, and does not take into account the additional demand for nurses from the social care sector and private sector - both of which are equally, if not more reliant (and short of) nurses and which face higher rates of turnover.[17]

[17] Skills for Care (2016), Stimulating debate on the distinctive contribution of nurses to adult social care. A discussion and good practice paper: http://www.skillsforcare.org.uk/Documents/NMDS-SC-and-intelligence/NMDS-SC/Analysis-pages/Stimulating-debate-on-the-distinctive-contribution-of-nurses-to-adult-social-care.pdf

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