Impact of Patient Safety Initiatives on Nursing Workflow and Productivity

Center for Patient Safety
School of Nursing, UCSF
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Impact of Patient Safety Initiatives on Nursing Workflow and Productivity

Mary A. Blegen
Center for Patient Safety

Nancy Donaldson
Center for Nursing Research and Innovation

Jean Ann Seago
Community Health Systems

Susan Shapiro
Center for Nursing Research and Innovation

School of Nursing,
University of California, San Francisco

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Goal and Aims of the Conference

• The goal was to set the stage for determining the impact:
  – of the multiple, concurrent, internally and externally driven safety initiatives
  – on nursing workflow, work demands, and productivity, and subsequently
  – on the overall quality and safety of patient care.
Specific Conference Aims

• Refine a conceptual framework explicating all factors influencing nurses’ workload in acute care settings

• Achieve consensus on a research agenda and suggested measures and methods to:
  • Describe nursing productivity, workload, workflow, and cost of nursing care in relation to patient outcomes after instituting practice changes to improve safety and quality of care
  • Identify specific points at which these safety interventions increase workload and alter productivity

• Explore staffing model changes and methods of streamlining support
Conference Participants

• 66 invited attendees, including,
  – 34 academic researchers,
  – 18 nurse leaders from hospitals, and
  – 14 doctoral and post-doctoral students.
  – 4 participants from Canada,
    1 from England and
    1 from Germany.
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Technology and Tools:
- equipment not available (32%)
- patient rooms not well-stocked (32%)
- spending time seeking for supplies (24%)
- spending time searching for equipment (20%)

Organization:
- delay in getting meds from pharmacy (36%)
- spending time searching for patients' charts (23%)
- delay in seeing new medical orders (21%)

Tasks:
- spending time dealing with family needs (35%)
- spending time teaching family (34%)

Environment:
- distractions from family members (42%)
- insufficient space (26%)
- many phone calls from family members (23%)
Prioritized Research Agenda

1. Ergonomic assessment of safety and quality mandates to reveal impact on nurses’ workload

2. Measure impact of the introduction of safety/technology initiatives on nurses' cognitive work and patient specific outcomes

3. Determine nursing work that gets shed (left out), under what circumstances, and what the impact on patient and system outcomes is?

4. Combine descriptive measures of nurse's clinical work (e.g. tracking time of nursing process) with summary measures of non-value added work and determine the effects of care models
Prioritized Research Agenda

5. Determine time staff nurses spend on activities that support and maintain the system.

6. Impact of broader organizational initiatives (not necessarily quality or patient safety) on nurses' work/workload.

7. Analyze high performing facilities/units to identify enablers and effective teamwork.

8. Build models of micro-systems, care-giving, caregiver teamwork, and impact.
Measurement Issues (a)

• Workload of Nurses (noting that workload is distinct from “work”)

• Tasks of Nurses/Nursing in Healthcare Delivery

• System Support/Contribution by Nurses/Nursing

• Family care needs /support /handling
Measurement Issues (b)

• Workload of Nurses (Now, number of patients)

Dimensions of workload

• Cognitive workload
• Affective/emotional workload
• Workflow
• System Complexity
Measurement Issues (c)

- Task Management
  - Stacking of tasks
  - Shedding of tasks
  - Multitasking
  - Intensity of tasks
  - Complexity of tasks
  - Temporal Urgency of Tasks
  - Tasks of organizational citizenship
Measurement Issues (d)

- System Functioning – Contributions from Nurses
  - Collaboration
  - Team (work)
  - Coordination
  - Prevention
  - Surveillance
  - Vigilance
  - Interception/rescue
  - Protection
Issues from Clinical Leaders (CNOs) (a)

• Tension between (a) need for rapid improvements in patient and system outcomes, and (b) lack of strong evidence for effective interventions.

• External drivers to implement practices such as rapid response teams and “bundles” of care.

• Need for research on the “last 100 yards” of a process
  – e.g. medication administration. What happens at the “sharp end” of the intersection between the nurse and the patient, between the nurse and the “system?”
Issues from Clinical Leaders (CNOs) (b)

Incomplete understanding of the work of nurses -- Need to re-conceptualize and re-design

– Perform macro-ergonomic modeling prior to any changes in practice or system function to assess downstream impact; use results to mitigate adverse downstream impacts on workload

– How do nurses prioritize/stack their work and what gets shed?
  • How is shedding handled?
  • Does that work get handed off to others or omitted?
  • Does this place patients in jeopardy?

– How to account for the system level work

– Improve the concepts of “value-added, non value-added”

– Better leverage technology so it supports the work of nurses, rather than adding to the perceived/actual burden
Next Steps

• Continue refinement of the priority areas with measurable targets and create action plans.
• Inform researchers who are interested in these topics about our work and our suggested foci.
• Develop inter-disciplinary work, particularly with human factors researchers, to address this issue.
• Create smaller working groups to address each sub-topic.
• Find funding for a series of inter-related studies to make significant progress.
  – This could be an RFP process like the AHRQ working conditions series.
Emergent ideas

• Generation I – Generation II research
  – Generation I: Have spent recent years calculating nurse staffing levels and relating to patient outcomes
  – Generation II: Now must look more closely at the work and workload of nurses – get into the Black Box.

• Work – workload