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An Operations Approach Toward Improved Patient Outcomes in Skilled Nursing Facilities

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A Capstone Project Entitled

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Section I: Abstract

A capstone experience was completed to fulfill academic requirements for a doctoral degree in occupational therapy. The primary goal of the doctoral capstone experience was to develop advanced leadership and administrative skills within the profession of occupational therapy. To accomplish this goal, operational strategies were implemented to adapt to the care delivery system in the skilled nursing facility (SNF) environment to achieve optimal clinical and operational performance. A review of current literature revealed that transformations in healthcare have yielded increased demands for SNFs to demonstrate quality services and data-supported evidence of reduced hospital readmission rates. Results from the literature review and a needs assessment indicated the need to develop an outcome tool that therapists can use to measure hospital readmission risks for patients who discharge from SNFs to home. From an operations perspective, the outcome tool helps to delineate the SNF organization from its competitors, market quality metrics to establish partnerships with hospitals, and fulfill healthcare system requirements. Clinical use of the outcome tool also aims to assist in the identification of potential system and population issues, and to verify consistent provision of high quality care. This capstone paper summarizes the development and implementation processes of the outcome tool, describes plans for continuous quality improvement, and highlights administrative and leadership skills gained throughout the doctoral capstone experience.

Section II: Background Information and Literature Review

Purpose

The purpose of the doctoral capstone experience was to develop advanced leadership and administrative skills in the skilled nursing facility (SNF) practice setting. This section introduces the theoretical basis used to guide the project completed during the experience, describes major changes in the healthcare system, and introduces the implications for SNFs to adaptively respond to the healthcare changes.

Theoretical Basis

An operations-based approach for the doctoral capstone experience was directed toward quality improvement of therapy practice to yield better patient outcomes and, in turn, improve business performance. Theories used to organize the approach were the Organizational Development (OD) theory and the Interorganizational Relations (IOR) theory. The OD theory relates to the development of strategies that facilitate organizational effectiveness (Cummings, 2004). OD encourages continuous improvement of knowledge and skills to adapt to the changes of complex environments (Butterfoss, Kegler, & Francisco, 2008; Cummings, 2004). Organizational change occurs through a four-step cycle: diagnosis, action planning, intervention, and evaluation of progress (Butterfoss et al., 2008). The IOR theory is rooted in the principle that collaboration among organizations generates more comprehensive and more effective methods to overcome complex issues (Butterfoss et al., 2008). Frameworks used to guide an operational approach to therapy services included transformational leadership and quality improvement.

Literature Review

According to healthcare experts, SNFs may experience the need for significant operational changes in the near future, which could also impact operative strategies in therapy (Optima Healthcare Solutions [OHS], 2017). Operational changes in the SNF setting can largely impact older adult populations and the quality of services they receive. Centers for Medicare and Medicaid Services (CMS) reported over 55 million Medicare Part A beneficiaries in the United States (U.S.); over 46 million of which were older adults and nearly 9 million had disabilities (CMS, 2015).

A literature review was performed to gather information on the healthcare reform that may impact therapy services within SNFs, and to identify effective strategies that therapy administrators may use to generate adaptive responses to healthcare system changes. EBSCOhost and Ovid research databases were used to search evidence discussed in this paper. Other literature that was not identified through the research databases included: proposed Medicare changes and trends via Federal Register documents, CMS innovations website, and other reliable reports. The literature review was limited to studies that included or related to therapy services within SNFs.

Healthcare system changes. An improvement in the quality of healthcare services and an overall reduction of costs are two topics that have become major focal areas in healthcare (Strunk, 2014). As a result, initiatives that have been employed by CMS officials have produced greater demands for operational modifications within SNFs. (Strunk, 2014). As part of cost reduction, decreases in average length of stay (LOS) and hospital readmission rates have become primary components for SNFs.

One method CMS officials have proposed to reduce costs in SNFs is through a new value-based payment system, the Resident Classification System Version 1 (RCS-1) (42 CFR 488, 2017; CMS, 2018b). The RCS-1 has been proposed to replace the current case-mix classification model with a single payment based on the complexity levels of Medicare beneficiaries and the resources needed for treatment (42 CFR 488, 2017; CMS, 2018b). Also through the proposed RCS-1, CMS strives to further reduce healthcare costs by decreasing LOS through an adjustment factor that gradually decreases the reimbursement rate after 14 days (42 CFR 488, 2017). With an average LOS of 20.1 days in Indiana and 18.3 days in the U.S. in 2016 (22.89 days within the SNF organization), this could largely impact the revenue of SNF organizations (PEPPER Resources, 2017). Though the final rule has not been published, the proposed RCS-1 is an example of CMS's efforts to redirect healthcare professionals' focus toward the needs of the patient and eliminate clinical decisions that are primarily based on financial profits (Strunk, 2014).

Bundled payment models have been another method for cost reduction by incentivizing organizations to provide high quality services to Medicare beneficiaries within a shortened LOS. The Bundled Payment for Care Improvement Advanced and the Comprehensive Joint Replacement bundled payment model are two current examples that support this movement (42 CFR, 510, 2017; CMS, 2018a). With bundled payment models, CMS aims to improve coordination of care and minimize duplicate or unnecessary services, promote evidence-based practice, and promote financial accountability from healthcare providers (CMS, 2018a; McHugh et al., 2017).

As another major component of cost control, reduced hospital readmission rates has become a priority for the healthcare reform in the U.S. (Alper, O'Malley, & Greenwald, 2017;

Herbold & Larson, 2016; Huckfeldt, Mehrotra, & Hussey, 2016; Ottenbacher et al., 2014; Rahman, McHugh, Gozalo, Ackerly, & Mor, 2016). With an average cost of more than \$10,000, acute care hospitals aim to reduce costs through utilization of post-acute care (e.g. SNFs). The Skilled Nursing Facility Value-Based Purchasing (SNF VBP) initiative will require, and incentivize, healthcare providers for verification that their services have led to decreased hospital readmissions, or endure financial repercussions (OHS, 2017). As a result, researchers and healthcare organizations have worked to identify factors that are associated with increased risk for hospital readmissions (Pedersen, Meyer, & Uhrenfeldt, 2017). These risk factors will be further discussed later in the paper.

Though cost reduction can benefit the healthcare system, it can also threaten the financial viability of SNFs and the quality therapy services in the SNF setting. For example, as a result of therapy reimbursement restrictions under the RCS-1, patients may not receive the amount of therapy services and intensity they need to achieve optimal outcomes (OHS, 2018). Also, the pressure to decrease LOS could result in premature discharges; patients may be discharged to home before they are safe in their home environments (OHS, 2018). Patients who are discharged prematurely may have greater risks for hospital readmission which, in turn, could yield increased costs due to hospital readmission.

Other challenges in SNFs. In addition to cost reduction efforts, other changes in healthcare have led to greater operational difficulties for SNFs. Recent changes to the conditions of participation (CoPs), which contains the requirements SNFs must meet to maintain eligibility for Medicare and Medicaid reimbursement, will intensify scrutiny and requirements for SNFs (42 CFR 405, 2016; OHS, 2017). Increased requirements for quality assurance, including a data-supported quality assurance and performance improvement (QAPI) program, add to the pressures

on SNFs to justify costs for patient care. If CoPS standards are not met, SNFs risk financial penalization as well as loss of Medicare/Medicaid eligibility (42 CFR 405, 2016; OHS, 2017). Greater demands for SNFs could lead SNF administrators to set more requirements for therapy departments (OHS, 2017).

Another challenge SNFs have experienced is a decrease in occupancy. From 2012 to 2016, occupancy in SNFs declined more than 5% (CliftonLarsonAllen, 2017a, 2017b). Healthcare providers are becoming increasingly pressured to guide consumers toward community- and home-based services, and away from SNFs (CliftonLarsonAllen, 2017b). As a result, therapy caseloads in SNFs have been increasingly composed of adults who are older, frailer, and have greater medical complexities (Buurman et al., 2016). The natural progression of aging and complex conditions could limit rehabilitation potential, which could impact perceptions of therapy quality (Buurman et al., 2016). One study found that, during a 1-year follow-up, 74% of Medicare beneficiaries who were admitted to SNFs made minimal to no improvement; 70% of which experienced frailty upon admission (Buurman et al., 2016).

Lastly, growth in competition among SNFs has become a challenge faced by organizations. Quality improvement efforts such as the CMS Five-Star Quality Rating System and the Skilled Nursing Facility Quality Reporting Program measure have been implemented to increase healthcare's transparency of service quality. Hospitals can use such tools to gather information to determine specific SNFs to recommend to their patients. Trends have shown that hospitals generally direct their patients to SNFs that provide high quality and cost-efficient care (Herbold & Larson, 2016).

Implications. For SNFs to achieve sustainability in a competitive market with increasingly difficult demands, therapy providers need to demonstrate exceptional oversight of

quality patient care that is measurable and is supported by data. Sufficient data management will allow therapy providers to adjust practice strategies to maintain clinical excellence and financial viability (OHS, 2018). As stated by Teresa Chase (2012), President and CEO of American HealthTech, “Cash is still king, but there’s a new queen in town and her name is data.” In support of the use of data to determine quality of care, Seema Verma, CMS administrator, has highlighted future plans for CMS to focus outcome measures (Slabodkin, 2017). Therapy practitioners can use outcome tools can to establish benchmarks and measure effectiveness of therapy services (Shah et al., 2013). Data collected from outcome tools can also be shared with hospitals to establish collaborative care networks (Shah et al., 2013). Expansion of care networks can lead to increased recommendations of the SNF organization and, in turn, generate revenue.

Section II Summary

Transformations of the healthcare system have created strains for SNFs, which has yielded increased demands for therapy departments; therapy practitioners are pressured to produce optimal patient outcomes under increasingly difficult circumstances. These changes have created various challenges for SNFs to achieve clinical excellence and maintain financial viability. With cost control and quality care being a primary focal points among healthcare organizations, upstream care providers (e.g. hospitals) need to be able to ensure that their patients safely and efficiently transition across levels of care. Patient outcomes are a major area for determining quality care and, since therapy can largely impact these outcomes, SNF administrators may turn to therapy practitioners to provide data that reflects high quality performance. The reviewed literature indicates a gap in the use of an interdisciplinary outcome

tool that is inclusive of the patient gains through participation in therapy services, which limits insight into the need for and quality of skilled therapy.

Research of regulations, trends, and other transformations in the healthcare system, as well as their impact on operational strategies within SNFs, contributed to the goals of the doctoral capstone. Leadership skills were enhanced through a challenge of the current processes and identification of innovative solutions to create an adaptive response to the external environment. Administrative skills were increased through the acquisition of knowledge that is required to successfully navigate the processes for creating an adaptive response. The next section explains the evaluation and development process of the doctoral capstone.

Section III: Evaluation & Development of the Outcome Tool

Needs Assessment

A needs assessment was performed to determine operational needs of the SNF organization in correspondence to changes in the healthcare system. Interviews were performed with therapy administrators of the SNF organization. The director of clinical coordination, whose primary role was to establish and maintain partnerships with hospitals, also participated in the interview process. Discussions were related operational plans to successfully meet the demands of current healthcare changes. One pertinent need that was acknowledged was related to standards under the SNF VBP initiative, which will require SNFs to provide data that show decreased hospital readmission rates. Another identified need was to provide hospitals with data that demonstrates patients' reduced risks for hospital readmission as part of participation in skilled therapy services. Thus, results from the needs assessment indicated a primary need to gather data that represent the relationship between patient outcomes and decreased hospital readmissions. Data will be used meet two primary needs of the SNF organization: 1) meet

requirements under SNF VBP initiative and 2) provide hospitals with valuable information that shows reduced readmission risks that are attributed to participation in therapy. To efficiently gather data, therapy administrators expressed the need for implementation of an outcome tool that measures common functional areas that are associated with hospital readmission. A plan was established to use this outcome tool jointly with the functional status outcome tools that were already used within the therapy department. This section describes the action planning phase by explaining the rationale for an outcome tool and the processes completed to identify appropriate items to include in the outcome tool.

Rationale for Outcome Tool

As mentioned the previous section, SNFs are experiencing increasingly difficult circumstances such as pressures to reduce LOS and hospital readmissions within populations that are older, frailer, and more commonly have medical complexities (Alper et al., 2017; Buurman et al., 2016). Also, efforts from healthcare professionals to expand community reintegration have put pressure on the SNF organization to increase the percentage of patients discharged to home (37.15% of patients in the SNF organization were discharged to home in 2017). These demands have led to greater challenges for SNFs to demonstrate effective treatment. For example, the increased commonality of patients with complex conditions in SNFs, in addition to reduced LOS, may limit patient rehabilitation, which raises concern for how SNFs will justify costs for therapy services. Therefore, SNFs must be able to warrant the superiority of their therapy services not only over their competitors, but also over other settings that may be more affordable.

Possible limitations to rehabilitation efficiency regarding patient functional status indicate the need for the SNF organization to demonstrate improvement of other patient areas, such as overall safety within functional tasks. New circumstances that will make it more

difficult to show significant improvements in functional status warrant the need for the SNF organization to show hospitals that their therapy services are still high quality and include purposeful efforts to reduce hospital readmissions. If therapists are unable to measure readmission-related outcomes as part of intervention planning, the SNF organization may experience difficulties to decrease hospital readmission rates.

Research Methods to Identify Hospital Readmission Risk Factors

To gain evidence of major hospital readmission risk factors, a review of research articles was completed via EbscoHOST and Ovid research databases. Risk factors identified in the evidence were then separated by medical-related factors and risk factors that could be addressed within the therapy scopes of practice.

Inclusion criteria. The inclusion criteria for the selection of an outcome tool included hospital readmission risk factors that fall within the scopes of practice for occupational therapy (OT), physical therapy (PT), or speech therapy (ST). Scopes of practice were specified by the SNF organization, and were congruent with the practice guidelines set by the professional associations for each discipline.

Exclusion criteria. Exclusion criteria consisted of factors that are not manageable through therapy services or are not factors that are addressed within the scopes of therapy practice (e.g. age, gender, race, comorbidities). Other than hospital readmission rates and LOS, metrics that have been used to assess SNF performance included: percentage of patients discharged to the community, average emergency department visits, quality of transitional care, average amount paid per day, and average amount paid per discharge (Herbold & Larson, 2016; Shah et al., 2013; Strunk, 2014). These factors that did not meet the inclusion criteria are not

discussed in this paper. Therefore, risk factors mentioned in this paper refer only to those related to therapy.

Although risk factors unrelated to therapy practice are not included in this paper, it should be acknowledged that populations within SNFs more commonly experience other risk factors such as frailty, comorbidities, and less stable conditions (Simmons et al., 2016), and it is important that practitioners consider all factors that impact patients' health and safety in practice. Readmission factors included in the outcome tool are not inclusive of therapy; the factors are customized to the needs of the organization.

Hospital Readmission Factors

To ensure that the content of data collected from the outcome tool is effective for marketing the organization's quality of care to partnered hospitals, it is important understand quality metrics that are valued by the hospitals. This paragraph describes the selected readmission risk factors used to guide the establishment of the tool. Factors identified in this paragraph were generalized and grouped into factors that may include multiple components. For example, inadequate patient support after discharge may refer to an insufficient home environment, lack of caregiver abilities, or other dynamics. Functional disability, cognitive impairment, fall risk, and premature discharge were familiar risk factors frequently mentioned in the literature, and have historically been major areas to address on therapy outcome tools (Alper et al., 2017; Bernatz, Tueting, & Anderson, 2015; Callahan, 2015; DePalma et al., 2013; Falvey et al., 2016; Pedersen et al., 2017). Researchers have also found that more than 30 million adults lack basic health-related skills (Cloonan, Wood, & Riley, 2013), and patients who return to home with unmet needs in daily activities are 66% more likely to experience readmission (DePalma et al., 2013). Inadequate patient support after discharge, poor health literacy, and low quality

discharge instructions have also been shown to increase readmission risk (Alper et al., 2017; Cloonan et al., 2013; DePalma et al., 2013). Lastly, polypharmacy difficulties have shown to affect readmission rates (Alper et al., 2017; Simmons et al., 2016). Though the number of medications patients are prescribed is not decided by therapy practitioners, researchers have found that readmissions are partially due to poor medication management (Alper et al., 2017; Simmons et al., 2016). These identified factors were considered during a search for outcome tools that already exist to measure readmission risks.

Gaps of Existing Outcome Tools

Research of existing outcome tools was completed to identify tools that met the inclusion criteria. Though CMS has implemented a rating system to measure quality of care in SNFs, the rating system has not been a comprehensive measure of the quality of therapy services, which is a major area of healthcare costs in the SNF setting (42 CFR 409, 2017; Lage, Rusinak, Carr, Grabowski, & Ackerly, 2015; Silverstein, Findley, & Bode, 2006). Therapy practitioners within SNFs need an interdisciplinary tool that can be used concurrently with other outcome tools and quality measures to further reflect improvements patients' health as a result of therapy services.

Several tools were found that measure common risk factors for hospital readmission, such as the LACE index scoring tool and the HOSPITAL score (Donzé et al., 2016; van Walraven, 2010). These measures did not meet the needs of the SNF organization, as they have been designed to measure medical-related items and do not incorporate areas within the scope of therapy practice. Other tools include some therapy-related items in addition to medical-related items, but are difficult to differentiate what has led to changes in patient outcomes. Lastly, several tools commonly used in therapy practice were identified that assess patient outcomes regarding functional abilities to perform physical and cognitive tasks. However, increased

complexities within the SNF population in combination with reduced LOS may impact rehabilitation potential. Use of outcome tools that only measure patients' functional abilities may create difficulty for the SNF organization to demonstrate significant improvement for patient outcomes and may provide inaccurate measurements of the benefits received from therapy.

A major gap within the reviewed outcome tools was the measurement of patient support levels after discharge. Although some tools include items that measure patient social support (e.g. living with caregiver), caregiver abilities are not included. This gap creates the uncertainty that the patient will be safe when receiving assistance from a caregiver at home; the caregiver may also have limitations that largely impact the ability to assist the patient. Despite exhaustive research, no tool met the criteria for the needs of the SNF organization. As a result, therapy administrators proposed the creation of a customized outcome tool.

Development of the Evaluation of Potential Readmission Factors (EPRF)

Purpose. The purpose of the EPRF is to measure safety impairment levels within functional areas that are associated with hospital readmission. Scores on the EPRF are used to predict hospital readmission risk for patients after discharge from a SNF to the home environment. The tool is not intended to be inclusive of all risk factors related to hospital readmission, but is a basic measurement of safety concerns with select functional areas. Use of the tool allows the organization to gather and analyze data to determine if therapy services yield reduced risks of hospital readmission. Thus, data that are indicative of reduced risk can be shared with hospitals to sustain or expand partnerships, while data that do not indicate reduced risks can assist to identify gaps in practice.

Design. The EPRF is designed for use with adults participating in OT, PT, and/or ST in a SNF setting upon initial evaluation and discharge evaluation. The EPRF consists of five sections (nine items) that are general areas associated with hospital readmission: (1) Functional Mobility (fall risk and transfers), (2) Self-Care (toileting, feeding and eating), (3) Functional Cognition (functional cognitive skills), (4) Home Environment (home assessment), and (5) Caregiver Return Demonstration (functional mobility assistance and self-care assistance). Items are scored on a scale of 1 to 7; higher scores indicate greater safety impairment.

The original content and design of the EPRF was modified throughout the development process to meet the needs of the SNF organization. An instructions manual was also created to guide accurate scoring and interpretation. This manual can be found in Appendix A.

Functional mobility. The Functional Mobility section is separated into two areas: fall risk and transfers. Fall risk is further separated into two items: fall risk during pre-ambulatory mobility or ambulation, and fall risk during wheelchair mobility. The fall risk items were separated according to variations in functional mobility; some patients may function at standing/walking level and others may function at wheelchair level. Only one of the fall risk items is completed; whichever item is more appropriate for the patient's functional level. The *Occupational Therapy Practice Framework, 3rd edition (OTPF-III)* was used to identify various aspects of functional mobility to be included in this section (American Occupational Therapy Association [AOTA], 2014).

(Pre)ambulatory fall risk. Development of performance-based scoring criteria was initiated to gather insight into the patient's fall risk. However, during the development process, therapy administrators expressed concern that extensive training would be required if a new outcome tool with different scoring criteria was used to measure each item, and explained the

need for a scoring structure that was familiar to therapists. Therefore, this item was structured based on the content of three existing assessment tools: the Berg Balance Scale (BBS), the Tinetti Performance Oriented Mobility Assessment (POMA), and the Timed Up and Go (TUG) test, which were selected in accordance with physical therapists' familiarity with these assessment tools.. Scores for fall risk on BBS, Tinetti POMA, and TUG test are used to help score this item (Berg, Wood-Dauphinee, Williams, & Maki, 1992; Lusardi et al., 2017; Podsiadlo & Richardson, 1991; Shumway-Cook, Brauer, & Woollacott 2000; Tinetti, 1986). Current evidence supports the use of the selected assessment tools to determine falls risk (Berg et al., 1992; Conradsson et al., 2007; Downs, 2015; Lusardi et al., 2017; Nordin, Rosendhal, & Lillemor, 2006; Sterke, Huisman, van Beeck, Looman, & van der Cammen, 2010).

Wheelchair mobility fall risk. The score for this item indicates the patient's fall risk and safety impairment with wheelchair mobility. Scoring is based on six criteria: wheelchair control, management of wheelchair parts, door management, dynamic sitting balance, weight shift, and awareness of limbs. Criteria for scoring were established based on various factors that may be associated with falls, and based on factors identified in the *OTPF-III* (AOTA, 2014).

Transfers. This item is scored based on a global assessment of transfers across various contexts. Safety impairment can be scored for this item with or without caregiver assistance. For example, if a patient who requires maximal assistance to transfer but there are no concerns for safety when caregiver provides assistance for the patient, the item would be receive a score of 1 (no concerns for safety). There are three tasks that serve as scoring criteria for this item: proper setup of transfer surfaces and/or assistive equipment (if applicable), proper body mechanics used throughout transfer, and movement quality (controlled movement). Criteria

included in this item were established through an activity analysis of transfers collaboratively performed with the therapy administrators.

Self-Care. There are many existing tools commonly used in therapy practice that assess self-care such as the Resident Assessment Instrument (RAI) 3.0, the Functional Independence Measure (FIM), and the Barthel Index (BI) (CMS, 2017; Keith, Granger, Hamilton, & Sherwin, 1987; Mahoney & Barthel, 1965). However, these tools measure improvement in skills. As discussed previously, patient rehabilitation potential in SNFs may be limited. With the possibility of little skill improvement in self-care within a shortened LOS, SNFs still need to be able to demonstrate that their services reduce the risk for hospital readmission. Therefore, this section was designed to measure patient safety impairment levels with or without assistance from a caregiver.

This section is separated into two items: toileting, and feeding and eating. Although others areas of self-care have shown to be factors for hospital readmission (Milnac & Feng, 2016), the section was narrowed down to these two items based on interview results from the needs assessment; the director of clinical coordination explained that the organization's partnered hospitals were mostly concerned with these two self-care areas in relation to hospital readmission. Additionally, Milnac & Feng (2016) described several studies in which toileting and feeding/eating were functional skills that researchers found to be typically preserved until later stages of dementia, whereas other self-care impairments (e.g. bathing and dressing) were found in earlier stages. This is important to note because safety impairment in these basic self-care tasks may further emphasize the need for sufficient patient support. Similar to the item that assesses safety with transfers, these items can be scored with or without caregiver assistance.

The FIM and *OTPF-III* were referenced to help establish criteria and language for both items in this section (AOTA, 2014; Keith et al., 1987).

Toileting. There are three tasks that serve as scoring criteria for this item: clothing management before toileting, perineal hygiene, and clothing management after toileting. These criteria do not apply to patients who use a medical device. If a medical device is used, score this item based on patient/caregiver abilities to setup and manage device safely and appropriately.

Feeding and eating. There are six tasks that serve as scoring criteria for this item: appropriate use of utensils (with or without assistive devices), oral transport (food is transferred efficiently into mouth), appropriately-sized bites to avoid choking, chewing (the patient sufficiently chews and manages food in mouth), pacing of bites (does not overfill mouth), and regular diet (there is a safety concern for aspiration if the patient is on a modified diet). These criteria do not apply to patients who use a medical feeding device. If a medical feeding device is used, score this item based on patient/caregiver abilities to setup and manage device safely and appropriately.

Functional cognition. Cognitive impairment and medication management skills were two hospital readmission factors identified in the literature that influenced the design of this item (Alper et al., 2017; Bolina, Jones, Koshman, Heintz, & Sadowski, 2016).

Functional cognitive skills. Functional cognitive skills are scored based on a global assessment of the patient's problem solving skills, self-awareness, goal-directed behavior, self-monitoring of performance, and adjustment of performance as appropriate for task performance. Scores for this item describe the amount of supervision/assistance the patient requires for safety with functional tasks. For example, a score of 3 on the EPRF indicates that the patient requires supervision for medication management. The initial structure for scoring

functional cognitive skills was separated into simple and complex tasks, and was heavily weighted on the assessment of medication management skills. However, similar to scoring fall risk, therapy administrators expressed the need for therapists to conveniently score this area using familiar tools. The Blessed Dementia Scale (BDS), the Global Deterioration Scale (GDS), and the Allen Cognitive Levels (ACL) were common tools that occupational and speech therapists were familiar with to assess functional cognitive skills and, therefore, were used as references to help establish language and criteria for scoring this section (Allen, 1985; Blessed, Tomlinson, & Roth, 1968; Reisberg, Ferris, de Leon, & Crook, 1982). The EPRF instructions explain that scores on one assessment tool may not directly translate into scores on another assessment tool, but may provide similar insight into the patient's functional cognitive skills.

Home environment. Premature discharge, poor health literacy, and inadequate patient support were the three hospital readmission factors identified in the literature that influenced the implementation of this item into the EPRF. This item is scored based on the patient's safety impairment with performance and/or accessibility of items, with or without caregiver assistance. In correspondence to the needs of a familiar and easy-to-use tool, the EPRF score for this item is converted from the therapy department's home assessment tool. The home assessment tool includes the patient's perspective regarding safety, living situation, physical assessment of the home, and recommendations made by therapists to ensure patient safety.

Caregiver return demonstration. This section is only completed if the patient will require caregiver assistance in the home environment, and has a caregiver available to provide assistance. Similar to the Home Environment section, creation of this item was influenced by premature discharge, poor health literacy, and inadequate patient support as hospital readmission factors. If the patient is unable to safely complete tasks without caregiver assistance, therapists

need to ensure that caregiver is able to provide the patient with safe and sufficient assistance. Thus, the items in this section are scored based on the safety of the caregiver. There are two items within this section: functional mobility assistance and self-care assistance. Both items have the same scoring criteria: proper setup and use of assistive devices/equipment (if applicable); caregiver demonstration of proper body mechanics to prevent injury when providing patient assistance; positioning and handling of patient is appropriate, safe, controlled, and secure to prevent patient injury; and communication between patient and caregiver is clear and effective. Criteria for scoring were established as a result of a collaborative activity analysis that was completed with the therapy administrators.

Total score. All items on the EPRF are added together to calculate the total score. The total score is used to measure the patient's overall risk for hospital readmission. Seven score ranges were established after collaborative decision making with the therapy administrators.

Section III Summary

Changes in the healthcare system have led to greater importance of the oversight of patient outcomes. Hospital readmissions and shortened LOS have become major focus areas of cost reduction and are primary operational factors used to determine quality of services within SNFs. Increased discharges to home as part of cost control accentuate the importance for practitioners to be able to comprehensively determine patient and caregiver needs and measure outcomes to ensure patient safety in the home environment at the time of discharge (Boulding, Glickman, Manary, Shulman, & Staelin, 2011; Falvey et al., 2016). Hospital readmission factors that can be addressed and improved upon in therapy included: functional disability, cognitive impairment, fall risk, premature discharge, and inadequate patient support.

Outcome tools can help therapy administrators track changes in patient function, benchmark standards for functional changes among facilities, and improve overall quality of care. Many outcome tools were identified in which healthcare providers can use to demonstrate quality of services and justify healthcare costs. However, some of these tools provide limited insight into the quality of care in therapy; measurements may be unrelated to therapy services or may be difficult to attribute patient improvement specifically to participation in therapy (Strunk, 2014). Additionally, SNFs may experience difficulty in distinguishing the organization from its competitors if oversight of patient care is limited to skill levels. Development of an outcome tool that allows the SNF organization to show safety improvement for patients who plan to discharge to home environments will allow administrators to verify quality of care, market quality metrics to hospitals, and meet healthcare requirements.

The purpose for development of the EPRF was to collect data that contribute to a more comprehensive measure of therapy services and their causal effect on patient outcomes for reduced readmission risks. To meet goals of the doctoral capstone experience, improvement of leadership and administrative skills were achieved through the development of an outcome tool that allows the SNF organization to create an adaptive response to current day healthcare changes. The next section explains the implementation process of the EPRF.

Section IV: Implementation

To improve operational performance, effective leadership is required and includes the initiation of adaptive responses, support of innovative practice strategies, and provision of resources and training necessary for staff to achieve proficiency (Phipps, 2015). This section explains the modifications made to the EPRF and describes the plan for implementation of the

tool into the organization's therapy departments. Collaboration with therapy administrators occurred throughout the planning process to develop an efficient implementation plan.

Setting and Population

The EPRF was created to be used for adults during initial and discharge therapy evaluations in the SNF setting. For convenience of documentation, the EPRF was built into the electronic documentation software currently used throughout the SNF organization.

Administration of the EPRF and interpretation of scores are to be performed by occupational therapists, physical therapists, and speech-language pathologists.

Selection of Facilities for a Trial Phase

To determine practicality and to identify potential issues with tool use, a two-week trial phase occurred in a sample population consisting of two SNFs within the organization. A dual step selection process was performed to determine trial facilities. For the first step, facilities were ranked according to the percentage of full-time therapists on staff. Logic for this was to ensure all therapists in the selected facilities received proper training, and to avoid trial of the EPRF in facilities that regularly utilized contract and part-time therapists who had not been acclimated to appropriate use of the tool. For the second step, therapy administrators assessed performance efficiency of facilities during the previous year. This was completed by therapy administrators through an internally developed performance analysis tool. The purpose the second step was to ensure the trial phase occurred within collaborative environments in which therapists were more likely to use the outcome tool effectively. The two facilities with the highest percentage of full-time staff and best performance rankings were selected to participate in the trial phase.

Staff Development

Prior to start of the trial phase, therapy practitioners within the two trial facilities received training on the EPRF to ensure accurate administration, scoring, and interpretation of the tool. Therapy supervisors received digital copies of the outcome tool prior to the scheduled training date to distribute to therapists. To minimize therapist burden and facility scheduling strains, training occurred via a 30-minute group conference call. Attendance for the conference call included the occupational therapy doctoral student, therapy administrators, and therapists (OT, PT, ST) within the two trial facilities.

The conference call began with explanations on current and future challenges in SNF that have led to the development of an outcome tool. Communication of the importance and purpose of the vision can help colleagues recognize tangible results and connect their goals with the overarching vision (Phipps, 2015). Establishment of therapists' understanding for implementation of a new outcome tool aimed to not only promote participation, but to also support staff development. Training included familiarization with outcome tool items, administration and scoring instructions, and scoring interpretation. To ensure competency in the use of the EPRF, therapists were provided with opportunities to ask questions for clarification and to provide feedback for improvement in the tool. Therapists were encouraged to implement evidence-based practice techniques related to test items on the outcome tool. As explained by Phipps (2015), effective leadership and creation of a collaborative environment can be achieved by supporting others' ideas and receiving constructive feedback.

Trial Phase and Trial Phase Follow-Up

After therapist training occurred, a two-week trial phase was initiated. Therapists were instructed to use the EPRF instructions manual and clinical reasoning to problem-solve through

administration, scoring, and interpretation of the tool. If therapists had difficulty with use of the tool, the facility therapy supervisor(s) assisted with answering questions. If supervisors were unable to provide assistance, therapy administrators and the doctoral student were available to answer questions regarding use of the EPRF throughout the trial phase.

At the end of the two-week trial phase, hard copies of surveys were distributed to therapists at the trial facilities. The surveys were used to collect ordinal feedback data on the benefits and issues related to use of the outcome tool. Completed surveys were collected, and modifications were made to the EPRF instructions in accordance with feedback results to increase clarity and scoring accuracy.

Implementation Phase

The duration of the doctoral capstone ended at the time in which the implementation phase commenced. However, a plan was made to ensure the implementation phase was carried out efficiently. After modifications to the instructions were finalized, a plan was devised to implement the EPRF into all twenty-two facilities. Similar to the trial phase, group training was planned to occur via conference calls with each facility and opportunities were provided to ensure accurate and appropriate use of the EPRF.

Assimilation phase. Although efforts were taken to develop an easy-to-use outcome tool with clear instructions, an assimilation phase was created within the first two weeks of the implementation phase to ensure good understanding and appropriate use of the outcome tool. The purpose of this phase was to make therapy supervisors, who received in-depth training on the outcome tool, readily available within each facility to help solve potential issues with clinical use of the outcome tool and to help minimize inaccuracies in administration and scoring. Therapy supervisors received instruction to assist therapists if questions developed regarding

appropriate use of the outcome tool. However, if questions or problems regarding the outcome tool were not able to be solved within facilities, a plan was established for the respective regional therapy administrator provided assistance. Issues that occurred were to be recorded by the designated therapy supervisor within each facility and reported to the corresponding regional therapy administrator. A plan for analysis of issue reports from supervisors was established to be completed at the end of the two-week assimilation phase for therapy administrators to identify common issues with clinical use of the tool. The analysis would allow administrators to determine if modifications to the instructions manual were necessary to provide therapists with further clarity to enhance scoring accuracy.

Section IV Summary

The EPRF was developed and designed in accordance with the needs of the therapy organization. Collaboration with therapy administrators, clinical coordinators, and therapists throughout the implementation process helped to ensure comprehensiveness of the tool and to generate effective use in practice. Strategies to facilitate staff development consisted of: education on current and future challenges in SNF settings from an operations perspective, training for use of a new outcome tool as part of an adjustment process to healthcare transformations, and promotion of evidence-based practice strategies to achieve optimal outcomes. Leadership skills to facilitate effective service provision were implemented by: collaboration with therapy staff throughout the development and implementation processes; assurance that the vision and strategies to achieve goals are upheld; and support of therapy staff according to needs, ideas, and feedback for successful use of the outcome tool. Leadership skills were also utilized through a focus on external systems, analysis of how the systems impact practice, and promotion of collaborative efforts to generate adaptive responses. Utilization of

these skills aligned with two major goals of the doctoral capstone: to learn strategies for improvement of business performance, and to contribute to internal professional development to improve patient outcomes. The next section describes plans for continuous quality improvement and establishment of psychometric properties of the tool.

Section V: Discontinuation and Outcomes

Continuous quality improvement of the EPRF supports accurate and purposeful oversight of factors that are associated with hospital readmission. Ongoing plans to improve the EPRF is essential to ensure the tool is administered and scored accurately and consistently, to foster sustainability of the tool in therapeutic practice, and to generate effectiveness at the operations level. In other words, improvement of the EPRF supports efforts to increase overall quality of care and, in turn, improve business performance. This section describes methods for continuous improvement of the EPRF and further illustrates plans for future implementation of the tool throughout all facilities.

Modifications for Improvement

Several modifications of the EPRF occurred in accordance with the needs of the SNF organization. Test items, criteria of test items, scoring structure, and instructions for administration and scoring are major areas that were adjusted throughout the development process. Inclusion of therapists throughout the development process has been, and will continue to be, important throughout the implementation phase to achieve optimal practicality. Minimal therapist burden is important to ensure that clinical use of the tool is pragmatic and efficient, and does not interfere with the quality of services or with the operations of therapy departments. As explained in the previous section, one strategy to identify needs for improvement of the tool was

through feedback from therapists. Analysis of ordinal data that were collected via surveys will assist therapy administrators to determine appropriate adjustments.

Revisions to the EPRF were also made to maximize benefits from an operations perspective. Data gathered from the tool help to identify potential gaps in practice, and allows therapy administrators to clearly and conveniently share important information regarding quality trends in practice with hospital administrators. As a result, data-supported efforts to reduce hospital readmissions can ultimately lead to increased frequency of recommending patients to the SNF organization. Effectiveness of meetings with hospitals will be measured twofold; by higher rates for acquisition of new partnerships at end-of-year report and by an increased annual percentage of partnership renewals.

Administrative Sustainability Plan

Specific plans for continuous improvement and future research have been established to ensure usefulness of the EPRF in therapeutic practice.

Data collection. Data collection will occur throughout the implementation phase. Collected data will consist of initial evaluation scores, discharge evaluation scores, and overall change in score. A data management platform will be used to obtain and compile data from the electronic documentation system; data will be automatically collected. The purpose of this phase is to gather information that will be used in a study to determine psychometric properties and practicality of the outcome tool.

Study. It is necessary to analyze reliability to determine if the tool produces consistent results. Interrater reliability will allow the researcher to determine the consistency of appropriate scoring among different therapists. Establishing validity is also necessary to determine accuracy in measuring what the outcome tool is designed to measure. Criterion validity will provide the

researcher with information regarding the accuracy of the tool in predicting levels of risk for hospital readmission. Measurement of reliability and validity will be performed by a graduate student as part of a doctoral capstone experience. Therapy administrators will provide oversight of the research process. If poor psychometric properties are identified, modifications may need to be made to the outcome tool, and further study will be performed to reassess properties. Additional aspects of future research design will be determined by therapy administrators.

Response to Society's Needs

As efforts for cost reduction in healthcare have continued to grow, hospital readmission rates and reduced LOS have become key areas for quality measurement of SNFs. These transformations in healthcare have led to increased pressures within SNFs; demands to produce better outcomes at lower costs and within shorter timeframes. As stated in the literature review, increased medical complexities and other demographic trends within SNFs indicate that a return to prior level of function may not be as feasible with shorter LOS. This raises the possibility that patients will return to home before it is safe to do so, which increases the likelihood of hospital readmission and, therefore, may be a threat to perceived quality of SNFs. These changes highlight the need to provide comprehensive therapy services for both the patient and the caregiver regarding safety in the home environment. In addition to existing efforts for patient rehabilitation, results from the initial assessment will allow therapists to determine priority areas to be addressed as part of readmission prevention. Thus, the EPRF supports a therapeutic approach to business viability and clinical excellence by meeting major demands of the healthcare system, as well as the assurance of patient safety.

Measurable Outcomes

Goals for the doctoral capstone experience included contribution to: improvement of business performance and quality of care, establishment of an outcome tool that enhances data collection relevant to outcome areas that are valued by upstream networks, and internal professional development. The measurable outcome for these efforts is the outcome tool itself. As part of business performance improvement, an outcome tool that has been developed in response to current healthcare trends creates opportunities for the SNF organization to set itself apart from its competitors. To help improve occupancy, therapy administrators can use the tool to market the organization's quality services. Efforts for internal development, such as training therapists for appropriate use of the outcome tool, was measured through surveys from therapists and issue reports from therapy supervisors.

Section V Summary

Phipps (2015) stated that changes within a system support businesses with innovation and quality. Continuous quality improvement is critical to the operations and viability of the SNF organization. Therefore, ongoing improvement of the outcome tool is important to successfully generate an adaptive response to healthcare transformations while upholding standards for exceptional care. Plans for sustainability and dissemination of the outcome tool assist with this process by building internal capacity and providing guidance for use of objective data to improve business performance. Improvement of administrative and leadership skills has occurred through: consideration of external systems and their effect on internal practice strategies, initiation of an innovative approach to generate an adaptive response to current healthcare trends, acquisition of knowledge through collaboration with therapy administrators, and contribution to internal development (Phipps, 2015).

Section VI: Overall Learning

The purpose of the doctoral capstone was to develop advanced leadership and administrative skills. This was achieved through implementation of strategies that are adaptive to the care delivery system. This section explains methods used for professional interaction throughout the doctoral capstone and summarizes the overall learning experience.

Professional Interaction

Throughout the experience, professional interaction was consistently utilized with the operations team (SNF administrators, therapy administrators, clinical coordinators, therapy supervisors, rehab coordinators), as well as OT, PT, and ST practitioners. Professional interaction was essential to ensure all team members had a clear understanding of healthcare trends and their implications for the need to create an outcome tool. Effective interaction helped team members share knowledge and ideas which, in turn, helped to identify methods for development and implementation that were most efficient.

Written communication. Written communication via email was the most commonly used form of interaction throughout the experience, as this method was most efficient for the varied availability of team members. Emails were exchanged with the therapy administrators on a daily basis, and included updates on research findings and development of the outcome tool, topics regarding operations and plans for implementation, and external factors that could influence the design or implementation of the EPRF. Written communication with therapy practitioners was performed through detailed explanations for the purpose of the outcome tool, and through descriptive instructions for administering and scoring the tool. To establish a collaborative effort for tool development, therapists completed surveys to provide feedback

regarding practicality of the tool. All forms of written communication were proofread to verify that communication was carried out in a clear, concise, and professionally acceptable manner.

Verbal communication. Verbal communication with a regional therapy administrator occurred in-person on a weekly basis. Similar to written communication, topics of discussion included research findings, the developmental process of the outcome tool, plans for implementation, potentially influential external factors, and updates on goals and objectives for the doctoral capstone experience. Outlines of discussion topics were created prior to the weekly meetings to ensure that the meetings were efficient, productive, inclusive of important areas of the doctoral capstone experience, and respectful of the administrator's. Verbal communication with SNF administrators, therapy administrators, clinical coordinators, therapy supervisors, and rehab coordinators occurred at operations meetings throughout the duration of the doctoral capstone experience. Verbal communication with all team members was carried out in a manner that was well-organized, concise, sensitive to the varying level of knowledge within the audience, and clearly articulated main points.

Nonverbal communication. Nonverbal communication can directly impact how audiences perceive information. Nonverbal communication was used to create a positive and receptive atmosphere. Methods that were used on a daily basis to enhance professional interaction included, but were not limited to: proper body language, dress, and appearance; as well as appropriate facial expressions, eye contact, and tone of voice. Other forms of nonverbal communication such as gestures were used to enhance the audience's interest and engagement during a presentation of the outcome tool at an operations meeting.

Experiential Learning

In preparation for future practice as an occupational therapist, the doctoral capstone experience has provided me with opportunities that have contributed to the acquisition of new knowledge. Throughout the doctoral capstone experience, I have gained knowledge of: operational strategies for improvement of business performance, strategies for effective collaboration of team members to maximize efficiency across all levels of operation, methods for internal professional development, and establishment of an outcome tool that enhances data management of patient outcomes.

A major area that was emphasized throughout the experience, regardless of the topic at hand, was a comprehensive consideration of factors that could influence the process or outcomes of certain efforts. External factors that were acknowledged in the development of the outcome tool included, but were not limited to: laws and regulations that influence therapy practice within SNFs, increasingly extensive efforts for cost reduction in healthcare, trending interests and methods that hospitals use to measure quality of care and cost control within SNFs, the current payment structure and potential changes to the reimbursement system for SNFs, services and amenities offered by competitors, and existing outcome tools. Common internal factors that required consideration consisted of, but were not limited to: trends in patient outcomes and average LOS, population trends, needs of the SNF organization in response to healthcare transformations based on results for a needs assessment, current practice strategies such as evaluation and intervention processes, as well as productivity goals and scheduling. Procurement of these skills has contributed to my overall improvement as a future healthcare professional. For example, from a clinical perspective, acknowledgement of all influential aspects could mean the consideration of why it may be unsafe for a caregiver to provide

assistance to a client during a caregiver training session: patient- or caregiver-related factors that contribute to safety concerns, potential results that create safety concerns, and many other components that are important to acknowledge. From an operations perspective, consideration of all aspects may translate to an exploration of how a therapy department can improve practice strategies to generate better patient outcomes. In short, a comprehensive examination of all components- internal and external- that could potentially impact the process or the outcomes is imperative to successful and effective implementation of practice strategies.

Another major area of knowledge gained through the doctoral capstone was related to the involvement of all appropriate team members to successfully carry out effective operational strategies. In relation to the outcome tool, strategic discussions with administration and clinical team members generated an understanding that allowed development and implementation processes to be more efficient and practical. Also, operational strategies may not always be carried out as originally planned. For example, revisions to the EPRF occurred regularly in response to 1) therapy administrators' needs for an outcome tool that requires minimal training time and 2) therapists' need for a tool that minimizes therapist burden. A collaborative approach toward quality improvement also allows team members to share knowledge and thoughts that may not have been known or considered by other members. Thus, inclusion of all team members generated a comprehensive understanding of how the implementation of a new outcome tool could affect the SNF organization at all levels of operation. As a future therapist, this experience will contribute to my understanding of reasons for operational changes within therapy departments.

Leadership and Advocacy Skills

Leadership skills. The doctoral capstone experience has also yielded substantial improvements in administrative, leadership, and advocacy skills. Administrative skills have improved through increased knowledge of healthcare regulations and their effect on therapy operations within the SNF setting. Also, the doctoral capstone experience allowed me to exercise and improve upon multiple aspects of transformational leadership such as: inspiring a shared vision, challenging the status quo, establishing a clear vision of the future of the SNF organization, modeling, and enabling other to act (Phipps, 2015; Snodgrass, 2011).

Advocacy skills. Advocacy skills were enhanced across multiple levels of care. Patient advocacy skills were utilized and improved upon, as the primary purpose for development of the outcome tool was to ensure patient safety. Additionally, with aims to reduce healthcare costs, the outcome tool supports responsible stewardship of the patient's Medicare benefits. Advocacy skills for caregivers were enhanced through assessment of caregiver safety while providing assistance to the patient, and promotion of improved caregiver education. Advocacy skills for therapists were enhanced through efforts to increase documentation of measurable outcomes and to minimize therapist burden regarding clinical use of the outcome tool. Lastly, improvement of advocacy skills for the SNF organization occurred through the creation of an outcome tool to enhance business performance through improved data management of patient outcomes and other operational factors (e.g. reimbursement claims).

Conclusion

As a result of changes within the healthcare system, SNFs are experiencing increasingly difficult circumstances to demonstrate quality services and meet healthcare requirements (e.g. provide data that indicate reduced hospital readmission rates). With an operations-based

approached toward quality improvement, the doctoral capstone experience was completed in response to healthcare transformations that could significantly impact therapy services within the SNF setting, and aims to overcome gaps in existing outcome tools. The doctoral capstone experience has largely contributed to the acquisition of knowledge, as well as the development of professional skills that will benefit future practice as an occupational therapist.

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Appendix A.



Evaluation of Potential Readmission Factors

User's Manual

Measurement of Safety Impairment in
Factors Associated with Hospital Readmission

Version 1.0

Created by Curtis Clem

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Purpose

The Evaluation of Potential Readmission Factors (EPRF) is an outcome tool **to measure changes in safety impairment**. Specifically, the EPRF measures changes in safety impairment of factors that are associated with hospital readmission. The EPRF is used for patients who are planned to return to their home environments.

The tool is not intended to be inclusive of all risk factors related to hospital readmission, but is a basic measurement of safety concerns with select functional areas. Use of the tool supports collection and analysis of data to determine if therapy services yield reduced risks of hospital readmission.

The EPRF is a measure of safety impairment; items are scored based on how safe activities are performed. The EPRF is **not** meant to be used to measure functional skill impairment. General scoring instructions are further explained on page 3.

Administration

The EPRF is to be used to assess adults and older adults participating in occupational therapy, physical therapy, and/or speech therapy in a skilled nursing facility. **The EPRF is used to measure change in safety impairment** from the date of initial evaluation to the discharge evaluation date.

It is recommended that the EPRF is administered by occupational therapists, physical therapists, and speech-language pathologists. However, therapists may obtain reliable reports from caregivers, therapy assistants, or other healthcare team members (e.g. a nurse or physician) to assist with accurate scoring.

Test environments are not limited to the designated therapy area or the patient's room, but efforts should be made to simulate the patient's home environment.

The EPRF consists of five sections (nine items). Items can be administered in any order. **All items must be scored.** If the patient's stay ends unexpectedly, clinical judgment may be used to score test items. If clinical judgment is used, documentation must reflect clear reasoning for the score(s).

Scoring Structure

Scoring criteria may vary within test items.

Score	Description	G-Code
1 = Good	No concerns for safety.	CH
2 = Fair plus	Safety concerns with 1-19% of the activity.	CI
3 = Fair	Safety concerns with 20-39% of the activity.	CJ
4 = Fair minus	Safety concerns with 40-59% of the activity.	CK
5 = Poor plus	Safety concerns with 60-79% of the activity.	CL
6 = Poor	Safety concerns with 80-99% of the activity.	CM
7 = Poor minus	Safety concerns with 100% of the activity.	CN
8 = Not applicable	Activity is not applicable to patient or patient's daily living.	

Note: A score with a decimal is rounded up, regardless of the decimal amount (e.g. 19.1% impairment is scored as 20% impairment).

Scoring Instructions

All test items must be scored. Clinical judgment may be used to score items that are not observed, unless specified otherwise in item-specific instructions.

Items are scored on a scale of 1 to 7. Higher scores indicate greater safety impairment; a score of '1' indicates no safety concerns and a score of '7' indicates safety concerns for 100% of the activity. An additional score option of '8' is available for items that are not applicable to the patient.

For example, if a patient is unable to walk due to paralysis, Item 1.1a would be scored as an '8'. Item 1.1b would then be scored, as this item is more appropriate for the patient's condition.

Documentation should reflect why the item is not applicable. A score of '8' has no value to the total score.

The EPRF is built into the electronic documentation system. Each item will be scored for the patient's prior, current, and anticipated safety impairment. The 'current score' is the only scoring category that affects the total score. Brief descriptions for each score value can be viewed by hovering the cursor over the score value. Detailed scoring criteria and descriptions are provided under each EPRF item to help determine percentage ranges of safety impairment.

Scores indicate levels of **safety impairment**. Scores are based on criteria for each item that measure how safely tasks are performed **with or without a caregiver** (*this is further clarified in each item*).

Note: If the therapist is unable to determine if the patient has a caregiver who can provide safe and appropriate assistance, score the item(s) without caregiver assistance.

If the word "and" is stated in the criteria, all criteria must be met. If the word "or" is stated in the criteria, only one of the criteria must be met. Scores are not affected by the time it takes to complete tasks or by the use of adaptive equipment/devices, unless specified otherwise.

Item(s) Not Completed Due to Safety Concern

If an item is not attempted due to medical or safety concerns, the item is scored as '7'. The safety of the patient and/or caregiver should not be at risk when administering and scoring items.

Item(s) Not Observed

If an item is not observed, a reliable report may be obtained from the patient's medical chart, the patient (if cognition is intact), the patient's caregiver(s), or a care team member who has observed the task(s). ***If a report cannot be obtained, clinical judgment may be used to score the item as accurately as possible.*** Documentation should reflect how the score was obtained.

Inconsistent Performance is Observed

If the patient demonstrates fluctuating or inconsistent levels of safety when performing certain test items, the score should reflect the patient's lowest level of safety.

Section 1: Functional Mobility

1.1a) (Pre)Ambulatory Fall Risk

! **USE THIS ITEM OR ITEM 1.1b TO ASSESS FALL RISK. DO NOT USE BOTH ITEMS TO SCORE FALL RISK. USE CLINICAL JUDGMENT AND THE DESCRIPTION BELOW TO APPROPRIATELY SELECT ONE.**

This item is used to assess fall risk if the patient has intact motor function in the lower extremities. If motor function of the lower extremities is not intact, or the patient's baseline is at wheelchair level, score this item as '8' and use item **1.1b** to accurately score the patient's fall risk. A score of '7' reflects that motor function is intact, but the patient is unable to perform any of the tasks required for standing and/or walking.

The score for this item indicates **the patient's fall risk** with sitting balance, standing balance, and/or ambulatory tasks **without** assistance from a caregiver.

Scoring

To guide scoring for this item, *Table 1* displays scoring examples of other tools including: Berg Balance Scale and Tinetti Performance Oriented Mobility Assessment (POMA). If the patient is not ambulatory but stands for functional tasks, it is recommended to use the Berg Balance Scale for this item. If the patient is ambulatory, it is recommended to use the Tinetti POMA.

Table 1

EPRF	Berg Balance Scale	Tinetti POMA
1 = Low fall risk	56	28
2 = Low fall risk	41-55	25-27
3 = Moderate fall risk	31-40	22-24
4 = Moderate fall risk	21-30	19-21
5 = High fall risk	11-20	10-18
6 = High fall risk	1-10	1-9
7 = Complete impairment	0	0
8 = Not applicable. Item is scored using item 1.1b.		

*Note: **Table 1 displays examples used to guide scoring fall risk; clinical judgment should be used while scoring this item.** Scores on one outcome tool may not directly translate into scores on another outcome tool, but may provide similar insight into the patient's fall risk. For example, interpretation for a score of 41 on the Berg Balance Scale is not the same as interpretation for a score of 23 on the Tinetti POMA. Rather, Table 1 displays examples to guide scoring for the level of fall risk.*

1.1b) Wheelchair Mobility Fall Risk

! USE THIS ITEM OR ITEM 1.1a TO ASSESS FALL RISK. DO NOT USE BOTH ITEMS TO SCORE FALL RISK. USE CLINICAL JUDGMENT AND THE DESCRIPTION BELOW TO APPROPRIATELY SELECT ONE.

This item is used to assess fall risk if the patient does not have intact motor function in the lower extremities, or if the patient's baseline function is at wheelchair level. If motor function of the lower extremities is intact, or the patient does not/will not require a wheelchair at baseline, score this item as '8' and use item 1.1a to accurately score the patient's fall risk.

The score for this item indicates the patient's fall risk and safety impairment with wheelchair mobility without caregiver assistance.

Scoring Criteria

There are six scoring criteria for this item:

- (1) **Wheelchair control:** safely and effectively propels (manual wheelchair) or steers (power wheelchair) the wheelchair for at least **50 feet**
- (2) **Management of wheelchair parts:** locks/unlocks wheel locks appropriately (e.g. before transfer), manages footrests appropriately (e.g. before transfer), etc.
Note: Management of wheelchair parts is not limited to wheel locks and footrests.
- (3) **Door management:** closes and opens doors (e.g. bathroom door) at wheelchair level to enter and exit rooms safely and effectively
- (4) **Dynamic sitting balance:** good balance when reaching outside base of support (forward, laterally, etc.) at shoulder and ground level
Note: Score is not affected by restricted upper extremity mobility that limits reach.
- (5) **Weight shift:** ability to shift weight periodically (e.g. to prevent pressure sores)
- (6) **Awareness of limbs:** good awareness of limbs during wheelchair mobility (e.g. arm/hand does not hang outside of armrest)

1 = Good. No concerns for safety

2 = Fair plus. Concerns for patient safety with 1-19% of wheelchair mobility

3 = Fair. Concerns for patient safety with 20-39% of wheelchair mobility

4 = Fair minus. Concerns for patient safety with 40-59% of wheelchair mobility

5 = Poor plus. Concerns for patient safety with 60-79% of wheelchair mobility

6 = Poor. Concerns for patient safety with 80-99% of wheelchair mobility

7 = Poor minus. Concerns for patient safety with 100% of wheelchair mobility

8 = Not applicable. Item is scored using item 1.1a.

1.2) Transfers

The score for this item reflects the patient's safety impairment for transfers with or without assistance from a caregiver. This item is scored based on a global assessment of transfers across various contexts. Documentation should reflect the type of transfer.

Circumstances for Scoring

Patient has a caregiver and requires assistance: Score the patient's safety impairment for transfers with caregiver assistance. *For example, if a patient who requires maximal assistance to transfer receives safe and appropriate caregiver assistance, and there are no concerns for safety, the item would be scored as '1'. Contrarily, if the therapist has concerns for the patient's safety when receiving assistance from the caregiver, the score should reflect the safety impairment percentage accordingly.*

Patient does not require caregiver assistance: Score should reflect the patient's safety impairment without assistance.

Patient requires assistance but does not have a caregiver, or the caregiver is not present at initial evaluation: Score the amount of safety concerns for the patient to complete the activity. *For example, if a patient requires minimal physical assistance to safely complete a transfer (requires assistance for 25% of effort), the item would be scored as '3'.*

Patient has a caregiver, but the caregiver is not present at discharge evaluation: Score the patient's safety impairment based on the most recent time patient transfer with caregiver assistance was observed.

Scoring Criteria

There are three scoring criteria for this item:

- (1) **Setup:** proper setup of transfer surfaces and/or assistive equipment (if applicable)
- (2) **Body mechanics:** patient uses proper body mechanics to transfer
- (3) **Movement quality:** movement is controlled throughout

1 = Good. No concerns for patient safety.

2 = Fair plus. Concerns for patient safety with 1-19% of transfers.

3 = Fair. Concerns for patient safety with 20-39% of transfers.

4 = Fair minus. Concerns for patient safety with 40-59% of transfers.

5 = Poor plus. Concerns for patient safety with 60-79% of transfers.

6 = Poor. Concerns for patient safety with 80-99% of transfers.

7 = Poor minus. Concerns for patient safety with 100% of transfers.

Section 2: Self-Care

2.1) Toileting

The score for this item reflects the patient's safety impairment with toileting with or without assistance from a caregiver (if applicable). The score is not affected by the use of assistive device (e.g. toilet tissue aid). *If the patient requires a device (e.g. catheter or colostomy bag), the score should reflect patient's or caregiver's abilities to setup and manage the device. The score for this item does not include the transfer onto or off of the toilet.*

Circumstances for Scoring

Patient has a caregiver, and requires caregiver assistance: Score the patient's safety impairment for the activity WITH caregiver assistance. *For example, if a patient who requires maximal assistance to perform the activity receives safe and appropriate caregiver assistance, and there are no concerns for safety, the item would be scored as '1'. Contrarily, if the therapist has concerns for the patient's safety when receiving assistance from the caregiver, the score should reflect the safety impairment percentage accordingly.*

If the patient does not require caregiver assistance: Score reflects safety concerns for the patient if the activity were to be performed without assistance.

If the patient requires assistance, but does not have a caregiver: Score safety concerns for the patient if the activity were to be performed without assistance. This scoring method may commonly be used at initial evaluation if caregiver is not present and additional information cannot be obtained regarding the caregiver's ability to sufficiently assist the patient in the activity. However, if additional information can be obtained regarding the caregiver's ability to sufficiently assist the patient, the score should reflect this.

Clinical judgment is encouraged to score EPRF items as accurately as possible.

Scoring Criteria

There are three scoring criteria for this item:

- (1) Clothing management before toileting
- (2) Perineal hygiene
- (3) Clothing management after toileting

These criteria do not apply to patients who use a medical device. If a medical device is used, score this item based on the patient's or caregiver's abilities to setup and manage the device safely and appropriately.

1 = Good. No concerns for patient safety

2 = Fair plus. Concerns for patient safety with 1-19% of toileting

3 = Fair. Concerns for patient safety with 20-39% of toileting

4 = Fair minus. Concerns for patient safety with 40-59% of toileting

5 = Poor plus. Concerns for patient safety with 60-79% of toileting

6 = Poor. Concerns for patient safety with 80-99% of toileting

7 = Poor minus. Concerns for patient safety with 100% of toileting

2.2) Feeding & Eating

The score for this item reflects the patient's safety impairment with feeding and eating with or without assistance from a caregiver. The score is not affected by the use of assistive devices (e.g. rocker knife to cut food). *If the patient requires a medical feeding device (e.g. tube feeding), the score should reflect the patient's or caregiver's abilities to manage device.*

Circumstances for Scoring

Patient has a caregiver and requires assistance: Score the patient's safety impairment for transfers with caregiver assistance. *For example, if a patient who requires moderate assistance to perform the activity receives safe and appropriate caregiver assistance, and there are no concerns for safety, the item would be scored as '1'. Contrarily, if the therapist has concerns for the patient's safety when receiving assistance from the caregiver, the score should reflect the safety impairment percentage accordingly.*

If the patient does not require caregiver assistance: Score reflects safety concerns for the patient if the activity were to be performed without assistance.

If the patient requires assistance, but does not have a caregiver: Score safety concerns for the patient if the activity were to be performed without assistance. This scoring method may commonly be used at initial evaluation if caregiver is not present and additional information cannot be obtained regarding the caregiver's ability to sufficiently assist the patient in the activity. However, if additional information can be obtained regarding the caregiver's ability to sufficiently assist the patient, the score should reflect this.

Clinical judgment is encouraged to score EPRF items as accurately as possible.

Scoring Criteria

There are six scoring criteria for this item. *These criteria do not apply to patients who use a medical feeding device.*

- (1) **Appropriate use of utensils:** utensils are handled safely and appropriately
- (2) **Oral transport:** food is transferred efficiently into mouth
- (3) **Appropriately-sized bites:** bites of food are appropriate to avoid choking
- (4) **Chewing:** the patient sufficiently chews and manages food in mouth
- (5) **Does not overfill mouth:** bringing food to mouth is well-paced to avoid choking
- (6) **Regular diet:** If the patient is not on a regular diet (is on a modified diet), this implies a safety concern (e.g. aspiration)

1 = Good. No concerns for patient safety

2 = Fair plus. Concerns for patient safety with 1-19% of feeding and eating

3 = Fair. Concerns for patient safety with 20-39% of feeding and eating

4 = Fair minus. Concerns for patient safety with 40-59% of feeding and eating

5 = Poor plus. Concerns for patient safety with 60-79% of feeding and eating

6 = Poor. Concerns for patient safety with 80-99% of feeding and eating

7 = Poor minus. Concerns for patient safety with 100% of feeding and eating

Section 3: Functional Cognition

3.1) Functional Cognitive Skills

The score for this item reflects the patient's functional cognitive skills **without** caregiver assistance. This item is a global assessment of problem solving, self-awareness, goal-directed behavior, self-monitoring of performance, and adjustment of performance as appropriate for task performance. *Table 2* displays scoring examples of other tools including: Global Deterioration Scale, Allen Cognitive Levels, and Blessed Dementia Scale.

Table 2

Functional Cognitive Skills			
EPRF	Blessed Dementia Scale	Global Deterioration Scale	Allen Cognitive Levels
1 = Good	0	1	6.0
2 = Fair plus	1-2	2	5.6-5.8
3 = Fair	3-5	3	5.4
4 = Fair minus	6-11	4	4.6-5.2
5 = Poor plus	12-13	5	4.0-4.4
6 = Poor	14-15	6	3.4-3.8
7 = Poor minus	16-17	7	0.8-3.2

Note: Scores on one assessment tool may not directly translate into scores on another assessment tool, but may provide similar insight into the patient's functional cognitive skills. For example, interpretation for a score of 5.2 on the Allen Cognitive Level is not the same as interpretation for a score of 4 on the Global Deterioration Scale.

Clinical judgment is encouraged to score EPRF items as accurately as possible.

Listed below are descriptions of the patient's cognitive abilities and supervision needs within the home environment. These are not required scoring criteria, but are listed to assist with scoring.

1 = Good. No concerns for safety. **May live alone.**

Patient predicts potential mistakes or consequences, and self-monitors performance to maintain safety.

2 = Fair plus. Very mild impairment for safe problem solving and judgment. **May live alone with occasional check-in reminders** to complete household tasks.

Patient can perform instrumental activities (medication management, financial management, etc.) with written instructions. Patient typically monitors his or her own safety.

3 = Fair. Mild impairment for safe problem solving and judgment. **May live alone with weekly check-in supervision.**

Patient requires supervision for safety with instrumental activities. Self-monitoring for safety is inconsistent, and the patient may occasionally perform tasks "automatically" without consideration of potential outcomes of actions. If challenges occur, the patient may abruptly change his or her original plans to complete a task.

4 = Fair minus. Moderate impairment for safe problem solving and judgment. Patient would require **daily check-in supervision** for personal safety. **Living alone is questionable.**

Patient is oriented to time and age. Able to safely complete self-care tasks in highly structured routine; daily check-in required. Patient requires assistance with instrumental activities. Intermittent impulsive behaviors.

- 5 = Poor plus.** Significant impairment for safe problem solving and judgment. Patient would require **24-hour supervision** for safety; **cannot live alone**.
Patient is disoriented to time and age (may believe age is 20-40 years old). Patient needs a lot of assistance for safety with instrumental activities. Patient requires close supervision and consistent cueing for safety for self-care. Generally demonstrates impulsive behaviors, unaware of limitations, and may be easily agitated.
- 6 = Poor.** Severe impairment for safe problem solving and judgment. Patient would require **24-hour physical assistance** for safety.
Patient is disoriented, and may believe (s)he is a child. Patient requires physical assistance for self-care required to maintain safety. There is an absence of goal-directed behavior, and the patient is unaware of his or her surroundings.
- 7 = Poor minus.** Patient is unable to follow simple commands and/or is unable to recognize safety concerns despite consistent maximal cues. Patient requires **24-hour care, usually nursing or hospice care**.

Section 4: Home Environment

4.1) Home Assessment

This item is scored based on the patient's safety impairment with performance and/or accessibility of items listed on the Home Assessment tool. The score reflects performance and/or accessibility with or without a caregiver.

Circumstances for Scoring

Scoring at Initial Evaluation

If the home assessment has not been completed at the time of initial evaluation, use clinical reasoning to score this item; gather as much reliable information about the home as possible via report or medical chart.

Discharge Evaluation

If the home assessment has not been completed, score this item using information from the patient's medical chart and any information gathered via reliable reports from the patient, caregiver(s), or other care team members.

Only score this item as an '8' if the patient will remain in a skilled nursing facility.

Scoring Criteria

Refer to the Lifespan Home Assessment tool to calculate score. Items in this section include (1) patient views, (2) living situation, (3) physical assessment of the home, and (4) recommendations.

1 = Good. No concerns for patient safety for within the home.

2 = Fair plus. Concerns for patient safety with 1-19% of occupations or accessibility within the home.

3 = Fair. Concerns for patient safety with 20-39% of occupations or accessibility within the home.

4 = Fair minus. Concerns for patient safety with 40-59% of occupations or accessibility within the home.

5 = Poor plus. Concerns for patient safety with 60-79% of occupations or accessibility within the home.

6 = Poor. Concerns for patient safety with 80-99% of occupations or accessibility within the home.

7 = Poor minus. Concerns for patient safety with 100% of occupations or accessibility within the home.

8 = Not applicable. Patient will remain in a skilled nursing facility.

Section 5: Caregiver Return Demonstration

- !** If the patient requires a caregiver for tasks included in Sections 1-4, but DOES NOT HAVE a caregiver: score items 5.1 and 5.2 as '7'.
- A score of '8' is only used if the patient does not require a caregiver.

5.1) Functional Mobility Assistance

The score for this item is based on a **global assessment** of the **caregiver's safety impairment** regarding the provision of assistance to the patient for mobility tasks included in **Section 1**.

Circumstances for Scoring

Initial evaluation: If caregiver is not present, score this item as '7', as the caregiver is unable to demonstrate the ability to provide safe and appropriate assistance.

Discharge evaluation: If caregiver has previously participated in therapy and patient assistance has been observed, score the caregiver's safety impairment based on the most recent observation of the caregiver's abilities to provide safe and appropriate assistance.

Scoring Criteria

There are four scoring criteria for this item:

- (1) **Setup:** proper setup and use of assistive devices/equipment (if applicable)
- (2) **Body mechanics:** caregiver demonstrates proper body mechanics to prevent injury when providing patient assistance
- (3) **Quality of patient assistance:** positioning and handling of patient is appropriate, safe, controlled, and secure to prevent patient injury
- (4) **Communication:** communication between patient and caregiver is clear and effective.
Communication should not be counted against score if patient unable to comprehend verbal instructions.

1 = Good. No concerns for caregiver safety when providing assistance to patient.

Caregiver consistently demonstrates safe and appropriate assistance, and shows good awareness of patient's needs.

2 = Fair plus. Concerns for caregiver safety with 1-19% of patient assistance.

Caregiver rarely need cues for safety; may occasionally forget minor aspects of techniques for safe assistance, but is able to recognize potential issues and adjust accordingly with extra time.

3 = Fair. Concerns for caregiver safety with 20-39% of patient assistance.

Caregiver is usually able to verbalize safe assistive techniques, but requires cues for recognition or correction of potential safety issues. Occasional cues may be needed for proper setup of assistive devices/equipment.

4 = Fair minus. Concerns for caregiver safety with 40-59% of patient assistance.

Caregiver frequently requires cues for proper setup of assistive devices/equipment. Frequent cues are also need for recognition and correction of potential safety issues. The caregiver requires standby assistance from the therapist to ensure safety.

- 5 = Poor plus.** Concerns for caregiver safety with 60-79% of patient assistance.
Caregiver is frequently unable to correct techniques for safety despite cues.
Caregiver requires minimal physical assistance from the therapist to ensure safety.
- 6 = Poor.** Concerns for caregiver safety with 80-99% of patient assistance.
Caregiver is frequently unable to correct techniques for safety despite cues. The caregiver requires moderate assistance from the therapist to ensure safety.
- 7 = Poor minus.** Caregiver does not demonstrate safety techniques for patient assistance.
Or patient requires caregiver, but does not have one.
Caregiver is frequently unable to correct techniques for safety despite cues. The caregiver requires maximal to total assistance from the therapist to ensure safety.
- 8 = Not applicable.** Patient does not require a caregiver.

5.2) Self-Care Assistance

The score for this item is based on a **global assessment** of the **caregiver's safety impairment** regarding the provision of assistance to the patient for self-care tasks.

Circumstances for Scoring

Initial evaluation: If caregiver is not present, score this item as '7', as the caregiver is unable to demonstrate the ability to provide safe and appropriate assistance.

Discharge evaluation: If caregiver has previously participated in therapy and patient assistance has been observed, score the caregiver's safety impairment based on the most recent observation of the caregiver's abilities to provide safe and appropriate assistance.

Scoring Criteria

There are four scoring criteria for this item:

- (1) **Setup:** proper setup and use of assistive devices/equipment (if applicable)
- (2) **Body mechanics:** caregiver demonstrates proper body mechanics to prevent injury when providing patient assistance
- (3) **Quality of patient assistance:** positioning and handling of patient is appropriate, safe, controlled, and secure to prevent patient injury
- (4) **Communication:** communication between patient and caregiver is clear and effective. *Communication should not be counted against score if patient unable to comprehend verbal instructions.*

1 = Good. No concerns for caregiver safety when providing assistance to patient. *Caregiver consistently demonstrates safe and appropriate assistance, and shows good awareness of patient's needs.*

2 = Fair plus. Concerns for caregiver safety with 1-19% of patient assistance. *Caregiver rarely need cues for safety; may occasionally forget minor aspects of techniques for safe assistance, but is able to recognize potential issues and adjust accordingly with extra time.*

3 = Fair. Concerns for caregiver safety with 20-39% of patient assistance. *Caregiver is usually able to verbalize safe assistive techniques, but requires cues for recognition or correction of potential safety issues. Occasional cues may be needed for proper setup of assistive devices/equipment.*

4 = Fair minus. Concerns for caregiver safety with 40-59% of patient assistance. *Caregiver frequently requires cues for proper setup of assistive devices/equipment. Frequent cues are also need for recognition and correction of potential safety issues. The caregiver requires standby assistance from the therapist to ensure safety.*

5 = Poor plus. Concerns for caregiver safety with 60-79% of patient assistance. *Caregiver is frequently unable to correct techniques for safety despite cues. Caregiver requires minimal physical assistance from the therapist to ensure safety.*

6 = Poor. Concerns for caregiver safety with 80-99% of patient assistance. *Caregiver is frequently unable to correct techniques for safety despite cues. The caregiver requires moderate assistance from the therapist to ensure safety.*

7 = Poor minus. Caregiver does not demonstrate safety techniques for patient assistance.

Or patient requires caregiver, but does not have one.

Caregiver is frequently unable to correct techniques for safety despite cues. The caregiver requires maximal to total assistance from the therapist to ensure safety.

8 = Not applicable. Patient does not require a caregiver.

Total Score

	Initial	Discharge	Change
Add scores of all items with a score of 1 through 7 . Scores of 8 on the tool have a value of 0 and, therefore, do not affect the total score.			

Potential Hospital Readmission Risk

Risk Level	EPRF Total Score Range
Very Low	7 - 13
Low	14 - 20
Moderate Low	21 - 28
Moderate	29 - 35
Moderate High	36 - 42
High	43 - 49
Very High	50 - 56

Patient Care Critical Checklist

This checklist is provided to track the timeline the patient's care pathway.

Dates (mm/dd/yyyy)				
	Admission	Home Evaluation	Caregiver Training	Discharge
OT				
PT				
ST				

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