HS urgent and emergency care services face increasing demand, sometimes leading to long waiting times and increased pressure on emergency departments (EDs) (NHS England, 2017; Baker, 2015; NHS England, 2013). Establishing the most efficient approach to matching limited resources to increased demand in this setting is a priority for the NHS. Achieving the right skill mix is vital, and attempts have been made to alter the skill mix, transfer work between professions and introduce new roles to enhance performance while continuing to deliver effective and safe care.

However, the safety and cost-effectiveness of these changes – which often involve nurses or other health professionals taking on roles and responsibilities of doctors, or support staff being added to nursing teams – need to be properly assessed. This article is an overview of the evidence on how the introduction of new roles and changes in skill mix in urgent and emergency care affect patient and staff outcomes and organisational costs.

Data sources
We built on searches developed for a comprehensive systematic review of evidence about staffing in emergency departments (Recio-Saucedo et al, 2015). We searched MEDLINE, CINAHL and the Cochrane Library using terms such as “substitute/nurse specialist/physician assistant/advanced practice nurse” and “skill mix” linked with terms such as “emergency nursing”, “urgent care” and “ambulatory care”. Because of the large and diverse evidence base, we selected relevant systematic reviews as core sources.

Skill mix
There is little evidence of skill mix changes in emergency care. A systematic review of the effect of changes in staffing levels and skill mix in the ED (Recio-Saucedo et al, 2015) found only one observational study. This study, of 107 Canadian EDs, showed that departments with more registered nurses in the care workforce – nurses and assistants – reported higher levels of patient satisfaction.

In urgent care, a US observational study suggests that medical practices with more...

Key points
New roles have been introduced in emergency and urgent care to face increasing demand
They often involve nurses taking on responsibilities of doctors or support staff being added to nursing teams
These new roles are often poorly defined and lack standardisation
The wider effects of these new roles and changes in skill mix are poorly researched
More research is needed to establish the best approach to matching limited resources to rising demand for emergency services

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nurse practitioners (NPs) or physician assistants (PAs) per physician had higher rates of patients presenting to EDs with emergent conditions that could have been treated in primary care (Blecker, 2014). In contrast, in an observational study of 7,456 UK general practices, non-elective admissions of people with asthma and diabetes were lower in practices employing more practice nurses per GP (Griffiths et al, 2010) – although the results differed for patients with two or more admissions and the role of nurses in providing emergent care was unclear.

A Cochrane systematic review of nurse-for-doctor substitution found five relevant trials. These demonstrated that outcomes for doctors and nurses were equivalent for first-contact care for patients wanting urgent consultations, with some evidence of improved satisfaction with nurse consultations. Findings on cost savings were equivocal, largely because savings on wages were offset by longer consultations (Laurant et al, 2009). A more recent review found that nurse-led urgent care, especially from NPs, was associated with a positive effect on patient satisfaction (four trials), with no significant effect on hospital admissions (two trials) or mortality rates (one trial) (Martínez-González et al, 2014).

New roles
Several new roles are reported in the literature, including:
- Emergency nurse practitioner (ENP);
- Emergency care practitioner (ECP);
- Advanced nurse practitioner (ANP);
- Advanced clinical practitioner (ACP);
- Physician assistant (PA).

These are often poorly defined in terms of role, training and scope of practice, making interpretation of the literature problematic. There is a blurring of role definitions between ENPs, NPs, ANPs and ACPs, and overlap with research into skill mix as ‘new’ roles become better established.

Emergency departments
A recent systematic review identified 12 primary studies since 2007 and two reviews (Jennings et al, 2015). The quality of the evidence was variable but generally low. It concluded that introducing an ENP service had a positive impact on the quality of care, patient satisfaction and waiting times in the ED. The review did not find robust evidence about the cost-effectiveness of this role.

A further systematic review concluded that employing NPs in EDs was associated with reductions in overcrowding (Elder et al, 2015). A randomised controlled trial (RCT) conducted in a single ED reported higher levels of patient satisfaction and better quality of clinical documentation with ENP-led care than junior doctor-led care (Cooper et al, 2002). A further RCT showed that ED NPs could provide care for patients with minor injuries that was equal to, or in some ways better than, that provided by junior doctors (Sakr et al, 1999).

A systematic review of 66 studies investigating their impact of PAs in the ED concluded that PAs are reliable in assessing certain medical complaints and performing procedures, although the quality of evidence was generally low. Limited evidence on improvement of patient flow and cost-effectiveness was found (Doan et al, 2011).

Urgent care
A systematic review of 21 studies using mixed methods concluded that the high-quality studies established that care processes provided by ECPs in NHS settings were equivalent to, or better than, those provided by practitioners with traditional roles – although the basis of high-quality judgements was unclear. In some cases, roles were implemented in EDs, but ECPs in urgent care settings were less likely to discharge patients than physicians and more likely to refer them to hospitals or ED (Hill et al, 2014).

A systematic review aiming to evaluate the impact of walk-in centres, often staffed by non-medical practitioners, reviewed 244 sources of evidence and concluded that these provide care of acceptable quality, but that their cost and impact on other health services was still unknown (Salisbury and Munro, 2003). The quality of the evidence was unclear.

Conclusions
Evidence about new roles and changes in skill mix in urgent care and emergency settings is complex and diverse. This is compounded by the lack of role definition, scope of practice and standardisation of new and advanced roles. Evidence about skill mix in nursing teams is extremely limited. Some studies indicate that specialist nurses can substitute for doctors and can deliver similar or better quality of care at similar or lower cost. However, the clearest evidence relates to patient satisfaction indicators, rather than health outcomes. There is some indication of increased use of other urgent and emergency services associated with nurse-led care.

Much of the evidence explores the effect of adding new roles in EDs or ambulatory care, but not the wider workforce implications, such as substitution of doctors and impact on the nursing team – making it difficult to obtain impact and potential cost savings.

We recommend a more detailed and formal review of reviews and meta-analysis of trials, to answer focused questions on effectiveness. However, it seems clear that high-quality studies that treat the introduction of new roles as a complex intervention, using multiple methods and ideally across multiple sites, are required.

References