

Why you should read this article:

- To refresh your knowledge of the nursing associate role and the reasons why it was introduced
- To recognise the barriers and challenges in implementing the nursing associate role in general practice
- To consider how the nursing associate role could be better supported and more widely accepted in general practice

Exploring the implementation of the nursing associate role in general practice

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Abstract

Background The nursing associate role was introduced to help reduce staff shortages in the NHS by bridging the gap between healthcare assistants and nurses. However, there is evidence that its implementation in general practice has been limited.

Aim To understand why, how and to what extent the nursing associate role has been implemented in general practice and what the barriers and enablers have been.

Method Semi-structured interviews and focus group discussions were conducted with a purposive sample of general practice staff in north east England. Template analysis based on a priori themes drawn from the literature was used to analyse the data.

Findings A total of 17 interviews and three focus group discussions were conducted with 29 GPs, managers, nurses, nursing associates, trainee nursing associates and healthcare assistants from five general practices. The barriers to the implementation of the new role included a lack of clarity about the place and purpose of nursing associates, a mismatch between nursing associate training and practices' needs, tensions around professional boundaries, and challenges in developing a professional identity.

Conclusion In general practice settings, the role of nursing associate is not yet fulfilling its original purpose and it needs to be better supported, accepted and implemented.

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Keywords

career pathways, community, general practice, nursing associates, primary care, professional, skill mix, support staff, workforce, workforce planning

Background

Workforce shortages in the NHS are frequently under the spotlight, often due to their negative effects on service delivery and patient safety (Buchan et al 2020, Rolewicz et al 2022). The coronavirus disease 2019 (COVID-19) pandemic has increased the demand on healthcare services and the pressures on the NHS (Shembavnekar et al 2022) but the underlying chronic workforce shortages remain and are an area of concern for policymakers and healthcare service managers.

Despite medical and technological advances, delivering healthcare services remains highly labour-intensive. The government has committed to an expansion of the NHS workforce with more GPs and additional resources for professionals including nurses, physician associates, pharmacists and mental health workers, together with an increase in funding (NHS 2019, NHS England 2014, 2016).

The workforce continues to be a significant component of the NHS budget and one of the main factors in the increase of healthcare costs

(Addicott et al 2015). In 2019/2020, the total expenditure on NHS staff was £56.1 billion, almost 47% of the NHS budget (King's Fund 2023). Making the most effective use of this resource is critical.

In recent years, acute workforce issues in nursing and general practice have been reported, and continuing staff shortages and high workloads have caused significant strain (Buchan et al 2019, Shembavnekar et al 2022, King's Fund 2022). These issues have been exacerbated by the COVID-19 pandemic and by the subsequent period of recovery (King's Fund 2022). A Health Foundation report predicted persistent shortages of practice nurses and GPs amid wider workforce concerns (Shembavnekar et al 2022). To help address GP shortages, a change in skill mix in primary care has emerged as one practical response (Nelson et al 2018).

In 2019, as part of the introduction of primary care networks, it was announced that 26,000 additional non-medical clinical staff would be recruited in primary care by 2023/2024 through the Additional Roles Reimbursement Scheme (ARRS) (Baird et al 2022). The nursing associate role is one of 13 roles eligible for that financial support (Baird et al 2022, Francetic et al 2022). While some primary care networks have been quick to take up the offer of financial support and recruit new staff, there is evidence of ineffective implementation of the ARRS (Baird et al 2022).

The role of nursing associate was created in response to the Shape of Caring review (Willis 2015), with the intention of bridging the gap between healthcare assistants and nurses (Nursing and Midwifery Council (NMC) 2023a). Nursing associates are regulated by the NMC (2023a) and the role only exists in England.

This article describes a study conducted to explore the implementation of the role of nursing associate in general practice. To the author's knowledge it is the first of its kind. It is intended to inform the future planning and implementation of the nursing associate role and other non-medical roles in primary care and beyond.

Aim

To understand why, how and to what extent the nursing associate role has been implemented in general practice and what the barriers and enablers have been.

The associated research questions were:

- » In establishing (or institutionalising) the nursing associate role, what processes are followed?

- » What effect does professional role identity have on the legitimisation process?
- » What are the early effects of implementing the nursing associate role?

Method

Design

A qualitative multiple case study design with an interpretive approach was used. According to Yin (2017), such an approach enables researchers to investigate 'how' and 'why' questions in situations where participants' behaviours are not under their control. A multiple case study design is generally more compelling and robust than a single case study design (Yin 2017).

Participants

Purposive sampling was used to recruit general practices in north east England. Because there are few nursing associates in primary care, all practices in the region who employed nursing associates were invited to take part. Recruitment was carried out through the nursing directors of the seven local clinical commissioning groups (CCGs) and supported by the Health Education England senior nursing workforce regional lead and research engagement leads. Five general practices in five out of the seven CCGs were recruited. Table 1 shows the demographics of the participating general practices.

Data collection

Data were collected between October 2021 and October 2022, at least six months after the nursing associates employed by the practices had registered, so that they would have had time to settle in their new role. NHS England (2022) recommends a minimum length for preceptorship programmes of four months, so six months was considered a reasonable time period.

Semi-structured interviews were used. Different members of staff were interviewed in each practice: GPs, managers (nurse

Implications for practice

- Skill-mix changes in general practice need to be underpinned by robust workforce planning
- Preceptorship and peer support are needed to facilitate the integration of newly registered nursing associates in general practices
- Integrated care boards, primary care networks and general practices need to work together to clarify the role of nursing associate
- The possibility for nursing associates to administer medicines under a patient group directive needs to be explored
- The structure and contents of nursing associate training programmes must better reflect the needs of general practice
- Public and professional awareness of the nursing associate role could be raised through a media campaign

Table 1. Demographics of the participating general practices

Practice	Type	Approximate registered population	Environment
1	Medical group	16,000	Urban
2	Alliance	26,000	City
3	Partnership	51,000	Town
4	Limited company	40,000	Urban
5	Medical group	36,000	Urban

managers or practice managers), nurses and nursing associates. A different semi-structured interview schedule was used for each participant group, with questions covering three broad areas:

- » General views on the nursing associate role.
- » Use of the nursing associate role in daily practice.
- » Effects of the implementation of the new role.

Nursing associates were also asked about their relationships with members of the practice team and patients.

In three of the five practices, focus group discussions were held with various members of the nursing team – nurses, trainee nursing associates and/or healthcare assistants.

All interviews and focus groups discussions were audio-recorded and transcribed verbatim. The transcripts were anonymised and the data transferred to NVivo (version 12) software.

Data analysis

Template analysis, a form of thematic analysis (King and Brooks 2017), was used to identify and organise themes from the interviews and focus group discussions. A priori themes generated by a review of the literature on the implementation of new work roles were used as the basis for template analysis – in particular Kessler et al's (2017) work on the institutionalisation of new support roles in healthcare, which had expanded the model proposed by Reay et al (2006). The focus was on identifying overarching organisational and operational factors affecting the implementation of the nursing associate role and the early effects of its implementation. Data were first analysed at the level of each practice and then across practices.

Ethical considerations

Ethical approval had been obtained from Northumbria University, Newcastle upon Tyne, and from the Health Research Authority. Informed consent was obtained from the GP practices and all the participants. Pseudonymisation of personal data was carried out to ensure the confidentiality of personal data.

Findings

In total, 17 interviews and three focus group discussions were conducted with 29 members of staff. Table 2 shows participants' role and the data collection methods used. All nursing associates had previously been employed by their respective practice as healthcare assistants.

Five themes emerged from the analysis of the data:

- » Motivations for introducing the new role.
- » Role purpose, scope and remit.
- » Professional identity.
- » Barriers to implementing the new role.
- » Early effects of the new role.

Motivations for introducing the new role

Initially the author had hypothesised that the COVID-19 pandemic and its effects on staff numbers and service needs would have been one of the main factors motivating general practices to introduce the nursing associate role. However, this hypothesis was not borne out by the study.

In all five practices, workforce-related factors were identified as the first motivation for introducing the new role. Reasons for introducing the role included the shortage of nurses, an ageing workforce, the difficulty attracting younger people to general practice, issues with retaining staff, succession planning and workforce development. In all practices there was a strong desire to develop the experienced healthcare assistant workforce.

The second motivation for introducing the new role was service needs, both short-term and longer-term, articulated at strategic and operational levels. In practice 2, a multidisciplinary model had been envisaged to address the shortages of GPs and nurses.

Participants in practices 2, 3 and 4 mentioned cost savings as a motivation for introducing the new role. Those in practice 3 also recognised and welcomed cost savings as a secondary benefit of the change. Participants in practice 4 thought that the initial cost of introducing the role would be set off by long-term gains. In practices 2 and 3, the additional funding via the ARRS was explicitly discussed as an incentive:

'So it wasn't really something that we had to consider as strongly as we would have done for other roles, because of the fact that it wasn't coming out of our core funding.' (GP, practice 2)

In practice 2, one nurse expressed scepticism regarding the official reason given for introducing the role, believing the change to be financially driven:

'They're going to be doing [a practice nurse's] job for a fraction of the price, really.' (Nurse, practice 2, focus group discussion)

Role purpose, scope and remit

For the most part, the nursing associates had continued to carry out the tasks they had been undertaking as healthcare assistants.

The number of enhanced or additional duties allocated to them was limited. One registered nurse interviewed in practice 1 explained that there were not enough tasks in the week to fill a full-time nursing associate post.

Table 3 outlines the tasks carried out by nursing associates in the five participating practices.

Despite having similar job descriptions, the nursing associates had taken on varying responsibilities (Table 3). Their role was described in all practices as being on a continuum from healthcare assistant to nurse. The manager in practice 1 described the duties of a nursing associate as:

‘The higher level of healthcare assistant work... coming from a different mindset because of the training.’ (Manager, practice 1)

In practice 2, participants highlighted the overlapping of the roles between healthcare assistant and nursing associate. In practice 3 it was considered that involvement in clinical decision-making was an important difference between nursing associates and healthcare assistants. Members of the nursing team in practice 5 considered that the nursing associate would stand out from their previous healthcare assistant role by gaining new skills.

In practices 1, 2 and 3 some participants expressed the view that nursing associates and newly registered practice nurses had comparable responsibilities and that this should be reflected by pay equity:

‘The only issue I have with this is, I think, the need to be banded in a band 5 across the board instead of a 4. I really do because [nursing associates are] actually doing band 5 work.’ (Nurse, practice 1, interview)

In all practices except practice 4, participants compared the role of nursing associate to

the role of state enrolled nurse, which was abolished in the 1990s. In practices 2 and 4, members of the nursing team considered that the nursing associate role was of less use than that of healthcare assistant and was not needed in general practice.

A lack of clarity about the role of nursing associate was highlighted in all practices and participants had expected more guidance from the NMC on that aspect. Scope, remit, accountability, boundaries and professional identity were all cited as areas that lacked clarity. At times the practices appeared to struggle to determine the place and purpose of nursing associates and to decide what responsibilities could be allocated to them. Nurses in particular were unsure where accountability for some delegated tasks would lie. The nurse interviewed in practice 4 described ‘huge grey areas’ in that respect.

Accountability is integral to delegation and crucial when developing a new professional role. There was a perception that although NMC registration instilled confidence it could not automatically be interpreted as enabling delegation. Participants in practices 3 and 4 considered that having confidence in the person was more important than the fact that they were registered. Participants’ views on the role of nursing associate and their perceptions of the individuals taking up the new role in their practice appeared intertwined.

Based on the author’s professional experience and knowledge, the introduction of the nursing associate role was further complicated by a lack of robust service and workforce planning and the higher skill set of healthcare assistants working in general practices compared with healthcare assistants working in the hospital setting. This was

Table 2. Participants’ role and the data collection methods used

Role	Practice 1	Practice 2	Practice 3	Practice 4	Practice 5	Data collection method used
GP	1	1	1	1	1	Individual semi-structured interview
Manager*	1	1	1	1	1	Individual semi-structured interview
Nursing associate**	1	1	2	0	1	Individual semi-structured interview
Nurse	1	0	0	1	0	Individual semi-structured interview
Various members of the nursing team	No focus group discussion	3 (three nurses)	4 (three nurses and one trainee nursing associate)	No focus group discussion	5 (three nurses and two healthcare assistants)	Focus group discussion

*The managers interviewed in practices 1, 3 and 5 were nurse managers or heads of nursing; the managers interviewed in practices 2 and 4 were practice managers **In practice 4, the nursing associate had left the practice by the time of study so no nursing associate from that practice was interviewed

confirmed by the findings of this study, for example one trainee nursing associate from practice 2 indicated that she could already carry out some of the duties of the nursing associate role as a healthcare assistant.

As a result, the practices proceeded cautiously, with the contents of the role being a matter for local interpretation and its development slower than expected.

Future development opportunities envisaged for nursing associates included practical 'treatment room' duties such as ear syringing, dressings, vaccinations and blood pressure monitoring. Some practices envisaged that nursing associates would replace practice nurses over time.

Professional identity

Developing a professional identity was something all nursing associates found challenging, with one of them stating:

'It's been very hard to shake the fact that I'm no longer a healthcare assistant with other members of staff... and I do feel like I have struggled to get out of the [healthcare assistant] box since I've qualified. It is an ongoing thing.' (Nursing associate, practice 5)

In practice 5, the new role created tensions in the nursing team. According to the nursing associate in that practice, their promotion to a higher role and their alignment with other registered healthcare professionals had caused 'a bit of a backlash' from the team. The nurse interviewed in practice 4 explained that some healthcare assistants had 'difficulties in sort of accepting [the nursing associate's] new role and also for the team in general [it's] taken a little bit of getting used to'.

All nursing associates had continued their previous duties and, overall, practices had maintained their old ways of working. This compounded the challenges for nursing associates to establish a distinctive professional identity. Furthermore, nursing associates described a severe lack of support from the university for trainee nursing associates in primary care, with one of them describing their experience as:

'Like hitting a brick wall every single step of the way.' (Nursing associate, practice 5)

In some cases, the new role had been – or was going to be – advertised on the practice's website. In practices 1, 2, 3 and 5, participants thought that patients had shown little or no awareness of the new role; however, according

Table 3. Tasks carried out by nursing associates in the five participating practices

Type	Tasks	Practice 1	Practice 2	Practice 3	Practice 4	Practice 5
All tasks already carried out by nursing associates in their previous roles as healthcare assistants*		X	X	X	X	X
Injections and vaccines	Coronavirus disease 2019 (COVID-19) vaccines	X		X		X
	Vitamin B12 injections**	X				X
	Pneumococcal vaccines** and shingles vaccines	X	X			
	Tetanus vaccines					X
	Newborn vaccines		X			
	Injections of hormonal treatments, for example goserelin	X				
	Other vaccines					X
Chronic disease	Long-term conditions health checks part 2			X		
Wound dressing	Complex dressings					X
	Acute wounds					X
Women's health	Cervical smears	X	X	X		
	Vaginal swabs					X
Monitoring	Blood monitoring following bariatric surgery					X

*Including electrocardiograms, phlebotomy, influenza vaccines, blood pressure measurement, simple dressings and/or wound care, long-term conditions health checks part 1 **In practice 1, the healthcare assistant was already administering vitamin B12 injections and pneumococcal vaccines

to participants, some patients had noted the change in uniform or the different tasks taken on by nursing associates and some patients had compared it to the role of state enrolled nurse.

Barriers to implementing the new role

Table 4 summarises the barriers to implementing the new role identified by participants.

One barrier mentioned by participants was that practices have to organise aspects of the training programme beyond the time trainee nursing associates spend at the practice. For example, according to participants, practices have to contact relevant organisations to arrange external placements for trainees, secure honorary contracts and negotiate access to clinical areas, particularly in hospital settings.

Another barrier was that the contents of the education provided by universities was not always relevant to general practice. Some participants questioned whether the training programme was fit for purpose for primary care settings. In practices 4 and 5, participants criticised the level of support from the university for trainees and for the practice. In practice 4, participants wondered whether their nursing associate might have stayed if better support had been available during training and after registration. At the time of the study, there was no peer support network for nursing associates in primary care nor any preceptorship programme for newly registered nursing associates working in general practice.

In line with the NMC (2023b) standards for student supervision and assessment, trainee nursing associates must be supported by a practice supervisor, who has to be a nurse and undergo specific training for their supervisor role. Practices found it challenging

to provide supervision, notably because of limited physical space. The capacity of practices to train and supervise trainees was further hampered by nurses’ workload and the shortage of nurses, in general and especially during the COVID-19 pandemic. Some practices also lacked the physical space to set up additional clinics that nursing associates could take on once they had registered.

Additional subject-based training was considered necessary before newly registered nursing associates could take on certain responsibilities, for example cervical screening, which practices would have to pay for. Another barrier cited by participants was that nursing associates were not allowed to administer medicines under a patient group directive.

Early effects of the new role

Participants in practices 1, 2, 3 and 5 reported an increase in the capacity for patient appointments. In practices 1, 3 and 5, nurses had more time to focus on patients with complex long-term conditions. Releasing GPs’ time was mentioned in practice 3, while in practice 5 the early effects of the new role were described as ‘keeping services running’. Early effects included a higher quality of service resulting from the nursing associate’s enhanced knowledge (practice 1), continuity of care (practice 5), resilience of the nursing team (practices 3 and 5), additional skills leading to better patient access and choice (practice 2) and having more time with patients (practice 2). Other staff had benefited from the presence and support of a nursing associate: in practice 1 the nursing associate had mentored a phlebotomist; in practice 2 the nursing associate had supported trainee nursing associates; and in practice 5 the nursing associate had supported a new practice nurse.

Table 4. Barriers to implementing the new role

Barrier	Practice 1	Practice 2	Practice 3	Practice 4	Practice 5
Having to arrange external placements for trainee nursing associates	X	X			X
Having to provide trainee nursing associates with dedicated supervision time at the practice	X	X			
Time trainee nursing associates spend away from the practice (university days and external placements)	X	X	X	X	X
Lack of space for training and supervision and for organising extra clinics		X			
Costs including trainee nursing associates’ salary, financial contribution to their training programme and cost of additional post-registration training					X
Lack of relevance of university training programme for general practice					X
Lack of support from the university				X	X

Discussion

Studies on the implementation of new roles in healthcare are scarce (Kessler et al 2017) and evidence regarding primary care is generally lacking (Nelson et al 2018, Spooner et al 2022). This study adds to the evidence in these under-researched areas and to the emerging evidence on the implementation of the nursing associate role in settings other than general practice (Kessler et al 2020, 2022).

Contrary to the findings of Gibson et al (2023), the primary reason to implement the role of nursing associate was to address workforce issues, not to increase appointments. In that respect the findings of the present study reflect the rationale given by chief nurses for introducing the role (Kessler et al 2020) and other evidence on introducing new roles in healthcare (Bungay et al 2013, Drennan et al 2014, 2019, Evans et al 2020).

Payment systems can enable skill-mix changes (Sibbald et al 2004) and are used often to encourage the uptake of new roles (Drennan et al 2019, Gibson et al 2023). However, in the present study financial incentives did not appear to be one of the main motivating factors, which reflects the findings of Gibson et al (2023). Data from NHS Digital (2022) showed that despite a 41.7% increase in direct patient care staff employed in England under ARRS between March 2019 and March 2022, the numbers of nursing associates and trainee nursing associates remained low overall in March 2022. The actual increase between this period was 0.07% for nursing associates and 0.88% for trainee nursing associates. Furthermore, the author of this article has access to evidence to confirm that many practices have not been taking advantage of the ARRS to introduce trainee nursing associates and nursing associates. This suggests that the financial support may need to be more targeted at specific staff groups to be effective.

Skill mix can be changed in many ways. The findings of the present study support previous research that emphasised the importance of paying attention to the process of implementing skill-mix changes (Sibbald et al 2004, Nelson et al 2019, Maier et al 2022, Spooner et al 2022). They also illustrate how important it is to clarify the scope of new roles, as emphasised by various authors (Drennan et al 2014, van der Biezen et al 2017, Halse et al 2018, Nelson et al 2018, Drennan et al 2019, Maier et al 2022).

Professional identity has been described as highly resistant to change (Chreim et al 2007). The relationship between role and professional

identity needs to be recognised so that the development of a new role is accompanied by the construction of a professional identity (Chreim et al 2007, Goretzki et al 2013). In the present study, challenges in the construction of a professional identity included the existence of the well-established role of healthcare assistant, recollections of the defunct role of state enrolled nurse and the absence of a strong narrative for the new role of nursing associate. The lack of peer support networks and preceptorship programmes and the absence of role models for nursing associates in primary care at this early stage compounded the challenges.

A major revision of people's skills and competencies is necessary before they can adopt a new role (Sibbald et al 2004) and various authors have highlighted that this requires adequate resources (Halse et al 2018, Drennan et al 2019, Kilpatrick et al 2019, Greenhalgh et al 2020). The findings of the present study suggest that current nursing associate training programmes do not meet all the needs of general practices nor those of nursing associates working in general practice. Some participants felt that nursing associates were not 'practice ready' on registration and it is possible that nursing associate training programmes are more targeted at the hospital setting. If the nursing associate role is to be expanded in general practice, it is essential that training programmes are tailored to that setting. For example, all nursing associates appear to need additional subject-based training after registration, such as cervical screening, so this needs to be included in their preregistration training.

Some practices seemed unconvinced of the benefits of the nursing associate role, considering the efforts and investment required. The main factor that will determine the scale and pace of any future roll-out of this role in general practice is the presence of demonstrable benefits and added value. Kessler et al (2017, 2021) similarly concluded that the decision to implement the role would depend on there being evidence of a distinct contribution and improved quality of care.

Limitations

The number of participants was relatively small, which was partly due to the fact that the study took place during the COVID-19 pandemic. The findings would have had further weight with a larger sample size, wider regional coverage, the inclusion of other sources of evidence and a mixed-method study design.

Conclusion

There is limited evidence regarding the implementation of the nursing associate role, particularly in general practice settings. This study, believed to be the first of its kind, provides insights into why, how and to what extent the nursing associate role has been implemented in general practice. Barriers to its implementation appear to include a lack of clarity about the role, a mismatch between

nursing associates' training and the needs of general practices, the lack of a strong narrative for the role, and the challenges encountered by nursing associates in developing a professional identity.

The author suggests that in general practice the nursing associate role is not yet fulfilling its original policy purpose, and that it needs to be better supported and more widely accepted and implemented.

References

- Addicott R, Maguire D, Honeyman M et al (2015) Workforce Planning in the NHS. www.kingsfund.org.uk/sites/default/files/field/field_publication_file/workforce-planning-NHS-Kings-Fund-Apr-15.pdf (Last accessed: 14 November 2023.)
- Baird B, Lamming L, Bhatt RT et al (2022) Integrating Additional Roles into Primary Care Networks. www.kingsfund.org.uk/sites/default/files/2022-02/Integrating%20additional%20roles%20in%20general%20practice%20report%28web%29.pdf (Last accessed: 14 November 2023.)
- Buchan J, Ball J, Shembavnekar N et al (2020) Building the NHS Nursing Workforce in England: Workforce Pressure Points. www.health.org.uk/publications/reports/building-the-nhs-nursing-workforce-in-england (Last accessed: 14 November 2023.)
- Buchan J, Gershlick B, Charlesworth A et al (2019) Falling Short: The NHS Workforce Challenge. Workforce Profile and Trends of the NHS in England. www.health.org.uk/sites/default/files/upload/publications/2019/S05_Falling%20short_The%20NHS%20workforce%20challenge.pdf (Last accessed: 14 November 2023.)
- Bungay H, Jackson J, Lord S et al (2013) What are the Key Factors in the Successful Implementation of Assistant Practitioner Roles in a Health Care Setting? - A Service Evaluation. www1.essex.ac.uk/hhs/documents/research/assistant-practitioner-roles-2013.pdf (Last accessed: 14 November 2023.)
- Chreim S, Williams BE, Hinings CR (2007) Interlevel influences on the reconstruction of professional role identity. *Academy of Management Journal*, 50, 6, 1515-1539. doi: 10.5465/AMJ.2007.28226248
- Drennan VM, Halter M, Brearley S et al (2014) Investigating the contribution of physician assistants to primary care in England: a mixed-methods study. *Health and Social Care Delivery Research*, 2, 16. <https://www.journalslibrary.nihr.ac.uk/hsdr/hsdr02160/#/abstract> (Last accessed: 28 November 2023.)
- Drennan VM, Halter M, Wheeler C et al (2019) The role of physician associates in secondary care: the PA-SCER mixed-methods study. *Health and Social Care Delivery Research*, 7, 19. doi: 10.3310/hsdr07190
- Evans C, Pearce R, Greaves S et al (2020) Advanced clinical practitioners in primary care in the UK: a qualitative study of workforce transformation. *International Journal of Environmental Research and Public Health*, 17, 12, 4500. doi: 10.3390/ijerph17124500
- Francetic I, Gibson J, Spooner S et al (2022) Skill-mix change and outcomes in primary care: longitudinal analysis of general practices in England 2015-2019. *Social Science and Medicine*, 308, 115224. doi: 10.1016/j.socscimed.2022.115224
- Gibson J, McBride A, Checkland K et al (2023) General practice managers' motivations for skill mix change in primary care: results from a cross-sectional survey in England. *Journal of Health Services Research and Policy*, 28, 1, 5-13. doi: 10.1177/13558196221117647
- Goretzki L, Strauss E, Weber J (2013) An institutional perspective on the changes in management accountants' professional role. *Management Accounting Research*, 24, 1, 41-63. doi: 10.1016/j.mar.2012.11.002
- Greenhalgh S, Selfe J, Yeowell G (2020) A qualitative study to explore the experiences of first contact physiotherapy practitioners in the NHS and their experiences of their first contact role. *Musculoskeletal Science and Practice*, 50, 102267. doi: 10.1016/j.msksp.2020.102267
- Halse J, Reynolds L, Attenborough J (2018) Creating new roles in healthcare: lessons from the literature. *Nursing Times*, 114, 5, 34-37.
- Kessler I, Heron P, Spilsbury K (2017) Human resource management innovation in health care: the institutionalisation of new support roles. *Human Resource Management Journal*, 27, 2, 228-245. doi: 10.1111/1748-8583.12114
- Kessler I, Manthorpe J, Harris J et al (2022) Evaluating the Introduction of the Nursing Associate role in Social Care. kclpure.kcl.ac.uk/ws/portalfiles/portal/171718706/Kessler_et_al_2022_Nursing_Associate_role_in_Social_Care.pdf (Last accessed: 14 November 2023.)
- Kessler I, Steils N, Samsi K et al (2020) Evaluating the Introduction of the Nursing Associate Role in Health and Social Care: Interim Report. kclpure.kcl.ac.uk/ws/portalfiles/portal/135604335/NURSING_ASSOCIATES_Interim_Report_2020.pdf (Last accessed: 14 November 2023.)
- Kessler I, Steils N, Harris J et al (2021) The Development of the Nursing Associate Role: The Postholder Perspective. kclpure.kcl.ac.uk/ws/portalfiles/portal/163286678/Kessler_et_al_2021_Development_of_the_Nursing_Associate_role_the_postholder_perspective.pdf (Last accessed: 14 November 2023.)
- Kilpatrick K, Jabbour M, Tchouaket É et al (2019) Implementing primary healthcare nurse practitioners in long-term care teams: a qualitative descriptive study. *JAN*, 75, 6, 1306-1315. doi: 10.1111/jan.13962
- King N, Brooks JM (2017) *Template Analysis for Business and Management Students*. SAGE Publications, London.
- King's Fund (2022) *NHS Workforce: Our Position*. www.kingsfund.org.uk/projects/positions/nhs-workforce (Last accessed: 14 November 2023.)
- King's Fund (2023) *Key Facts and Figures About the NHS*. www.kingsfund.org.uk/audio-video/key-facts-figures-nhs (Last accessed: 14 November 2023.)
- Maier CB, Scarpetti G, Kroezen M et al (2022) Implementing skill-mix changes: lessons for policy and practice. In Maier CB, Kroezen M, Busse R et al (Eds) *Skill-Mix Innovation, Effectiveness and Implementation: Improving Primary and Chronic Care*. Cambridge University Press, Cambridge, 70-82.
- Nelson P, Martindale AM, McBride A et al (2018) Skill-mix change and the general practice workforce challenge. *British Journal of General Practice*, 68, 667, 66-67. doi: 10.3399/bjgp18X694469
- Nelson PA, Bradley F, Martindale AM et al (2019) Skill-mix change in general practice: a qualitative comparison of three 'new' non-medical roles in English primary care. *British Journal of General Practice*, 69, 684, e489-e498. doi: 10.3399/bjgp19X704117
- NHS (2019) *The NHS Long Term Plan*. www.england.nhs.uk/wp-content/uploads/2022/07/nhs-long-term-plan-version-1.2.pdf (Last accessed: 14 November 2023.)
- NHS Digital (2022) *Primary Care Workforce Quarterly Update, 31st March 2022, Experimental Statistics*. digital.nhs.uk/data-and-information/publications/statistical/primary-care-workforce-quarterly-update/31st-march-2022-experimental-statistics (Last accessed: 14 November 2023.)
- NHS England (2014) *Five Year Forward View*. NHS England, London.
- NHS England (2016) *General Practice Forward View*. NHS England, London.
- NHS England (2022) *National Preceptorship Framework for Nursing*. www.england.nhs.uk/long-read/national-preceptorship-framework-for-nursing (Last accessed: 14 November 2023.)
- Nursing and Midwifery Council (2023a) *We Regulate Nursing Associates*. www.nmc.org.uk/about-us/our-role/who-we-regulate/nursing-associates (Last accessed: 14 November 2023.)
- Nursing and Midwifery Council (2023b) *Standards for Student Supervision and Assessment*. NMC, London.
- Reay T, Golden-Biddle K, Germann K (2006) Legitimizing a new role: small wins and microprocesses of change. *Academy of Management Journal*, 49, 5, 977-998. doi: 10.5465/AMJ.2006.22798178
- Rolewicz L, Palmer B, Lobont C (2022) *The NHS Workforce in Numbers*. www.nuffieldtrust.org.uk/resource/the-nhs-workforce-in-numbers (Last accessed: 14 November 2023.)
- Shembavnekar N, Buchan J, Bazeer N et al (2022) *NHS Workforce Projections 2022*. www.health.org.uk/publications/nhs-workforce-projections-2022 (Last accessed: 14 November 2023.)
- Sibbald B, Shen J, McBride A (2004) Changing the skill-mix of the health care workforce. *Journal of Health Services Research and Policy*, 9, Suppl 1, 28-38. doi: 10.1258/135581904322724112
- Spooner S, McDermott I, Goff M et al (2022) Processes supporting effective skill-mix implementation in general practice: a qualitative study. *Journal of Health Services Research and Policy*, 27, 4, 269-277. doi: 10.1177/13558196221091356
- van der Biezen M, Derckx E, Wensing M et al (2017) Factors influencing decision of general practitioners and managers to train and employ a nurse practitioner or physician assistant in primary care: a qualitative study. *BMC Family Practice*, 18, 1, 16. doi: 10.1186/s12875-017-0587-3
- Willis P (2015) *Raising the Bar. Shape of Caring: A Review of the Future Education and Training of Registered Nurses and Care Assistants*. www.nhs.uk/sites/default/files/documents/2348-Shape-of-caring-review-FINAL.pdf (Last accessed: 14 November 2023.)
- Yin RK (2017) *Case Study Research and Applications: Design and Methods*. Sixth edition. SAGE Publications, Thousand Oaks CA.