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Do we need more practice nurses?

Over the past ten years there has been a large increase in both the number of nurses employed in general practice and the proportion of consultations undertaken by them. Some have argued that there is considerable scope to further increase the amount of primary care delivered by nurses but the potential extent and desirability of substitution is contested. In this Policy+ we summarise a recent study by the National Nursing Research Unit which examined whether practices which employed more nurses delivered better quality care for patients.

What we already know

Higher levels of registered nurse staffing has been linked to quality of care and improved patient outcomes in acute care settings[1]. Quality of care in general practice has been linked to a number of organisational factors including practice size, number of GPs and list size per full time equivalent GP[2,3]. While it is thought that larger practices are able to better deliver multidisciplinary care[3], few studies examining performance in general practice have directly considered nurse staffing. However when considering quality of clinical aspects of care, not all studies show the expected benefits of a larger team[4,5] and those covering limited geographical areas have failed to find a link between nurse staffing and quality of clinical care[6-7]. There is evidence from controlled trials that nurse for doctor substitution can be effective and deliver care that is essentially equivalent[8], but evidence from such experimental implementation does not necessarily translate into routine care.

Relationship between quality and staffing in England

A recent study conducted by the National Nursing Research Unit[9] examined whether general practices who employ more registered nurses deliver better clinical care as measured by clinical indicators of the Quality and Outcomes Framework (QOF), a pay for performance system that records the quality of care for a number of significant patient groups[10]. Most English general practices participate in the scheme and, in many practices, much of the work involved in delivering results against the QOF indicators has been undertaken by nurses[11]. The study used QOF data for 2005/2006 linked to practice and population data. There were 7456 practices in the analysis, representing about 48 million patients registered in England.

Results

Nurse staffing (list size per fulltime equivalent (FTE) registered nurse) was significantly associated with a number of practice and patient population characteristics. After control for these variables higher levels of nurse staffing was associated with better performance in a number of areas. A high level of nurse staffing (fewer patients per full time equivalent practice employed nurse) was significantly ($p<0.01$) associated with better performance in 4/8 clinical areas (Chronic obstructive pulmonary disease [COPD], Coronary heart disease [CHD], Diabetes and Hypertension, and in 4/10 clinical outcome indicators.

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More patients with diabetes had good control of blood glucose (2 indicators) and cholesterol in practices with higher levels of nurse staffing. For patients who had a history of stroke more had good control of cholesterol. It has been suggested that additional nurses simply add to the number of clinical staff available and thus lead to larger and more diverse teams[7]. However, there was no consistent relationship between performance and other characteristics of practices to strongly support this assertion. Bigger practices (those serving a larger population) were associated with worse QOF scores for the clinical areas of asthma, CHD, hypertension, mental health and stroke. Although list size per FTE GP was negatively associated with QOF scores for the clinical area of asthma and the total cholesterol clinical outcome indicators for CHD and stroke, it was positively associated with QOF scores for mental health and numbers of patients with good diabetes control. Single handed GP practices had fewer people with good levels of diabetes control but had more patients with epilepsy convulsion free for 12 months and more patients with good control of high blood pressure.

Conclusions and implications

The study demonstrates that practices which employ more nurses perform better in a number of areas measured by the QOF and that patients of these practices have better intermediate clinical outcomes such as blood glucose control for people with diabetes. These findings offer some support to the call for an increased nursing contribution in primary care and suggest that there may be scope for more growth in the number of nurses being employed in UK general practice. While this observational evidence supports the findings of controlled trials of nurse for doctor substitution, further research is required to determine if the relationship is causal. This study did not explore the costs of care. It has been suggested that adding nurses to the workforce may add to the overall workload by generating additional demand through meeting unmet need[8,12]. Cost savings through substitution are likely to be context dependent and depend on pay differentials between nurses and GPs[8]. Further we did not explore the impact on quality of the increasing use of healthcare assistants to substitute for some nursing roles, for which there is little if any evidence[13]. Variations in results across clinical areas may relate to variations in activity or effectiveness of nurses in those areas and future research needs to investigate the configuration of services and deployment of nurses more specifically. Further evidence is required to determine if the clinical benefits suggested by intermediate outcomes are translated into substantial benefits to patients, ideally using data external to the QOF.

Key issues for policy

- The practice nurse workforce is often neglected but they have a significant role to play in delivering high quality primary care.
- There may be scope to further shift the skill mix in primary care from doctors to qualified nurses.
- The cost effectiveness of this and other skill mix changes have yet to be assessed and should be a priority for future research.

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