Nursing care that is left undone: findings from RN4Cast

Background
An association between nurse staffing and patient outcomes has been established in the UK and around the world (1, 2). Recent research from the USA suggests that lower staffing levels result in care being left undone, and that this affects patient outcomes (3).

Objectives
To determine the frequency and nature of nursing care being left undone, the extent that this varies, and whether variation is related to differences in nurse staffing and skill-mix.

Methods
The research was undertaken as part of a larger EU 7th Framework multinational study ‘RN4Cast’ and replicated the design protocol set by the consortium.

A cross-sectional survey of registered nurses working on medical and surgical wards was undertaken January–September 2010, covering 31 NHS general acute hospital Trusts in England. The sample was stratified by size, teaching status and region. 2990 responses were received, representing a response rate of 39%.

Results
What is left undone due to lack of time? Nurses were asked:

“On your most recent shift, which of the following activities were necessary but left undone because you lacked the time to complete them?”

- Comfort/Talk with patients: 66%
- Educating patients & family: 52%
- Develop/update nursing care plans: 47%
- Adequate patient surveillance: 34%
- Adequately documenting nursing care: 33%
- Oral hygiene: 29%
- Frequent changing of patient position: 28%
- Planning care: 28%
- Administer medications on time: 23%
- Skin care: 21%
- Prepare patients & families for discharge: 20%
- Treatments & procedures: 11%
- Pain Management: 7%

• Average patient per RN ratio on wards was 8.8 (SD 3.4)
• RNs as % of all nurses (ie skill mix) was 57% (SD 15%)
• 87% of respondents report that they had left one or more aspect of care undone on last shift due to lack of time

What factors explain variation in care left undone? (multilevel model)

LEVELS: Hospitals (46), Wards (393), nurses (2,657)
Factors in model:
- Specialty (med/surgical)
- Shift, practice environment score (PES)*
- Patients per RN*
- Patients per HCA
Variation between wards and hospitals tested statistically using intercepts only and full model

Significant differences related to the Practice Environment Scales and RN staffing (patients per RN as an average on the last shift worked).

Variation in care left undone
• Nurse/shift level variation was much larger than the variation found at the ward and hospital levels.
• Wards varied significantly on all activities except: pain management, treatment & procedures and preparing patients for discharge (and additionally skin care and comfort talk in the full model).
• Hospitals varied significantly on pain management and frequent changing of position only (and additionally developing or updating nursing care plans/pathways in the full model).

Missed care by staffing levels (pts per RN)

Relationship to nurse staffing
• The degree and nature of care not completed on a shift is significantly related to shift staffing levels (patient to RN ratio).
• Better staffed wards with a ratio of 6-7 patients per RN have an average of 1.4 fewer items of care left undone compared with wards with staffing levels of 9 patients per RN.
• Once staffing levels below certain point (> 8 patients per RN) the level of compromised care score plateaus (at roughly 4.3 items of missed care per shift).

References