The 12-hour shift: friend or foe?

Why some nurses prefer to work 12-hour shifts

Potential problems caused by nurses working long shifts

Issues to consider when introducing 12-hour shifts

The changes are driven by perceived efficiencies for the employer (fewer handovers and reduced overlap between shifts), and an improved work–life balance for employees, with the opportunity to compress work into fewer days per week. However, the length of nursing shifts in hospitals is hotly debated; the contrasting views below are illustrative of the diverging opinions given in response to our recently published article on the subject (Griffiths et al, 2014).

“I do 12.5-hour shifts and to be honest I prefer them… with the intensity of nursing care and [the] ward environment, I find it less wearing overall than coming in 4-5 days a week.”

“I worked 14.5-hour shifts at the hospital I work at. I left as I couldn’t stand working such ridiculous hours…. It’s ludicrous to expect you to be working at your best for this amount of time, and on your feet.”

Concerns about 12-hour shifts

Long shifts have become an established feature of working life for many nurses in the NHS. Our study, based on a representative sample of 31,627 nurses on acute general hospital wards in the EU, found that 14% were working shifts of 12 hours or longer (Griffiths et al, 2014). In some countries – most notably England, Ireland and Poland – 12-hour shifts are far more common; in England, 32% of day shifts and 37% of night shifts are reported to be 12 hours or longer (Griffiths et al, 2014). Despite the growing use of 12-hour shifts, persistent concerns have been raised about whether it can be safe to work such long hours. Many nurses working for 12 hours or more are more likely to report poor-quality care, poor patient safety and more care left undone.
commenting in response to our article expressed concern on the Nursing Times online discussion pages:

“It’s the long hours worked that affect patient care. I saw it years ago, when 12h shifts started. Everyone had to slow their pace and do less to get through the 13 hours.”

“Tired, worn-out nurses, working flat out for 12+ hours and recovering on days off to go back…what could possibly go wrong?”

Others, however – and sometimes even the same nurses – express a strong preference for 12-hour shifts, citing the potential benefits of greater continuity of care across the day and preference for more days off.

**Research evidence**

Although considerable research on shift patterns has been undertaken over the past 40 years (Harris et al, 2014), most of the evidence on nurses’ views of 12-hour shifts is anecdotal, with relatively little formal research being carried out.

A large cross-sectional study that was performed in Europe to investigate the effect of different work schedules on the psychological wellbeing of nurses reported that nurses prefer 12-hours shifts because they allow for more time off, thereby reducing work/home conflicts (Estyn-Behar et al, 2012).

In a questionnaire survey of 363 registered nurses across five US hospitals, Day (2004) examined the relationship between shift work and job satisfaction; in relation to 12-hour shifts, 31% felt they were positive in terms of lifestyle, 62% gave a negative or uncertain response, 38% gave a positive response on morale, and 56% a negative or uncertain response. On the question of preference to work 12-hour shifts, 36% strongly agreed, 30% agreed, 9% disagreed, 9% strongly disagreed and 15% were uncertain. Overall, the majority of participants (66%) were in favour of the 12-hour shift.

Studies examining the relationship between shift length and fatigue, stress, burnout and negative patient outcomes are more plentiful. Several studies report that long working hours are correlated with fatigue and decreased levels of alertness, potentially resulting in more adverse events (Geiger-Brown et al, 2012; Trinkoff et al, 2011). A recent study based on a survey of 22,275 registered nurses in four US states found that those who worked shifts of 12 hours or longer were significantly more likely to report poor quality of care and poor patient safety compared with nurses working shifts of eight to nine hours (Stimpfel and Aiken, 2013).

Long hours can also have adverse outcomes for nurses; many of these are fatigue-related – for example, nurses working 12-hour shifts are found to be at increased risk of occupational hazards such as needlestick injuries and musculoskeletal disorders (Trinkoff et al, 2006).

Research also describes how other factors can affect the quality and safety of nurses’ work, such as shift rotation (Surani et al, 2007), the total weekly worked hours in a week/the number of consecutive days worked (Potera, 2011), and unplanned or extended shift times (Rogers et al, 2004).

Much of the previous research has, however, conflated overtime working (working beyond contracted hours) with working long shifts as an intended shift pattern. Overtime working has been associated with adverse quality because of cumulative fatigue, lack of rest and adverse working environments (Bae, 2013; Olds and Clarke, 2010). To more fully understand the issue of shift length it is therefore important to consider both overtime working and shift length, and endeavour to differentiate between the effects of each.

**Study findings**

Our study aimed to address questions about the possible effects of 12-hour shifts on patient safety and quality, while also controlling for other factors that may influence both of these, including nurse staffing levels and working overtime (Giffiths et al, 2014). We found that both longer shifts and working overtime were significantly associated with lower quality of care, worse patient safety reports and more care left undone (p<0.05). Compared with nurses who were working eight hours or fewer, the odds of nurses who worked 12 hours or more on their most recent shift describing the quality of nursing care in their unit as “poor” or “fair” increased by 30% and the odds of them reporting “failing” or “poor” patient safety in their units increased by 41%.

Nurses working shifts of 12 hours or more also reported 13% higher rates of care left undone than those working shifts of eight hours or fewer. All shifts longer than eight hours were associated with statistically significant increases in the rate of care left undone (p<0.05).

Nurses working overtime on their most recent shift were 32% more likely to report poorer quality of care, 67% more likely to report poorer patient safety, and reported a 29% higher rate of care left undone than was reported by those nurses who were working shorter shifts.

There were significant associations between reports of poor quality, compromised safety or missed care for several control variables, including:

- Day/night – nurses working nights were more likely to report fewer negative evaluations;
- Nurse:patient ratio – more negative evaluations were reported when there were more patients per nurse;
- Part-time work – there were fewer negative evaluations compared with full-time work.

Our results suggest that a policy of moving to longer shifts to reduce overall workforce requirements may have unintentional consequences and reduce the efficiency and effectiveness of the workforce in being able to deliver care that is both safe and of a high quality. However, the social-media responses to our article make it clear that the issue is not a simple one to address:

“It is OK if they [nurses] are feeling fit and energised, otherwise output is reduced. Also OK if they get enough breaks.”

**Patient safety and care**

**Risk factors**

The risks and benefits of different shift patterns may vary according to the context and the characteristics of the worker (Chen et al, 2011); for example, there may be greater health risks for older people who are working long shifts (Keller, 2009). The time of day also makes a difference: the risk of adverse events is greater:

- At night;
- Towards the end of a 12-hour shift;
- Before breaks;
Discussion

Nursing Practice

“"You’ll never be perfect, so always be kind to yourself”
Rebecca Sherrington p24

After successive shifts (Geiger-Brown and Trinkoff, 2010).

Shorter shifts may be, however, less feasible at night.

A key issue, and a challenge in trying to review the evidence on 12-hour shifts, is that “it depends on how it’s done” – that is, how 12-hour shifts are implemented and the wider working pattern context. Clearly, levels of fatigue and associated impaired functioning will be affected by many other factors beyond the length of shift – some related to other aspects of shift-working (sequence, choice, time of day/night) and some to other dimensions of work, such as workload, and physical demands.

These contextual factors are rarely accounted for in the research, with little information about the practical ways in which a shift system is operated, such as how many long shifts are worked in a row, number and length of breaks, and variation in the pattern of shifts worked.

In our study we controlled for one key factor known to have associations with patient safety and quality – staffing levels of registered nurses. However, as we did not have access to data on other aspects of working patterns and deployment (such as breaks and sequencing), we have little insight into their possible effect and how this may contribute to – or mitigate – the observed effect that 12-hour shifts have on specified outcomes.

Mitigating the risks

This issue of “it depends how” may be key to understanding the mixed views and reaction given in response to the use of 12-hour shifts. The question we have sought to address has been “Are negative effects of working 12-hour shifts observed when controlling for other factors?”. Perhaps future work needs to start from a different viewpoint – not “Are 12-hour shifts good or bad?” but “In what conditions can a 12-hour shift system be operated without risk to patient safety or nurse wellbeing?” As one person said in response to our article:

“Yea staff need breaks, preferably with decent facilities. But don’t throw the baby away with the bathwater; many staff prefer long shifts.”

Research such as ours points to the importance of considering some of the staples of research on shift work over the years. If working long shifts, it is increasingly important to ensure nurses have adequate time for rest between shifts and must not work too many in a row. Returning to the comments of Nursing Times’ readers:

“Nursing staff like long shifts but most accept they cannot possibly maintain concentration and enthusiasm for so long without adequate food, fluids and restful breaks.”

Perhaps, if more research like this accumulates, some consideration needs to be given to restricting opportunities to work 12-hour shifts until adequate safety measures are put in place to mitigate the associated negative effects. Many aspects of working hours are governed by the EU Working Time Directive, but these shift patterns seem largely outside its scope.

The questions that remain are:

» Should employees who undertake work in which safety is critical be permitted to work in ways that are known to increase risk?

» Should employers be allowed to ask them to do so?

Conclusion

It is imperative that healthcare organisations are fully aware of the effect that 12-hour shifts can have on staff and, consequently, also on patients. They must understand the risks and benefits of such shifts, along with the importance of undertaking the proper planning to mitigate the risks and take full advantage of the potential benefits. Box 1 lists implications for practice. NT

Quotations are drawn from discussions and comments on nursingtimes.net, made in response to a report on Griffiths et al (2014), available at: bit.ly/NTShiftWarning. Bold has been added by the authors, and spelling and punctuation errors have been corrected.

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BOX 1. IMPLICATIONS FOR PRACTICE

● A policy of moving to longer shifts may have unintended consequences: nurses may perform less efficiently and less safely

● Where 12-hour shifts are already in operation, managers should try to plan the schedule to reduce fatigue

● Fatigue countermeasures, such as taking completely relieved breaks, are needed to improve productivity and relieve stress

● Respect for days off is essential; lack of sufficient time away from work between shifts can be detrimental

Source: Adapted from Geiger-Brown and Trinkoff (2010)

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References


Surani S et al (2007) Sleepy nurses: are we willing to accept the challenge today? Nursing Administration Quarterly; 31: 2, 146-151.


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Bit.ly/NTUnsocialHours