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Transformational Leadership Meets Innovative Strategy: How Nurse Leaders and Clinical Nurses Redesigned Bedside Handover to Improve Nursing Practice

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In 2000, the Institute of Medicine (IOM) published *To Err Is Human: Building a Safer Health System*, highlighting medical errors resulting from failure in perception, assumption, and communication. The handover process is a high-risk activity prone to the communication vulnerabilities described in the IOM report. The handover project started as a 3-month pilot with plans to expand to the entire facility. The handover education had 4 elements: questionnaire, presentation, video, and simulation. Compliance with the new process was measured using audits completed by the unit managers. Sixty-four registered nurses on 2 acute units were educated by nurse champions. After a successful implementation, the surge of COVID-19 patients in spring of 2020 required us to adjust expectations regarding bedside handover. As the number of hospitalized COVID patients began to decrease, we reinvigorated the project and re-established the expectation that handover be performed at the bedside. A post-questionnaire was completed after implementation and revealed more favorable responses toward bedside handover. We also saw improvements in our patient satisfaction scores (Hospital Consumer Assessment of Healthcare Providers and Systems [HCAHPS]). With direct observation and a checklist, we were able to return to the practice of bedside handover following the surge of COVID-19 patients. As a direct result of the bedside RN involvement, we created and implemented a handover process that prioritized nursing needs and concerns. Our implementation of this evidence-based practice enhanced patient experience and improved safety. Through education, observational audits, and use of a checklist, we were able to re-establish the expectation and practice of handover being completed at the bedside.

**KEY POINTS**

- Involving bedside RNs is essential to successful practice change to gain support and ensure new processes align with actual workflows.
- Surges of patients with COVID-19 require flexibility in the provision of nursing care.
- As the COVID-19 pandemic persists, we need to actively reimplement best practices while providing support to the frontline staff.

The transferring of professional responsibility and accountability for the care of patients between nursing staff is a high risk component in healthcare. In 2000, the Institute of Medicine (IOM) published its groundbreaking report, *To Err Is Human: Building a Safer Health System*. The IOM report highlighted the staggering number of adverse events experienced by patients as a result of communication
In 2017, the Joint Commission released a Sentinel Event Alert related to handover communication stating, “Potential for patient harm—from minor to the severe—is introduced when the receiver gets information that is inaccurate, incomplete, not timely, misinterpreted, or otherwise not what is needed. Inaccurate information can be incorporated into the patient’s plan of care and create safety risks. The handover process allows the caregiver to present the necessary information needed to manage care for the patient. Nursing handover should be structured, detailed, pertinent, complete, and accurate.

A standardized handover process reduces risks and demonstrates benefits for the registered nurse (RN), patient, and organization. According to Ernst et al., a consistent handover approach streamlines information and compensates for different caregiver communication styles. Nurses encounter increased efficiency and clarity during the patient report. Organizational benefits include decreased adverse events, improved nursing-sensitive indicators, and enhanced patient experience levels. Patients benefit by participating in their individualized plan of care, which can reduce anxiety related to their care. Prior clinical handover studies show recurrent themes of improved patient safety, time effectiveness, patient/family engagement, and bidirectional satisfaction for patients and staff.

To enhance and elevate patient safety in our organization, we chose to redesign and standardize the process for nursing bedside handovers at our institution in 2018. We had a successful pilot and organization-wide implementation. The surge of COVID-19 in 2020 required us to adjust expectations regarding bedside handover. As the number of hospitalized patients with COVID diminished, we reinvigorated the project and re-established the expectation that handover be performed at the bedside.

BACKGROUND
Our institution, an urban, 450-bed, full-service teaching hospital and level 1 trauma center, aligns its aim for patient care with the Institute of Medicine: effectiveness, safety, timeliness, patient-centeredness, efficiency, and equity. All quality initiatives are designed and implemented with the principles of a highly reliable organization (HRO) such as preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resiliency, and deference to expertise.

Although our facility has performed bedside handover at change of shift for many years, in August 2016, we implemented a new electronic medical record (EMR) that contains a screen that organizes patient information in one place to facilitate the handover process. Information includes but is not limited to the patient diagnoses, medications, recent labs, and vital signs. The organization adopted the mnemonic IPASS (illness severity, patient summary, action list, situation awareness and contingency planning, synthesis by receiver) to standardize and guide handover communication. Initial handover observational practice audits revealed the process was not performed consistently, and patients were not routinely active participants.

The senior director of nursing for medicine/surgery held a 2-hour meeting to address concerns and brainstorm solutions. The meeting was attended by key stakeholders: clinical staff nurses from the pilot units, directors of nursing, nursing quality, nursing managers from the pilot units, senior vice president of nursing, patient experience, nursing education, and nursing informatics. Communication issues that contribute to patient harm and low patient satisfaction scores were discussed. Bedside handover was highlighted as a key initiative that would positively contribute to patient safety and satisfaction through consistent communication between nurses.

The Handover Redesign Team was formed to create a standardized nurse bedside handover process to guide practice and improve communication among clinical nursing staff.

Our project was designed as a quality improvement project using educational interventions and a pre- and post-questionnaire. The project’s success was measured using post-questionnaire results, quality outcomes specific to falls, and patient experience outcomes. The quality and patient experience outcomes were benchmarked against each unit’s historic performance to establish a baseline. Patient falls are tracked monthly through the nursing quality department. Patient experience scores are measured through survey responses via HCAHPS. Through bedside handover, we hypothesized we would see a decrease in the number of falls and an improvement in our patient experience scores relating to nurse communication and discharge information.

The pilot phase of the handover project ran for 3 months on a 20-bed neuroscience unit and a 36-bed adult surgical unit. Handover education included 4 main elements: pre- and post-questionnaire, PowerPoint presentation, video, and simulation. The project was further supported by adjusting nursing shift start times and installing patient Care Boards.

Instruments
A literature search was conducted to ascertain best practices for nursing handover and identify potential implementation barriers. Nursing quality developed a 9-item questionnaire to assess nursing opinions and views regarding the bedside handover process (Table 1). The questionnaire used a yes/no question format and a 5-point Likert scale (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree). The
questionnaire addressed handover preferences, estimated time to perform handover, nurse perceptions of patient care prioritization, patient confidentiality concerns, and patient experience with bedside handover.

**METHODS**

The questionnaire was administered using Qualtrics® and distributed to the RNs through e-mail by the nurse managers. Participation was voluntary, and the results were anonymous. Sixty-four RNs participated in the initial stage. We used the pre-education intervention questionnaire to inform development of educational components and workflow transitions. The post-education questionnaire was administered 6 months after the implementation of the new handover process.

**Care Boards**

The promotion of patient participation and engagement during the handover process was accomplished in part by the installation of Care Boards on each nursing unit. The Patient Experience Team collaborated with individual nursing units to design content for custom whiteboards for each patient that display information important to the plan of care. Care Boards increase patients’ knowledge of the care team, understanding of individual goals, and improve patient satisfaction.

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**Table 1. Handover Questionnaire Results**

| Question                                                                 | Pre- and Post-Education Comparison | Pre | Post | Pre | Post | Pre | Post |
|--------------------------------------------------------------------------|-----------------------------------|-----|------|-----|------|-----|------|
| I prefer to receive handover at the patient’s bedside, %                |                                   |     |      |     |      |     |      |
| 15 Minutes                                                               |                                   | 66  | 87   | 34  | 13   |
| 20 Minutes                                                               |                                   |     |      |     |      |     |      |
| 25 Minutes                                                               |                                   |     |      |     |      |     |      |
| 30 Minutes                                                               |                                   |     |      |     |      |     |      |
| >30 Minutes                                                              |                                   |     |      |     |      |     |      |
| Average amount of minutes it currently takes to give handover, %         |                                   | 24  | 2    | 24  | 9    |
| Strongly Agree                                                           |                                   | 28  | 39   | 46  | 46   |
| Agree                                                                    |                                   |     |      | 7   | 7    |
| Neither Agree nor Disagree                                              |                                   | 7   | 7    | 19  | 2    |
| Disagree                                                                 |                                   |     |      | 2   | 0    |
| Strongly Disagree                                                        |                                   |     |      | 5   | 5    |
| Bedside handover is an efficient use of the nurses time, %               |                                   |     |      |     |      |     |      |
| By doing bedside handover, I can prioritize patient care, %             |                                   | 28  | 39   | 46  | 46   |
| Bedside handover makes it easier for me to take over the care of patients I have not previously cared for, % | | 35  | 42   | 41  | 39   | 11  | 10   |
| I have concerns about patient confidentiality while performing bedside handover, % | | 43  | 44   | 31  | 39   | 11  | 10   |
| Through bedside handover, patients experience less anxiety about their care, % | | 54  | 27   | 33  | 46   | 4   | 7    |
| Bedside handover allows patients and families the opportunity to communicate more effectively with the nursing team, % | | 6   | 17   | 33  | 34   | 35  | 35   |
| months after the implementation of the new handover process.             |                                   | 17  | 29   | 46  | 46   | 18  | 12   |

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pam medication schedule, daily patient goals, and known assistive devices.

**New Standardized Bedside Handover PowerPoint Presentation**

The Handover Redesign Team used the questionnaire data to create a customized education program highlighting the benefits of bedside handover while proactively addressing staff concerns. The target audience for the educational program included RNs, nursing assistants, and ward clerks. Nurse managers nominated clinical nurses with a passion for the handover project to act as champions. These champions participated in the team meetings, contributed to the scripts, starred in the video, and provided staff education and handover facilitation at the unit level.

The handover presentation was done using peer-to-peer educational techniques. Handover champions presented the material with nurse leader support. The program began with an icebreaker exercise that demonstrated the importance of communication and engaged the participants in education. A slide presentation covered the following topics:

- **Background of Bedside Handover**—RNs need to maintain clinical inquiry in their work; excellent nursing practice is based on the best available evidence. Literature was provided to staff on patient safety and communication practices in health care.

- **Professional Practice Model**—We discussed how this practice change aligns with the guiding principles of our professional practice model: caring, advocacy, professionalism, and patient-centered care.

- **High Reliability Organization (HRO)**—Our project goal was to reduce variability in the bedside handover process: this supports the organization’s HRO goals.

- **Care Delivery Model**—Bedside handover is foundational to nursing practice and prioritizes patient care.

- **Questionnaire Results**—Education specifically addressed low-scoring items from the pre-intervention questionnaire, such as concerns about patient confidentiality. HIPAA strategies included discussing sensitive information outside the room prior (i.e., HIV status) and asking the patient on admission if family/friend would be present during the change of shift. Information that is potentially overheard during bedside handover is considered incidental disclosure and does not place the RN at any risk of violating confidentiality laws.

- **IPASS and Handover Screen in EMR**—The EMR handover screen provides vital patient information in 1 centrally accessed location including recent vitals, intravenous lines, pressure injuries, pending labs, and medications. The screen is utilized by all staff during the nursing handover process.

- **Pre-Round**—We evaluate patient concerns in a pre-handover round to prevent interruptions and set expectations for patients during handover. During the pre-round, the RN explains that handover will be occurring in 30 to 60 minutes and ensures the patient has or does not have family present. The pre-round also encompasses Care Connection rounds, addressing pain, toileting, possessions, and position.

**Video**

The Handover Redesign Team developed an educational video to portray the expected handover process. The clinical nurse champions were members of the Handover Redesign Team, starred in the video, and contributed to writing the script. The video demonstrated the bedside handover process step by step from the pre-round to the handover, with emphasis on the discussion of sensitive patient information outside the room, bedside handover using IPASS, and methods to engage patients in the handover process. The video included nurse manager rounds that depict how to validate nursing handover practice. After staff viewed the video, the nurse champions facilitated open discussion and answered questions.

**Simulation**

As the last element of the education, the RNs participated in a simulation exercise to practice the handover techniques they learned during class. Predetermined patients were chosen from our test EMR for the simulation session. A mock patient room was set up with a Care Board and workstation on wheels to simulate nursing bedside handover. Each RN was given the opportunity to give handover as the outgoing and incoming nurse. Following completion of simulation, clinical nurse champions provided performance feedback and addressed any RN questions or concerns.

**Validation of Practice Change**

The nurse managers on the pilot units conducted monthly observational audits following the go-live. These live observations of the handover process ensured that the process was occurring in a standardized fashion, and provided coaching and reinforcement of positive practice. The nurse managers also validated the patients’ handover experience through their daily rounds.

**RESULTS**

**Registered Nurse Questionnaire**

Fifty-four (84%) of the total 64 RNs completed the pre-questionnaire and forty-four (69%) participated in the post-questionnaire. The participants had a more
favorable response in post-questionnaire across all categories (Table 1). In response to the question “I prefer to receive handover at the bedside,” 87% of post-questionnaire respondents agreed, compared to 66% in the pre-questionnaire. In addition, there was a significant improvement in the nurse’s perception of efficiency of bedside handover. In the post-questionnaire, 85% of nurses agreed or strongly agreed that bedside handover is an efficient use of the nurse’s time, compared to 74% pre-questionnaire. Through bedside handover, the RNs perceived that patients experienced less anxiety about their care (51%, compared to 39%). Finally, “bedside handover allows patients and families the opportunity to communicate more effectively with the nursing team” improved from 63% to 75%. RNs continued to report concerns of infringement on patient confidentiality, though there was a decrease from 87% to 73%.

The pre-intervention questionnaire showed patient confidentiality and insufficient shift time overlap to be biggest nursing concerns. Particularly, shift time overlap time needed to be addressed to ensure successful educational and process improvement initiatives. The questionnaire showed that 15 minutes was not sufficient time to perform handover: most nurses reported shift-to-shift handover taking 20 minutes or more.

Nursing leadership recognized shift start and end times presented a challenge to the effective transfer of patient health care information. The RN shift start times only allowed for a 15-minute timeframe for nurses to perform handover. Handover research conveys an average of 5.4 minutes to give an individual patient report. Clinical nurses on the pilot units had to handover 4 to 6 patients at the change of shift. The time constraint of 15 minutes contributed to fragmented and limited information exchange between nurses and the inability to have interactive care discussions with patients/families. Collaborating with the nursing union, shift times were formally adjusted to 7:00 to 7:30, allowing 30 minutes’ overlap for change of shift handover. The results of the change were demonstrated in the questionnaire with 22% of RNs responding that handover took 30 minutes in the post-questionnaire, compared to the pre-questionnaire results of 22%.

### Patient Safety and Experience Outcomes

Historical unit performance in quality and patient experience were assessed for sustained improvement for patient experience and nurse-sensitive indicators to determine effectiveness. We compared the data 2 calendar quarters before the intervention to 2 calendar quarters post-intervention; the neuroscience unit had a 60% decrease in falls. The surgical unit did not reduce falls but maintained their fall rate.

In the patient experience domain of “communication with nurses,” the neuroscience unit saw a significant increase of 22% in the HCAHPS survey top box scores. However, the surgical unit HCAHPS scores remained unchanged in the pre- and post-intervention period.

### Lessons Learned

Several lessons were learned during the quality improvement project. Streamlining the bedside handover methodology required unit-specific nurse champions, leadership oversight, and continuous communication, and might impact the patient’s experience on varied pilot units.

First, the project’s central strength was to empower some of the high performer nurses to become change agents. These nurses serve as champions in developing and disseminating the project’s objectives to their peers to facilitate buy-ins. Second, leadership deployment to visualize bedside handover for closed-loop communication and provide coaching to the staff was another critical strength. Third, bedside handover was communicated frequently across diverse platforms such as during staff meetings, daily huddles, beginning of the shift, organization department meetings, and the nursing leadership council to maintain the project goals. Utilizing a multilevel communication approach kept the project relevant and lead to the adaptability of key stakeholders.

Finally, utilizing 2 independent units to pilot the quality improvement project highlighted the variances across both units, such as patients’ limited participation during the handover process on the neuroscience progressive care unit due to patient acuity, whereas the surgical unit patients were less acute and were more involved in their care. These differences can manifest in the patient experience score variations. The pilot was deemed successful by nursing leadership and rolled out to the remaining units in the facility.

### COVID-19

In March 2020, SARS-CoV-2 (COVID-19) impacted clinical practice in New York State and eventually the entire country. Health care organizations encountered an unprecedented burden of caring for patients with a novel virus and of protecting health care workers. The organization was challenged by the uncertainty of constantly changing recommendations and the surge of COVID-19 patients. Due to the incredible number of infected patients, there were insufficient nursing resources to maintain the staffing guidelines we had adopted to meet bedside handover requirements. Additionally, limited personal protective equipment (PPE) availability required nurses to prioritize which patients could have bedside handover and which could have handover completed outside the room. However, there were exceptions based on the patient severity requiring the staff to enter the patient’s room. These are not limited to patients in imminent danger or if staff...
members needed to review and address a patient-facing care issue. One specific feature that remained consistent was that staff performed a change of shift reports directly outside of the patient room. It was imperative, even though we were battling a pandemic, that the team maintain visibility, self-awareness, and the highest level of care within the defined limitations.

Post-COVID Surge

As the number of patients admitted with COVID-19 declined and PPE supplies improved, nursing leadership looked toward our HRO principle of commitment of resiliency. Commitment to resiliency is the ability to improve immediate problems while using innovation to create larger improvements. The team understood that we would have to adapt to the challenges of the new normal and resume essential activities, including bedside handover. It was necessary to balance those responsibilities with the realities of the tremendous stress placed on the staff and their families under the extreme circumstances of COVID-19. The staff experienced insurmountable stress and anxiety from the suffering of the pandemic. The organization acknowledged the lived experience of the staff and revised the bedside handover priorities on candid feedback from the nursing staff. The goal was to provide individualized quality healthcare with compassion, dignity, and respect. However, it was important for the bedside handover committee to pause and think methodically as an organization.

The nurse manager of 1 of the pilot programs and the senior director of women and children’s services and nursing education reconvened the members of the original workgroup to plan the re-establishment of bedside handover. The workgroup determined the strategy of re-education through huddles and the creation of a checklist to guide the staff on the steps of bedside handover. Each checklist was modified based on feedback from the units about the needs of the patients and the staff. The information listed on the checklist includes an introduction, details of utilizing the IPASS, focused assessment, task pending, crucial labs, pain, addressing patient and family concerns, goal setting, and managing up the incoming nursing staff. The bedside handover checklist was laminated and displayed on each workstation on wheels. Finally, observational audits were completed by the unit managers to provide coaching and set the expectation that handover is once again to be completed at the bedside.

CONCLUSION

The project highlighted the importance of involving bedside RNs in process changes through both questionnaire and direct participation in the Handover Redesign Team. As a direct result of their involvement, the Handover Redesign Team was able to create and implement and handover process that addressed nursing concerns and prioritized their needs. The improvements in the HCAHPS scores in the patient experience domain “communication with nurses” indicate that the implementation of our evidence-based handover initiative has enhanced our patient’s experience and improved their safety.

COVID-19 has forced our organization to think creatively regarding quality and nursing practice as the number of patients admitted with COVID-19 fluctuates. Although bedside handover has a litany of benefits, organizations must continue to include staff nurses who are still reeling and grappling from the experiences of the pandemic. The resilience of our staff to swiftly readopt bedside handover is a testament to their flexibility, commitment, and autonomy. As we adapt to the new, uncertain landscape of nursing and patient care, organizations must continue to engage the nurses at the bedside to re-establish best practices.

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