

Utilizing an Interprofessional Approach to Obtain Budget Approval for a Video Monitoring System to Reduce Patient Falls and Sitter Costs

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Objectives

By the end of this presentation the participant will be able to:

1. Identify the role of the DNP on the interdisciplinary team in determining available quality improvement options.
2. Identify sources of information that can be used to develop a cost-benefit analysis.
3. Recognize the value of the DNP on the interdisciplinary team in supporting quality improvement projects.

Background/Significance

According to the Institute of Medicine (IOM), "safety should be an explicit organizational goal" for healthcare (IOM, 1999, p. 4). The Veterans Health Administration (VHA) Blueprint for excellence calls for adopting the IOM high-performance healthcare quality goals, which include safe, effective, patient-centered, timely, efficient and equitable care (VHA, 2014). Patient falls have been identified as a threat to patient safety in hospitals and are the number one reported adverse event, with over one million falls reported in United States (US) hospitals annually. Fall reports indicate that approximately 33% of patient falls are preventable (Ganz, et al., 2013). Falls that result in serious injury or death are considered "never events" (AHRQ, 2014). Pain and disability result from 10% to 30% of patient falls (Spetz, Brown, & Aydin, 2015). 11,000 falls per year lead to patient death in the U.S. (Ferenc, 2014). Hospitals are required by the Joint Commission (TJC) to have a fall reduction program as a national safety standard (Jorgenson, 2011). Many hospitals have attempted to reduce falls by placing sitters at the bedside of patients at high risk of falling (Jeffers, et al, 2013; Burtson & Vento, 2015; Votruba, Graham, Wisiniski, & Syed, prepublication). The use of video technology to assist in decreasing patient falls is beginning to be used as an adjunct in safety management.

Purpose/Goals

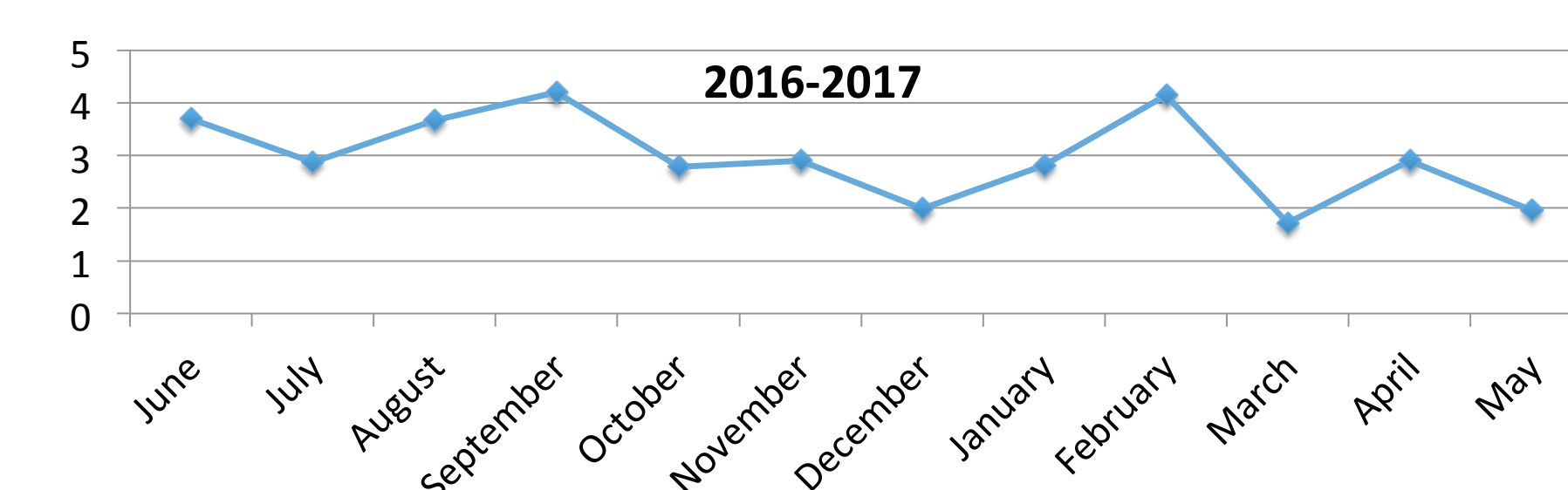
The purpose of this project is to: Demonstrate how the DNP has become an important member of the healthcare interdisciplinary team with the skills to assemble the latest research evidence for use in clinical practice and create a cost-benefit analysis from available options; Demonstrate the use of the DNP skill set to advocate for the policies and budget allocation for equipment needed to protect the most vulnerable inpatient populations from illness and injury; Show how this proposal creates a blueprint for working within an interdisciplinary team to create an accepted budget proposal for a large capitol project.



Blueprint

Identification of current practice & effectiveness:

Recent policies including the "Fall Champion Committee" the "Fall Bundle" and the "Hospice Specific Care Plan" have been adopted but fall rates have not consistently fallen to below benchmarks.



Analysis of cost of falls: Falls without injury cost between \$1,138 and \$2,033 for medical evaluation, diagnostic testing and monitoring and falls with injury cost between \$7,136 and \$30,931 (Spetz, Brown, & Aydin, 2015). Total Number of inpatient falls FY October 2015 to September 2016 = 117. Lowest cost estimate of non-injurious and 10% injurious falls = \$1,138 X 105 + \$7,136 X 12 = \$205,122 as very conservative estimate of total cost of falls.

Analysis of Bedside Sitters Used and Cost:

DNP tallied sitters used and job classifications for month of April 2016, determined to be average usage month.

Average Classification Salaries used for cost calculations
 NA/HT--\$19.10/HR
 LPN---\$21.64/HR
 RN---\$34.93/HR
 OT salaries X 1.5

Total Sitter Costs 4/3-4/30-2016	\$31,122.87
Average Facility Sitter Costs per Day (total/27)	\$1,156.40
Annual Facility sitter Costs (Avg daily X 365)	\$422,086

Review of Literature

- Only 4 evidence-based peer reviewed articles
- Many reports from nurses in poster and power point presentations.
- There are no reports that indicate regret over adopting the system
- Reported benefits of reduced costs, reduced sitter use, reduced falls, reduced restraint use, improved patient and family satisfaction, anecdotal unanticipated patient rescues, and improved work environments as CNAs are returned to the staffing model

Available Evidence-Based Articles

- Ochsner Medical Center New Orleans, LA 2009 report of facility assembled monitors to increase surveillance in response to increased psychiatric patients and reduced nursing staff after Hurricane Katrina. Initial cost was \$3,000. Sitter costs were reduced from \$960 to \$240 per 4 patients and fall rates were reduced by 6%. 12 month fall rates reduced to 0.68/1000 bed days (Goodlett, Robinson, Carson, & Landry, 2009)
- Poudre Valley Hospital Ft. Collins, CO pilot use decreased annual falls from 23.5 to 2 (Reported in Jeffers, et al., 2013)
- Denver Health, CO noted ineffectiveness of fall prevention program as impetus to implement video monitoring. After implementation more patients were monitored, 57 falls prevented in first 3 months of use, ROI exceeded in first quarter. 18 month savings of \$2.02 million (Jeffers, et al., 2013)
- UCSDHS reduced falls to at or below benchmark and reduced fall injuries by 26%. Restraint use also decreased. First year sitters reduced by 23.9%, second year by 53.6%. First 9 month savings \$771,919, second year savings \$1,718,823 (Burtson & Vento, 2015)
- Mercy Health Saint Mary's Grand Rapids MI reduced sitter hours and fall rates. Fall rates lower among high risk monitored patients than lower risk non-monitored patients. Estimated cost savings between \$77,200 and \$120,000 annually (Votruba, Graham, Wisinski, & Syed, Prepublication)

Additional Sources of Evidence

- Healthcare Risk Management publications
- Poster Presentations
- News releases
- Continuing Education Symposium
- American Nurse Today publications
- Health care websites
- Podium presentations
- Quality Improvement Conferences
- Nurse Executive Conferences
- Magnet Conference

Summary of Additional Evidence

- Reduced costs
- Reduced bedside sitter use with increased surveillance
- Reduced patient falls and falls with injury
- Improved patient and family satisfaction
- Improved work environments
- Reduced or eliminated restraint use
- Unanticipated rescues of patients and staff

Process

- The work of the project occurred over 18 months. The DNP met with staff nurses, unit managers and advanced practice nurses as members of the Fall Champion group. Additionally, nursing supervisory staff, management, facility biomedical engineers and facility financial officers were consulted
- Literature review was conducted which revealed few evidence-based articles, but an exhaustive search revealed many clinically based sources of evidence
- DNP traveled to Houston, TX with Chief Nurse for Education to attend a conference demonstrating the use of the video monitoring system
- DNP made several site visits to local hospitals where the video systems are being utilized to speak with staff about their experiences
- Collected and analyzed facility data about fall rates, fall injuries, bedside sitter use and costs
- Researched video monitoring companies and worked with selected vendor and hospital stakeholders to facilitate facility walk through for formal quote and to establish cost estimates, anticipated to be \$150,000 for 8 portable monitors, including equipment, installation, staff training and contracts
- Prepared and presented a budget proposal, including a cost-benefit analysis with anticipated timeframe for ROI, for adoption of the video monitoring system as a quality improvement project to reduce patient falls and reduce sitter costs

Outcomes/Next Steps

- Budget Proposal was accepted by facility stakeholders
- No available funds for FY 2017
- Plans to include in budget for FY 2018
- DNP will participate in policy/procedure development, staff training and data collection and dissemination

