The NHS is facing increasing nursing shortages, with an overall 6.5% vacancy rate in England (NHS Improvement, 2016a). At the same time, there is rising demand for healthcare but limited resources. Establishing the most efficient approach to matching limited nursing resources and variable demand for care on hospital wards is a priority. Flexible staffing policies can ensure that nurses are deployed to wards where demand is greatest, avoiding negative consequences for patients when staffing falls below the required level.

Some flexible staffing approaches, such as the use of agency staff, can be expensive and the evidence on the risks and benefits is inconclusive. There is evidence that the increased use of nurse overtime is associated with adverse patient outcomes. The evidence on floating (assigning nurses to wards other than those they normally work on) is inconclusive. More scrutiny of the limited but complex evidence, and more primary research, are warranted.

Temporary staffing ‘usually means the deployment of staff who are not permanently employed by an organisation, but in the UK, a hospital’s own employees may be hired as temporary staff through an agency; employees of one unit may undertake extra work and be temporarily deployed to their own or another unit via their hospital’s ‘bank’; and employees may have no permanent unit assignment and work exclusively as part of that bank. There is, therefore, a potential overlap between ‘temporary staffing’, ‘overtime’ and ‘floating’. We have organised material according to the primary focus.

The evidence on temporary staffing is largely from the US. Three large US studies report that the higher use of temporary staff does not affect mortality (Aiken et al, 2013) and that higher levels of non-permanent staff are associated with lower levels of adverse events (Aiken et al, 2007) and fewer medication errors (Bae et al, 2010). A single small UK study found that a lower occurrence of deep vein thrombosis and pressure ulcers was associated with higher levels of temporary staffing (Shuldham et al, 2009).
Overtime

There is evidence showing that the increased use of nurse overtime is associated with adverse patient outcomes. A large US study found that every additional 10% of overtime hours was associated with a 1.3% increase in hospital-related mortality (Kane et al, 2007). A further study found that needlestick injuries, work-related injuries, patient falls with injury, nosocomial infections and medication errors were significantly related to nurses working more than 40 hours in an average week (Olds and Clarke, 2010). The negative effect of overtime appears to be independent of the shift length (Griffiths et al, 2014).

Floating

‘Floating’ refers to the practice of assigning nurses to nursing units other than those they are regularly assigned to work, sometimes drawing from a defined pool of nurses (Kane et al, 2007). The evidence on floating is contrasting, which may be due to the inability of some studies to disentangle float pools from other methods of temporary staffing. The limited economic evidence on float pools suggests they are associated with a decrease in agency-related costs and vacancy rates (Kutab and Nelson, 1993), but there is some evidence that patients who are frequently cared for by a float nurse are at higher risk of bloodstream infections (Kane et al, 2007).

A number of modelling studies have tried to produce schedules that make the most efficient use of the available resources at hospital level. One study explored the potential of employing float nurses to respond to the hospital’s fluctuating patient population and concluded that it was beneficial (Kortbeek et al, 2015). However, another study concluded that the effectiveness of care was potentially jeopardised when nurses floated between wards, with clear trade-offs between efficiency and effectiveness. Both the unconditional use of floating and a ‘no tolerance’ policy vis-à-vis floating led to suboptimal outcomes. A small pool of floating staff was recommended (Maenhout and Vanhoucke, 2013).

An extensive but now dated review concluded that if floating is mandatory, nurses should be competent, and floated to clinical areas similar to those where they usually practice (Dziuba-Ellis, 2006). Limited evidence indicates that specific training enabling nurses to cover other units, reducing overtime and use of agency nurses (Crimlisk et al, 2002; Altimier and Sanders, 1999).

Conclusions

The available evidence makes it clear that the risks and benefits of the different methods of flexible staffing need to be carefully balanced. Most of the evidence comes from cross-sectional studies, which makes it difficult to determine cause and effect. The lack of evidence from the UK suggests that more primary research in this area is required.

Much of the evidence relates to temporary staffing, and because it is mixed, it would be wrong to draw firm conclusions. While some studies suggest that there may be risks presented to patient safety, others imply that resource adequacy is the real problem and that temporary nurses may compensate for staffing deficiencies, albeit with a risk of reduced effectiveness and higher costs.

Float pools have been credited with reducing overtime and the use of expensive agency staff, but again, the evidence is mixed. The limited use of properly prepared float staff seems more likely to be beneficial than ad-hoc staff redeployment. Models of roster planning for flexible staffing have been proposed, however, none of these has yet been tested or implemented.

References


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