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The labour market for nurses in the UK and its relationship to the demand for, and supply of, international nurses in the NHS

Final report

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Institute for Employment Studies

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Executive summary

This research examines and seeks to explain the variation in the recruitment of non-European Economic Area (EEA) nurses at trust level in the NHS in England, drawing on evidence from quantitative analysis of available data, as well as qualitative interviews with NHS trusts and health sector experts.

The aims of this research are to:

■ Investigate available data to identify any particular trust-level characteristics which might indicate likelihood to recruit from outside the EEA.

■ Investigate the differential recruitment of non-EEA nurses among some NHS trusts, and the reasons for this.

■ Provide a broader overview of current nursing shortages and how they have come about.

Key findings from this study are summarised below:

1. The UK nursing labour market has been characterised by cyclical patterns of nursing shortages. A lack of long-term workforce planning has meant that nursing supply and demand in the UK has rarely been in sync, and there have been periods when active international recruitment has become a 'policy solution' for the NHS in England.

2. Evidence around the current shortage of nursing suggests a broadening out of localised skill shortages into a national issue. Our research finds that the current shortage of nurses is explained by several demand-side and supply-side factors, which have taken hold at a time when many trusts are facing financial difficulty:

   a. the emphasis on safe staffing since the publication of the *Francis Report* (2013) has increased demand for nurses;

   b. student nursing commissions have not kept up with the demand for nurses, restricting the supply of the domestic workforce;

   c. retention has been an issue as growing numbers of nurses leave their jobs; and

d. the profile of the workforce is ageing: one in three nurses will be due to retire over the next 10 years.[1] This has been an issue for over a decade one which workforce planners would have been aware of.

3. The quantitative findings show that, with the exception of NHS trust type, there are very few trust-level characteristics which emerge as highly significant in influencing non-EEA recruitment. Region does appear to be significant, with trusts in London and the South East more likely to recruit from outside of the EEA. The same can be said of the recruitment of EEA nurses: very few trust-level characteristics are a significant influence, but trust type and region are significant influences.

Aside from this, the analysis shows that there is no clear, consistent evidence of the characteristics which drive the variation in non-EEA recruitment at trust level. Instead, a picture emerges of varied and differential recruitment of non-EEA nurses among trusts, even those in the same shared region, as trusts attempt to balance recruitment decisions with a range of other pressures they may face.

4. From the qualitative evidence, differential use of non-EEA nurses is likely to be explained by a trust's own approach to workforce planning (whether they have previously recruited from outside of the EEA and/or the resources available to them); local demographics and the 'attractiveness' of a trust; and the different skills needs of trusts.

5. Our findings point to the importance of structural factors in explaining the cause of previous and current shortages in the nursing workforce. Most notable among them is a lack of long-term, strategic workforce planning, that offers oversight, coordination and alignment of the different dimensions of the nursing workforce (financial, education, employment and international recruitment).

6. The role of international recruitment needs to be well aligned to, and considered alongside, other aspects of workforce planning to avoid contributing to future boom and bust cycles and restricting opportunities for domestic entrants to train as nurses. International recruitment has an important role to play in the future planning of the domestic nursing workforce, but ideally, this role should be a marginal one which aims to provide a buffer against the effects of temporary labour shortages.

[1] IES analysis of HSCIC data, presented in Chapter 2.

1   Introduction

On 15 October 2015, the independent Migration Advisory Committee (MAC) was commissioned by the Government to undertake a review of nursing shortages. The MAC was tasked with considering both the issue of whether nurses are currently in shortage in the UK and, additionally, whether it is sensible to include nurses on the Shortage Occupation List (SOL). Key to the issue of 'sensible' was understanding the causes of any shortage and determining whether the relevant industry bodies and healthcare providers have been and are presently taking reasonable steps to address the underlying causes.

In particular, the MAC was keen to better understand the reasons behind the variation in levels of recruitment of non- European Economic Area (EEA) nurses across NHS trusts. This research project considers this specific issue and the findings have fed into the MAC's overall assessment of nursing shortages, published in March 2016, which recommended, albeit with some reluctance, that nurses remain on the shortage list.[2]

1.1   Background

The MAC review was prompted by the Home Secretary's decision to temporarily add nurses from outside the EEA to the SOL, under Tier 2 of the immigration system.

This temporary and exceptional measure was taken in the face of increasing concern around a nationwide shortage of nurses, a situation that was exacerbated in summer 2015 by the visa maximum allocation for the number of economic migrants from outside the EEA being reached (the Tier 2 General cap). Consequently many visa applications for nurses were rejected in the second half of 2015. Up to this point, although nurses were not included on the SOL (which gives priority entry for non-EEA economic migrants to the UK), it had been possible to bring non-EEA nurses into the UK under the Resident Labour Market Test (RLMT) route, also under Tier 2 of the immigration system.

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[2] MAC (2016), *Partial review of the shortage occupation list: nursing*, London, MAC.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/510630/Partial_review_of_the_shortage_occupation_list_-_review_of_nursing.pdf

Since 2009 around 15,500 certificates of sponsorship were issued to healthcare providers in the UK looking to recruit non-EEA nurses, with just under half of these, 7,500, going to NHS trusts in England and the remainder going to NHS organisations in Scotland, Wales or Northern Ireland, or to private sector organisations (this includes both in-country and out-of-country visa applications). Overall, this constitutes a small part of the overall nursing workforce; in 2016 there are 690,000 nurses on the Nursing and Midwifery Council (NMC) register.[3]

Particular drivers of nursing demand since 2013 have been the emphasis on safe staffing levels, following the publication of the *Francis Report* in 2013, as well as measures to curb trusts' expenditure on agency nurses, implemented in autumn 2015.

However, Home Office management information (i.e. visa) data on Certificates of Sponsorship, analysed in this report, indicate that different NHS trusts recruit non-EEA nurses to a vastly differing degree. A few recruited a couple of hundred non-EEA nurses between 2009-15, while the majority of NHS trusts in all years between 2009-15 had two or fewer Certificates of Sponsorship (CoS). There is also variation from year to year: for example Lewisham and Greenwich used only a handful each year from 2009 to 2014, but used 127 in 2015, and Royal Surrey County Hospital exhibited a similar pattern. In these two trusts, 2015 CoS represented around six per cent of their total nursing staff levels. By contrast, Barts and Colchester Hospital used a large number of CoS in 2010, but much smaller volumes since then. Similarly sized trusts located geographically close to each other, and thus in the same labour market catchment area, can also exhibit very different levels of CoS usage: for example King's College Hospital had 460 CoS in total and Guy's and St Thomas' 115 CoS in total, between 2009 to 2015. These data suggest differential recruitment of, and ultimately reliance on, nurses from outside of the EEA to tackle the apparent overall nursing shortage.

As such, in the face of claims of nationwide shortage of nurses, the aim of this research project was to understand better at NHS trust level the driving forces behind the supply of, and the demand for, nurses overall, as well as for foreign-born nurses. In particular, this study set out to complement the MAC's review of nurses on the SOL by:

■ Investigating available data to identify any particular trust-level characteristics which might indicate likelihood to recruit from outside the EEA.

■ Investigating the differential recruitment of non-EEA nurses among some, often neighbouring, NHS trusts, and the reasons for this.

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[3] Certificate of Sponsorship (CoS) data taken from MAC (2015), *Research specification. The labour market for nurses in the UK and its relationship to the demand for, and supply of, foreign-born nurses in the NHS*, London: MAC.

■ Providing a broader overview of current nursing shortages and how they have come about.

The focus of the research was the NHS in England because data constraints make it difficult to extend quantitative analysis uniformly across the UK, and most of the CoS were issues in England. The quantitative analysis at trust level covered all types of trusts, while the qualitative research was conducted mostly with acute trusts.

The research team undertook a literature review to inform the broader overview of current nursing shortages and how they have arisen. We constructed a dataset containing information on nurses by nationality from the Health and Social Care Information Centre (HSCIC) along with other trust information, and developed geographical catchment areas for each trust to allow us to feed contextual, demographic and economic indicators into our regression model; this development of trust catchment areas had to our knowledge never been undertaken before. A consistent time series dataset was also created to account for changes in trust definitions over time, and again this was a novel exercise. We then undertook quantitative analysis of the factors influencing the use of non-EEA nurses. In parallel to this, the team undertook seven expert interviews with the following stakeholders: the Royal College of Nursing; Health Education England; the Department of Health; NHS Employers; and two recruitment agencies that specialise in sourcing healthcare professionals in the UK and abroad for NHS trusts. We also conducted in-depth interviews with eight NHS trusts spread across the South East, London, the South West, and the North East of England, with one trust being based in South Wales. The trusts represented a good mix of low and high users of non-EEA nurses, as well as a few trusts that were embarking upon non-EEA recruitment for the first time.

This report is structured as follows:

■ Chapter two provides a broad overview and policy context of nursing shortages in the UK and how they have come about.

■ Chapter three details the key quantitative results of our research.

■ Chapter four details the key qualitative evidence.

■ Chapter five identifies policy responses to preventing future nursing shortages.

2   Policy context: The UK nursing labour market and the role of international recruitment

2.1   The UK nursing labour market – A summary

OECD data highlights that the nurse to population ratio in the UK is about 8.2 nurses per 1,000 population, slightly below the OECD average of 9.1.[4] There are 690,000 qualified nurses and midwives registered with the Nursing and Midwifery Council[5] and this represents the domestic 'pool' from which any UK employer must meet their demand for nursing staff.

The UK nursing labour market has been characterised by cyclical patterns of nursing shortages. An underlying issue of a lack of long-term and strategic workforce planning has meant that nursing supply and demand in the UK has rarely been in sync: there have been periods when active international recruitment has become a 'policy solution' for the NHS in England, such as at the beginning of this century[6], peaking during times of nursing shortages in the UK.

The current backdrop to these issues is the ageing nursing workforce; the proportion of the nursing workforce over the age of 45 now stands at around 45 per cent, with almost a third of nurses working in mental health over the age of 50.[7] In addition, the 2008 recession and its aftermath of constrained public sector funding and tightened immigration policy since 2006 has also slowed growth in the nursing workforce in recent years, at a time when healthcare demands on the NHS are growing.

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[4] OECD (2014), *OECD Health Statistics 2014. How does the United Kingdom Compare?:* http://www.oecd.org/unitedkingdom/Briefing-Note-UNITED-KINGDOM-2014.pdf. Last accessed February 2016

[5] https://www.nmc.org.uk/contact-us/. Last accessed February 2016.

[6] Buchan J and Seccombe I (2012), 'Using scenarios to assess the future supply of NHS nursing staff in England', *Human Resources for Health*, 10 (16) p. 4.

[7] The Royal College of Nursing (2015), *Frontline First: The fragile frontline*, p. 3.

At present, there is evidence to show that nursing demand is outstripping supply.[8] In particular, there is evidence to show that the *Francis Report*[9] and the subsequent guidelines over safe staffing have been an important driver of nursing demand since 2013.[10] While the supply of nurses from the EEA has increased since 2006/07, this has not sufficiently offset the increasing demand for nurses, partly because there was also a substantial decline in the number of non-EEA nurses coming into the UK over the same period. As a result, NHS trusts have made increased use of agency staff to fill vacancies, driving up agency costs. Although there are now measures to cap this spend, high vacancy rates in nursing posts persist which means that many trusts are likely to continue to incur high agency costs, at least in the short to medium term. High agency costs are financially unsustainable for trusts and can contribute to poor continuity of patient care and low staff morale. This underlines the urgency with which these and other workforce challenges need to be addressed. As one trust put it, when describing the cumulative pressures on their nursing supply at present, 'we're in free fall'.

This chapter sets out to detail the following:

■ evidence of 'boom' and 'bust' in the UK nursing labour market and the role of international recruitment

■ where we are now: evidence of the current nursing shortage

■ current drivers of demand.

2.2   Evidence of 'boom' and 'bust' in the UK labour market for nurses

Previous nursing shortages in the UK have tended to be cyclical and usually as a result of increasing demand outstripping the supply of nurses.[11] Looking back, the annual number of new student nurses and midwives being trained has varied markedly over the last two decades, as a result of funding decisions, and the number of new registrants from UK education on the Nursing and Midwifery Council (NMC) register has been highly variable over the period from 1990 (Figure 2.1 below), with a decline in the annual

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[8] NHS Improvement (2016), *Evidence from NHS Improvement on clinical staff shortages. A workforce analysis.* London: NHS Improvement.

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

[10] Ibid and qualitative findings from this study.

[11] Buchan J and Aiken L (2008), 'Solving nursing shortages: A common priority', *Journal of Clinical Nursing,* (17), pp. 3262-3268.

number of new registrants occurring in the period up to 1997/8, followed by growth in the early 2000s, and a more recent upward correction until 2014/15.[12]

Figure 2.1: Number of new entrants to the UK nursing register from UK sources, 1990/1 to 2014/15
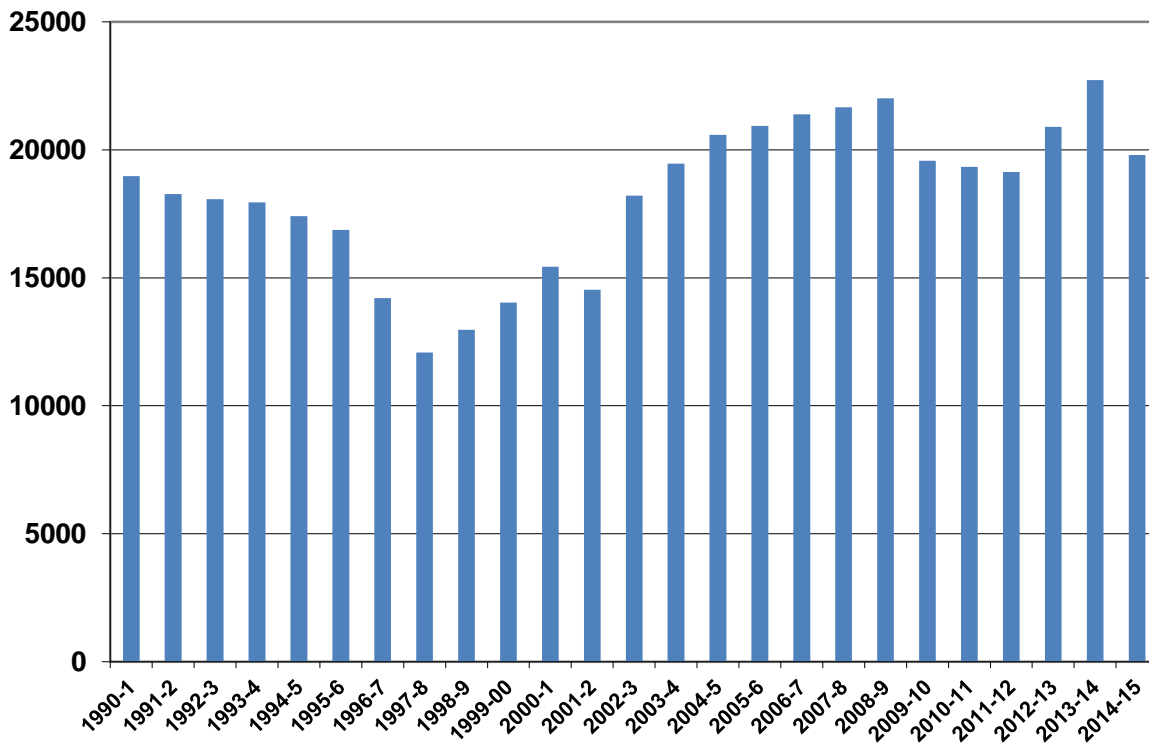
Source: Buchan (2015) using UKCC/NMC data

At the time of the last significant shortage of nurses, at the beginning of the century, the Department of Health in England committed to provide an extra 20, 000 trained nurses over four years. The number of training places was subsequently expanded in the early years of the last decade. However, training places then fell gradually, hitting a low of only 17,264 places in 2012/13 (see Table 2.1 below). In more recent years, Health Education England (HEE) has had the responsibility for recommending the level of pre-registration places being commissioned for nursing.

The most recent increases in commissions in 2015/16 and 2016/17 will not alleviate the immediate and short-term reported shortages because of the time required to train nurses. Even without this time lag, it is unlikely that these recent increases would meet the levels of current demand alone; the volumes of EEA and non-EEA nurses being

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[12] Buchan J (2015), *International Centre on Nursing Migration (GNM) Nursing Workforce sustainability: the international connection*

recruited at present outstrip the number of nursing commissions for 2015/16 and for 2016/17.

Table 2.1: Nursing Commissions 2010-2016, England

Nursing specialism	Strategic Health Authority Commissioning				HEE workforce plans		
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Adults	13,628	11,930	11,416	12,134	13,228	14,160	14,417
Children	2,095	2,045	2,159	2,151	2,182	2,343	2,343
Learning difficulty	681	599	606	628	653	664	638
Mental health	3,500	3,253	3,083	3,096	3,143	3,243	3,343
Total nursing commissions	19,904	17,827	17,264	18,009	19,206	20,410	20,741

Source: Health Education England Commissioning and Investment Plan 2016/17

2.2.1 The period of 'boom' in the early 2000s and international recruitment

The active recruitment of international nurses into the UK has followed a pattern of boom and bust, intensifying during periods of increased healthcare demands and/or reductions in the supply of UK nurses and falling off as the supply of UK nurses increases. Figure 2.2 illustrates the pattern of boom and bust and its impact on the demand for international (EEA and non-EEA) nurses.

Figure 2.2: International (EEA and non EEA) and UK sources as a percentage of total new admissions to the UK nursing register, 1990/1-2013/14 (New registrations)
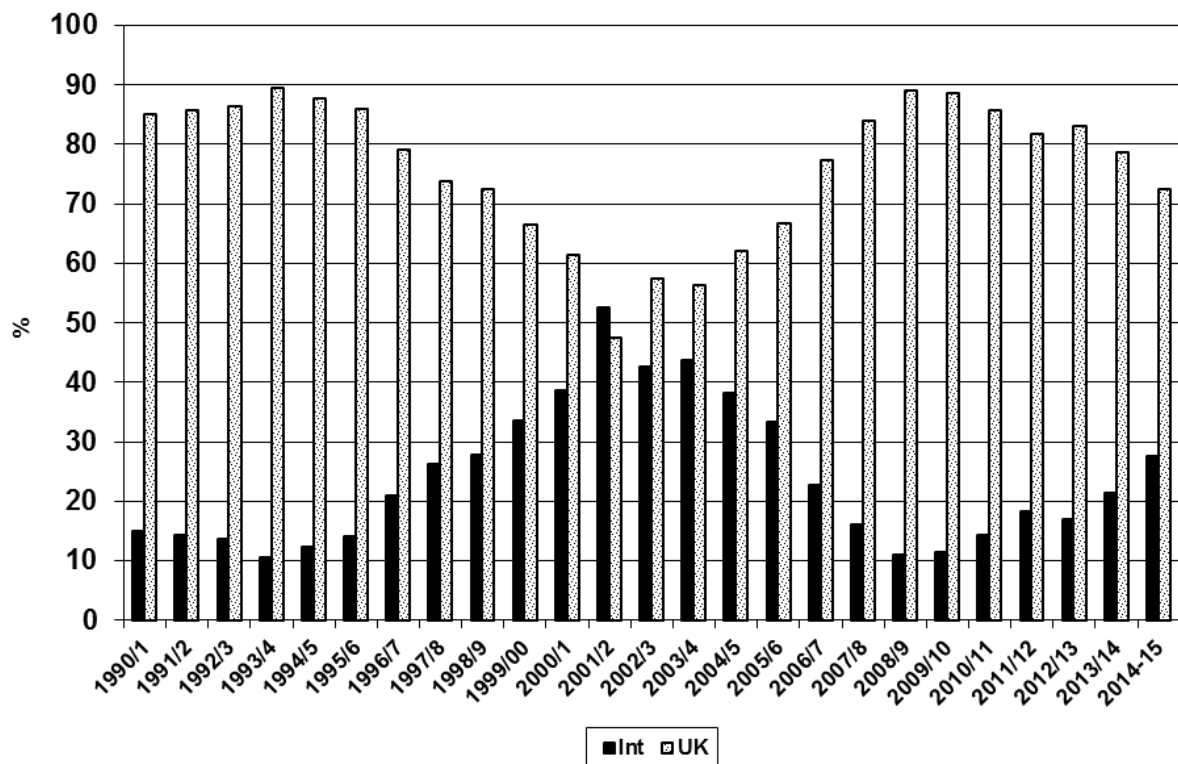
Source: Buchan (2015) using UKCC/NMC data

Between 1990/91 and 1997/98 there was a decline by more than a third in the number of new entrants from nursing education and training in the UK, from 18,980 in 1990/91 to around 12,000 in 1997/98. This decline was a direct result of funding decisions that led to significant reductions in the number of new entrants to UK nursing education in the first half of the decade.[13]

There was then a particularly rapid growth in the recruitment of non-EEA nurses over the period 1997-2007, during which time overall NHS nurse staffing growth was approximately 25 per cent in England and Wales, with Scotland and Northern Ireland also seeing marked increases (Table 2.2).

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[13] Royal College of Nursing (2004), *Fragile Future? A review of the UK nursing labour market in 2003*. London: RCN.

Table 2.2: Whole time equivalent and per cent change in the NHS qualified nursing and midwifery workforce across the four UK nations, 1997-2007

	1997	2007	% change 1997-2007
England	246,011	307,628	25
Scotland	35,245	41,004	17 (2006)
Wales	17,228	21,443	24
Northern Ireland	11,508	13,345	16

Source: Buchan (2009) using non-medical staff census, The Information Centre, NHS (England), DHSSPSNI (N. Ireland), ISD Workforce Statistics (Scotland) and SDR 43/2008 (Wales). Scotland data is for 1997-2006.

This growth was significantly driven by policy-led, active international recruitment. The incoming Labour Government at the time aimed to 'modernise' the NHS by reforming and expanding health services as detailed in the NHS Plan.[14] Shortages of skilled staff were highlighted as one of the main obstacles to reform and growth and the government established national level, top down targets for NHS staffing growth to counter the decline in the annual number of new registrants occurring in the period up to 1997/8. Significant funding was made available to support staffing growth.

This growth was partly achieved by increasing the numbers in pre-registration nursing education, reversing a downward trend earlier in the decade. The Department of Health in England increased student training places to 24,527 in 2004/05 and Figure 2.2 above shows that the subsequent number of new nurses and midwives entering the UK register from UK training rose in the years following this increase.

There were also efforts to improve nurse retention, including a focus on the provision of flexible hours, improved access to education and a new pay system and career structure. However, there is little available data from this period to assess if these efforts resulted in any improvement in the retention of NHS nurses.[15] Encouraging returners was also another key element of NHS policy at the time. Again, however, there is limited data on returners and analysis of available data shows that there was no upward trend in returners across the period 2000-2004.[16]

So, growth in the nursing workforce during this period was achieved partly through the increase in intakes to pre-registration nursing education, but **it was international**

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[14] Department of Health (2000), *The NHS Plan: A plan for investment, a plan for reform*. London: Department of Health.

[15] Buchan J (2009), 'Achieving workforce growth in UK nursing: Policy options and implications', *Collegian*, (16), pp. 3-9.

[16] Ibid.

recruitment that accounted for much of this growth. According to Buchan, it was the policy-led approach to international recruitment which contributed to the 'clearest and least ambiguous growth' in the nursing workforce at this time and increasing the intakes to nursing education only succeeded in bringing back the level of intakes to those of the early 1990s.[17] International recruitment during this period was national policy-led.[18] As a result, the NHS (and notably the NHS in England) recruited nurses from Australia, the Philippines, South Africa, India and other countries to meet NHS staff growth targets first set in 2000.

2.2.2 The period of 'bust', from 2005 and the impact of the 2008 recession

The subsequent 'bust' period in international recruitment, from 2005 onwards, has seen a decline in nursing workforce investment and a significant drop in the recruitment of non-EEA nurses to the UK (see Figure 2.2). This was because the **policy of supporting international recruitment shifted markedly in 2005/06, when financial difficulties hit the NHS, and overall staffing growth was curtailed** in the light of an over-expanded workforce. This led to less demand for international nurses. As the Health Select Committee report on NHS workforce planning summarised in 2007:

> *Figures were set for a large increase in the number of staff employed by the NHS in the 'NHS Plan'. There was also to be a significant expansion in the number of training places for clinicians. However, the huge growth in funds provided by the Government, together with the demanding targets it set, ensured that the increase in staff far exceeded the 'NHS Plan'. By 2005 there were signs that the NHS was spending too much. Boom turned to bust. Posts were frozen, there were some, albeit not many redundancies, but, most worryingly, many newly qualified staff were unable to find jobs and the training budget was cut.[19]*

The slow growth of the nursing workforce can also be attributed to **tightened immigration policies that applied to non-EEA nurses, and more costly application requirements** being implemented by the NMC for non-EEA international nurses.[20] This resulted subsequently in a significant shift in the composition of international recruitment, with fewer non-EEA nurses and growing numbers of EEA nurses. Non-EEA nurse recruitment since 2005 has seen a dramatic decrease as evidenced by a drop from 14,122 to 2,309 in the annual number of non-EEA nurses joining the nursing register

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[17] Ibid, p. 7.

[18] House of Commons Health Committee (2007), *Workforce Planning*. Volume 1. London: The Stationery Office: http://www.publications.parliament.uk/pa/cm200607/cmselect/cmhealth/171/171i.pdf

[19] House of Commons Health Committee (2007), *Workforce Planning*. Volume 1. p. 100.

[20] Royal College of Nursing (2013), *Safe Staffing levels – a national imperative. The UK nursing labour market review 2013*. London: RCN.

between 2004 and 2008. The annual number of EEA nurses joining the nursing register increased during the same period, from 1,033 to 1,872. This trend, of greater numbers and proportion of EEA nurses and decreasing non-EEA nurses has continued (see Figure 2.3 below). Since 2010 international recruitment into the UK has been mainly from EU countries such as Spain, Portugal and Ireland. In 2013/14 EEA nurses made up 87 per cent of new international registrants in the UK.[21] In 2015, one quarter of nurses came from Europe. The greater focus on EEA recruitment also reflects the 'push' factors that are making nurses in post-recession member states consider job opportunities abroad.

Figure 2.3: Annual registration of EEA and non-EEA nurses, 1990-2015
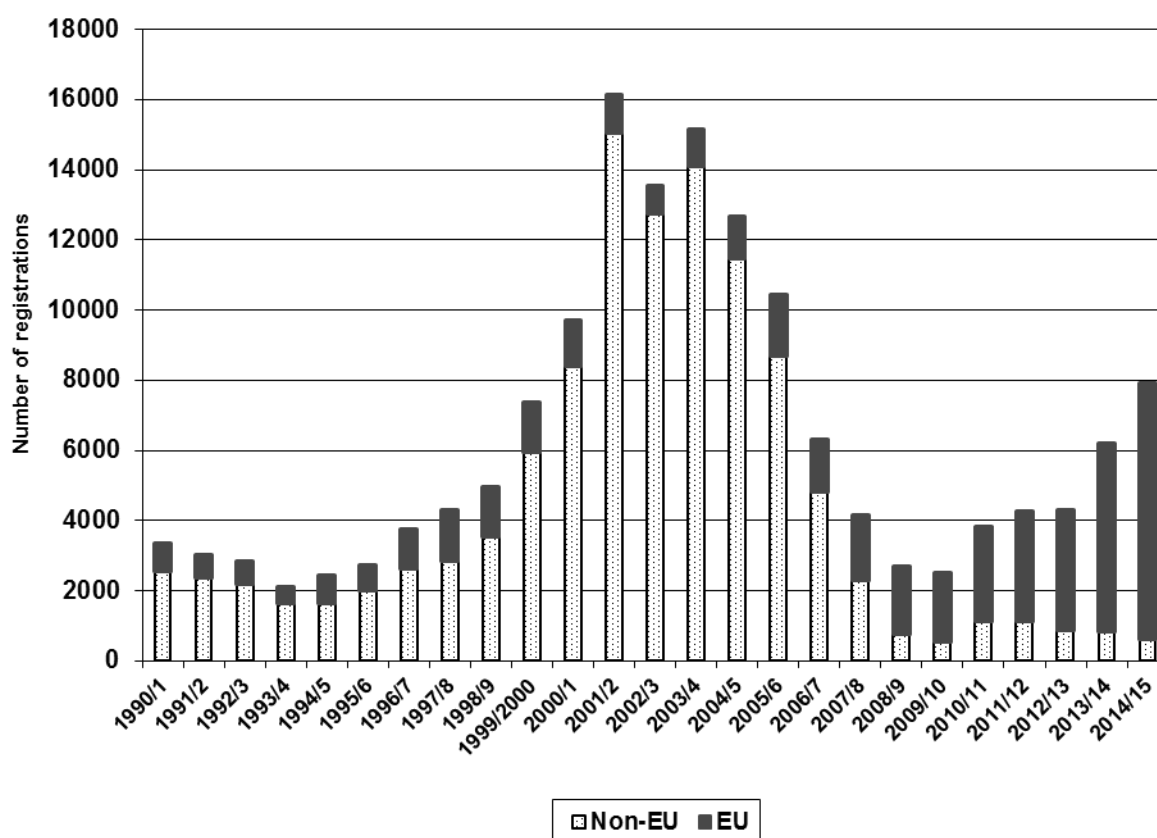
Source; Buchan (2015) using NMC/UKCC data

Since 2008, nurse staffing levels have also been affected by the **post-recession** impact on NHS funding, which has resulted in constrained public sector expenditure, reduced intakes of new student nurses, pay and recruitment freezes, and some redundancies.[22]

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[21] Royal College of Nursing (2015), *Frontline First. The Fragile Frontline*. London: RCN.

[22] National Audit Office (2012), *Progress in making NHS efficiency savings*. London: NAO: https://www.nao.org.uk/report/progress-in-making-nhs-efficiency-savings/; Jones N and Charlesworth A

Economics and policy experts told the Health Select Committee in February 2016 that trusts had been able to make savings between 2010-13 by holding down pay for NHS staff and employing fewer nurses.[23] One consequence was a slowing in growth of the NHS nursing workforce, with an actual decline during this time. Although numbers have since increased, there has been only marginal change in the overall size of the NHS nursing, midwifery and health visitor workforce in England across the period 2009/10 to 2014/15 (from 354,000 whole time equivalent at the end of 2009, to 358,000 whole time equivalent in February 2015).[24]

2.3   Where we are now: brief overview of the current shortage

There is a lack of consensus on how to measure nursing shortages in the NHS, but recent evidence suggests a broadening out of localised skill shortages into a national issue, in some specialties at least.[25] In 2013, an independent review of the NHS workforce also noted the likelihood of an impending shortfall in nursing.[26] In 2014, there was a reported shortfall for nurses, midwives and health visitors of 7.2 per cent[27] and a 2016 report by NHS Improvement concluded that nursing demand is rapidly outstripping supply.[28] Another indicator of the current nursing shortage is temporary agency spend, which the Department of Health reports was £3.3 million in the 2014/15 financial year.[29]

In December 2015 a survey conducted by NHS Employers reported that:

■ The overall vacancy rate across organisations that provided their nurse staffing establishment data was calculated at ten per cent (21,000 FTE), i.e. posts not occupied by permanent or fixed-term staff.

■ 137 NHS trusts (93 per cent of those surveyed) reported that they are experiencing registered nurse supply shortages.

(2013), *The anatomy of health spending 2011/12*. London: Nuffield Trust.

[23] Nursing Times (2016), *Lack of nurse workforce planning led to NHS 'financial mess*, February 25 2016.

[24] Buchan J (2015), *Nursing workforce sustainability: the international connection*. International Centre on Nurse Migration.

[25] NHS Pay Review Body (2016), *Twenty Ninth report 2016*. Office of Manpower Economics: London.

[26] Imison C and Bohmer R (2013), *NHS and social care workforce: meeting our needs now and in the future?* The King's Fund, London

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

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

[29] This is the total spend for NHS Trusts and Foundation Trusts. NHS Pay Review Body (2016), *Twenty Ninth report 2016*. Office of Manpower Economics: London, p.27.

■ 92 NHS trusts (63 per cent of those surveyed) have actively recruited from outside of
the UK in the last 12 months, with most focusing on EU countries. Spain, Italy and
Portugal were the most commonly targeted.

Over 60 per cent of planned new appointments are for non-EEA recruitment in the next
12 months, with countries such as the Philippines and India featuring predominantly in
future international recruitment plans.[30] HEE's data indicate that providers had 15,489
FTE vacancies for adult nurses (both those working in the acute and the community
sector) in April 2014, equivalent to a 6.5 per cent vacancy rate.[31] In April 2015, it was
reported that 77 per cent of surveyed acute NHS trusts in England – 107 out of 139 –
failed to achieve their own nurse staffing targets on both day and night shifts, mirroring
the result of a similar analysis in June 2014 that found that 75 per cent had failed to meet
staffing targets.[32]

Demand continues to outstrip supply and it is apparent that the national NHS nurse
supply picture in England is showing problematic signs for the 'security of supply': the
confidence that policy makers, planners and managers must have that current and future
supply will meet requirements.

2.3.1   Current drivers of demand and supply

Compared to the last period of 'bust', when there was a shortage of nurses in the 1990s,
the current reported shortage of nurses has been driven by a different set of factors. The
previous shortage was largely a direct result of funding decisions that led to significant
reductions in the number of new entrants to UK nursing education in the first half of the
decade.[33] However, evidence suggests that the current shortage is largely the result of an
increased demand for nurses caused by the post-Francis emphasis on safe staffing (see
below) and restricted supply because of constrained budgets at both Government
departmental level and at trust level. These drivers are described in more detail below.

The post-Francis emphasis on safe staffing has increased demand for nurses

Whilst funding constraints have put downwards pressure on nursing staffing levels, the
nursing workforce is facing countervailing pressures from **safe staffing issues** that have

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[30] NHS Employers (2015), *NHS Registered Nurse Supply and Demand Survey Findings*. Leeds: NHS Employers.

[31] Health Education England (2015), *HEE Commissioning and Investment Plan 2016/17*. Leeds: HEE.

[32] Lintern S (2015), 'Four out of five hospitals miss own nurse staffing targets', *Nursing Times*, 21st April.

[33] Royal College of Nursing (2004), *Fragile Future? A review of the UK nursing labour market in 2003*. London:
RCN.

become prominent since the publication of the *Francis Report* in 2013.[34] The *Francis Report* found that inadequate staffing levels had been one of the reasons behind the failings at the Mid Staffordshire NHS Trust.[35] Since then, there has been much emphasis on improving the recruitment and quality of nurses in the UK, with the Keogh Mortality Review and the National Institute for Health and Care Excellence (NICE) guidelines for safer staffing for nurses in adult patient wards in acute hospitals.[36] Since April 2014, all hospitals have been required to publish staffing levels on a ward-by-ward basis together with the percentage of shifts meeting safe staffing guidelines.

NHS Improvement have calculated the impact of staff staffing levels, post Francis, on the demand for nurses. In their Figure 2.4 below, the number of nurses is shown in green and the number of patient bed days are in blue. Before publication of the *Francis Report* in February 2013, changes in the nurse-to-patient bed day ratio were mainly driven by changes in patient bed days. However, after February 2013 onwards, increases in nursing numbers changed the increase in the ratio (by four per cent) because trusts were employing more substantive numbers of nurses. This is consistent with trusts implementing safe staffing in the wake of the *Francis Report* by increasing their nursing levels, bringing the nurse-to-patient bed day ratio back up to the levels of September 2011.[37]

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

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

[36] Keogh B (2013), *Review into the quality of care and treatment provided by 14 hospital trusts in England*; NICE (2014), *Safe staffing for nursing in adult inpatient wards in acute hospitals.*

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

Figure 2.4: Nurse-to-patient bed day ratio, 2010-2015 (substantive nurses only)
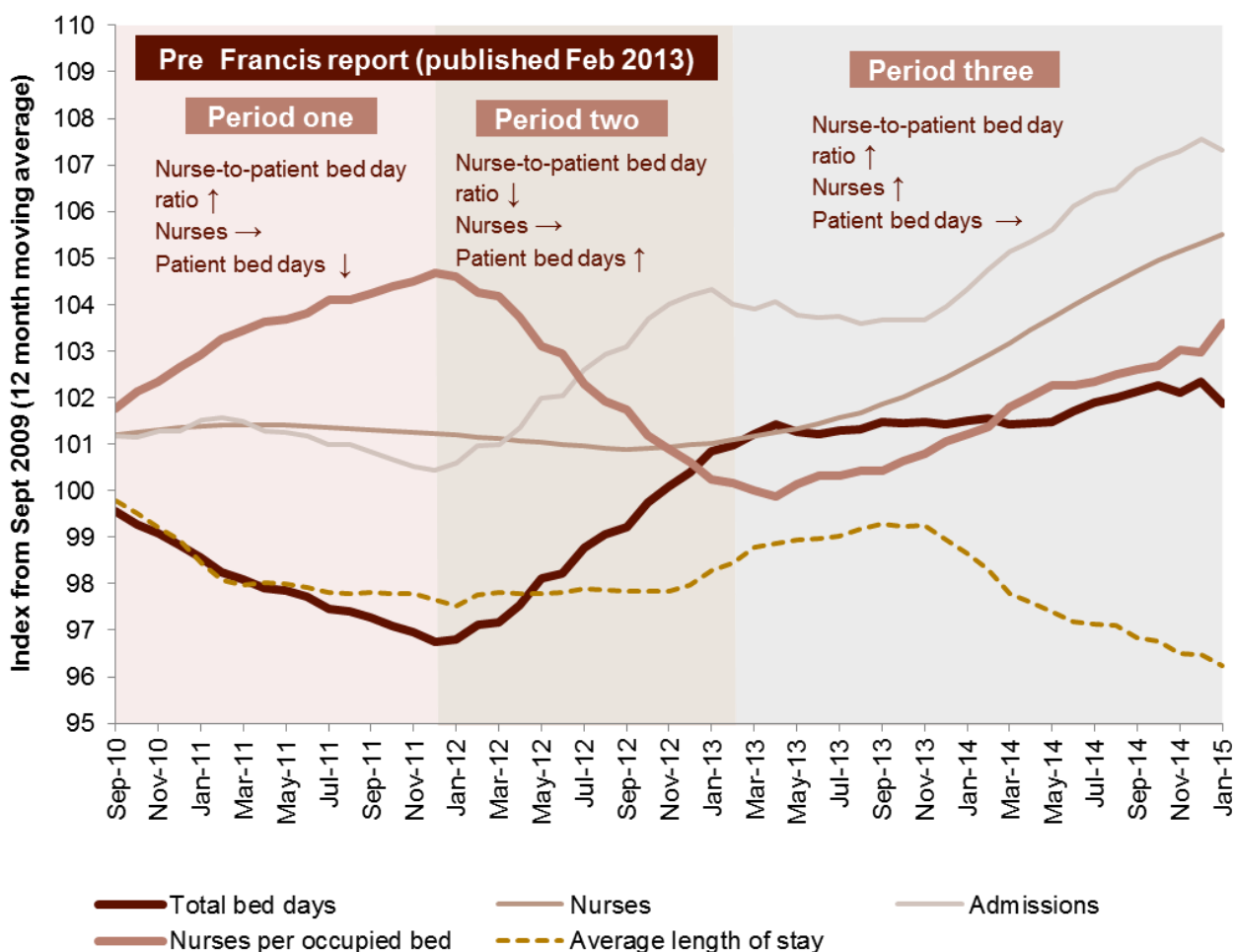
Source: NHS Improvement (2016) using inpatient admissions and length of stay data from the Hospital Episode Statistics, the number of substantive adult, general and elderly nurses from the electronic staffing record. Twelve-month averages used to account for seasonal fluctuations.

Another countervailing pressure is the **increasing healthcare demand** on the NHS, above the rate of budgeted funding increases. Pressure on the NHS is projected to grow at around four per cent a year up to 2021/22, arising from growing demand for healthcare to meet the needs of an ageing population which is growing in size and experiencing more chronic disease.[38]

While the emphasis on safe staffing has increased the current demand for all international nurses (EEA and non-EEA), it is likely that some trusts may have had lower initial staffing ratios than others, or have interpreted the staffing guidelines differently, possibly

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[38] Royal College of Nursing (2013), *Safe Staffing levels – a national imperative. The UK nursing labour market review 2013*. London: RCN.

explaining some of the differential recruitment of non-EEA recruitment among some trusts. We have explored this issue more in the qualitative work with experts and trusts (reported in chapter four) and by examining Care Quality Commission Data (reported in chapter three).

Demand for nursing education remains high, but student commissions have failed to match this demand

Data about trends in the number of applicants for pre-registration nursing education shows that demand for nursing education is high, highlighting the potential of the UK to 'home grow' its domestic nursing workforce to meet future demand. Figure 2.5 shows that the slight drop in applicants in 2012 followed a period of growth in annual applicants, which subsequently picked up again in 2013.

Figure 2.5: Applications for entry to nursing courses, and 'acceptances', at higher education institutions in the UK, 2008-13
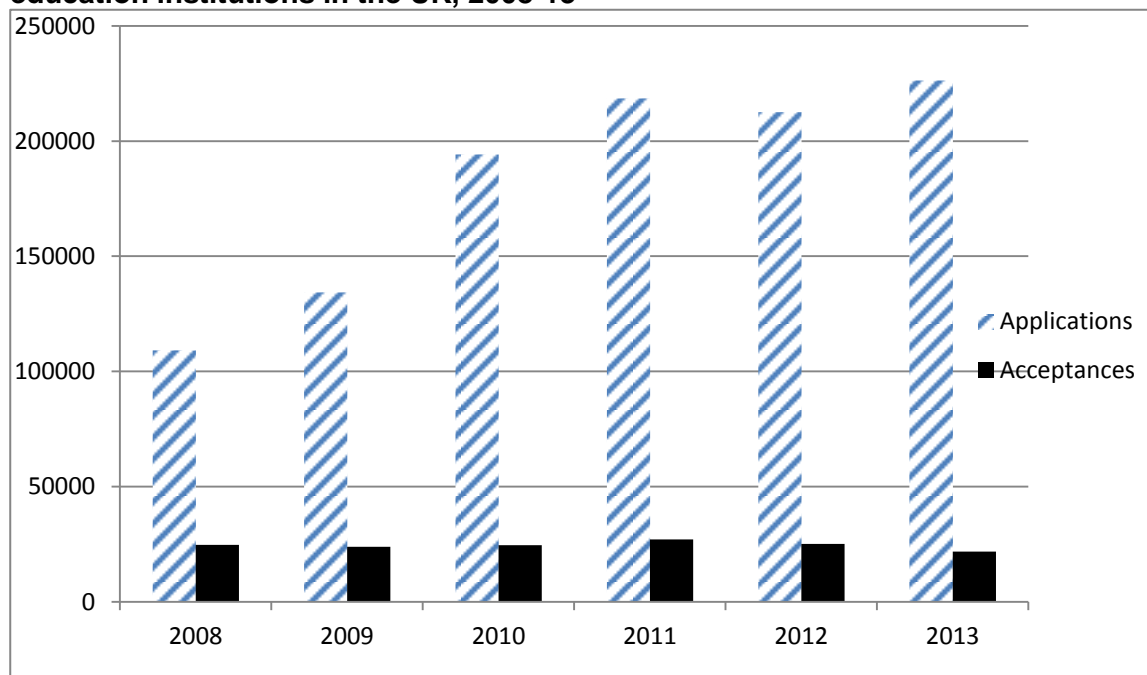
Source: Buchan (2015) using UCAS: JACS3 Subject line 'Nursing'

Whilst there has been growth in the number of applications, the actual intake to pre-registration nursing education has not increased accordingly. In 2014, some 30,000 applicants, or more than 60 per cent of total applicants, were not successful in obtaining a funded place on pre-registration courses – demand for places exceeded the funded supply.[39]

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[39] Royal College of Nursing (2015), *Frontline First. The Fragile Frontline*. London: RCN.

Although HEE have recently increased the number of commissions for 2014/15 and again for 2015/16, and 2016/17, this is unlikely to bridge the gap. In the November 2015 Spending Review and Autumn Statement, the Chancellor announced a transformation of the funding system for nursing and midwifery students by replacing bursaries with student loans and abolishing the cap on the number of student places for nursing, midwifery and allied health subjects. The changes come into effect from 1 August 2017. In theory, this reform removes the existing limit on the number of nursing education placements; the Government believes that this will enable universities to provide up to 10,000 additional nursing and other training places during the lifetime of this Parliament. However, it is too early to judge whether this will be the case.

It is likely that, in the short-term at least, the fact that there will be too few student commissions to meet current levels of demand, will drive demand for international nurses (both EEA and non-EEA). However, at the time of writing, there is no evidence to indicate how this constrained supply in the domestic nursing workforce is driving the recruitment of non-EEA nurses specifically, and why this recruitment might differ between trusts (if at all). As such, the research team explored this issue in more detail in their interviews with experts and NHS trusts and the results are presented in Chapter four.

The ageing nursing workforce is now a critical factor affecting the nursing workforce

The ageing nursing workforce has been an issue for almost two decades and, as such, is one which workforce planners would have been aware of. Yet, with the exception of Return to Practice initiatives (which have apparently yielded relatively low numbers in recent years), this issues has not been adequately addressed in workforce planning.[40] Our analysis shows that, although this is not a new factor constraining the supply of nurses, it is now a critical one. Figure 2.6 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.

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[40] Return to Practice initiatives are aimed at encouraging former nurses to return to the profession. The initiatives are currently the remit of Health Education England and are discussed more in section 4.3.3.

Figure 2.6: Proportion of qualified nursing, midwifery & health visiting staff in England aged 50 and over, 2005-14
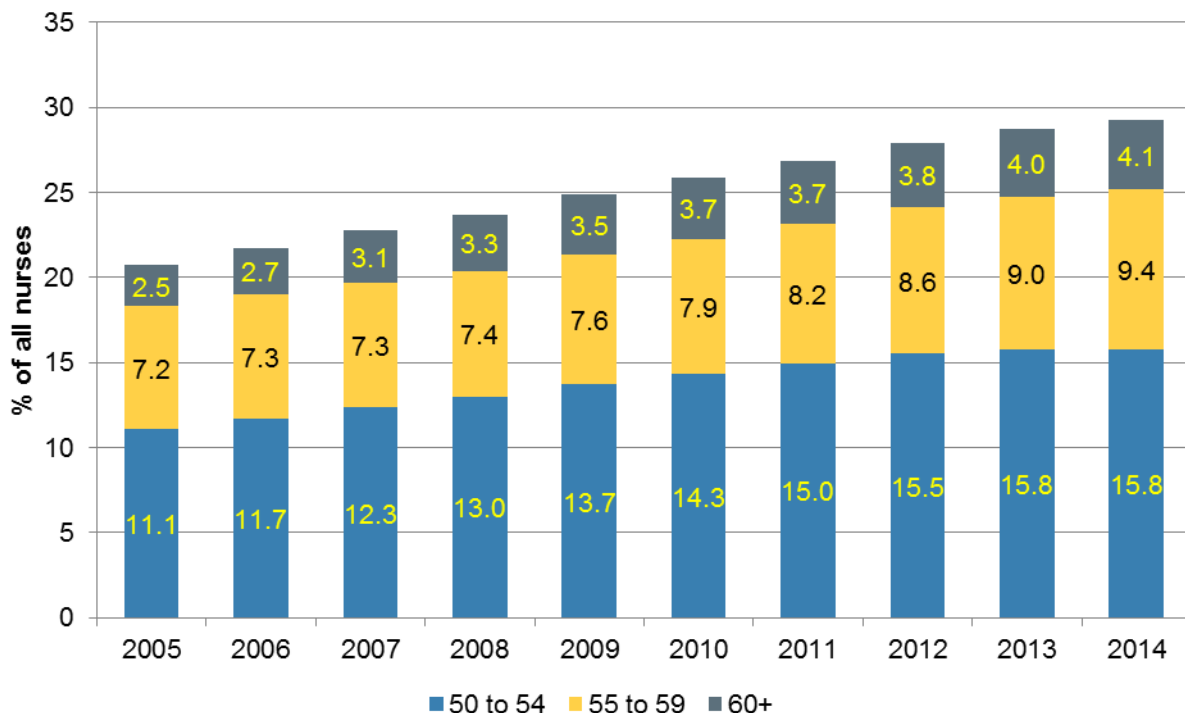
Source: HSCIC Non-medical Staff Detailed Results, 2005-14

The Normal Pension Age[41], 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. There are not enough nurses entering the system to fill this gap or offset the loss of skills and experience that is taking place. While this issue is likely to increase the current demand for all international nurses (EEA and non-EEA), there is no evidence to indicate how the ageing domestic nursing workforce is driving the recruitment of non-EEA nurses specifically, and influencing trusts' recruitment decisions regarding this. Given this, the research team explored this issue in more detail in their interviews with experts and NHS trusts and the results are presented in Chapter four.

Retention is still an underlying issue

One critical determinant of the supply-demand balance is the level of retention of nurses already working in the NHS, and the ability of the system to improve retention and therefore reduce the need for replacement action.

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[41] 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).

Different studies have estimated turnover in the nursing workforce differently, depending on how they have defined 'intention to leave'.[42] A 2012 report found that ten per cent of UK nurses intended to leave the profession[43] which is in line with earlier evidence which shows a similar percentage of nurses leaving the workforce.[44] More recent HSCIC data shows an increase in turnover in recent years (Table 2.3 below).

Table 2.3: Qualified Nursing and Midwifery – Joiners and Leavers 2011 - 2014

	Leavers	Leaving rate %	Joiners	Joiners rate %
2014/15	30,655	8.6	34,617	9.7
2013/14	28,907	8.2	33,924	9.7
2012/13	27,511	7.9	27,240	7.8
2011/12	26,916	7.7	23,688	6.7

Health Education England (2015), using HSCIC data

Stress and burnout have been found to be strongly linked with intention to leave.[45] In a European nursing survey, 42 per cent of UK nurses reported burnout (the highest of all ten European countries surveyed), compared to the European average of 28 per cent.[46] The recent King's Fund report pinpoints staff morale across the NHS, for the third consecutive quarter, as the number one concern raised by trust directors and the 2014 NHS Staff Survey indicates high levels of work-related stress across NHS staff.[47] Our own qualitative research with NHS trusts found that some trusts reported a 'vicious cycle', whereby high vacancy rates among nursing staff negatively impacted upon working conditions and staff morale, which then negatively impacted upon retention.

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[42] For example, a review of international studies found that between 4 per cent and 54 per cent of nurses intended to leave. See Flinkman M, Leino-Kilpi H and Salantera S (2010), 'Nurses' Intention to leave the profession: integrative review', *Journal of Advanced Nursing* 66(7), pp.1422–1434.

[43] Heinen M et al. (2012), 'Nurses' intention to leave their profession: A cross-sectional observational study in 10 European countries', *Journal of Nursing Studies*, 50:2, pp.174-184.

[44] Buchan J (2001), *Nursing and Midwifery workforce data 2000/01. A special report*. Chamberlain Dunn Associates; Buchan J (2002), *Nursing and Midwifery workforce data 2002/03. A special report*. Chamberlain Dunn Associates.

[45] Coomber B and Barriball K L (2007), 'Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: a review of the research literature', *International Journal of Nursing Studies*, 44 (2), pp. 297-314; Flinkman M, Leino-Kilpi H and Salanterä S (2010), 'Nurses' intention to leave the profession: integrative review', *Journal of Advanced Nursing*, 66 (7), pp. 1422-34.

[46] Heinen M et al (2012) 'Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries', *Journal of Nursing Studies* 50 (2), pp. 174-184.

[47] NHS Staff Surveys (2014), *Briefing note: Issues highlighted by the 2014 NHS Staff Survey in England*; King's Fund (2015), *Quarterly Monitoring Report*. London: King's Fund

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, where turnover rates tend to be high within the first year of qualification and remain high, or even rise during the second year of service before declining.[48] The NMC has previously highlighted that nurses between 35-39 and 60-64 are most likely to leave; the later age group is likely to reflect nurses retiring.[49] Other analysis of adult nurse workforce data for London also found a U-shaped age-sex relationship, where the youngest and oldest nurses were most likely to leave – a pattern which was more pronounced in female nurses.[50]

Workforce data from HSCIC also shows that there is a regional difference in the leaving rates of nursing staff, with London and the South East having higher rates than other parts of England (see Table 2.4 below). While this does not necessarily indicate a shortage of nurses (see the corresponding joining rates for these regions, which are also high), it does mean higher vacancy rates for London and the South East because of the higher level of turnover in those areas.

The existing literature on the cost attached to turnover is limited but what does exist indicates a high cost involved in nurse turnover. Turnover costs have been estimated to range between 0.75 to 2.0 times the salary of the nurse that left, depending on the seniority and experience of the nurse, as well as other organisational and environmental factors.[51]

Table 2.4: Qualified Nursing, Midwifery and Health Visiting staff – Joiners and leavers by region, Nov 2014 – Nov 2015

Health Education region	Leavers	Leaving rate %	Joiners	Joiners rate %
East Midlands	2,226	8.1	2,662	9.7
East of England	3,318	10.2	4,195	12.9
Yorkshire and the Humber	2,912	7.8	2,954	7.9
Wessex	1,502	8.8	1,912	11.2
Thames Valley	1,200	10.4	1,644	14.2
North West London	1,779	11.0	1,917	11.9
South London	2,180	10.5	3,227	15.6
North Central and East London	2,329	10.5	2,984	13.0
Kent, Surrey and Sussex	2,504	9.9	2,626	10.4

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

[49] RCN (2003), *More nurses, working differently – A review of the UK nursing labour market in 2002*. RCN: London.

[50] Drennan V M, Halter M, Grant R L, Gale J, Harris R and Gourlay S (2015), *Adult Nurse Turnover and Retention: South London Project Report.* Kingston University & St. George's University of London.

[51] McConnell C R (1999), 'Staff turnover: Occasional friend, frequent foe, and continuing frustration', *Health Care Manager* 8 ,pp. 1-13.

North East	1,590	7.1	1,644	7.3
North West	4,427	7.9	4,993	8.9
West Midlands	3,162	8.1	3,436	8.8
South West	2,508	8.8	2,919	10.2

Source: HSCIC provision monthly NHS workforce data

The regional variation in the leaving rate of nurses indicates that turnover could be one issue at trust level which could help explain the differential recruitment of non-EEA nurses among some trusts. We explore this in more detail in the following chapter.

3   Findings from our quantitative research

3.1   Introduction

This chapter sets out the findings from the quantitative analysis. The quantitative analysis set out to investigate whether there were any particular trust-level characteristics that might indicate a trust's likelihood of recruiting from outside the European Economic Area (EEA). This would help explain the differential recruitment of non-EEA nurses among trusts, as well as potentially identify any factors which could predict which trusts were more likely to recruit from outside the EEA.

To explore whether a range of trust-level characteristics explained the variation in the employment of non-EEA nurses, a dataset was created combining Health and Social Care Information Centre (HSCIC) data on nurses by nationality and other trust characteristics, with variables capturing local economic and demographic factors. We developed geographical catchment areas for each trust to allow us to feed contextual, demographic and economic indicators into our analytical models; this process of developing trust catchment areas for all trusts in England has to our knowledge never been done before. We also developed a consistent time series based on 2015 trust definitions to adjust for trust mergers and the NHS reorganisation, and so enable time series analysis of changes in the use of non-EEA nurses; again this was a completely novel exercise as there is no central source of information on how trusts have changed and evolved over time.

The trust-level characteristics which we investigated were identified through the existing literature on the demand for, and supply of, nurses in the NHS – for example, retention levels, workplace conditions and practices.

This chapter begins by describing the data sources and how the dataset was created, before presenting some descriptive statistics about trusts' use of Certificates of Sponsorship (CoS) for non-EEA nurses and their employment of non-EEA nurses. The result of the regression models are then presented.

The quantitative results presented in this chapter show that **there are very few of the characteristics at the NHS trust level that are highly significant in influencing the employment and recruitment of non-EEA nurses.** Type of trust and region emerge as significant in influencing the recruitment of non-EEA nurses, but overall, there is no clear, overall picture of trusts' characteristics that influence their use of non-EEA nurses.

Instead, a picture emerges of varied and differential recruitment of non-EEA nurses among trusts, even within the same labour market and locality.

3.2 Data sources and definitions

3.2.1 Developing dependent variables

Data on the recruitment and employment of non-EEA nurses came from two key sources:

■ Home Office management information data on Certificates of Sponsorship (CoS) by employing organisation (NHS trusts and private sector health and care organisations) were provided by the Migration Advisory Committee, covering the period 2009 to 2015.

■ Bespoke data on the nationality of nurses (UK/Irish, EEA, non-EEA and unknown nationality) employed by NHS England trusts were ordered from the Health and Social Care Information Centre (HSCIC), again covering the period 2009 to 2015.

The bespoke HSCIC data formed the basis of the dataset used for the analysis. The HSCIC data contained the NHS Organisation Code for each trust. Other trust-level characteristics from NHS sources, such as total headcount, type of trust and region, were added using the organisation code to link the data. The CoS data did not contain the organisation code, and so the organisation codes were manually added to the CoS data so that they could be linked to the HSCIC data.

These two sources – CoS issued and employment sharesof non-EEA nurses – provided the indicators used as dependent variables in the regression analyses.

3.2.2 Adding control variables

A range of control indicators were added to the dataset, to attempt to explain the variation in the use of non-EEA nurses by trusts using regression analysis. These control indicators were thought *a priori* to have an influence on the demand for nurses, or to indicate local labour market conditions, and were discussed and agreed in the early stages of the research. These are:

■ Trust characteristics – size of the trust in terms of total headcount, type of trust, NHS England region, and trust financial surplus/deficit.

■ Trust workplace policy/practice outcome indicators – staff survey results, nurses' turnover rate, and care quality rating.

■ Demographic characteristics –age and ethnicity profile of the local population, health profile of local population.

■ Local labour market characteristics – average earnings, unemployment rate.

■ Area characteristics –rurality.

The definitions of the individual indicators used are discussed in turn.

Trust workplace policy/practice outcome indicators

The following workplace policy/practice outcome indicators were available for all trusts:

■ Staff satisfaction with resourcing and support – Key Finding 14 from the 2015 NHS Staff survey. This scale measures staff satisfaction with their ability to meet conflicting demands on their time, as well as adequacy of supplies and resources, staffing levels and support from colleagues. Possible scores range from 1 to 5, with 1 representing staff dissatisfaction with the available resources and support, and 5 representing high satisfaction with the available resources and support.

■ Percentage of staff working extra hours – Key Finding 5 from the 2015 NHS Staff Survey. This indicator is the percentage of staff that said that, in an average week, they worked longer than the hours for which they are contracted.

■ Engagement – from the 2015 NHS Staff Survey: This indicator is an overall measure of employee engagement, based on three key findings in the staff survey:

● KF22 Percentage of staff able to contribute towards improvements at work;

● KF24. Staff recommendation of the trust as a place to work or receive treatment

● KF25. Staff motivation at work

■ Nurse turnover rate – this is the staff turnover rate for qualified nursing, midwifery & health visiting staff between July 2014 and July 2015, and the July to July period for earlier years.

Descriptive statistics for these workplace policy/practice outcome indicators are shown in Appendix Table 6.1.

In addition, for trusts with acute delivery sites, we reviewed the latest data from the Care Quality Commission on the care quality rating, to model a variable that accounts for a possible post-Francis effect and test the hypothesis that lower care quality scores may be linked to higher demand for non-EEA nurses. Caring quality ratings were available for each acute site within a trust, for 2015/16 – after publication of the *Francis Report*. A trust-

level value was calculated by taking the arithmetic mean of the ratings across all sites within each trust. The ratings were given numerical values of 1 for inadequate, 2 for requires improvement, 3 for good, and 4 for outstanding. Trust level ratings clustered around three, with only a small proportion having values either below or above three (see Appendix Table 6.2).

Demographic and labour market characteristics

To capture the demographic and local labour market characteristics for each trust, local catchment areas were defined for each trust. The definitions were based on local authority districts, and covered the core area that encompasses the bulk of each trust's sites, and their core patient catchment area. A two-stage process was used to define these catchment areas:

■   First, postcode information for every delivery site for each NHS trust was obtained from the NHS Organisation Data Service. A postcode look-up exercise was undertaken to identify the local authority district for each site. Then for each trust, the list of local authority districts were ordered by the number of sites, and the districts which contained the vast majority of sites were identified as the preliminary catchment area.

■   Second, information on each trust's patient catchment area or delivery area was obtained from the trust's website. This information was used to confirm or modify the preliminary catchment area definition from the analysis of trust site locations.

Once the catchment areas were defined, demographic and labour market characteristics were added to the dataset, from national secondary data sources. For the demographic characteristics, the following indicators taken from the 2011 Census of Population were used:

■   Infant rate – the proportion of the local population aged 0-4 in 2011.

■   Elderly rate – proportion of the local population aged 60 and over in 2011.

■   Bad Health rate – proportion of the local population who self-report their health as bad or very bad in 2011.

■   Ethnicity – proportion of the local population from Black and Minority Ethnic backgrounds in 2011.

The economic indicators used in the analysis were:

■   Average gross weekly earnings for full-time employees, taken from the Annual Survey of Hours and Earnings, for 2009 to 2015.

- ILO unemployment rate, taken from the Annual Population Survey, for 2009 to 2015.

- JSA Claimants unemployment rate, taken from the Department of Work and Pensions, for 2009 to 2015.

The area characteristic used was:

- Rurality – the proportion of the population living in rural areas including hub towns (rural and rural related population).

3.2.3 Developing a consistent time series

To allow for an examination of the influences on changes in the use of non-EEA nurses, a consistent time series dataset was created. Trust definitions have changed over time, through trust mergers, and the reorganisation of the NHS which led to the abolition of Primary Care Trusts (PCTs) and their provider functions, which employed nurses, being taken over by NHS trusts. Not accounting for these changing trust definitions would give a misleading picture about trusts' usage in situations where there were mergers or they took on ex-PCT nurses. Therefore, a dataset with consistent time series for each trust based on the 2015 trust definitions was created.

Because there is no central register of trust mergers and the transfer of staff from former PCTs to trusts, the research team had to undertake a manual tracking and matching exercise. Initially, the research team looked for instances where the employment of nurses in a PCT ended in a particular year, and the number of nurses in a trust in the same geographical area was boosted by a similar amount in the following year. This process identified most instances of PCT provider functions being taken over by trusts, and also identify trust mergers. However, in some instances the former PCT nurses could not be matched onto trusts because they were transferred to two or more trusts. Once this initial review had been completed, a list of outstanding PCTs was reviewed by DoH staff and all but one of these outstanding PCTs were matched onto their relevant trusts.

3.3 Variation in the recruitment and employment of non-EEA nurses

3.3.1 Certificate of Sponsorship data

The data on the total number Certificates of Sponsorship (CoS) issued for nurses indicate the flow of new nurses from outside the EEA into each Trust, but do not provide information on the stock of international nurses working in each Trust. As such, they are an indication of the recruitment of nurses from outside the EEA, but do not indicate how many non-EEA nurses are employed within trusts.

Table 3.1 shows key characteristics of the CoS issued in the 12 months to August each year for the 2009 to 2015 period, for the 227 NHS Trusts in the analysis. The mean number of CoS ranged from a low of two in 2011 up to eight in 2010, while the maximum number ranged from 37 in 2011 to 283 in 2015. However, in all years the majority of NHS Trusts had two or fewer CoS.

Table 3.1: Distribution of CoS usage across large NHS trusts, 2009-15

	2009	2010	2011	2012	2013	2014	2015
Mean	4.8	8.0	2.0	2.3	5.0	5.7	6.3
Std Dev.	9.3	23.0	4.5	6.5	15.1	25.0	22.7
Median	2	2	1	1	1	1	1
Min.	0	0	0	0	0	0	0
25th %ile	1	1	0	0	0	1	1
75th %ile	5	6	2	2	2	3	2
90th %ile	12	16	4	5	10	8	11
Max.	69	214	37	90	147	273	283
Number of trusts	227	227	227	227	227	227	227

Source: IES analysis of Home Office Certificate of Sponsorship data

Figure 3.1 shows the proportion of all CoS that were accounted for by large NHS Trusts in England(defined as those with 100 or more nurses) between 2009 and 2015. Across most years CoS issued to large NHS Trusts accounted for around half of all nurses CoS issued, with the exceptions being 2011 and 2012 when the proportion was around 30 per cent. Thus around half of all nurses CoS are used by private or independent sector organisations, including care homes, by organisations within the NHS that employ small numbers of nurses, such as CCGs, or by NHS organisations in Scotland, Wales and Northern Ireland.

Figure 3.1: Proportion of all CoS accounted for by NHS trusts with 100+ nurses, 2009-15
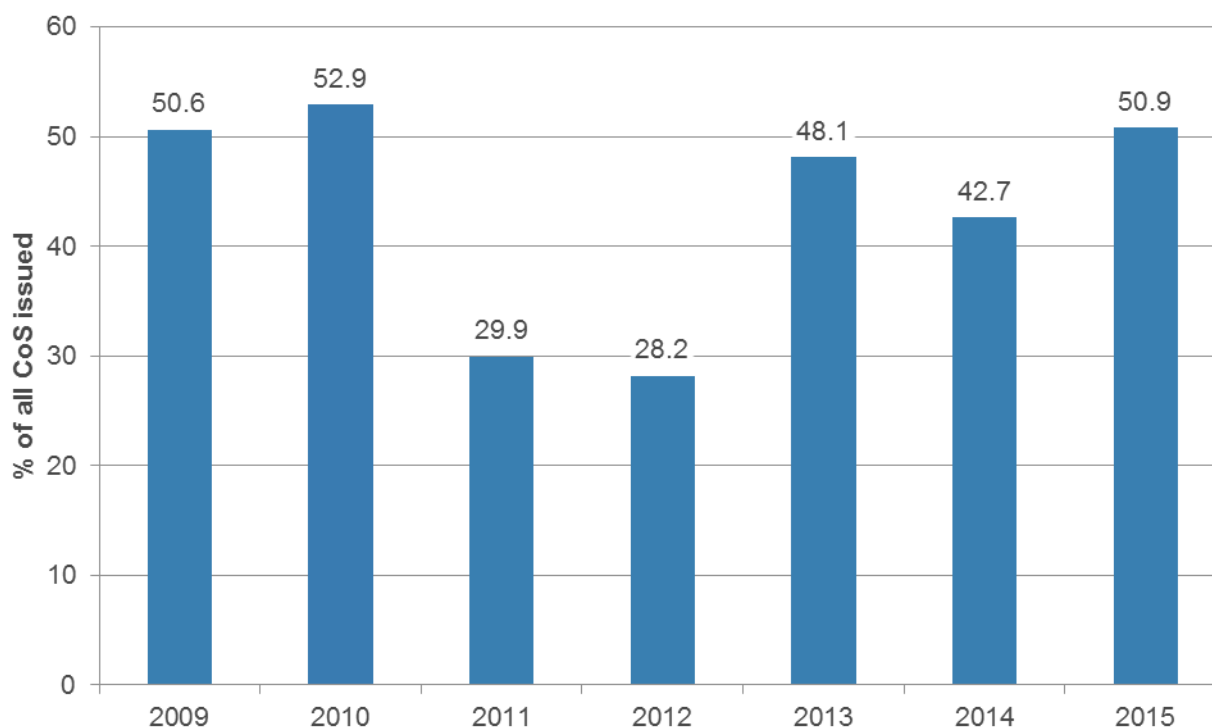
Source: IES analysis of Home Office Certificate of Sponsorship data

Table 3.2 shows the average number of CoS by type of trust. Acute trusts were issued with the highest number on average, followed by specialist trusts, while mental health/learning disability trusts and community trusts were issued with relatively few. In terms of the average number of nurses, acute trusts were the largest (c. 1,800 nurses), followed by mental health and community trusts (c. 1,100 nurses), and acute specialist trusts were the smallest (c. 700 nurses). Thus, comparing the number of CoS issued in 2015 with the average number of nurses shows that the average CoS issued for mental health and community trusts were less than 0.1 per cent of the average nursing level, while these proportions were substantially higher among acute and acute specialist trusts, at 0.5 per cent and 0.2 per cent respectively.

Table 3.2: Mean CoS used by type of Trust, Year to August, 2009-15

Year to August	Acute (Specialist) Trusts	Acute Trusts	Mental Health Trusts	Community Trusts
2009	2.8	6.3	2.0	0.1
2010	3.9	11.6	2.2	0.3
2011	1.0	2.3	0.4	0.0
2012	1.0	2.7	0.4	0.3
2013	3.4	7.1	0.3	0.1
2014	2.1	8.3	0.1	0.4
2015	1.2	9.5	0.1	0.3

| N= | 17 | | 136 | 55 | | 19 | |

Source: IES analysis of Home Office Certificate of Sponsorship data

Table 3.3 shows the proportion of the total CoS numbers accounted for by each NHS Region in the 12 months to August each year, and shows substantial regional variation (mean CoS numbers by region are presented in Appendix Table 6.3). The East of England and the three London regions, generally had the largest numbers, particularly the East of England in 2009, 2010 and 2013, North West London in 2012 and 2015, and South London in 2014. Yorkshire and the Humber had the fewest CoS across the seven year period, followed by the North East, the North West and the East Midlands.

Table 3.3: Total CoS used by large NHS trusts by NHS England Region, Year to August, 2009-15 (%)

	2009	2010	2011	2012	2013	2014	2015	Number of trusts
East Midlands	4.2	2.3	2.6	2.7	1.7	2.2	2.2	14
East of England	26.6	31.8	18.2	14.4	31.7	13.5	16.3	26
Kent, Surrey and Sussex	7.4	6.7	6.8	9.0	6.6	5.2	9.4	17
North Central and East London	12.9	13.2	11.1	10.9	8.9	6.5	9.6	13
North East	3.2	2.9	3.4	1.9	3.3	0.7	0.9	10
North West	4.3	3.0	2.0	2.4	2.0	0.6	2.3	40
North West London	13.2	19.2	21.9	31.6	19.0	28.0	27.5	11
South London	10.7	8.5	19.1	10.9	10.2	28.5	19.5	10
South West	2.8	2.7	2.8	5.8	3.1	2.6	3.2	20
Thames Valley	3.5	3.0	1.4	5.6	5.6	3.3	3.4	6
Wessex	3.6	3.0	0.9	1.7	5.5	5.4	1.9	11
West Midlands	3.9	2.7	8.5	1.9	1.4	2.5	1.6	28
Yorkshire and the Humber	3.5	1.0	1.1	1.0	1.1	1.0	2.3	21
England Total	1,020	1,772	351	411	1,037	1,178	1,326	227

Source: IES analysis of Home Office Certificate of Sponsorship data

Figures 3.2 to 3.4 show maps of the locations of trusts that have used CoS during the period 2009 to 2015, with circles proportional to the total number of CoS used. The figures show that use of CoS is concentrated in trusts located in the south and east of England, and particularly those located in London.

Figure 3.2: Number of CoS used by Trusts, England, 2009-15
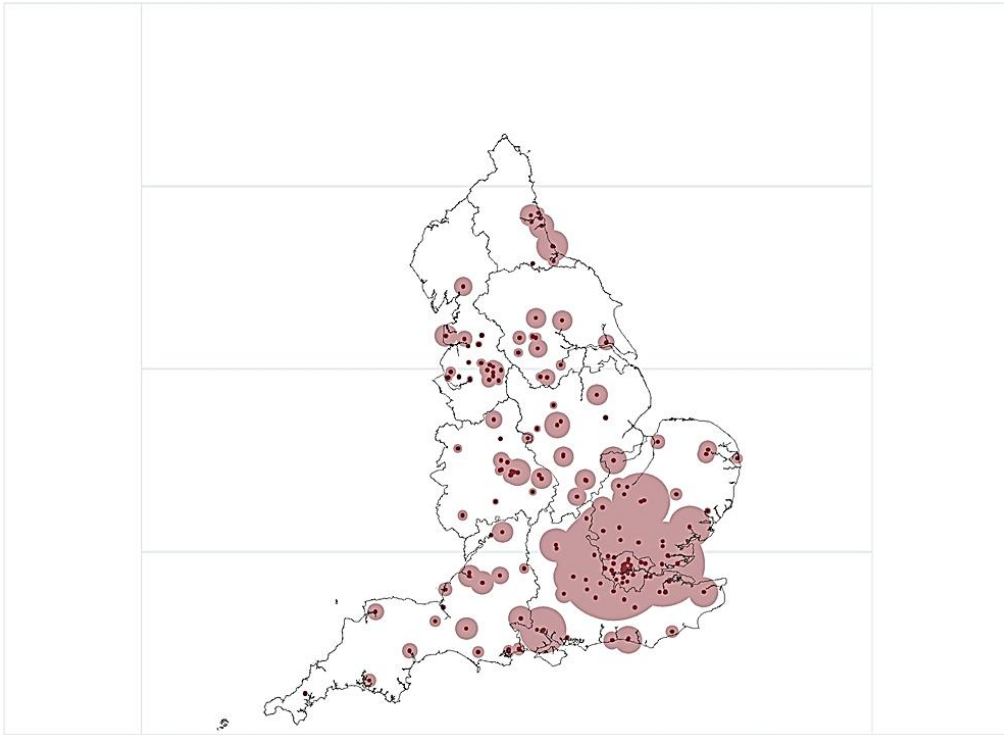
Source: IES analysis of Home Office Certificate of Sponsorship data

Figure 3.3: Number of CoS used by Trusts, South East England, 2009-15
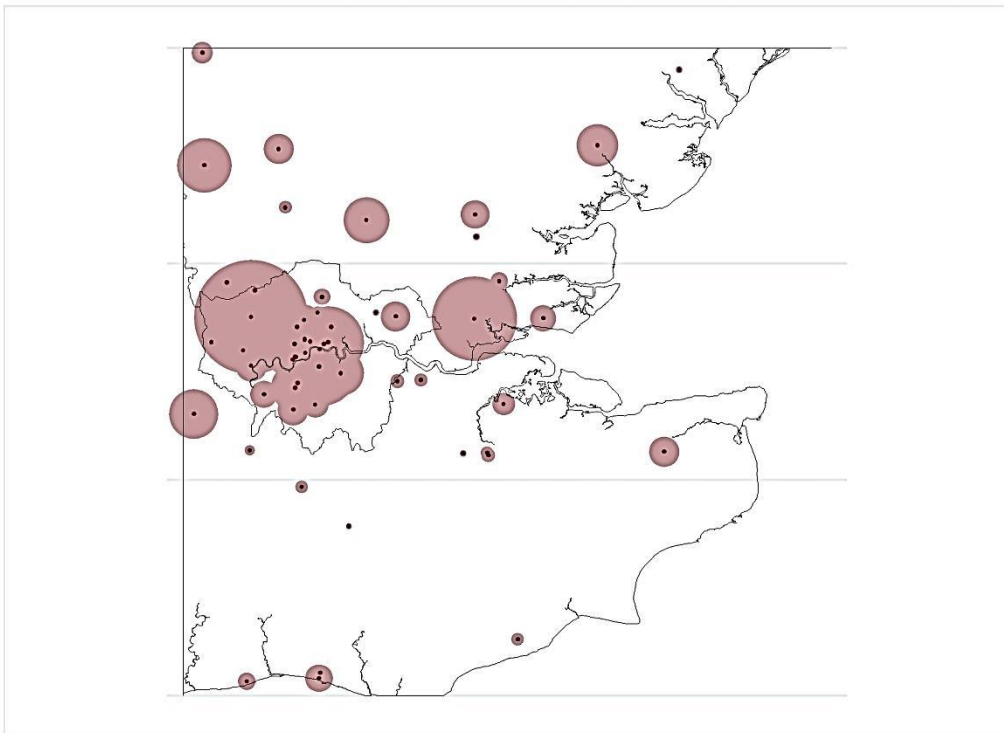
Source: IES analysis of Home Office Certificate of Sponsorship data

Figure 3.4: Number of CoS used by Trusts, London, 2009-15
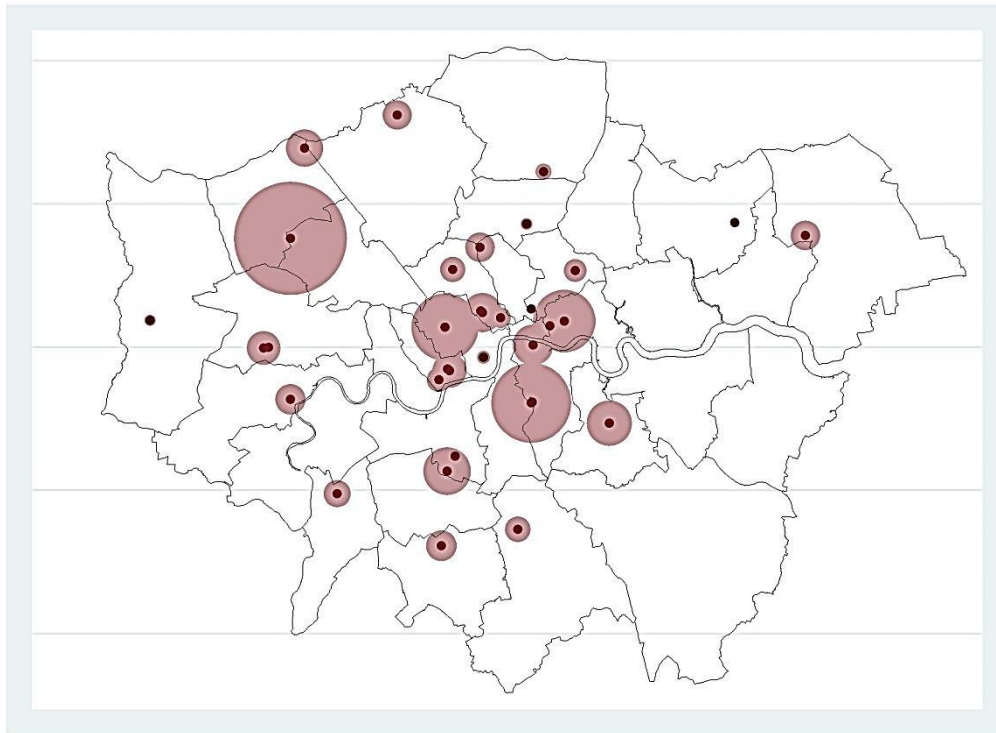
Source: IES analysis of Home Office Certificate of Sponsorship data

Table 3.4 shows the data for the 20 NHS Trusts with the largest number of CoS across all seven years. Key points to note are:

■ The trust with the largest number, London North West Healthcare NHS Trust, used nearly 1,000 CoS across the seven years, around 70 per cent more than the trust with the second highest total (Basildon & Thurrock, 527) and twice as many as the trust with the third highest total (King's College Hospital, 460). London North West also had the largest number for 2015, which represented nearly ten per cent of its total nursing workforce. All of the top 20 trusts are in London, the South East or the East of England.

■ There is often considerable variation from year to year in each trust's use of CoS. For example Lewisham and Greenwich used only a handful each year from 2009 to 2014, but used 127 in 2015, and Royal Surrey County Hospital had a similar pattern. In these two Trusts, 2015 CoS represented around six per cent of their total nursing staff levels. By contrast, Barts, and Colchester Hospital used a large number of CoS in 2010 but much smaller numbers since then.

- Similarly sized trusts located geographically close to each other, and thus in the same labour market catchment area, can exhibit very different levels of CoS usage; see for example King's College Hospital (460 CoS in total) and Guy's and St Thomas' (115 CoS in total).

Table 3.4: Certificates of Sponsorship used for nurses – top 20 Trusts by usage, year to August, 2009-15

Organisation Name	2009	2010	2011	2012	2013	2014	2015	Total 2009-15	% of all CoS 2009-15	Nurses headcount July 2015
London North West Healthcare NHS Trust	8	182	6	90	147	217	283	933	6.0	2,923
Basildon and Thurrock University Hospitals NHS Foundation Trust	36	214	32	14	119	103	9	527	3.4	1,491
King's College Hospital NHS Foundation Trust	12	19	33	11	49	273	63	460	3.0	4,094
Imperial College Healthcare NHS Trust	42	57	37	15	19	92	61	323	2.1	3,347
Barts Health NHS Trust	50	129	14	20	20	16	31	280	1.8	4,837
Cambridge University Hospitals NHS Foundation Trust	64	43	3	8	29	12	76	235	1.5	2,961
Luton and Dunstable University Hospital NHS Foundation Trust	69	68	2	7	46	3	10	205	1.3	1,272
Ashford & St Peters Hospitals NHS Trust	37	46	4	16	35	27	10	175	1.1	1,049
St George's Healthcare NHS Trust	20	45	15	12	28	25	15	160	1.0	2,655
University Hospital Southampton NHS Foundation Trust	16	30	1	6	40	57	7	157	1.0	3,278
The Princess Alexandra (Harlow) NHS Trust	3	82	1	2	57	0	2	147	0.9	857
Lewisham and Greenwich NHS Trust	9	3	2	2	0	1	127	144	0.9	2,116
Colchester Hospital University NHS Trust	4	71	0	1	43	2	0	121	0.8	1,304
Guy's and St Thomas' NHS Foundation Trust	19	21	12	11	12	15	25	115	0.7	4,417
Royal Berkshire NHS Foundation Trust	13	27	4	6	35	14	7	106	0.7	1,714
University College London Hospitals NHS Foundation Trust	7	22	1	9	10	25	32	106	0.7	2,526
Royal National Orthopaedic NHS Trust	28	25	0	1	41	2	0	97	0.6	408
Royal Surrey County Hospital NHS Trust	6	4	3	2	3	3	63	84	0.5	1,089
The Royal Brompton and Harefield NHS Trust	8	24	11	6	10	13	9	81	0.5	1,269
West London Mental Health Trust	34	39	3	0	1	1	0	78	0.5	868
All other organisations	1,529	2,199	988	1,219	1,410	1,861	1,777	10,983	70.8	-

Source: IES analysis of Home Office Certificate of Sponsorship data

3.3.2 Nurses in the NHS by nationality

The Health and Social Care Information Centre (HSCIC) provided IES with trust-level data on nurses by nationality for 2009 to 2015, split into the following groups:

■ British/Irish

■ EEA (including Switzerland)

■ all other nationalities

■ unknown (about ten per cent of all NHS staff do not have nationality recorded; among nurses the proportion decreased from around 20 per cent in 2009 to 10 per cent in 2015).

This data gives information on nationality, which is not necessarily the same as country of training, so the data has to be interpreted with that point in mind. This data indicates the **stock** of international nurses working in each trust. Data were provided for the period 2009-2015, to match the time series of the CoS data.

Before going on to look at trust-level variation in the employment of non-EEA nurses, headline analysis of employment of nurses from outside the UK and Ireland for the NHS as a whole (including CCGs, Ambulance Trusts, national NHS bodies etc.) is presented. Figure 3.5 shows the proportion of nurses with known nationalities who are from outside the UK/Ireland, split between those from elsewhere in the EEA, and those from outside the EEA. The proportion of foreign nurses has fluctuated around 12 per cent between 2009 and 2015; it was falling between 2009 and 2013, but has since picked up. However there has been a shift towards nurses from the EEA and away from those from the rest of the world; in 2009 EEA nurses comprised just over one per cent of nurses with known nationalities compared with 4.5 per cent in 2015, and the proportion of nurses from outside the EEA fell from nearly 12 per cent to 8 per cent during this time.

Figure 3.5: Nurses with foreign nationalities in the NHS in England as a proportion of all nurses with known nationalities, 2009-15
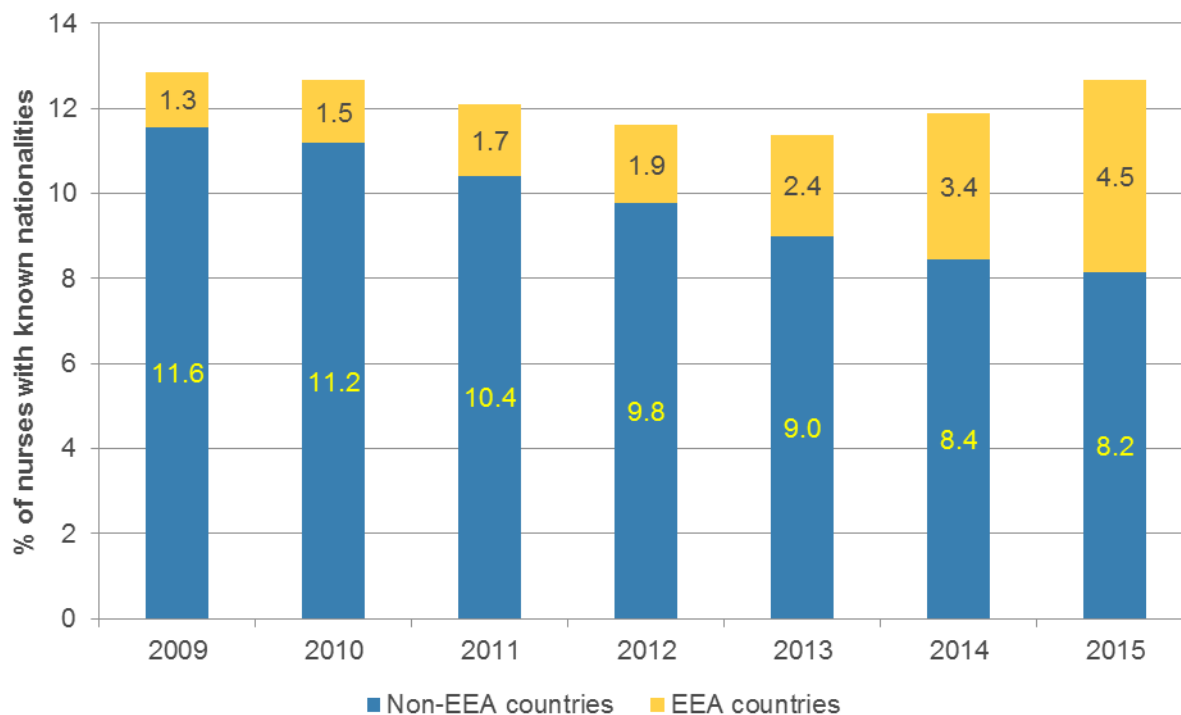
Note: Irish nurses are recorded together with British nurses in the HSCIC data

Source: IES analysis of HSCIC data

Moving on to look at the trust-level data, Table 3.5 presents details of the 20 trusts with the largest number of nurses from outside the EEA in 2015. Many of these trusts also featured among the top 20 users of CoS presented in Table 3.4, for example London North West, Basildon and Thurrock, King's College and Barts. However, there are a number of Trusts located outside London, the South East and the East of England, such as Nottingham, Leeds, Birmingham.

The rest of the analysis is based on the 227 large NHS Trusts in England[52] (excluding CCGs, Ambulance Trusts and other national NHS bodies) that employed at least 100 nurses in 2015.

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[52] Chesterfield Royal Hospital NHS Foundation Trust and Moorfields Eye Hospital NHS Foundation Trust have more than 100 nurses. However, these two trusts have not implemented the Electronic Staff Record (ESR) for their HR/Payroll purposes, so consequently all nurses from these organisations are included in the 'Unknown' nationality category. Therefore, these trusts have been excluded from the analysis.

Table 3.5: Nurses by nationality – Top 20 Trusts by number of nurses from outside the EEA, 2015

Trust	UK/ Ireland	EEA countries	Non-EEA	Unknown	Total	Total known	Non-EEA as % of Total	Non-EEA as % of Total known
King's College Hospital NHS Foundation Trust	2,600	349	1,088	57	4,094	4,037	26.6	27.0
Barts Health NHS Trust	3,345	566	923	3	4,837	4,834	19.1	19.1
London North West Healthcare NHS Trust	1,528	205	744	446	2,923	2,477	25.5	30.0
Cambridge University Hospitals NHS Foundation Trust	1,999	345	562	55	2,961	2,906	19.0	19.3
Barking, Havering and Redbridge University Hospitals NHS Trust	1,356	127	525	55	2,063	2,008	25.5	26.2
Imperial College Healthcare NHS Trust	1,375	306	521	1,145	3,347	2,202	15.6	23.7
Guy's and St Thomas' NHS Foundation Trust	3,190	374	521	332	4,417	4,085	11.8	12.8
Royal Free London NHS Foundation Trust	2,038	280	455	19	2,792	2,773	16.3	16.4
St George's University Hospitals NHS Foundation Trust	1,864	338	436	373	3,011	2,638	14.5	16.5
University Hospitals of North Midlands NHS Trust	2,514	148	411	23	3,096	3,073	13.3	13.4
Basildon and Thurrock University Hospitals NHS Foundation Trust	984	109	397	1	1,491	1,490	26.6	26.6
University Hospital Southampton NHS Foundation Trust	2,495	388	393	2	3,278	3,276	12.0	12.0
Frimley Health NHS Foundation Trust	1,884	268	390	1	2,543	2,542	15.3	15.3
Leeds Teaching Hospitals NHS Trust	3,623	46	373	10	4,052	4,042	9.2	9.2
East and North Hertfordshire NHS Trust	1,249	144	332	23	1,748	1,725	19.0	19.3
Nottingham University Hospitals NHS Trust	3,776	90	331	169	4,366	4,197	7.6	7.9
University College London Hospitals NHS Foundation Trust	1,584	317	309	316	2,526	2,210	12.2	14.0
Luton and Dunstable University Hospital NHS Foundation Trust	866	97	308	1	1,272	1,271	24.2	24.2
University Hospitals Birmingham NHS Foundation Trust	2,175	69	291	1	2,536	2,535	11.5	11.5
Lewisham and Greenwich NHS Trust	1,634	177	286	19	2,116	2,097	13.5	13.6

Source: IES analysis of HSCIC data

Key characteristics of the 227 trusts in the sample were as follows:

■ On average, trusts had a total headcount of 4,900, staff with a quarter having more than 6,000 staff. (Appendix Table 6.4)

■ Nurses from outside the EEA made up 7.0 per cent of all nurses, or 7.9 per cent of all nurses with known nationalities, on average. In a quarter of trusts, more than one in ten nurses was from outside the EEA. (Appendix Table 6.4)

■ The majority of trusts in the sample (60 per cent) were acute trusts, while around a quarter were mental health/learning disability trusts, and acute specialist trusts and community health trusts each accounted for around eight per cent of the total (Appendix Table 6.5).

■ In terms of the geographical distribution of trusts, the North West was the largest region, with 40 trusts and accounting for 18 per cent of the total, followed by the West Midlands (28 trusts, 12 per cent of total) and the East of England (26 trusts, 12 per cent of total). The three London regions combined accounted for 34 trusts, or 15 per cent of the total, while Thames Valley was the smallest region (six trusts, three per cent of the total; Appendix Table 6.6)

■ In terms of regional employment of nurses, the largest region was the North West, with 55,000 nurses employed by trusts with at least 100 nurses, accounting for 16 per cent of the total. The next largest regions were the West Midlands (38,600 nurses, 11 per cent), Yorkshire and the Humber (35,100, 10 per cent) and the East of England (30,700, nine per cent; Appendix Table 6.6)

Table 3.6 shows that there is considerable variation in the proportion of non-EEA nurses by type of Trust. The proportion is highest among Acute Trusts, followed by Acute Specialist Trusts, and lowest among Community Health Trusts. These echo the findings of the analysis of CoS data presented in Table 3.2.

Table 3.6: Proportion of non-EEA nurses by Trust type, 2015

	non-EEA as % of all nurses		non-EEA as % of known nationalities		
	Mean	**Std. Deviation**	**Mean**	**Std. Deviation**	**N=**
Acute Specialist Trust	6.3	6.3	6.6	6.6	17
Acute Trust	8.5	6.0	9.7	7.2	136
Mental Health Trust	5.1	5.4	5.7	5.8	55
Community Health Trust	2.4	2.6	2.6	2.9	19
Total	**7.0**	**6.0**	**7.9**	**7.0**	**227**

Source: IES analysis of HSCIC data

There is also considerable variation by region, as shown in Table 3.7. Trusts in the three London regions have the highest proportions of non-EEA nurses, followed by those in the neighbouring regions of East of England, Thames Valley, and Kent, Surrey and Sussex. The lowest proportions are among trusts in the North East, the North West, and Yorkshire and the Humber. Again these echo the CoS data (Table 3.3). The influence of region alongside other trust characteristics is explored in the following chapter.

Table 3.7: Proportion of non-EEA nurses by NHS England region, 2015

	non-EEA as % of all nurses		non-EEA as % of known nationalities		
	Mean	**Std. Deviation**	**Mean**	**Std. Deviation**	**N=**
East Midlands	4.7	3.7	5.3	4.3	14
East of England	10.0	7.0	11.1	6.8	26
Kent, Surrey and Sussex	10.1	5.4	10.8	5.1	17
North Central and East London	14.5	6.2	15.5	6.1	13
North East	2.5	1.8	2.6	1.8	10
North West	3.6	3.0	3.8	3.1	40
North West London	14.7	6.5	17.0	7.5	11
South London	16.2	5.4	17.5	5.7	10
South West	4.1	3.2	4.9	3.8	20
Thames Valley	8.7	2.3	17.4	14.8	6
Wessex	6.2	3.5	6.4	3.3	11
West Midlands	5.0	3.7	5.5	3.9	28
Yorkshire and the Humber	3.4	2.7	3.7	2.8	21
Total	**7.0**	**6.0**	**7.9**	**7.0**	**227**

Source: IES analysis of HSCIC data

3.4   Analysis of the influences on the use of non-EEA nurses

Having described the data, we now turn to the analysis of the factors that may explain variation in the employment and recruitment of non-EEA nurses across NHS trusts, using the dataset we constructed. Our approach was to undertake multi-variate analysis using regression techniques to explore which, if any, of the factors were a significant influence on the employment and recruitment of non-EEA nurses, controlling for all other factors. A number of analytical models were developed to investigate the influences on the employment and recruitment of non-EEA nurses:

■ Firstly, we developed a cross-section linear regression model of the influences on the proportion of non-EEA nurses.

■ Secondly, we developed a cross-section linear regression model of the influences on the number of CoS issued. A variation of this model, using an ordinal regression approach, was also undertaken because of the distribution of the dependent variable.

■ Thirdly, we developed models looking at changes over time in the proportion of non-EEA nurses. These were a linear regression model using the change in the proportion of non-EEA nurses from 2014 to 2015, and a fixed effects model using panel data over the period 2010 to 2014.

The results of the analyses have generally been inconclusive, with few of the characteristics that trusts are able to control emerging as significant influence on the use of non-EEA nurses, once controlling for structural characteristics such as type of trust and region. The detailed results of the different regression approaches are presented in the following sections.

3.4.1   Regression models of the influences on trusts' use of non-EEA nurses

The results of the basic regression model are presented in Table 3.8Table 3.8. The dependent variable is nurses from outside the EEA as a proportion of all nurses (including those with unknown nationality). This regression analysis covers all of the 227 NHS trusts with at least 100 nurses in the dataset, although missing data means that only 221 trusts are included in the model. Subsequent sections examine models that include care quality ratings to explore the impact of the Francis effect, and financial performance; these models are restricted to trusts with acute sites, and Foundation Trusts respectively.

Dummy variables were used for trust type, and for region, with the regions combined into five larger regions of London, the South East, the South West, the Midlands, and the North. The default categories for the dummy variables are an Acute Trust, in the South West.

Four models were calculated using either the infant rate or the elderly rate, and either the ILO unemployment rate or the JSA unemployment rate. The model with the most explanatory power was the one with the infant rate and the JSA unemployment rate, with an adjusted R-squared of 64 per cent.

The model also shows some significant influences of the workplace policy/practice outcome variables on the employment of non-EEA nurses, when controlling for all other factors:

■ There was a positive relationship between satisfaction with resources and support, and usage of non-EEA nurses.

■ There was a negative relationship between staff engagement and usage of non-EEA nurses.

Table 3.8: Regression model estimates – non-EEA nurses as a % of all nurses, all trusts

	Base model with region dummy variables		Base model excluding region dummies	
	Coefficient	**Significance**	**Coefficient**	**Significance**
(Constant)	-2.56	0.853	-1.80	0.903
Headcount	0.00	0.936	0.00	0.419
Mental health Trust	-3.61	0.000***	-4.67	0.000***
Community health Trust	-5.40	0.000***	-6.06	0.000***
Acute Specialist Trust	-2.35	0.046*	-2.97	0.016*
Acute Trust (ref. category)	-	-	-	-
Satisfaction with resources and support	9.93	0.030*	11.11	0.022*
Percentage of staff working extra hours	0.14	0.109	0.23	0.012*
Staff Engagement	-9.96	0.040*	-11.59	0.024*
Nurses turnover rate 2015	0.00	0.701	0.11	0.448
London	4.47	0.006**	-	-
South East	3.12	0.002**	-	-
Midlands	-0.88	0.420	-	-
North	-1.63	0.149	-	-
South West (ref. category)	-	-	-	-
Earnings 2015	-0.01	0.176	0.00	0.899
Infant rate	2.06	0.009**	1.34	0.092
Bad health rate	-0.21	0.634	-0.93	0.028*
Unemployment JSA rate	-1.19	0.014*	-1.48	0.003**
Ethnicity	0.10	0.079	0.17	0.000***
Rurality	-0.04	0.031*	-0.05	0.011*
N=	221		221	
R^2	0.64		0.59	

Note: *** indicates significance at the 0.1% level, ** indicates significance at the 1% level, and * indicates significance at the 5% level

Source: IES analysis of HSCIC and NHS Staff Survey data

The model also shows that a number of other variables were significant influences on the recruitment of non-EEA nurses, when controlling for all other factors:

■ Mental Health Trusts and Community Health Trusts had significantly lower usage of non-EEA nurses than Acute Trusts.

■ Trusts in London and the South East had significantly higher usage of non-EEA nurses than those elsewhere in England.

■ The higher the proportion of infants in the local area, the higher the proportion of non-EEA nurses.

■ Trusts located in areas of lower unemployment had higher usage of non-EEA nurses.

■ Trusts located in areas with higher proportions of people living in rural areas had lower usage of non-EEA nurses.

The following sections discuss these findings in more detail by the type of independent variable.

Region and type of trust

The cross-section regression model found that type of trust and region were highly significant in explaining difference between trusts in their use of non-EEA nurses, controlling for all other factors including the local economic and demographic characteristics of trusts' catchment areas, such as unemployment, earnings and ethnic profile (Trust definitions were taken from the NHS Staff Survey).

In comparison with acute trusts, the proportion of non-EEA nurses in the workforce in mental health trusts was nearly four percentage points lower, and the proportion in community health trusts was more than five percentage points lower, holding all other factors constant, and these differences were highly statistically significant. The significance level for acute specialist trusts was just inside the five per cent level, and the coefficient was negative suggesting use of non-EEA nurses is two percentage points lower in acute specialist trusts than in acute trusts, controlling for other factors.

Turning to variation by region, use of non-EEA nurses in trusts located in London was 4.5 percentage points higher than in trusts located in the South West, while usage in trusts located in the outer South East was more than three percentage points higher than in those in the South West. A modified model excluding the region dummies found that ethnicity became highly significant, although this is likely to be picking up the structural factors between trusts in London and other regions as ethnicity was not significant when the regional dummies were included (see Table 3.8).

Demographic, socio-economic and area characteristics

The cross-section regression model of the influences on trusts' use of non-EEA nurses found that the JSA unemployment rate in the catchment area was a significant influence, but that average earnings in the catchment area were not significant. The model found that trusts located in areas with higher unemployment had lower usage of non-EEA nurses than did trusts in areas with lower unemployment, with a one percentage point difference in unemployment rates being associated with a 1.2 percentage point difference

in the proportion of non-EEA nurses. One possible explanation is that trusts in areas with low unemployment, and thus tight labour markets, find it more difficult to recruit UK nurses and so are more likely to look elsewhere (including non-EEA recruitment) to meet nursing staffing levels.

The proportion of infants aged under five in the local catchment area was a significant influence in the proportion of non-EEA nurses, with a one percentage point increase in the proportion of infants between trusts being associated with a two percentage point increase in the proportion of non-EEA nurses. The proportion of the local population living in rural areas was also significant, with trusts in more rural areas associated with lower proportions of non-EEA nurses.

Workplace factors

Two variables related to workplace practices were found to be significant influences on the use of non-EEA nurses in the cross-section regression model.

Firstly, there was a positive relationship between satisfaction with resources and support, and usage of non-EEA nurses. In trusts with higher levels of satisfaction, the usage of non-EEA nurses was generally higher. It may be that the causality runs in the opposite direction, and that in trusts that have used recruitment of non-EEA nurses to meet staffing levels, satisfaction with the resources and support available is higher.

Secondly, there was a negative relationship between staff engagement and usage of non-EEA nurses. Usage of non-EEA nurses was lower in trusts with higher levels of staff engagement, which may suggest that trusts with high levels of staff engagement are attractive for UK nurses and so the trust has less need to recruit from non-EEA countries.

The relationship between staff working extra hours and usage of non-EEA nurses was not statistically significant, controlling for other factors.

Retention

The turnover rate for nurses was not found to be a significant influence on variation in trusts' use of non-EEA nurses, controlling for other factors.

Both models were adjusted to include turnover as a lagged variable, to investigate whether high turnover in one year affects the use of non-EEA nurses the following year, but it was not found to be significant. Using a two-year lag in the linear regression model turnover was found to be significant, with a positive coefficient indicating that trusts with high turnover two years previously generally had lower proportions of non-EEA nurses.

Francis effect/safe staffing

The model was modified to include the latest data from the Care Quality Commission to model the impact of a possible post-Francis effect, with the hypothesis being that lower care quality scores may be linked to higher demand for non-EEA nurses.

The results of the regression model for 107 acute trusts with caring quality rating included show that the caring quality rating was not a significant influence on the employment of non-EEA nurses, controlling for other factors. The dummies for London and the South East were also significant, along with the proportion of infants in the local population.

Table 3.9: Regression model estimates – non-EEA nurses as a % of all nurses, trusts with acute sites with 2015 CQC care quality ratings

	Continuous CQC rating		Dummy CQC variables	
	Coefficient	Significance	Coefficient	Significance
(Constant)	-6.77	0.760	-7.16	0.755
Headcount	0.00	0.149	0.00	0.154
Satisfaction with resources and support	-2.40	0.739	-2.31	0.750
Percentage of staff working extra hours	-0.04	0.777	-0.04	0.778
Staff Engagement	2.95	0.711	2.96	0.711
Nurses turnover rate 2015	-0.38	0.079	-0.38	0.077
London	7.03	0.017*	7.03	0.017*
South East	4.63	0.006**	4.59	0.007**
Midlands	0.10	0.958	0.08	0.963
North	-1.46	0.415	-1.46	0.416
South West (ref. category)	-	-	-	-
Earnings 2015	0.00	0.618	0.00	0.602
Infant rate	3.20	0.007**	3.16	0.010*
Bad health rate	0.04	0.958	0.01	0.991
Unemployment JSA rate	-1.21	0.114	-1.19	0.129
Ethnicity	0.04	0.619	0.04	0.623
Rurality	-0.02	0.398	-0.02	0.399
Caring rating (continuous)	-0.21	0.864	-	-
Caring rating dummy – low	-	-	0.38	0.819
Caring rating dummy – 3 (ref. category)			-	-
Caring rating dummy - high	-	-	-0.12	0.922
N=	107		107	
R²	0.58		0.58	

*** indicates significance at the 0.1% level, ** indicates significance at the 1% level, and * indicates significance at the 5% level

Source: IES analysis of HSCIC and NHS Staff Survey data

Because the distribution of the mean caring quality rating deviated from the normal distribution, an alternative model was run with dummy variables for low ratings (ie below 3) and high ratings (ie above 3), in comparison with a rating of exactly 3. However this model produced very similar results to that with the mean caring quality rating, and again caring quality rating was not an important influence on usage of non-EEA nurses holding other factors constant.

The influence of caring quality on the number of CoS was also investigated, and the association between caring quality and the number of CoS was found to be just significant using the year to date data and the ordinal regression method. The coefficient was positive, indicating that trusts with higher care quality ratings generally had higher numbers of CoS, although it is possible that the causality operates in the opposite direction and trusts that have had higher numbers of CoS are more likely to receive higher care quality ratings.

Caring quality ratings were not available going back over time and so they were not able to feed into the time series analysis.

Trusts' financial performance

Financial performance data for Foundation Trusts were obtained from Monitor. Foundation trusts are semi-autonomous organisational units within the National Health Service in England. They differ from standard NHS trusts in that they have the freedom to decide locally how to meet their obligations, they are accountable to local people who can become members and governors, and they are authorised and monitored by an independent regulator for NHS foundation trusts.

The most recent data were for 2013/14, and so they are lagged in comparison with the other indicators. Data are available for 134 Foundation Trusts used in our analysis.

The results of the regression model including financial performance are shown in Table 3.10. Financial performance was not a significant influence on the use of non-EEA nurses by Foundation Trusts, controlling for other factors. With financial performance included in the model, the significant influences are:

■ mental health trusts have significantly lower usage than acute trusts,

■ trusts in the South East have significantly higher usage than those in the South West,

■ the infant rate was statistically significant with trusts in areas with high proportions of infants in the local population having higher usage than those in areas with lower proportions of infants.

Table 3.10: Regression model estimates – non-EEA nurses as a % of all nurses, Foundation Trusts

	Model with financial surplus – Foundation trusts		Model with financial surplus and care quality rating – acute Foundation trusts	
	Coefficient	**Significance**	**Coefficient**	**Significance**
(Constant)	-14.36	0.455	-15.54	0.690
Headcount	0.00	0.583	0.00	0.474
Mental health Trust	-3.64	0.001**	-0.67	0.822
Acute Specialist Trust	-1.16	0.425	-3.32	0.293
Satisfaction with resources and support	10.38	0.088	-6.36	0.627
Percentage of staff working extra hours	0.11	0.364	-0.07	0.777
Staff Engagement	-9.55	0.152	11.06	0.433
Nurses turnover rate 2015	-0.07	0.675	-0.34	0.492
London	2.82	0.211	2.55	0.657
South East	3.36	0.023*	5.39	0.085
Midlands	-1.53	0.361	0.51	0.891
North	-1.12	0.474	0.38	0.909
Earnings 2015	0.01	0.366	0.00	0.767
Infant rate	2.38	0.027*	0.80	0.758
Bad health rate	-0.16	0.788	-0.38	0.736
Unemployment JSA rate	-1.09	0.091	-0.75	0.539
Ethnicity	0.06	0.497	0.22	0.250
Rurality	-0.02	0.492	-0.05	0.343
Financial surplus 2014	0.00	0.276	0.00	0.205
Care Quality rating (continuous)			0.58	0.777
N=	133		59	
R^2	0.58		0.49	

Note: *** indicates significance at the 0.1% level, ** indicates significance at the 1% level, and * indicates significance at the 5% level

Source: IES analysis of HSCIC and NHS Staff Survey data

To investigate the combined influence of Francis and financial performance, a model was also run on acute Foundation Trusts (59 trusts), incorporating both the caring rating data and the financial performance data. However, in this model no variables were found to be statistically significant.

Influences on use of EEA nurses, and all non-UK/Irish nurses

The basic regression model was also run using the proportion of EEA nurses as the dependent variable, and the proportion of all non-UK/Irish nurses (ie EEA plus non-EEA nurses) as the dependent variable. The results are shown in Appendix Table 6.7. Looking

first at the use of EEA nurses, the only significant variables were type of trust, and region. When looking at the use of all non-UK/Irish nurses, type of trust and region were again significant, as well as the infant rate and the JSA unemployment rate in the trust catchment areas. This suggests that there are no special factors affecting the use of EEA nurses that are different to those affecting the use of non-EEA nurses, and that type of trust and region have the strongest influence on the use of any type of non-UK/Irish nurses.

3.4.2 Regression model of the influences on the number of Certificates of Sponsorship used by NHS trusts

An alternative regression model was undertaken using the number of Certificates of Sponsorship as the dependent variable, and the same independent variables as the model of usage of non-EEA nurses presented above. The results are shown in Table 3.11.

The only significant variables were total staff, the dummy for mental health trusts, and the proportion of staff working extra hours, which had a positive coefficient indicating that trusts with high proportions of staff working extra hours also had high numbers of Certificates of Sponsorship. This could suggest that new attempts to recruit from non-EEA may be a response to a high proportion of staff working extra hours.

Because the distribution of Certificates of Sponsorship deviated substantially from the normal distribution, with a very high proportion of trusts having no CoS, and a few having large numbers, an ordinal regression was undertaken with three categories of CoS use – zero, one to nine, and 10 and over. The results were similar to the linear regression, with total staff, mental health trusts, and the proportion of staff working extra hours being significant. In addition, the dummy for community health trusts was significant, as was the bad health rate, with a negative coefficient indicating that trusts in areas with high proportions of the population reporting bad health had lower use of CoS than those in areas with low proportions of people reporting bad health.

Table 3.11: Regression model estimates – CoS used 12 months to August 2015, all trusts

	Coefficient	Significance
(Constant)	-43.98	0.353
Headcount	0.00	0.014*
Mental health Trust	-5.96	0.037*
Community health Trust	-5.09	0.143
Acute Specialist Trust	-2.95	0.462
Acute Trust (ref. category)	-	-
Satisfaction with resources and support	-4.26	0.785
Percentage of staff working extra hours	0.65	0.031*
Staff Engagement	-0.50	0.976
Nurses turnover rate 2015	0.02	0.971
London	10.46	0.060
South East	2.22	0.522
Midlands	-0.96	0.796
North	-0.80	0.835
South West (ref. category)	-	-
Earnings 2015	0.01	0.492
Infant rate	1.34	0.616
Bad health rate	-0.42	0.776
Unemployment JSA rate	1.28	0.436
Ethnicity	-0.21	0.277
Rurality	0.01	0.920

Note: N=221, R^2=0.19; *** indicates significance at the 0.1% level, ** indicates significance at the 1% level, and * indicates significance at the 5% level

Source: IES analysis of HSCIC and NHS Staff Survey data

3.4.3 Influences on changes in the usage of non-EEA nurses – time series analysis

The analysis was extended to investigate influences on the *changes* in the use of non-EEA nurses over time, to examine whether any of the variables affect whether trusts are increasing or decreasing their usage of non-EEA nurses over time, controlling for other factors. Two approaches were used: firstly, undertaking linear regression with the recent change in share of non-EEA nurses as the dependent variable; and secondly, using a time series panel data analysis for the period 2010-14. No factors within trusts' control were found to be significant, while some of the demographic and socio-economic factors were significant influences.

Linear regression model

The first approach involved a linear regression model with change in the proportion of non-EEA nurses between 2014 and 2015 as the dependent variable, and the same independent variables as in the main model but using 2014 data rather than 2015 data (the work pressure variable from the 2014 NHS Staff Survey was used instead of the satisfaction with support and resources as this was only introduced in 2015). No trust-specific variables were found to be significant, but three area-based variables were significant. Trusts in areas with high earnings, with high proportions of infants, and with high proportions living in rural areas were associated with negative changes in the share of non-EEA nurses.

Appendix Table 6.8 presents the results of models including the care quality rating, and the financial surplus. Neither of these additional variables was significant, controlling for other factors, while earnings and rurality were significant in both models.

Table 3.12: Regression model estimates – change in non-EEA nurses as a % of all nurses, 2014 to 2015

	Coefficient	Significance
(Constant)	2.31	0.649
Headcount	0.00	0.018*
Mental health Trust	-0.06	0.738
Community health Trust	0.09	0.705
Acute Specialist Trust	0.00	0.990
Acute Trust (ref. category)	-	-
Work Pressure 2014	0.55	0.521
Percentage of staff working extra hours 2014	-0.01	0.567
Staff Engagement 2014	0.69	0.386
Nurses turnover rate 2014	0.04	0.180
London	-0.03	0.942
South East	0.02	0.914
Midlands	-0.16	0.487
North	-0.05	0.829
South West (ref. category)	-	-
Earnings 2014	-0.01	0.000***
Infant rate	-0.47	0.006**
Bad health rate	-0.10	0.360
Unemployment JSA rate 2014	0.03	0.728
Ethnicity	0.02	0.145
Rurality	-0.01	0.026*

Note: N=222, R^2= 0.192 *** indicates significance at the 0.1% level, ** indicates significance at the 1% level, and * indicates significance at the 5% level

Source: IES analysis of HSCIC and NHS Staff Survey data

An alternative model looked at the change in the proportion of non-EEA nurses over a longer period between 2010 and 2015, using 2010 data for independent variables. This again found that earnings was significant, with a negative coefficient indicating that trusts in areas with high earnings in 2010 experienced greater decreases in their shares of non-EEA nurses than trusts in areas with low earnings in 2010, other things being equal. The proportion of ethnic minority people in the local population was also significant, and had a positive coefficient indicating that trusts in areas with large minority ethnic populations generally had increasing shares of non-EEA nurses, which may reflect trusts matching the profile of their workforce to the patient profile in their catchment area. The infant rate and rural variables were not significant over this longer time period.

Fixed effects model with panel data

The second approach used a fixed effects model with panel data. This model investigated the impact of changes in a range of independent variables on changes in the dependent variable. Only variables that change over time are included; time invariant variables, such as type of trust and region, are excluded as they are constant over time.

Table 3.13 shows the results of the fixed effects model, with the proportion of all nurses from outside the EU as the dependent variable. The independent variables used were total staff numbers, the proportion of staff working extra hours, the turnover rate among nurses, the JSA unemployment rate in the trust's locality, average earnings in the trust's locality, and work pressure. This last variable, Key Finding 3 from the NHS Staff Survey, was the predecessor to the Satisfaction with Support and Resources indicator in the 2015 Staff Survey and was asked from 2010 to 2014. The work pressure score assessed the extent to which staff have a workload that is more than they can cope with and includes the extent to which staff feel there is a lack of time or resources to do their job well. Possible scores range from 1 to 5, with 1 representing that staff experience low work pressures, and 5 representing that staff experience high work pressures. Data were available on a consistent basis for the period 2010 to 2014.

The results of the model show that, along with changes in total staff, changes in the unemployment rate were a significant influence on changes in usage of non-EEA nurses, with increases in the local JSA unemployment rate associated with increases in the proportion of non-EEA nurses.

Thus in the time series analysis the coefficient on the unemployment rate has the opposite sign to the coefficient in the cross-sectional analysis. This finding may seem somewhat contradictory. However, one explanation for the positive sign is that areas with increasing unemployment may be seen as less desirable places in which to work by UK nurses, and areas with decreasing unemployment seen as more desirable, which may affects trusts' ability to meet staffing levels with UK nurses and thus is an influence on them recruiting from non-EEA countries.

Neither of the two workplace practice variables – the proportion of staff working extra hours, and work pressure (a predecessor indicator to satisfaction with resources and support) – was found to be significant in the fixed effects model. Similarly, nurses turnover was not significant in the fixed effects model analysis.

As financial data were available for the period 2010 to 2014 it was possible to include them in the time series analysis, although as with the cross-sectional analysis it is limited to Foundation Trusts. However, financial performance was not found to be a significant influence on changes in the use of non-EEA nurses, controlling for all other factors, although its inclusion in the model resulted in earnings becoming significant, with increases in earnings associated with increases in the use of non-EEA nurses (Table 3.13). The analysis above found trusts in areas with high earnings in 2010 had greater decreases in their usage of non-EEA nurses than trusts in areas with low earnings, while this finding suggests that trusts in areas where earning rose faster had smaller decreases than those in areas where earnings rose slower or fell.

Table 3.13: Fixed effects model estimates – non-EEA nurses as a % of all nurses, 2010-14

		Base model – all trusts		Model with financial surplus – Foundation trusts	
		Coefficient	Significance	Coefficient	Significance
Factors	Total staff	-0.001	0.000***	-0.001	0.000***
	% working extra hours	0.031	0.149	0.000	0.998
	Nurse turnover	-0.008	0.540	-0.013	0.337
	JSA unemp rate	0.546	0.001**	0.647	0.001**
	Earnings	0.005	0.296	0.016	0.006**
	Work pressure	0.027	0.974	1.443	0.178
	Financial surplus	-	-	0.000	0.402
Year	2011	-0.566	0.000***	-0.770	0.000***
	2012	-1.161	0.000***	-1.217	0.000***
	2013	-1.408	0.000***	-1.556	0.000***
	2014	-1.020	0.002**	-1.089	0.009**
N=		225		138	
R^2		0.17		0.25	

Source: IES analysis of HSCIC and NHS Staff Survey data

3.5   Conclusion: the importance of structural drivers

The quantitative analysis presented in this chapter has not found a significant link between NHS trust-level characteristics and their recruitment of non-EEA nurses (or EEA nurses, for that matter). Type of trust and region emerge as significant in influencing the recruitment of non-EEA nurses, but overall, there is no clear picture at the trust level of

factors which influence the employment and recruitment of non-EEA nurses. Instead, a picture emerges of varied and differential recruitment of non-EEA nurses among trusts, even within the same locality.

This key finding points to the importance of structural factors in explaining the current nursing shortage, as the data has not found the trust-level characteristics used in the models, such as working conditions, workplace/management practices, staff retention/turnover, and trusts' financial position, to be significant. Structural factors are defined here as those which exert external influences upon NHS trusts from organisational, institutional, labour market, demographic, financial or policy changes and developments. These drivers are largely outside the control of NHS Trusts but nevertheless impact upon their recruitment of international nurses. These drivers are examined in more detail in our following chapter (four) to gauge their significance in driving recruitment decisions at the Trust level. It may also be the case that some trusts are more pro-active in their non-EEA recruitment due to their own preferences based on factors outside of those included in the models.

Importantly, the fact that the data does not reveal any significant, consistent insights, which could explain the differential recruitment of non-EEA nurses among trusts, indicates that these factors may only be identifiable through in-depth qualitative research with trusts themselves. To provide more insight into this, we now turn to the qualitative findings with trusts and industry experts.

4 Findings from our qualitative research

This chapter draws on qualitative research interviews carried out with health sector experts and eight NHS trusts. The qualitative research with trusts was not designed to be representative of all NHS trusts but rather to explore in-depth some of the trust-level factors at play in determining levels of non-EEA recruitment, and why this differed among some trusts. Interviews were usually held with the Chief Nurse, Head of Workforce Planning or Head of Recruitment, often in combination.[53]

This chapter draws on the qualitative research with experts and NHS trusts to:

1. Report their views on what is driving the current reported shortage of nurses, both nationally and at trust level. Many of these findings are in line with what has already been reported in Chapters two and three, particularly in terms of highlighting the importance of structural factors, but these are reported from the perspective of trusts and industry experts.

2. Provide more evidence to explain the differential use of non-EEA nurses at trust level. This is new data sheds more light on why some trusts recruit more non-EEA nurses than others – an issue which the quantitative data could not answer fully.

3. Report on experts' and trusts' views on how to address the current nursing shortage.

The qualitative findings show that:

■ There are many factors likely to be driving the recruitment of international nurses (both EEA and non-EEA) at the trust level. Structural factors identified were: too few newly-qualified nurses; the ageing profile of the nursing workforce; and a post-Francis emphasis on safe staffing. These issues affected all trusts we interviewed. Other

[53] The trusts that were interviewed represent a good mix of trusts, in terms of regional location and use of non-EEA nurses. The selection included one trust with an unexpectedly low use of foreign nurses and two neighbouring trusts with quite different levels of non-EEA nurse recruitment. Half of the trusts are in the Shelford group and so are strategically important to the UK economy, but have varying uses of foreign nurses (both historic and current).

factors found to be driving both EEA and non-EEA recruitment were issues around workplace pressures and, related to this, retention.

■ Differential use of non-EEA nurses is likely to be explained by a trust's own approach to workforce planning (whether they have previously recruited from outside of the EEA and/or the resources available to them); local demographics and the 'attractiveness' of a trust; and the different skills needs of trusts.

4.1   Views on what is driving the current shortage

The experts and representatives of trusts we interviewed identified three key structural drivers of the current (reported) shortage of nurses: the impact of post-Francis safe staffing guidelines; too few newly-qualified nurses; and the ageing nursing workforce. As such, their views largely confirm the findings of the previous chapter in highlighting the importance of structural factors in driving the current shortage. At the same time, their views also provide a more nuanced context of trusts and the other factors they have to consider alongside their nursing recruitment decisions.

4.1.1   Too few newly-qualified nurses to meet current demand

All trusts and experts reported that cuts to student nursing commissions from 2010 had significantly contributed to a shortage of nurses in England. This was having a strong impact on the *current* supply domestically, given the three years it takes for student nurses to qualify and join the labour market. Furthermore, the subsequent increases in commissions since 2014 were not reported as being helpful in alleviating the current shortage, as one expert explained:

When Health Education England came into being in 2012, demand for nurses was extremely high so HEE responded in 2014 by significantly increasing the number of commissions. However, these won't come out of the 'system' 'til 2017.

(Expert interview)

The Government's decision to temporarily add nurses to the Shortage Occupation List (SOL) was welcomed by all trusts but there was some concern that this move would not be enough to address the extent of the current supply deficit, if the decision to keep nurses on the SOL was not upheld for a longer period.

You can't recover four years of under commissioning in three months.

(NHS Trust, North West)

Some expert interviewees also highlighted that the NHS nursing workforce cannot be seen in isolation to other sectors, such as the social care and care home sector (public and

private) because they rely on the same pool of nurses to maintain their own adequate staffing levels. These sectors already face serious challenges to delivering high-quality care and this will also be driving the demand for nurses across the *whole* profession, and not just the NHS.

> *The health and social care workforces are interconnected so you can't look at a shortage of nurses in one area without considering the other. They all draw from the same pool of skills…*

> (Expert interviewee)

This point is acknowledged by the 2016/17 HEE Commissioning and Investment Plan. When forecasting for available supply up to 2020, the Plan acknowledges the limitations of its forecasting in only accounting for the NHS workforce, and not for the social care or private sectors:

> *It should be noted that the percentage increases [in HEE's forecast of the nursing workforce] are in respect of the NHS workforce only. For professions where a large element of the workforce are employed in care, local government, and private/independent sectors, then this growth will represent a smaller percentage increase of the whole profession.[54]*

For all trusts we interviewed, the lack of newly-qualified nurses was reported as a driver for all international recruitment (both EEA and non-EEA), and not specifically for one particular type.

4.1.2 Ageing workforce

All trusts and experts noted the increasing age profile of the nursing workforce, year on year, and cited this as a major contributor to both nursing shortages and trusts' decisions to recruit from abroad. For one trust, the ageing workforce was its number one driver of nursing shortages:

> *We have worked out that 11 per cent of our nurses will retire in the next five years and 25 per cent are eligible to retire.*

> (NHS trust, North East)

While some trusts were more conscious than others of the ageing profile of their workforce, in terms of working out what proportion of their workforce was likely to be affected, all trusts reported the ageing profile of the profession as a whole as being a significant cause of the current shortage and a key driver of the international recruitment of nurses (both EEA and non-EEA).

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[54] Health Education England (2016), *HEE Commissioning and Investment Plan 2016/17.*

4.1.3 Post-Francis emphasis on safe staffing

In contrast to our quantitative findings (see table 3.9), which used care scores to model the possible effect of the post-Francis guidance on the recruitment of non-EEA nurses, the qualitative work with expert and NHS trusts found that post-Francis guidance around safe staffing levels was driving *all* international recruitment, both from within and outside of the EEA, as well as driving up use of temporary staffing (both bank and agency). The discrepancy between the two sets of findings may be explained by the fact that, for the experts and trusts we spoke to, non-EEA recruitment was not the immediate 'go to' response to filling nursing vacancies, but rather more of a medium to longer term response that had to be considered alongside the time and cost savings associated with other options, such as bank staff or the recruitment of EEA nurses.

As figure 2.4 showed, most trusts had seen an increase in nursing staffing levels post 2013 as a result of the safe staffing guidance, and this was no different across the trusts we interviewed.

Trusts spoke of increased numbers of nurses in their hospitals as a result of the post-Francis guidance on safe staffing and how they now had to factor these minimum staffing levels into their recruitment plans. As one trust described:

> *We had already shut two wards because of insufficient nursing staff and we would have had to shut a third if we hadn't had brought in the Filipino nurses.*

> (NHS trust, North East)

This drive to increase nursing staff levels among the trusts we interviewed has been reinforced by national regulators looking to improve quality of care in acute hospitals. As one trust put it:

> *Post-Francis, the CQC and every other regulator is telling us that we can't tolerate the [nursing] shortages that we did in the past.*

> (NHS trust, North West)

However, while non-EEA recruitment was, in theory, an option for trusts seeking to fill vacancies, it was not an immediate 'go to' response to fill nursing vacancies among the trusts we interviewed. This was mostly because of the time it took to recruit from outside the EEA, which required a minimum six-month lead in time, according to several trusts who had recruited from outside the EEA in 2015. Some trusts also reported delays in processing non-EEA nurses, as well as associated costs, which further impacted their consideration to recruit from outside the EEA. One trust cited delays from NMC and UK Border Agency meaning that 'you couldn't make it [non-EEA recruitment] harder if you

tried' and this was one of the reasons it had not considered non-EEA recruitment again. Another trust reported the costs associated with such delays in the following way:

Delays are expensive to us because all the while we are having to rely on temporary staff… and that is on top of the cost we incur having to demonstrate to the government that we have already advertised the job domestically for four weeks.

(NHS Trust, South East)

In short, the decision to ensure safe staffing levels through non-EEA recruitment was often more of a medium to long-term consideration for many trusts. Tightened immigration rules for non-EEA migrants would seem to be having an effect on trusts' recruitment decisions and this may help to explain why trusts have, in recent years, increasingly recruited from the EEA. It may also explain why our quantitative data shows little influence of care scores over a trust's likelihood of recruiting non-EEA nurses.

Trusts reported that their immediate response to increasing nursing levels, post-Francis, had come from temporary (bank and/or agency) staff because it allowed them to increase staffing quickly, albeit with a cost attached to agency staff.

Safe staffing means that set numbers are in place and we have to meet those numbers. This has pushed up our agency spend, which is a killer at the moment.

(NHS Trust, North West)

One trust reported to have a daily safety dashboard to monitor nurse staffing levels and that when this dropped below a certain level, they would turn to agency nurses to bring staffing back up to 'safe' levels.

Whereas agency/bank staff was often reported to be a short term solution to nursing staffing shortages, EEA recruitment was reported to be more of a short to medium term solution as it could take as little as six to eight weeks to recruit from the EEA, in comparison to six months for non-EEA nurses. EEA recruitment often ran alongside use of bank and agency staff, and a few trusts had rolling recruitment and induction programmes every six weeks to bring in small groups of nurses from the EEA.

4.1.4 Other factors

Nearly all trusts reported **workplace pressures** of one sort or another. Most common were long hours, 'burnout', the pay freezes and low morale. These issues were reportedly impacting upon staff retention levels and contributing to high turnover in some trusts. However, there was no evidence that trusts with more workplace pressures were any more likely to consider non-EEA recruitment. Instead, trusts reported that workplace pressures were just one of many other factors that influenced their decisions to recruit non-EEA nurses. For example, one trust with relatively few work pressures, good retention levels, low agency spend and low sickness absence reported that their main

reason for recruiting from outside the EEA was increasing competition from other trusts in the region, reportedly high turnover among EEA nurses and previous positive experience of having recruited from the Philippines. Related to this were issues around **retention** similar to those reported in chapter two. A few trusts and experts reported anecdotal knowledge of the movement of some NHS nurses to agency work. As these nurses sought greater flexibility and better pay, they either dropped to part-time NHS work, or left the public sector altogether, contributing to high turnover rates. High turnover was notably higher in the trusts we spoke to in the South East and London (echoing the data on leaving rates, presented in table 2.3) and that this was likely to be driving more international recruitment (EEA and non-EEA) in this region. High vacancy rates in the South East were often reported to be linked to the higher costs of living and accommodation and the fact that London was not always attractive for nurses with families.

4.2   Explaining differential use of non-EEA recruitment among trusts

The quantitative results in chapter three show that, with the exception of region and type of trust, there are very few trust-level characteristics which emerge as highly significant in influencing non-EEA recruitment. Instead, the picture which emerges is one of highly varied and differential use of non-EEA nurses between trusts, even trusts within the same localities and regions.

Qualitative evidence from trusts and experts put forward a number of possible reasons for differential use of non-EEA nurses between trusts. These include:

■   A trust's **own approach to workforce planning**, including retention, management and HR policies and how international recruitment fits in with that. Often this could simply come down to whether the Chief Nurse or Human Resources lead had had a previously good experience of recruiting abroad, and/or the organisation already had in place effective international recruitment protocols. For example, one trust had a long-established and very positive previous experience of recruiting from abroad and so had brought in nearly four times the number of non-EEA nurses as a neighbouring trust between 2009 and 2015.

Trusts also had varying levels of resources and/or experience to dedicate to workforce planning, with some trusts better equipped to undertake this than others. As one Chief Nurse, from a large teaching trust reported:

We are 'privileged' that we have a dedicated workforce team, consisting of four people, which sits in the chief nurses' office. Other trusts don't have this.

(NHS Trust, South East)

Another trust, mindful of the costs associated with non-EEA recruitment, had 'tested' non-EEA recruitment by hiring an agency to recruit a small number of Filipino nurses for it. From this, the trust had learned that a whole package of support for the nurses was needed upon arrival in the UK and because of the associated costs, had decided against non-EEA recruitment on a larger scale.

■ **Local demographics and the 'attractiveness' of a trust** were reported to be important in explaining differential use of non-EEA nurses. For example, some large, acute teaching/foundational trusts were able to offer new recruits and trainee nurses more experience across different specialisms, which made them more attractive to new 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. This would often leave other, often neighbouring trusts, struggling to attract adequate numbers of nurses, or nurses with the right skills, and more likely to recruit from abroad. At the same time, some large teaching trusts based in large urban centres reported a high turnover of nurses because of the cost of living, particularly among nurses with families.

Trusts reported more intense competition for nurses among neighbouring trusts, particularly in tight local and regional labour markets, and this had meant that some, even neighbouring trusts recruited non-EEA in varying numbers. As one trust explained, when describing why they are now recruiting from outside of the EEA, for the first time in 11 years:

In the past, we've always been a significant importer from other trusts in the region. We're a massive, city-based, successful trust so we've always been able to attract staff from other trusts in the region in the past. But our closest trust and competitor have increased the size of their communications team and launched a big advertising campaign for nurses. They are more rural than us, but their campaign would be trying to target our nurses as well as others.

(NHS Trust, North East)

■ **Some trusts have different skills needs** which could lead to differential use of non-EEA nurses. Most trusts reported their biggest shortage in Band 5 Adult Nurses; however one trust reported their most acute shortage to be in a smaller number of specialist nursing roles.

4.3   Views on how to address the current shortage

In recent years, NHS trusts have relied on a mix of temporary staffing (agency and bank nurses) and international recruitment to help fill nursing shortages, particularly post-Francis.[55] There was reliance on agency and bank nurses in all but one of the trusts we interviewed. Agency use was viewed as a necessary evil among the trusts we interviewed and they were fully aware of the cost implications and some of the negative impacts on staff morale, motivation and the potential to develop a collegiate atmosphere. These, in turn, negatively impacted upon retention levels. As one Director of HR put it:

> *My values don't sit well with paying agencies out of public money but I don't have a choice. I have to manage with what I've got and what I'm faced with.*

(NHS Trust, South West)

All trusts were actively pursuing ways of keeping agency spend to a minimum, even before the cap on spending was announced in 2015. Two trusts planned to focus even more on retention to keep agency spend low, while another trust reported that it had turned to greater EEA recruitment in 2013 in an attempt to keep agency spend low. Another trust reported that it had worked together with other regional trusts to 'starve out' the premium agencies.

All the trusts we spoke to were using agency nurses in combination with bank staff. However, there were reported limits to what bank staff could deliver. For example, one trust had a very low use of agency nurses because of their effective bank system. However, it reported that the bank system was now coming under pressure due to many staff reaching their hourly limit under the working time directive. As a result, they were considering non-EEA recruitment as a means of keeping agency spend low because they had already worked out that it was more cost effective to recruit a Filipino nurse, than to get in an agency nurse.

As trusts recognised, the recent growth in agency spend and reliance upon temporary staff is not a financially sustainable or optimal solution. As such, trusts and experts identified five policy interventions to address the current shortage:

- improve retention of the current nursing workforce

- 'grow our own', by increasing the numbers in pre-registration nursing education

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[55] Addicott R et al. (2015), *Workforce planning in the NHS*. London: Kings Fund: http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/Workforce-planning-NHS-Kings-Fund-Apr-15.pdf

■ attract 'returners' back to the workforce, who are qualified but not currently practising

■ recruit internationally

■ improve productivity/change skill mix and/or different working patterns.

The qualitative evidence presented below is in relation to the first four policy interventions listed above. Evidence is limited with regard to the final intervention and so it is unclear whether, and to what extent, this would be a viable way to address the nursing shortage based on our qualitative research alone.

4.3.1 Improve retention

Experts and some trusts acknowledged that improving retention would be a more cost effective alternative to international recruitment. As one expert pointed out, the latest data reported by HEE suggests an increase in the turnover of nurses. However, while retaining more nurses could make a contribution, there is a stated need by some trusts to expand the recruitment pool. As one trust put it, when asked about how far improved retention could address their current nursing shortage:

> *If we all [trusts] retain our nurses, then that's great, but how are we then going to fill our vacancies if the current pool of nurses are staying put? We can do more to improve our retention here but that just makes it harder for the trust down the road to fill their vacancies.*

(NHS trust, North East)

Improving retention may also not make a major contribution to addressing the challenge if the issue of the ageing profile of the nursing workforce is not addressed. As one trust highlighted:

> *We've done a lot of work on retention and are very close to our target on this, but our biggest turnover is in retirees.*

(NHS trust, South West)

Most trusts we interviewed are already addressing retention, not least because increasing competition between trusts for adult nurses has driven them to improve their staff 'offer'. One trust described how their neighbouring trust had 'upped their game' to attract new nursing recruits which had, in turn, motivated them to look again at their own staff offer and see if it could be more competitive. However, the qualitative interviews with trusts also highlighted the difficulty in assessing the effectiveness of such interventions on retention, particularly given the other factors impacting upon a nurse's decision to leave their post, and the different organisational contexts of trusts, which are also likely to be influential. Trusts themselves do not collect data on retention in a consistent and robust way and so any national drive to improve nurse retention would have to address this. A

recent literature review on retention found that 'intervention studies are almost wholly lacking and we are unable to conclude that the [HEE and NHS Employers] guidance will have an impact'.[56]

Among some trusts, there is also a question of whether they would have the capacity to improve retention among their nursing workforce given their current financial positions and/or the pressures on their services. One trust described how 'we can't do more' on retention, while another trust reported a vicious cycle of high vacancy rates leading to difficulties retaining staff:

If we could just get to a position of being fully established, we could do more work on retention… but we haven't been fully established for three to four years.

(NHS Trust, London)

The better the staffing level, the better it is to get people to stay.

(NHS Trust, North West_

4.3.2   'Growing our own'

Experts told us that there is potential for the UK to 'home grow' its domestic nursing workforce because the demand for nursing education is high. The recent modest increases that the HEE have made for student nursing commissions will take three to four years to have an impact because of the time taken to train nurses, as many trusts emphasised. As one group of Chief Nurses put it:

We are working with our partners in the health care system to develop a long-term strategy to address nursing shortages. However, the impact of increased commissions, for instance, would only be felt in 3-4 years. In the meantime, the challenges we face, such as a shortage of specialist nurses who require considerable additional training, mean that the importance of international recruits, from both within and outside of the EU, in addressing these must be recognised.

(Shelford Chief Nurses Group)[57]

[56] Drennan V M, Halter M, Grant R L, Gale J, Harris R and Gourlay S (2015), *Adult Nurse Turnover and Retention: South London Project Report.* Kingston University & St George's University of London, p.5.

[57] http://shelfordgroup.org/sub_group_article/chief-nurses/the-shelford-group-chief-nurses-respond-to-the-migration-advisory-committee Last accessed 10 January 2016.

The impact of the removal of the cap on commissions is unknown, and the experts we interviewed as part of this study expressed uncertainty as to how this would impact the future supply of UK trained nurses.

4.3.3   Attracting 'returners' back to the workforce

Expert interviewees noted that relatively little use has been made of return-to-practice schemes in recent years. In 2014-15, approximately 900 nurses enrolled on return-to-practice courses. Past initiatives have attracted more nurses back to the NHS; a centrally funded programme between February 1999 and March 2004 resulted in 18,500 former nurses and midwives returning to work – four times the number who completed return-to-practice courses a decade later (4,800 from 2010 to 2014).[58]

Nevertheless, Health Education England has allocated £1.3 million in 2015/16 to retraining the current qualified workforce to return to work, in addition to £1.5 million in 2014-15. The cost of these schemes is relatively low and the timescales short, compared to the cost and the time taken to train new nurses; the National Audit Office reports that a national scheme supporting nurses to return to the NHS takes three months at a cost of £2,000 per person.[59] Health Education England has also noted the benefits of using staff who come back to the NHS, noting that they typically bring valuable experience back with them and go on to be employed by the trust in question.

However, experts we spoke to warned that the potential for return-to-practice schemes to meet the current and future demand for nurses remains unclear, given the modest numbers who have returned but also the gaps in the data around why nurses leave the NHS and what is required to encourage them to return. Data on the use and success of these initiatives are also no longer collected centrally. HEE argues that these schemes 'could form an important component of workforce strategies but are poorly understood and… [have] received comparatively little evaluation'. With better quality data on this, the scale and value of these schemes could be better evidenced, but at present this is not the case.[60]

Many trusts we spoke to questioned why nurses would want to return to a profession under the current working conditions in many hospitals, citing work pressures and the ageing of the profession as factors. As one trust stated:

Nursing's hard when you're in your 60s, and then they have to contend with the current work pressures in many hospitals.

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[58] National Audit Office (2016), *Managing the supply of NHS clinical staff in England.* London: NAO
[59] Ibid.
[60] Higher Education England (2014), *Nursing Return to Practice: Review of the current landscape*. Leeds: HEE, p.3

(NHS Trust, South West)

4.3.4 International recruitment

From the trusts' perspective, with the need to urgently fill vacancies to assure patients safety, with a cap on agency use and difficulties in recruiting locally, it makes sense to recruit internationally, with a priority to consider recruitment within the EEA first, given that it is quicker and easier.

Even though recruitment from the EEA has been on the increase in recent years, expert interviewees and trusts reported that there is still unmet demand which was making non-EEA recruitment a necessity for them. Trusts reported diminishing returns from Europe in terms of the volumes of nurses that they could potentially recruit in comparison to some non-EEA countries. Volumes were important to the trusts we spoke to because of the reported scale of nursing shortages reported in the section above, but also because of the upfront investment costs of undertaking international recruitment. A recent survey by NHS Employers suggests that this is a more widespread issue among NHS trusts; 68 per cent of EEA-targeted recruitment campaigns had been unsuccessful at sourcing the number of planned appointments.[61]

Volumes of recruits in European countries were often significantly lower because some of the European economies, which had supplied nurses to several NHS trusts in recent years, were now doing a little better economically, reducing the supply of potential recruits. Second, there were anecdotal reports from interviewees that the European market had already been exhausted, particularly in places like Italy and Spain, where there has been heavy recruitment from some NHS trusts in recent years, and from places like Portugal, which already has a shortage of nurses. This is in contrast to the Filipino and Indian job markets, which are characterised by an oversupply of skilled nurses who are encouraged to seek posts abroad. As two trusts reported:

In Europe, we might look to get a maximum of 20 [nurses] now, whereas in the Philippines, you could get 80-100.

(NHS Trust, London)

The only way you get volume that you need… you get it from universities or you go abroad. The commissions are low and so going abroad is the only option.

(NHS Trust, South West)

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[61] NHS Employers (2015), *NHS Registered Nurse Supply and Demand Survey*. London: NHS Employers.

Reported advantages of recruiting non-EEA nurses over EEA nurses

Trusts also reported other advantages of recruiting non-EEA nurses over EEA nurses. In line with this, the 2015 NHS Employers survey indicates that 56 per cent (83 trusts) have plans to actively recruit from non-EEA countries in the next 12 months.

Trusts and expert interviewees reported that non-EEA nurses from India and the Philippines (the two largest suppliers of non-EEA nurses to the UK) were also often **more experienced and had better English language skills** than some EEA nurses because these foreign workforces tended to be characterised by highly skilled nurses with good levels of spoken and written English. English language skills were thought to be increasingly important among the trusts and experts we spoke to because of the Nursing and Midwifery Council requirement, as of January 2016, for nurses from the European Union to pass an International English Language Testing System (IELTS) exam before they start working in the UK. All trusts anticipated that this would significantly reduce the numbers of potential recruits from the EEA, if not diminish them altogether. One trust went as far as to suggest the new IELTS exam would almost remove Europe as a viable alternative for them to recruit any new nurses, saying:

> *I don't think anyone will go to Europe anymore after these [exams] are introduced because it will yield even fewer potential recruits. This will mean that the time and expense of European recruitment will be the same or even greater than foreign recruitment.*

(NHS trust, London)

Trusts also reported generally **better retention** among non-EEA recruits, than among EEA recruits. Non-EEA recruits often had families back home who were dependent on their income, or had come to the UK with family members in previous years, and these dependants meant that they were more likely to stay with the trust. Non-EEA nurses also have restrictions attached to their entry into the UK which effectively ties them to their employer for the first few years of their stay. These factors mean that it is easier to retain non-EEA nurses than EEA nurses, who are arguably more mobile. For example, one trust in the North West recruited 200 Indian nurses between 2001 and 2004, all of whom are still with the trust. The trust's decision to go to India at the time was influenced by the fact that there was already a well-established Indian community in the area, which could ease the nurses' settlement upon arrival. As a result of these Indian nurses staying with the trust, it has not had to recruit any more non-EEA nurses in the period 2004-2015. Similarly, in 2005, another trust in the North East recruited approximately 95 Filipino nurses, of which 92 are still at the trust and 89 are still in nursing positions. Again, because of this the trust has not needed to recruit any more non-EEA nurses in the last ten years.

In contrast to this, trusts reported that EEA nurses would often come to the UK to gain more experience, or because of temporary economic problems in their home country,

rather than to support dependants back home. Hence, interviewees thought that the movements of EEA nurses within the internal nursing labour market of the UK was greater than that of non-EEA. This had not deterred trusts from recruiting from the EEA, but it had caused issues in terms of retention and turnover among the nursing staff. As one trust interviewee saw it:

European nurses are easier to get in [to the UK], but harder to keep, whereas foreign nurses are harder to get in, but easier to keep.

(NHS trust, London)

4.4 Conclusion

In line with the findings of chapter 2, this chapter has underlined that structural factors have played in creating the current shortage of nurses, particularly the ageing profile of the nursing workforce, the post-Francis guidance on safe staffing and the issue of too few student nurses. These factors have been articulated by health sector experts and NHS trusts as driving the recruitment of *all* international nurses – both EEA and non-EEA – and not exclusively driving non-EEA recruitment. Although trusts reported some 'advantages' to recruiting non-EEA nurses over EEA nurses, more important considerations, such as the time and costs associated with non-EEA recruitment, were more influential in determining final recruitment strategies.

Indeed, the qualitative findings in this chapter indicate that trusts consider a range of factors when recruiting international nurses. These include a trust's previous approach to workforce planning, the time taken to bring in non-EEA nurses, the costs of recruiting from the EEA versus non-EEA countries, local demographics and likely success of trying to recruit 'domestically', based on previous experience.

The trusts we interviewed were also conscious of the costs of agency nurses, as well as its negative impact they often had on patient care; many were clearly using agency nurses as a 'last resort' to meeting their safe staffing levels. In describing the 'necessary evil' of agency nurses, many interviewees spoke of the need for more long-term measures to ensure the nursing workforce does not face similar shortages in the future. Industry experts, in particular, articulated the need to learn from the previous nursing shortage in order to address workforce issues in a more sustainable way. It is this issue, then, that we now consider in the final chapter.

5   Policy responses: Lessons for policymakers from the last 'boom' and 'bust' period

The underlying factors for the 'boom' of the early 2000s in international recruitment, and subsequent bust from 2005 onwards can be attributed in part to broader issues around inadequacies and changes in the approach to national level workforce planning in the NHS. Although the drivers behind the previous and current shortage of nurses have been different, the underlying cause of both has been a failure of the healthcare sector to adequately sustain long-term workforce planning.

This chapter identifies longer-term policy responses for policymakers, drawing on lessons from the last 'boom' and 'bust' period and the evidence presented earlier in this report. In doing so, this chapter aims to identify ways in which reliance on international recruitment can be reduced and the supply of nurses can be secured in a more sustainable way for the future. The 'lessons' set out in this section are framed by the acknowledgement that the level of international recruitment to the UK has varied, but overall, the UK is currently heavily reliant on international nurses. In line with our analysis in chapter three (figure 3.2), OECD estimates that 12.7 per cent of UK nurses were foreign trained, compared to an OECD average of 5.9 per cent.[62]

Specific 'lessons' for policymakers seeking a more stable supply of nurses in the UK, that is less susceptible to boom and bust cycles, are set out below:

■ **A lack of long-term, strategic workforce planning** has been partly responsible for the cycle of boom and bust in international recruitment and the cyclical shortages of nurses in the UK labour market. The 2007 UK Parliament Health Committee report on NHS workforce planning highlighted this as an issue, citing the cuts to training provision at the time as an example. However, this problem has persisted with healthcare providers at a local level often being influenced by short-term priorities, which in recent years have been funding constraints and (post Francis) safe staffing levels, rather than longer-term workforce needs. In contributing to the national

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[62] OECD (2015), *Health at a Glance 2015*. Paris: OECD, page 9.

workforce planning process, some NHS trusts have under estimated the future number of nurses required – just one of the reasons why Health Education England increased their student commissions for 2015/16 and marginally increased it again for 2016/17[63] More recently, the National Audit Office has highlighted that trusts' workforce plans appear to be influenced as much by the pressure of efficiency targets as by workforce needs. Financial plans, which trusts have had to prepare on a regular basis for Monitor or for the NHS Trust Development Authority, often focus primarily on efficiency targets and may risk understating their true staff needs because of cost concerns.[64]

- **Weak central oversight and coordination have compromised the effective supply of nurses** and this has meant that the security of the future supply of nurses has been compromised. There has been very little national or regional coordination of international recruitment or return-to-practice initiatives, despite the fact that many healthcare providers could be competing for the same staff and despite the potential cost savings through exercising economies of scale and co-ordinating efforts.[65] Since its creation, Health Education England has sponsored return-to-practice initiatives, which is likely to improve coordination on this front, but the coordination of international recruitment is not part of its remit.

- **Workforce, financial and service planning have not been sufficiently aligned,** and so workforce planning has often been based on isolated factors and issues, instead of integrative decisions across all NHS organisations. In the 'boom' period, in the early 2000s, some NHS organisations continued to recruit large numbers of staff in spite of their rising financial deficits, while the Department for Health also failed to ensure that targets for staffing growth were consistent with the level of funding available, as noted by the Health Committee in 2007.[66] In a similar way, the workforce implications of recent policy aspirations and guidance have not always been heeded. For example, the recent National Institute for Health and Care Excellence (NICE) guidance on minimum staffing for adult nursing was not accompanied by any additional funding to cover the costs associated with safe staffing requirements. This is despite the fact

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[63] Health Education England (2013), *Workforce Plan for England 2014/15*. Leeds: HEE; Health Education England (2015), *HEE Commissioning and Investment Plan 2016/17*. Leeds: HEE: https://www.hee.nhs.uk/sites/default/files/documents/Workforce-plan%202014-15.pdf

[64] National Audit Office (2016), *Managing the supply of NHS clinical staff in England*. London: NAO: https://www.nao.org.uk/wp-content/uploads/2016/02/Managing-the-supply-of-NHS-clinical-staff-in-England.pdf

[65] National Audit Office (2016), *Managing the supply of NHS clinical staff in England*. London: NAO: https://www.nao.org.uk/wp-content/uploads/2016/02/Managing-the-supply-of-NHS-clinical-staff-in-England.pdf

[66] House of Commons Health Committee (2007), *Workforce Planning*. Volume 1. p. 103.

that NICE itself estimated the impact of its minimum staffing guidance as being up to £414 million.[67]

■ **Gaps in the workforce data persist**, making it difficult to make well-informed decisions and measure the impact of specific initiatives. For example, available data on retention and return-to-practice are insufficient to assess their respective impacts on the nursing workforce; flows of nurses between sectors and UK countries is not well understood; and more broadly, there is insufficient information on non-NHS employment and demand for nurses to allow workforce planning to be effective sector wide.

■ **International recruitment presents several advantages to policymakers who are looking to increase the size of the nursing workforce.** In the late 1990s, it offered a rapid response to meeting the national targets on staffing growth, and, as such, was explicitly supported by the Department of Health, who developed a range of policies to assist trusts in targeting appropriate sources of supply in other countries. Nurses were recruited and working in the UK within a few months and not the four years it would take to commission and train a UK educated nurse. Although the time taken to recruit and bring in a non-EEA nurse has become more complicated due to tightened visa requirements and online tests, for example, international recruitment can still be a much quicker way of addressing workforce shortages than moves towards 'growing our own' – if 'growing our own' is based only on increasing supply through investment in training new staff; improved retention would be a potentially low cost and more rapid response. International recruitment is also a flexible lever for UK policymakers because of the Shortage Occupation List, which can help manage migration at times of particular shortage or at times when numbers of recruits need to be reduced. This point was noted in the evidence to the House of Commons Health Committee in 2006 when the then HR Director for the NHS stated that international recruitment had made the 'single greatest contribution' to achieving NHS workforce growth.[68] Finally, international recruitment carries with it little financial risk to policymakers because the recruits are trained elsewhere and at someone else's expense.

■ **However, international recruitment should be well aligned to other aspects of workforce planning (see previous points).** If this is not the case, then previous experience has shown that it can contribute to the uneven distribution of new staff and

[67] NICE (2014), *Safe Staffing Guideline: Safe staffing for nursing in adult impatient wards in acute hospitals. Report on the potential resource implications*. NICE: London.

[68] House of Commons Health Committee (2007a), *Fourth Report of Session 2006–07*. Volume 2 Oral and Written Evidence. Q95, Ev15, 11 May 2006.
http://www.publications.parliament.uk/pa/cm200607/cmselect/cmhealth/171/171ii.pdf

over expansion in staffing growth.[69] The counter argument to the benefits of international recruitment, noted above, is that it takes the pressure off employers to become more effective in planning, recruiting and retaining domestic supply; if not well aligned with other workforce policies it can contribute to boom and bust, and may restrict opportunities for domestic entrants to train as nurses (in recent years applications for nursing education in the UK have far exceeded available funded places).

■ **The regulatory, education, employment and immigration dimensions of the international recruitment of nurses to the UK have sometimes been out of alignment.** For example, the rapid increase in applications for international nurses to enter the UK at the beginning of the last decade initially led to a significant backlog of applications to process at the regulator (the then UK Central Council (UKCC), now the Nursing and Midwifery Council). This backlog delayed the immigration and employment of thousands of nurses at the time, leaving them in limbo and was only solved by increasing the administrative capacity of the UKCC to process applications, with support from the Department of Health.

5.1   Conclusion

The UK nursing labour market has been characterised by cyclical patterns of nursing shortages. A lack of long-term workforce planning has meant that nursing supply and demand in the UK has rarely been in sync, and there have been periods when active international recruitment has become a 'policy solution' for the NHS in England. Evidence around the current shortage of nursing suggests little has improved since then, in terms of workforce planning. Although there are some recent drivers of demand for more nurses, such as the *Francis Report* (2013), other issues, such as retention and the ageing nursing workforce have been known to workforce planners for over a decade and yet little action has been taken to address these.

It is largely this lack of long-term, strategic workforce planning, that offers oversight, coordination and alignment of the different dimensions of the nursing workforce, that has led to the current shortage of nurses and the pattern of varied and differential recruitment of non-EEA nurses among trusts, even those in the same shared region. At a time when many trusts are facing financial difficulty, they have to balance recruitment decisions with a range of other pressures and considerations they may face at the trust level. These include their own approach to workforce planning (whether the trust has previously recruited from outside of the EEA and/or the resources available to it); local

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[69] Buchan J (2009), 'Achieving workforce growth in UK nursing: Policy options and implications', *Collegian,* 16, pp. 3-9.

demographics and the 'attractiveness' of the trust; and the different skills needs of the trust.

Region and type of trust emerge as the only consistent and significant influences, across all trusts, on the recruitment of non-EEA nurses, with trusts in London and the South East more likely to recruit from outside of the EEA.

The findings of this research point to three areas in which more evidence would help support better workforce planning in the future. This includes better evidence on the effectiveness of interventions designed to improve retention, which could usefully inform any national drive to improve retention across the NHS nursing workforce. Related to this, there is a case for implementing a consistent method of data collection on retention across all trusts. The second area which needs close monitoring is the numbers of student nurses, following the government decision to remove the student nurse bursary. It is too early to predict what the effect of this decision will be; it may discourage prospective students from taking up nursing, or allow expansion, but either way it has clear workforce implications for the future. Finally, given the importance of region and demography in influencing trusts' use of non-EEA (and EEA) nurses, more evidence is needed to pin down the issues at play in London and the South East. Our research has already contributed to this last area, not least by developing a geographical catchment area for each trust, but more work is needed to understand the interplay of 'push' and 'pull' factors in these regions and why they result in higher vacancy rates and greater turnover than on other regions.

6   Appendix tables

Table 6.1: Descriptive statistics for workplace policy/practice outcome indicators, NHS trusts, England, 2015

	Satisfaction with resourcing and support (scale 1=low satisfaction, 5=high satisfaction)	% of staff working extra hours	Staff engagement (scale, 1=not engaged, 5=very engaged)	Nurses turnover rate 2015	Nurses turnover rate 2014
Mean	3.32	72.3	3.80	9.1	8.3
Std Dev.	0.11	4.20	0.11	2.7	2.8
Median	3.31	72.7	3.80	8.8	7.9
Min.	3.05	57.3	3.47	4.4	2.9
25th %ile	3.24	69.4	3.74	7.1	6.4
75th %ile	3.38	75.4	3.87	10.4	9.8
90th %ile	3.48	77.5	3.94	12.9	12.0
Max.	3.65	81.5	4.004	19.2	24.7
Number	227	227	227	226	226

Source: IES analysis of HSCIC and NHS Staff Survey data

Table 6.2: Distribution of acute trusts' caring quality rating scores, acute trusts, 2015/16

	Frequency	Per cent
2	4	3.7
2.5	3	2.8
2.67	3	2.8
3	85	78.0
3.33	1	0.9
3.5	3	2.8
3.67	1	0.9
4	9	8.3
Total	**109**	**100**

Note: scale is 1=Inadequate, 2=Requires Improvement, 3=Good, and 4=Outstanding

Table 6.3: Mean CoS used by NHS trusts by Region in England, Year to August, 2009-15

	2009	2010	2011	2012	2013	2014	2015	N=
East Midlands	3.1	2.9	0.6	0.8	1.3	1.9	2.1	14
East of England	10.4	21.7	2.5	2.3	12.7	6.1	8.3	26
Kent, Surrey and Sussex	4.4	7.0	1.4	2.2	4.0	3.6	7.3	17
North Central and East London	10.2	18.0	3.0	3.5	7.1	5.9	9.8	13
North East	3.3	5.2	1.2	0.8	3.4	0.8	1.2	10
North West	1.1	1.4	0.2	0.3	0.5	0.2	0.8	40
North West London	12.3	30.9	7.0	11.8	17.9	30.0	33.2	11
South London	10.9	15.0	6.7	4.5	10.6	33.6	25.9	10
South West	1.5	2.4	0.5	1.2	1.6	1.6	2.2	20
Thames Valley	6.0	9.0	0.8	3.8	9.7	6.5	7.5	6
Wessex	3.4	4.8	0.3	0.6	5.2	5.8	2.3	11
West Midlands	1.4	1.7	1.1	0.3	0.5	1.0	0.8	28
Yorkshire and the Humber	1.7	0.8	0.2	0.2	0.5	0.6	1.4	21

Table 6.4: Basic descriptive statistics of key trust workforce variables, 2015

	Total headcount	RoW nurses as % of all nurses	RoW nurses as % of all nurses with known nationalities
Mean	4,899	7.0	7.9
Std Dev.	2,829	6.0	7.0
Median	4,160	5.6	6.7
Min.	965	0	0
25th %ile	3,003	2.2	2.3
75th %ile	6,076	9.9	10.8
90th %ile	8,743	15.6	17.4
Max.	15,744	26.6	47.2
Number	227	227	227

Table 6.5: Trusts by type, 2015

	Frequency	Per cent
Acute Specialist Trust	17	7.5
Acute Trust	136	59.9
Mental Health Trust	55	24.2
Community Health Trust	19	8.4
Total	**227**	**100.0**

Source: IES analysis of HSCIC data

Table 6.6: Distribution of trusts, and nursing employment levels, by NHS Region, England, 2015

	Number of trusts		Number of nurses	
	Number	Per cent	Number	Per cent
East Midlands	14	6.2	26,500	7.7
East of England	26	11.5	30,700	8.9
Kent, Surrey and Sussex	17	7.5	24,500	7.1
North Central and East London	13	5.7	22,100	6.4
North East	10	4.4	22,200	6.4
North West	40	17.6	55,500	16.1
North West London	11	4.8	16,000	4.6
South London	10	4.4	20,200	5.9
South West	20	8.8	25,700	7.5
Thames Valley	6	2.6	11,300	3.3
Wessex	11	4.8	16,700	4.8
West Midlands	28	12.3	38,600	11.2
Yorkshire and the Humber	21	9.3	35,100	10.2
Total	**227**	**100.0**	**345,000**	**100.0**

Source: IES analysis of HSCIC data

Table 6.7: Regression model estimates – (dependent variable = proportion of EEA nurses, and proportion of all non-UK/Irish (ie EEA plus non-EEA))

	Model with proportion of EEA nurses		Model with proportion of all non-UK/Irish	
	Coefficient	**Significance**	**Coefficient**	**Significance**
(Constant)	-14.24	0.133	-16.81	0.353
Headcount	0.00	0.957	0.00	0.929
Mental health Trust	-4.40	0.000***	-8.02	0.000***
Community health Trust	-4.03	0.000***	-9.42	0.000***
Acute Specialist Trust	-0.94	0.243	-3.29	0.033*
Acute Trust (ref. category)	-	-	-	-
Satisfaction with resources and support	2.95	0.344	12.88	0.031*
Percentage of staff working extra hours	0.02	0.711	0.16	0.155
Staff Engagement	1.53	0.642	-8.43	0.181
Nurses turnover rate 2015	0.06	0.551	0.00	0.985
London	3.50	0.002**	7.98	0.000***
South East	2.13	0.002**	5.25	0.000***
Midlands	-0.95	0.203	-1.82	0.200
North	-1.40	0.070	-3.03	0.040*
South West (ref. category)	-	-	-	-
Earnings 2015	0.00	0.889	-0.01	0.335
Infant rate	0.45	0.401	2.51	0.014*
Bad health rate	-0.23	0.440	-0.44	0.442
Unemployment JSA rate 2015	-0.38	0.251	-1.57	0.013*
Ethnicity	0.01	0.872	0.10	0.153
Rurality	0.01	0.401	-0.03	0.225
N=	221		221	
R^2	0.62		0.73	

Note: *** indicates significance at the 0.1% level, ** indicates significance at the 1% level, and * indicates significance at the 5% level

Source: IES analysis of HSCIC and NHS Staff Survey data

Table 6.8: Regression model estimates – (dependent variable = change in non-EEA nurses as a % of all nurses, 2014 to 2015)

	Model with care quality rating – acute trusts		Model with financial surplus – Foundation trusts	
	Coefficient	Significance	Coefficient	Significance
(Constant)	10.96	0.170	-1.26	0.829
Headcount	0.00	0.054	0.00	0.042*
Mental health Trust	-	-	0.07	0.711
Community health Trust	-	-	-	-
Acute Specialist Trust	-	-	0.23	0.385
Acute Trust (ref. category)	-	-	-	-
Work Pressure 2014	-0.85	0.534	1.60	0.100
Percentage of staff working extra hours 2014	0.00	0.968	-0.01	0.518
Staff Engagement 2014	-0.62	0.620	0.51	0.592
Nurses turnover rate 2014	0.05	0.225	0.02	0.614
London	-0.13	0.829	0.61	0.147
South East	-0.03	0.934	-0.16	0.535
Midlands	-0.21	0.551	-0.17	0.574
North	-0.18	0.632	-0.22	0.437
South West (ref. category)	-	-	-	-
Earnings 2014	-0.01	0.000***	-0.01	0.000***
Infant rate	-0.39	0.107	-0.19	0.351
Bad health rate	-0.13	0.417	-0.18	0.154
Unemployment JSA rate 2014	0.00	0.987	0.10	0.419
Ethnicity	0.00	0.938	-0.02	0.277
Rurality	-0.02	0.003**	-0.01	0.005**
Care quality rating	-0.01	0.971	-	-
Financial surplus 2014	-	-	0.00	0.243
N=	107		133	
R^2	0.17		0.25	

Note: *** indicates significance at the 0.1% level, ** indicates significance at the 1% level, and * indicates significance at the 5% level

Source: IES analysis of HSCIC and NHS Staff Survey data

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