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NORTHERN ILLINOIS UNIVERSITY

Safe and Effective Patient Handoffs

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With Honors

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By

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Abstract

The Joint Commission on Accreditation of Healthcare Organizations reported that poor communication is a contributing factor in more than 60% of all hospital adverse events. Poor communication is found in many different healthcare settings and is especially prominent in-patient hand-offs and settings where fast and effective management is indispensable. It is estimated that roughly 1.6 million handoffs typically occur each year within hospitals.

Ineffectiveness of handoffs leads to progressive information degradation and is characterized by omissions and inaccuracies in the information shared among healthcare providers. Consequently, they are recognized as a major contributing factor to sentinel events and medical errors. To overcome these barriers, communication strategies are desirable, which take little time and effort to complete, deliver comprehensive information efficiently, encourage interprofessional collaboration and limit the probability of error. The purpose of this study is to lay out the best practices for safe and effective handoffs in a hospital setting. The literature reveals that a standardized patient handoff protocol is effective in mitigating risk associated to patient handoffs within the healthcare system.

Safe and Effective Patient Handoffs

Patient safety is an essential component of the healthcare system. Maintaining patient safety increases the chances of success in gaining optimal results in treatment but is one of the biggest challenges that providers face. The Joint Commission on Accreditation of Healthcare Organizations defines a patient handoff as a “contemporaneous, interactive process of passing patient-specific information from one caregiver to another for the purpose of ensuring the continuity and safety of patient care” (Wayne, et al, 2008). In other words, one of the most important steps in ensuring the continuity of care for patients in the hospital, is the transfer of professional responsibility and accountability for some or all aspects of patient care to another provider. Safe handover of patients is a skill that helps to mitigate risk through interactive and direct communications, a standardized process, minimized interruptions, and the use of error prevention tools such as repeat/read backs, clarifying questions and numeric clarification. The accurate and appropriate transmission of patient specific information at the end of shifts, or any transfer of responsibility for any length of time, is one of the main functions of delivering and evolving with secure and safe patient handoffs.

Failure of effective handover is a major preventable cause of patient harm in the healthcare setting and is the most important step in ensuring patient safety during handover of care. Transitions in responsibility are high risk in both clinical and non-clinical situations, therefore it is important to develop a clear and concise stepwise approach to patient handoffs. Due to the importance of safe and effective patient handoffs, The Joint Commission mandated all hospitals in the United States standardize the communication activity between and among healthcare professionals during transitions by implementing safe handoff protocols and tools.

Methodology

In order to answer the research question, “What Practices Should be Implemented in Order to Improve Safety and Effectiveness of Patient Handoffs?”, a literature review was conducted of 10 Peer-reviewed research articles discussing safe and effective patient handoffs. This study was conducted throughout the Spring 2021 semester to review published articles relating to challenges and improvements to patient handoffs. For this purpose, articles were selected from the following four databases: CINAHL, PubMed, Medline and Google Scholar. Key words were used for the selection of articles such as patient handoffs, challenges, quality improvement, and implementation.

Results

One article that began to dive into the issue of safe and effective patient handoffs was written by Raeisi et al. in 2019. The aim of this study was to identify patient handoff challenges that concern the safety and quality of health services. This systematic review extracted 263 articles in total, with 20 articles selected for final review. Some of the problems that arise due to poor-quality handover communication are a lack of follow-ups on treatments and medication, poor task management, and poor time management. However, it was found that the main cause of reduced safety and quality of services and patient dissatisfaction was a lack of communication among incoming and outgoing nurses.

In order to develop a deeper understanding of the challenges that healthcare providers face when conducting safe and effective handoffs, it is important to discuss with the providers that actually participate in the handoff process. A qualitative study published in 2018, focused on analyzing cognitive task interviews which targeted end-of-shift handoff experiences with 35 medical residents from three geographically dispersed veterans affairs hospitals (Rattray et al.,

2018). It was found that many residents were only partially prepared for enacting safe and effective handoffs. Six skills were identified as critical in learning safe and effective handoffs: identifying pertinent information, applying acquired clinical knowledge, providing anticipatory guidance, incorporating delivery strategies, appreciating the styles/preferences of handoff recipients, and being concise. Formal education alone can miss the critical role of real-time sense-making throughout the handoff process.

While there is a plethora of different handoff tools that can be utilized within the healthcare setting, there is limited evidence of available handover training programs. In a study published by Joyce Higgins in 2016, a handoff training exercise was developed and implemented in a simulated patient care environment. Participants were broken up into groups of roughly 5-20, with one participant acting as an observer and the remaining participants assigned to roles such as physicians, nurses, etc. Participants were blinded to any prior discussion regarding the “patient”, and sequentially received a handoff about the patient from a previous participant while being observed by a peer. The results indicated that if a training activity like this one is implemented in clinical settings, then healthcare providers will develop a structured handoff method, thus being able to communicate higher level information and debrief effectively with peers.

Research has identified that a main source of dissatisfaction by medical trainees is with current handover practices as a result of a lack of clear policies and ineffective training. In 2012 Drachsler et al., looked into customizable training as a promising approach to improving the quality and sustainability of handover training and outcomes. In this study a handover toolbox was designed through the use of Technology Enhanced Learning Design Process (TEL-DP) in order to provide a web-based knowledge exchange environment that allowed for online

community practice. The handover toolbox takes into account the diversity of needed solutions in order to improve patient handovers; information on the content as well as format of handover training; ready to use training material; and guidelines on how the efforts to improve handovers needs to be sensitive to culture and organizational issues of each different healthcare environment. The current version of the Handover Toolbox focuses on 40 handover tools, 142 related files, 22 education videos, and 25 discussion topics related to patient handovers.

When looking into the adaptation of a standardized communication tool to improve the safety and effectiveness of patient handoffs all communication tools must be reviewed. Another study conducted by Smeulers (2016), aimed to implement a locally developed evidence-based nursing shift handoff blueprint with a bedside-safety-check in order to determine its effect on the quality of patient handoffs. A mixed methods design was used with: (1) an interrupted time series analysis to determine the effect on handover quality in six domains; (2) descriptive statistics to analyze the intercepted discrepancies by the bedside-safety-check; (3) evaluation sessions to gather experiences with the new handover process (Smeulers, 2016). The use of this nursing shift handover blueprint showed promising results on effectiveness as well as feasibility and acceptability among nurses; while the bedside-safety-check successfully identified discrepancies on drains, intravenous medications, bandages or general condition and was highly appreciated by nurses.

Following The Joint Commission recommendations for standardizing patient handoffs, direct peer observations and feedback were utilized in a quality improvement project at the Pediatric Hospital of Medicine Kapi‘olani Medical Center for Women & Children. Di Rocco et al. (2020) utilized a quality improvement project to standardize the handoff process, whether it be verbal or written, within their healthcare system. This study chose to use the I-PASS, Illness

Severity, **P**atient Summary, **A**ction List, **S**ituational Awareness and Contingency planning, and **S**ynthesis by receiver handoff model. All hospitalist attendings were trained in an evidence-based handoff focusing on team communication and feedback strategies. This quality improvement project was broken up into two portions: the initial project where each hospitalist performed 12 peer observations and feedback sessions using validated tools for verbal and written handoffs over the course of 6 months; the subsequent project acted as a refresher where each hospitalist performed 6 handoff observations. Throughout the duration of the study a total of 204 observations were completed by 17 different hospitalists. The project concluded that performing direct peer observations with feedback strengthened the workplace culture, promoted growth through collaboration, and allowed acceptance and success of future projects involving peer observation and feedback (Di Rocco et al., 2020).

Studeny et al., (2017) published a study, which also focused on measuring the outcomes of implementing a quality improvement project (IPASS mnemonic) to improve handoffs by the inclusion of key elements necessary for safe and effective handoffs. Results showed major improvements in all of the key elements of handoffs with healthcare professionals stating they were satisfied with the outcomes, finding it more effective at providing a safe transition of care. Overall, six key elements necessary for effective handoffs improved: Illness severity improved from 5% to 97%, diagnosis from 60% to 100%, patient summary from 71% to 100%, contingency planning from 10% to 100%, action list from 23% to 100%, and receiver synthesis from 0% to 97% (Studeny et al., 2017).

Another communication tool that is often utilized in patient handoffs is SBAR; **S**ituation, **B**ackground, **A**ssessment, and **R**ecommendation. Müller et al. (2018), conducted a systematic review of several different databases and selected articles based on the following inclusion

criteria: (1) SBAR was implemented into clinical routine, (2) the investigation of SBAR was the primary objective and (3) at least one patient outcome was reported. Eleven studies were chosen for final review; Eight of which had a before-after design and three were controlled clinical trials. The objectives of all eleven studies were the same in the fact they wanted to improve team communication, patient hand-offs and communication in telephone calls from nurses to physicians. All studies assessed the effect of SBAR implementation on inpatient outcomes. In total, 26 different patient outcomes were measured, and the majority showed improvement. A reduction in adverse patient outcomes, drug events, patient falls, and catheter-associated urinary tract infection rates were found consistently in all studies. Another major point found within this article was that the use of SBAR in telephone communication to inform the physician of a deteriorating patient, leads to a significant decrease in unexpected death, and a significant reduction in 30-day readmissions to the hospitals. Thus, SBAR implementation in telephone communication appears to positively affect patient outcomes.

Part of the challenges that arise from using handoff tools is that these solutions are specifically designed to support the exchange of information between clinicians during patient care transitions. However, just as crucial to the success of information transfers is actually supporting the handoff workflow. An example of this is handoff tools that support the preparatory activities prior to handoffs in order to aid in better information management and organization, ultimately resulting in effective communication during handoffs. “Ensuring Patient Safety in Care Transitions: An Empirical Evaluation of a Handoff Intervention Tool” designed and evaluated a Handoff Intervention Tool, HAND-IT (Abraham et al., 2012). This tool was based on a checklist-inspired, body system format allowing for structured information organization, and a problem-case narrative format which allowed for temporal description of

patient care events. It was designed to support information organization during pre-handoffs and the systematic structuring of communication events that occur during handoffs.

This study was conducted in a large academic hospital in the Gulf Coast with a focus on resident handoffs in a 16-bed closed medical intensive care unit. The HAND-IT tool was pilot tested in the medical ICU with two residents and a clinical fellow. This process was comprised of three interdependent phases in which they all had a distinct goal. First was a pre-turnover phase which focused on the coordination of activities such as information seeking and organization. Next was the handoff phase, that focused on the exchange of communication events related to patient-care between the outgoing and incoming team members. The final phase of the process was the post-turnover phase which focused on the execution of patient-care delivery activities. HAND-IT showed that content standardization using a body system-oriented format and summarization using a problem-case narrative format would reduce the communication complexity and incidence of transition errors (Abraham et al, 2012).

Davis et al. (2017) performed a study comprised of a systematic literature review of articles pertaining to handoff feedback and assessment tools in the improvement of patient handoffs in inpatient settings. A total of 26 articles were reviewed, where 32 different feedback and assessment tools were found to be used. It was found that assessment and ongoing feedback are important components for improving patient handoffs, but implementation of these tools will vary based on specialty. Many hospital educators have noted that feedback and assessment are essential facilitators of learning. If a person were to simply perform a task without receiving feedback, they would forever assume the act they performed was done correctly even if it were not. Assessment and feedback tools are essential for the patient handoff process in order to properly educate hospital staff on safe and effective patient handovers.

Discussion

Overall, the results show that a standardized patient handoff protocol supported by proper education and resources helps to mitigate risks, such as sentinel events and medical errors, that are associated with patient handoffs. There are many different problems that arise related to poor patient handoffs such as: lack of follow-ups on treatments and medication, poor task management, and poor time management; to name a few. These problems can ultimately lead to ineffective and unsafe patient care. All 10 of the articles reviewed agreed that the main cause of reduced safety and quality of services as well as patient dissatisfaction was a lack of communication between and among healthcare professionals during bedside patient handoffs. In 2008, The Joint Commission on Accreditation of Healthcare Organizations mandated that all hospitals in the United States standardize the communication activity between and among healthcare professionals during transitions by implementing safe handoff protocols and tools, due to the sentinel events associated with poor communication (Drachsler et al., 2012). Five of the articles reviewed discuss only some of the various different communication protocols that are available for implementation in different healthcare facilities. The remaining five articles discuss the challenges to patient handoffs, the skills necessary for effective patient handoffs, and necessary support and resources to set healthcare professionals up to provide the most effective patient handoff communication.

The studies completed on skills and support resources found that a majority of medical trainees and professionals have a dissatisfaction with current handover practices. This is due to a lack of clear policies as well as ineffective training related to the patient handover process within their healthcare facility. Formal education alone can miss the critical role of real-time sense-making throughout the handoff process. For this reason, it is necessary for healthcare

organizations to orient and train new and preexisting healthcare staff on the standardized patient handoff tool chosen for their facility. Six skills were identified as critical in learning safe and effective handoffs: identifying pertinent information, applying acquired clinical knowledge, providing anticipatory guidance, incorporating delivery strategies, appreciating the styles/preferences of handoff recipients, and being concise (Rattray et al, 2018). Although these skills may seem like common sense when it comes to applying them in a healthcare setting without real-time practice it can be overwhelming for any professional. One particular study (Higgins, 2016) that was reviewed enacted a handoff training exercise to be implemented in a simulated patient care environment. The group was split up into three roles: outgoing provider, incoming provider and observer. Blinded to any prior discussion of the simulated patient the incoming provider would receive a patient handoff from the outgoing provider. The incoming provider and the observer would then assess the quality of patient handover information provided from the outgoing provider and would provide feedback. The results indicated that if a training activity like this one is implemented in clinical settings then healthcare providers will develop a structured handoff method, thus being able to communicate higher level information and debrief effectively with peers.

Along with training activities such as the one described above there are other resources that can be provided to aid in the education of safe and effective patient handoffs. Another study aimed to develop a promising approach to improving the quality and sustainability of handover training and outcomes through customizable education. A handover toolbox was developed containing 40 handover tools, 142 related files, 22 education videos, and 25 discussion topics related to patient handovers. Tools such as this can be utilized by healthcare facilities along with

a simulated training course to provide supplemental education and training on their selected patient handoff protocol.

The remaining articles discussed some of the various different handoff protocols available to healthcare facilities including: NURSEPASS, IPASS, SBAR and HAND-IT. These various pneumonia's outline information to be included in each patient handover. Although they are all slightly different, they emphasize the need for a few basic areas of necessary information that should be included in each and every patient handoff. Such things include the current patient status; patient summary; pertinent signs, symptoms and lab values; and recommendations for care. It is also important for healthcare facilities to support the organization and communication events associated with patient handoffs.

Conclusion

Patient safety is an essential component of the healthcare system in order to maintain patient safety and gain optimal treatment results. However, it is one of the biggest challenges that providers face. This paper reviewed some of the many handoff protocols available. There is no one protocol that overall is better than the other, however when implementing a handoff protocol, it is imperative that the needs of the environment where it is being implemented in is evaluated. One protocol may fit one facility better than the other based off the environments demands and skills of the providers. However, the implementation of a standardized protocol alone is not enough to promote safe and effective patient handoffs. Healthcare facilities need to offer proper education such as formal and simulation training so that medical staff are able to learn what is expected of them in that facility. Without proper training, providers may be aware of the protocol but unaware of what is expected within that protocol. In order to set medical staff up for the highest level of success, formal education should be supplemented with simulated

patient handoff scenarios. Simulated patient handoff scenarios allow for educators to observe firsthand if the communication within the handoff is effective. It also allows for a “worry free” situation in which medical professionals can practice without the risk of causing harm to an actual patient.

In conclusion, although patient handoff protocols vary from facility to facility, they are still an essential tool to help mitigate the risk of sentinel events associated with poor communication. Best practice for the implementation of a handoff protocol stays relatively the same throughout. It is necessary for healthcare facilities to offer formal education on the handoff protocol being implemented and recommended that formal education is supplemented by simulation training. Supporting the medical staff with additional education sources such as The Handoff Toolbox, and through normal evaluation of staff’s communication skills have also shown to increase the effectiveness of patient handoffs. Failure of effective handover is a major preventable cause of patient harm in the healthcare setting and is the most important step in ensuring the continuity of patient safety during handover of care.

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