What's New in the Patient Safety World

October 2014

Another Rap on the 12-Hour Nursing Shift

Since our original November 9, 2010 Patient Safety Tip of the Week "12-Hour Nursing Shifts and Patient Safety" we've discussed the pros and cons of the 12-hour work shift as they relate to both healthcare and other industries. We concluded that the literature to date really did not answer the question as to whether those shifts had a detrimental impact on patient safety or patient outcomes. In several subsequent columns (see list at the end of today's column) we discussed some evidence suggesting a detrimental impact of such hours on patient care and satisfaction as well as a longer term negative impact on nurses' satisfaction.

The fundamental question should be "Is there evidence that the 12-hour nursing shift results in more patient harm or worse patient outcomes than the more traditional 8-hour shift?" And, because no studies have been done allowing direct comparison of care rendered via the two scheduling patterns and eliminating potential confounding factors, we still cannot confidently answer that question.

There are some features of the 12-hour shift that we like because they could at least theoretically improve patient safety. These include **fewer handoffs** and a reduction in the "**consecutive day phenomenon**" (see our July 29, 2014 Patient Safety Tip of the Week "The 12-Hour Nursing Shift: Debate Continues"). But these must be balanced against the negative influence of worker fatigue that may worsen patient safety.

A previous survey of nurses in the US (Stimpfel 2013) suggested a detrimental impact of such extended work hours on patient care. Now another nursing survey has linked prolonged nursing shifts to problems in quality and patient safety. Griffiths and colleagues for the RN4CAST Consortium (Griffiths 2014) reported the results of a survey of over 30,000 RN's in general med/surg units at 488 European hospitals. Nurses working shifts of 12 hours or more were more likely to perceive poor or failing patient safety, poor or fair quality of care, and more care activities being left undone. Working overtime, regardless of shift length, was also associated with nurses' perception of poor or failing patient safety, poor or fair quality of care, and more care activities being left undone.

Though this was a survey that relied on nurse self-reported responses, previous studies have validated that such nurses' perceptions correlate with actual patient safety and quality measures (McHugh 2012).

12-hour shifts are not yet as common in most European countries compared to the US. In the US the most common shift length in a survey was 12-13 hours, worked by 65% of nurses responding (Stimpfel 2013) and another paper put that number at 75% (Townsend 2013). In contrast, only 15% of nurses in the current survey of European hospitals worked shifts of 12 or more hours. That did, however, vary by country. Less than 5% of nurses responding in Belgium, Germany, Greece, The Netherlands, Norway and Sweden worked shifts of 12 hours or more whereas in Ireland and Poland such shifts were worked 73% of the time and in England such shifts accounted for about a third of shifts.

But there are questions left unanswered by this and all previous studies. The Griffiths study did not distinguish between nurses who chose to work 12-hour shifts vs. those for whom it was mandated. Given the correlation between overtime and nurses' perceptions of suboptimal quality and patient safety, one might anticipate that the degree of discomfort nurses have with their shift length may be an important contributory factor.

Because the 12-hour shift has become so popular in the US, both with nurses and hospitals, it will likely take compelling evidence to cause reversion to shorter shifts. The majority of nurses we know like the 12-hour shift because of its flexibility and that it allows them to spend more time with their families and other activities outside the hospital. But it is this very personal preference that would make it very difficult for the ultimate study on this issue – a randomized controlled trial (RCT) – to be performed. Probably the only way to do such a quasi-RCT would be to take a sizeable hospital with multiple wards handling comparable patients and then make half the units 8-hour shift units and the others 12-hour shift units, letting nurses choose which unit they want to work on. Objective quality and patient safety outcomes would have to be measured in addition to nurses' impressions of care. Such a study would probably still be subject to selection bias. Given the hospital nursing shortages in the US it would be very difficult to adjust results for the occurrence of overtime.

This is a critically important issue in quality and patient safety. But conclusive answers are not yet available. In the interim see some of our prior columns regarding strategies to mitigate nurse fatigue and also our columns on the impact of fatigue in healthcare and other industries and use of strategies such as power naps.

Our previous columns on the 12-hour nursing shift:

November 9, 2010 "12-Hour Nursing Shifts and Patient Safety"
February 2011 "Update on 12-hour Nursing Shifts"
November 13, 2012 "The 12-Hour Nursing Shift: More Downsides"
July 29, 2014 "The 12-Hour Nursing Shift: Debate Continues"

Some of our other columns on the role of fatigue in Patient Safety:

November 9, 2010 "12-Hour Nursing Shifts and Patient Safety"
April 26, 2011 "Sleeping Air Traffic Controllers: What About Healthcare?"
February 2011 "Update on 12-hour Nursing Shifts"
September 2011 "Shiftwork and Patient Safety
November 2011 "Restricted Housestaff Work Hours and Patient Handoffs"
January 2010 "Joint Commission Sentinel Event Alert: Healthcare Worker Fatigue and Patient Safety
January 3, 2012 "Unintended Consequences of Restricted Housestaff Hours"
June 2012 "June 2012 Surgeon Fatigue"
November 2012 "The Mid-Day Nap"
November 13, 2012 "The 12-Hour Nursing Shift: More Downsides"
July 29, 2014 "The 12-Hour Nursing Shift: Debate Continues"

Some of our other columns on housestaff workhour restrictions:

December 2008 "IOM Report on Resident Work Hours"
February 26, 2008 "Nightmares: The Hospital at Night"
January 2010 "Joint Commission Sentinel Event Alert: Healthcare Worker Fatigue and Patient Safety
January 2011 "No Improvement in Patient Safety: Why Not?"
November 2011 "Restricted Housestaff Work Hours and Patient Handoffs"
January 3, 2012 "Unintended Consequences of Restricted Housestaff Hours"
June 2012 "Surgeon Fatigue"
November 2012 "The Mid-Day Nap"
December 10, 2013 "Better Handoffs, Better Results"
April 22, 2014 "Impact of Resident Workhour Restrictions"

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