**Executive Summary & DNP Pillars Implications**

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DNP Inquiry Project

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**Executive Summary**

**Background and Significance:** The Joint Commission (2017) defines patient handoff as “a transfer and acceptance of patient care responsibility achieved through effective communication.” Archival evidence suggests that effective handoffs may lead to reduced errors, increased quality of care, increased patient safety and satisfaction, increased staff satisfaction, and improve relationships among staff. Organizations are struggling to achieve effective and sustainable handoff processes as evidenced by the minimal change in the literature over the past 20 years depicting the best ways to facilitate an effective handoff. The purpose of this study is to identify sustainable policy changes which may make the nurse-to-nurse patient handoff process more effective.

**Methods:** We utilized a cross-sectional survey study design and a convenience sample of registered nurses employed on two med medical-surgical floors, a pediatric intensive care unit (PICU), and a neonatal intensive care unit (NICU). The questionnaire was distributed electronically and utilized the methodologies to capture how individuals prioritize choices via perception (Analytical Hierarchy Process (AHP); Saaty, 2008) and while making decisions (Policy Capturing (PC); Zedeck & Kafry, 1977). Both AHP and PC require the use of cues. For this study, the cues are potential policy changes and include starting handoff ten minutes after shift start, mandating no interruptions for a 30-minute period during handoff (unless emergency), providing all patients the same education about bedside handoff, and preparing brief shift summaries in the electronic health record (EHR) using a structured template.

**Results:** The AHP results indicated that staff perceive our potential policies as most to least impactful in this order: mandating no interruptions for a 30-minute period during handoff (unless emergency) (40%), preparing brief shift summaries in the electronic health record (EHR) using a structured template (23%), providing all patients the same education about bedside handoff (22%), and starting handoff ten minutes after shift start (15%). The PC results indicated three of the four potential policies being most impactful. Staff identified starting handoff ten minutes after shift start may be beneficial in order to review patient charts before handoff. Staff identified mandating no interruptions for a 30-minute period during handoff (unless emergency) and having a structured template for shift summaries may be beneficial in order to complete a shift summary within the last hour of their shift.

**Discussion:** It is easily understood as to why staff identified the first two policies as impactful; providing a structured template will simplify the task of completing a shift summary, and delaying handoff start time will allow nurses to review patient charts before receiving handoff. The third policy of mandating no interruptions for a thirty-minute period during handoff in order for staff to complete a shift summary in the last hour of their shift is not as easily understood. We argue these results may be explained by social exchange theory whose fundamental premise is that if an organization wants someone to do something, it needs to do something for that someone in return (Settoon et al., 1996). Our study’s data show that staff are willing to complete a shift summary if the organization mandates no interruptions.

We also note that our methodologies show that people differ in what they see as important and what actually may motivate them to engage in specific behaviors which is beneficial knowledge when implementing interventions into practice. In AHP, staff identified starting handoff ten minutes after shift start as least impactful and in PC, it was identified as most impactful. This study provides the foundation work to answer which and why certain policies may improve the patient handoff process. We encourage researchers to continue efforts to effectively change the handoff process.

**DNP Pillars Implications**

**Practice**

Patient handoff is a practice nurses utilize multiple times a shift. This project serves to find a sustainable way to improve the way nurses practice handoff. We utilize policy capturing methodologies in order to achieve our purpose. Policy capturing is beneficial in practice as it identifies how an individual prioritizes choices while making decisions (Zedeck & Kafry, 1977). The decisions we targeted in this study were the desired behaviors of incoming nurses reviewing patient charts before receiving handoff and outgoing nurses completing a shift summary within the last hour of their shift (Ernst et al., 2019). We looked at four potential policies to be implemented into practice that may be impactful for staff to engage in the desired behaviors. Staff identified three as impactful: starting handoff ten minutes after shift start, mandating no interruptions for a thirty-minute period during handoff (unless emergency), and providing a structured template for shift summaries.

 We also examined the seminal work of Shannon and Weaver’s (1949) model of communication in order to help us better understand how to effectively communicate during the handoff process. We noted that Shannon and Weaver’s model helps explain ***why*** our desired behaviors and potential policies may positively impact the communication process. Incoming nurses (the decoder in Shannon and Weaver’s model) reviewing patient charts before handoff allows for a better foundation so they may be better listeners. Starting handoff ten minutes after shift start may allow nurses to engage in this preparatory work. Outgoing nurses (the encoder in Shannon and Weaver’s model) completing a shift summary organized information to transmit. Providing a structured template for shift summaries may encourage nurses to complete them.

 Lastly, Shannon and Weaver identify that any noise in the channel (the conduit for information exchange) will hinder the communication process. In patient handoff, noise is represented by distractions which may include interruptions from patients, physicians, support staff, etc. Implementing a policy that mandates no interruptions for a thirty-minute period during handoff may decrease the noise in the channel and may allow for a more effective communication process.

**Policy**

 The methodology of analytical hierarchy process and policy capturing utilized in this study allowed us to identify which policy changes may be most impactful for nurses to engage in the components of an effective patient handoff. Statistically significant results included policies that influenced the desired behaviors of reviewing patient charts before handoff and completing a shift summary within the last hour of a shift. As previously mentioned, the policies staff identified as most impactful in order to complete the desired behaviors were starting handoff ten minutes after shift start, mandating no interruptions for a thirty-minute period during handoff (unless emergency), and providing a structured template for shift summaries.

The first two policies are conspicuous as to why they may influence nurses to engage in effective handoff behaviors. If nurses are asked to complete a shift summary in the last hour of their shift, provide them with a structured template to do so. A structured template may help the outgoing nurse more easily organize the pertinent and necessary information required during patient handoff (Ernst et al., 2019). If nurses need to review patient charts before starting handoff, delay handoff start time in order to allow them to do so. The delayed handoff start time may give incoming nurses ample opportunity to review their patients’ charts and may allow for a more effective and efficient handoff process so nurses can begin their patient cares quicker (Ernst et al., 2019).

Staff identifying no interruptions as a motivating factor to complete a shift summary is not as easily understood. The shift summary is completed before shift change which is not when interruptions would be deterred. Social exchange theory may help explain these results. The fundamental premise of the social exchange theory is that if an organization wants someone to do something, it needs to do something for that someone in return (Settoon et al., 1996). In this case, the AHP results help us explain the PC results from the perspective of the social exchange theory. In AHP, staff indicated that the policy they perceived as most beneficial is mandating no interruptions for a thirty-minute period during handoff (unless emergency). Therefore, if the policy is that the organization wants staff to complete a shift summary, then staff wants the organization to mandate no interruptions for a thirty-minute period during handoff.

**Systems**

 Policy capturing was chosen for this project because it takes a systems perspective on which potential interventions might work by identifying the driving behavior instead of perceptions alone. We are recommending systems approaches be done to continue this research. A short-term research goal may be the extension of this study by doing a pre- post-intervention study. We recommend the intervention be the sustainable policy changes we identified as a result of this study (starting handoff ten minutes after shift change, mandating no interruptions for a thirty-minute period during handoff, and providing a structured template for shift summaries).

The intervention may be measured with the Handover Evaluation Scale (HES) distributed both before and after the intervention. The HES serves to measure nurses’ perceptions of handover based on the following key components as outlined by O’Connell et al. (2014), “relevance and comprehensiveness of information, timeliness and efficiency of the process, opportunity to clarify and discuss information, and information on any patient involvement” (p. 561). The organization may then compare the pre- and post- intervention HES results to assess the success of the new policies and make changes as necessary.

 Next, we note that implementing the intervention of no interruptions for thirty minutes will undoubtedly require a culture change within the organization at the system level. Currently, it is allowed for any team member to approach nurses during handoff time which has been well identified throughout the literature as a hinderance to effective patient handoffs (Riesenberg et al., 2010; Vandervort et al., n.d.). It will take the cooperation of all involved (nursing, physicians, support staff, etc.) in order to fully comply with the no interruptions rule during patient handoff.

 Finally, data were collected with a focus on pediatric medical-surgical, pediatric intensive care units, and neonatal intensive care units. The study’s recommendations may be applicable system wide, and the organization may choose to expand these efforts across the institution. Implementing the handoff process change hospital wide may also allow for inter-departmental patient transfers to be more efficient and streamlined. All nurses, regardless of the unit they work on, practicing the same handoff process may allow for shared expectations of how handoff should flow which may decrease information omissions and misunderstandings. Expanding this work throughout the organization may then multiply the positive outcomes associated with effective patient handoff including reduced errors, increased quality of care, increased patient safety and satisfaction, increased staff satisfaction, and improved relationships among staff (Riesenberg et al., 2010; Vandervort et al., n.d.).

**Economics**

 Positive outcomes associated with effective patient handoffs such as those noted in Riesenberg and colleagues (2010) as well as Vandervort and colleagues’ (n.d.) reviews have economic implications. Studies have shown effective patient handoffs may reduce the number of falls with injury and medication errors (Taylor, 2015). Paulsen (2018) identified a fall with injury may cost the healthcare system up to $14,000. Another positive outcome which results from effective patient handoff is staff satisfaction and the improvement of relationships among co-workers. This outcome may decrease the nursing-turnover rate which can cost between $37,300 and $58,400 per nurse (The University of New Mexico, 2016). Another noted outcome from effective patient handoffs is the reduction of time it takes to perform handoff (Kasinathan et al., 2012; Reinbeck & Fitzsimons, 2013; Usher et al., 2018). Reducing the time it takes to perform patient handoff may reduce overtime pay as nurses are able to leave work on time.

 Lastly, it is important to analyze the economic implications the policies we are recommending may have on an organization. Delaying handoff start time by ten minutes has no cost burden. One may argue that it may have the unintended consequence of the outgoing nurse leaving later. Our contention is that the aforementioned argument is not the case; the behaviors we have targeted in this study may help alleviate this issue. If outgoing nurses prepare brief shift summaries, they may be able to deliver a more effective and efficient handoff. If incoming nurses review patients’ charts before receiving report, they may be better prepared to receive handoff by being able to anticipate questions and/or order verification. These effective and efficient handoff practices may allow the outgoing nurse to leave on time in spite of starting handoff ten minutes later.

Mandating no interruptions for a 30-minute period during handoff (unless emergency) has no dollar cost, however, as mentioned previously, it may be a large culture change and difficult to adopt. Finally, structuring a shift summary will incur an initial cost to create and embed the template in the electronic health record. This cost would be a one-time fee and may substantially help the handoff process which, again, may lead to an increase in positive outcomes.

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