Dysphagia Screening Adherence in the ED: Impact of a Nurse Champion

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Dedication

I am dedicating my capstone work to two former colleagues, Pamela Wagner and Rhonda Fleischman, who were instrumental in my professional and personal development. Their leadership examples of how to achieve person-centered, high quality care through caring, mentoring, and educating nurses, have been my true north star(s).

Abstract

Unrecognized dysphagia among stroke patients can cause complications, including aspiration and healthcare acquired pneumonia. A pilot study to test if dysphagia screening adherence was influenced by the implementation of a nurse champion was conducted at one of three free standing emergency departments (FSEDs) affiliated with a large, Midwest, urban, teaching, and 'thrombectomy capable' stroke certified center. This quality improvement project utilized May and Finch's Normalization Process Theory as the theoretical framework with the Doctorate of Nursing Practice (DNP) student acting as champion. Participants included full, part-time, and per diem RNs in the FSED (N=22). After implementation of the nurse champion, bedside screening overall adherence improved from 18% to 36%, which demonstrated a statistically significant change ($p<.03$). Conclusion: Utilization of a nurse champion in a FSED is a novel approach to ensure high quality care by closing the gap between evidence and practice. This pilot study reinforces previous work regarding implementation of unit-based champions to advance specific evidence-based clinical practice guidelines.

Keywords: Evidence-based practice, champion, clinical practice guidelines, opinion leader, quality improvement, staff nurse education

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Dysphagia Screening Adherence in the ED: Impact of a Nurse Champion

Chapter I

To provide high quality, time sensitive care in the emergency department (ED) setting, team members are required to maintain competency in various skills and obtain a wide base of knowledge pertaining to numerous human ailments. In the context of healthcare complexity, organizations are challenged with ensuring patients receive high quality care. Uniformity and consistency can be achieved through the implementation of evidence-based clinical practice guidelines (CPG). However, despite knowledge of best clinical practices that support high quality care, inconsistent use of CPGs places patients at risk for error, or harm. This project addresses how to improve adherence to CPG so that patients receive the high-quality care expected of a stroke certified organization.

Background

Caring for patients with varying levels of health and disease is common in today's healthcare setting, and resources to achieve this goal are limited. Aiming to transform an inefficient volume-based healthcare system to one that is focused on value, thought-leaders prioritized the characteristics needed to eliminate waste, redundancy, and inefficiency (Brandt, Lutfiyya, King, & Chioreso, 2014; Lee, 2017; Salmond & Echevarria, 2017). The Institute for Healthcare Improvement (n.d.) recommends that organizations use a Triple Aim Framework that includes improving patient experience (quality and satisfaction), the health of populations, and reducing the per capita cost of healthcare (Berwick, Nolan, & Whittington, 2008; Institute for Healthcare Improvement, n.d.). The Affordable Care Act now leads the transformation of healthcare by ensuring that payment structures are centered around quality, cost, and experience

(Brandt et al., 2014). Therefore, healthcare leadership is challenged with executing plans that improve health and reduce the disparities that keep people from achieving health.

Stroke. Stroke creates a major burden on the American healthcare system as it impacts 800,000 people per year and is the cause of death for nearly 100,000 people annually (Centers for Disease Control [CDC], 2017). As the 5th leading cause of death and the leading cause of disability, strokes cost more than $34 billion per year (CDC, 2017; Savage, Kub, & Groves, 2016). Due to the substantial implication of this disease process, stroke has received more attention since the early 2000's.

Several years after the To *Err is Human* report indicated problems in the healthcare system (Institute of Medicine, [IOM], 1999), and during the same year that the *Crossing the Quality Chasm* report indicated the need for healthcare transformation (IOM, 2001), Congress, together with the CDC funded the Paul Coverdell National Acute Stroke Program to improve the outcome for stroke victims. With a similar goal to improve the rates of morbidity and mortality, and minimize the heavy human and financial burden of stroke, The Joint Commission (TJC) collaborated with the American Heart Association (AHA) and the American Stroke Association (ASA) to initiate standardized guidelines for the care of patients with a stroke diagnosis (TJC, 2008).

These certification organizations created a structure where the detailed aspects of care that drive cost and quality can be monitored, measured, and intervened upon. Hospitals participating in stroke-certification programs promise to achieve high-level stroke outcomes and remain accountable to this commitment by entering data into shared data systems (TJC, 2018). Subsequently, when stroke-specific care guidelines are implemented by front-line care givers,

patients experience fewer complications, that contribute to lower rates of morbidity and mortality (Considine & McGillivray, 2010; Reynolds, Murray, McLennon, & Bakas, 2016b).

***Dysphagia*.** Dysphagia, the impairment of swallowing, can lead to complications such as dehydration, insufficient nutritional intake, and hospital-acquired pneumonia (Alexander, 2013). Within the first three days following a stroke (Barnard, 2011), 37% - 78% of patients are at risk for dysphagia (Palli et al., 2017; Powers et al., 2018). Secondary effects of dysphagia include increased length of stay, higher mortality, and greater financial expense (Barnard, 2011; Henke, Foerch, & Lapa, 2017). Because of the impact of dysphagia and its prevalence, bedside swallow screenings for the disorder continue to be among the AHA/ASA guidelines for stroke care (Powers et al., 2018). If a stroke patient demonstrates a positive bedside swallow screening, nursing interventions are used protect the patient from acquiring one of the dysphagia-associated complications (Barnard, 2011).

In the ED where a formal dysphagia screening by a speech pathologist is not immediately available, a bedside swallow screening serves to detect dysphagia until more advanced follow-up testing can be conducted (Barnard, 2011). Since patients most often encounter a nurse before a physician in the ED, foundational ED nursing knowledge includes the recognition of stroke symptoms (Barnard, 2011).

While stroke-trained professionals easily recognize the classic presentation of an anterior circulation stroke such as a weak extremity, facial droop, and slurred speech, some patients may not present with textbook symptoms (Arch et al., 2016). Often overlooked by busy ED nurses are the symptoms associated with a posterior circulation stroke: headache, nausea/vomiting, dizziness, seizure, syncope, and falls. Unfortunately, failure to identify these gray-zone

symptoms (see Appendix A) is a missed opportunity to screen the patient for dysphagia and failure to advocate for the patient (Palli et al., 2017).

Significance

Having initial contact, proximity, and frequent interaction with patients, it is understandable why ED nurses are charged with the responsibility of identifying and screening patients for a potentially harmful situation (Salmond & Echevarria, 2017). However, a nurse's ability to recognize less obvious signs and symptoms of a stroke may be challenged by contextual factors that are beyond the control of an ED nurse such as a changing census and fluctuating patient acuity. Without a reminder system or embedded process to support implicit behaviors involved in clinical CPG, opportunities to advocate for patients may be missed (Lam, Kwong, Hung, & Pang, 2016).

Problem Statement

In the Fall of 2017, a new electronic health record (EHR) system was adopted by the participating organization. The implementation of this innovation brought many unanticipated, down-stream effects. Notably, the dysphagia screening process and nursing documentation were significantly modified as a result. A new dysphagia screening process was adopted, and the previous method was abandoned. Anticipatory education regarding the changes was inadvertently overlooked. Additionally, the previously used gray-zone reminder sheet (see Appendix A) was eliminated after the changes were made.

Figure 1. Contributing factors to poor dysphagia screening adherence.

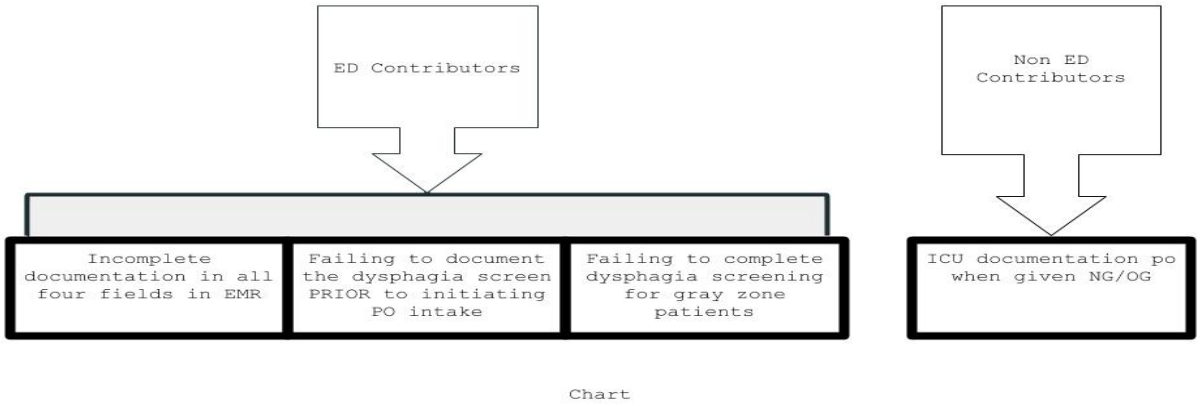

Figure 1. This figure illustrates the ED contributors to dysphagia screening non-adherence.

With a goal of 100% dysphagia screening adherence set by the stroke quality committee, data for the quality metric is gathered monthly by the stroke quality coordinator (see Table 1). At baseline, the organization-wide adherence to the quality metric was between 91% and 93%. After the EHR change in November of 2017, there was an initial drop in adherence to 68%. When the adherence rates from December through April did not consistently meet the established goal of 100%, the organization's administration decided to add an electronic feature to the EHR that would remind nurses to conduct the screenings (see Figure 2).

In the months following the EHR intervention, quality improvement (QI) data remained below the baseline. Following the most recent QI data collection in September 2018, with adherence results still a subpar 80%, an educational email blast was sent out to all nurses involved in caring for stroke patients.

Table 1.

Organization-wide quality data.

Dysphagia Screen				
Benchmark Group	**Time Period**	**Numerator**	**Denominator**	**% of Patients**
My Hospital	Sep 2017	21	23	91.3%
My Hospital	Oct 2017	20	21	95.2%
	Nov 2017	17	25	68.0%
	Dec 2017	17	28	60.7%
	Jan 2018	17	17	100.0%
	Feb 2018	19	23	82.6%
	Mar 2018	16	16	100.0%
	Apr 2018	19	21	90.5%
	May 2018	18	22	81.8%
	Jun 2018	15	24	62.5%
	Jul 2018	24	27	88.9%
	Aug 2018	18	23	78.3%
	Sep 2018	12	15	80.0%

Note. Illustrates percentage of patients receiving dysphagia screening reflective of patients admitted to hospital.

Figure 2. Organization-wide dysphagia adherence September 2017-September 2018.

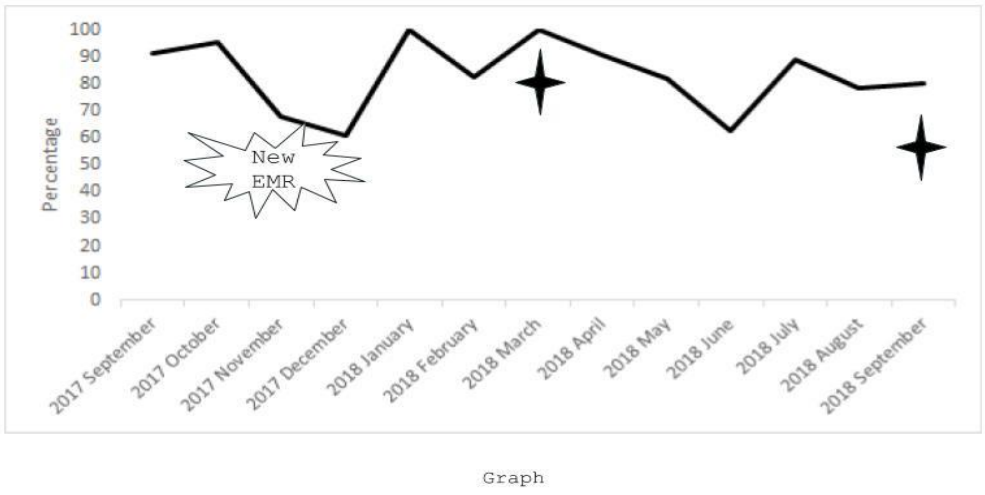

Figure 2. Stars indicates organization-wide interventions to improve dysphagia screening adherence after new EHR.

The internal evidence displayed in Figure 2 indicates variable delivery in care for the prevention of complications of stroke. Despite organization-level attempts to improve nurse adherence, opportunities for improvement persist. With increasing expectations of high-quality care, organizations must find ways to promote adaptation and normalization of behaviors that are in accordance with regulations.

Project Purpose, Aim and Objectives

Targeting a population of nurses in the FSED, the overall purpose of the project was the development of a program to engage ED nurses to improve adherence to stroke CPGs. The aim of the QI project was to improve dysphagia screening adherence. The first objective was to implement a unit-based nurse, called a "stroke champion". The second objective was to implement required stroke-specific education.

Clinical PICOT Question

Among FSED nurses (population), what impact does the initiation of a unit-based nurse champion (intervention), compared to no champion (comparison), have on dysphagia screening adherence (outcome) over a two-month time frame (time constrained)?

Congruence with Organizational Strategic Plan

The mission of the organization where the study was conducted is "to improve the health and lives of the people we serve" (CCAG, n.d.a). Using the relationship model of care, healing and caring relationships are encouraged between the self, colleagues, patients, and families. Patients and families are the focus of the professional model, with patient safety at the core (see Appendix B). The model "represents a unique integration of our core values and beliefs; vision and guiding principles that embrace professional practice as a means to achieve quality care that is grounded in evidence-based caring practices" (CCAG, n.d.b). By providing an opportunity for

a nursing peer to mentor and educate staff, for the purpose of improving patient quality, this project was well aligned with organization's mission.

Healthcare systems. To improve access to healthcare for its community members, **s**ome hospitals have opened freestanding EDs (FSED) that offer 24/7 access to healthcare (American College of Emergency Physicians [ACEP], 2015; Davis & Zacchigna, 2018). From 2008 to 2016, there has been a 100% increase in these entities (Davis & Zacchigna, 2018). Freestanding EDs affiliated with a hospital system are operated as an outpatient department and must perform according to the same administrative and governmental regulations as the parent hospital. Patients living in the hospital's geographic service-region receive the benefit of closer proximity, shorter wait times, and subsequently quicker access to life-saving emergency physician evaluations, as well as advanced diagnostic and laboratory services (ACEP, 2015; Davis & Zacchigna, 2018). Whereas the constraint of unavailability of specialty physicians may have inhibited the use of remote care access sites in the past, advances in technology have removed this barrier. For instance, the advent of telemedicine allows a patient to be evaluated by a neurologist within minutes of the patient's arrival at the FSED. The neuro team can conduct a neurological exam and prepare an advanced treatment plan that includes the administration of the 'clot-busting' drug, tissue-plasminogen activator (tPA); or instead, decide that the patient qualifies for a thrombectomy.

Synthesis of Evidence

Search Process. In April 2018, the literature was searched for studies from 2013 – 2018 in CINAHL, PubMed, and Google Scholar. Few studies were found that specifically addressed improvement of adherence to dysphagia screening or stroke guidelines among nurses in the emergency department. Terms utilized to garner results included improvement/compliance in the

usage of any clinical practice guidelines, adherence, clinical practice guideline, stroke guidelines. Additional inclusion criteria were any clinical practice guideline and any healthcare provider. Additionally, works were considered if they addressed barriers or facilitators to the use of CPG or a specific tactic was utilized to improve the uptake of the CPG. Articles were excluded initially if they were in the pediatric setting.

The literature pertaining to staff nurses as champions for change is minimal in recent years and; therefore, a search was conducted in both Google Scholar and CINAHL without any limiter for year. In November of 2018, using the search term 'nurse champion', all in the title, there were six in Google Scholar and thirty-six were found in CINAHL. Some works were mined from other research on adherence and were considered relevant to the 'nurse champion' concept if a bedside nurse was involved any type of clinical practice guideline, or evidence-based practice improvement project.

What is known about translation of new knowledge into practice along with adherence to clinical practice guidelines has been gathered using both qualitative and quantitative approaches. Melnyk and Fineout-Overholt (2015) differentiated qualitative from quantitative as it relates to patient-centered care. Where quantitative research seeks to answer intervention questions, qualitative research provides information about meaning and human response to a phenomenon. Indisputably, it is necessary to have knowledge and insight of the human response of guideline implementation when aiming to change adherence behaviors in the context of translating knowledge into practice.

Barriers and facilitators of healthcare provider behavior. Researchers identified that specific factors determine whether a 'caring act' or behavior would be performed by a health care provider (HCP). The presence of specific conditions was more likely to facilitate a

caregiver's provision of a required component of a CPG (Jun, Kovner, & Stimpfel, 2016). Likewise, other circumstances were identified as barriers to HCP implementation of CPG.

One theme in the literature that arose was that HCPs judge who will receive the CPG. For instance, there was a statistically significant association between asthma severity and physician guideline adherence (Aftab, Khan, Sulaiman, Khan, and Ali , 2014). Similarly, in a pilot study to determine what barriers might hinder the use of a new dialysis intervention, Presseau et al. (2017) discovered when a patient was 'not doing well' HCP were likely to implement guidelines to decrease dialysis temperature. Conversely, when patients were 'tolerating dialysis without any problems, the same evidence-based guideline was not implemented. These findings indicated a direct relationship between acuity levels and the provision of evidence-based care, such that patients who are more ill are selected to receive the evidence-based care. If caregivers formulate an opinion about the caring action/behavior they will provide to a patient based on the patient's level of acuity, the notion could be translated to the ED nurses' omission of dysphagia screening for patients who have 'gray-zone' symptoms, compared to those with more classic stroke symptoms.

Jun et al. (2016) conducted an integrative review of both qualitative and quantitative studies and discovered that both internal and external factors exist that contribute to adherence and non-adherence to CPG. Internal factors are related to the caregiver, while external factors are related to the organization. One of the internal factors that serves as facilitator of CPG usage included caregiver knowledge. Specifically, knowledge that was provided beyond the initial CPG implementation phase was found to be a facilitator. Attitudes and perception of nurses and cultures on a unit have an impact of CPG implementation. For instance, a greater appreciation

for innovation and evidence, along with a commitment to improving care, are associated with greater CPG usage (Jun et al., 2016).

Aftab et al. (2014) unveiled an interwoven relationship between these factors: knowledge boosts confidence; confidence leads to improved attitudes and perceptions; and positive attitudes and perceptions positively impact guideline adherence. That health care provider attitudes and beliefs serve as either a barrier to, or facilitator of adherence to CPGs, is not surprising. However, if a relationship exists between knowledge and perception, then opportunities exist to manipulate attitudes and adherence through educational interventions and influential change-agents on the unit.

Support and motivation by someone who is designated as a champion, or by someone who unofficially takes on this role, is another facilitator of CPG adherence (Munce et al., 2017). Conversely, the lack of a championing staff member decreased the sustainability of the intervention as well as the continuity of the project (Munce et al., 2017). Jun et al. (2016) also illuminated the importance of supportive environment among the peer group, combined with informal leadership, as one of the most important facilitators of CPG uptake by nurses. In fact, nurses who deemed the CPG as useful, were more likely to encourage others to use it as well. Some nurses also found it helpful to have a resource available to answer questions regarding the CPG when questions would arise (Lam et al., 2016)

Ebben, Vloet, Schalk, Mintjes-de Groot, and van Achterberg (2014), offer more reinforcement to the concept that knowledge boosts confidence, beliefs, and perceptions, thereby facilitating increased CPG adherence. This research group from the Netherlands found that ambulance nurses exhibited greater adherence to a national ambulance protocol when the nurses agreed with the CPG and when the use of the guideline became a part of their own

routine. Additionally, HCP agreement and familiarity with a CPG intervention, was also discovered as a factor that positively impacted adherence to the CPG (Munce et al., 2017). Disagreement with a CPG was also found to be a barrier by another research team. Gaining specific insight from ED nurses using a qualitative descriptive design, Lam et al. (2016) noted that nurses perceive that administration implements CPGs without first considering its impact on workflow. Furthermore, their dissatisfaction with the absence of administration to re-evaluate the impact of the CPG on workflow, served as a barrier to future use of the CPG.

The negative culture among staff, concerns about the CPG, and leadership are examples of external factors that impact adherence with CPG according to Jun et al. (2016) classification. Some have tried to implement interventions to overcome both internal and internal barriers and facilitators of CPG's.

Interventions to improve professional behavior and guideline adherence. Working in a primary stroke center to improve the use of standardized stroke order sets, Case (2017) tested the notion that education alone can improve the uptake and usage of evidence-based nursing care. After a brief educational intervention was provided, nurses from the emergency department reported a significantly higher likelihood of performing a nursing intervention knowing the intervention was evidence-based, compared to if they were unsure the order was evidence-based ($n=88$, $P < .001$). Likewise, a foundation-funded, dedicated and structured education that was provided to hospitals across the United States was found to improve adherence to traumatic brain injury guidelines (Saherwala et al., 2018).

Although it has been eight years since publication, the work of Considine and McGillivray bears mentioning since it is one of the only studies working with stroke CPG adherence in an emergency department. Using local opinion leaders, combined with an

educational intervention highlighting the evidence behind the new guideline and the rationale for changes in nursing care (McGillivray & Considine, 2009), swallow assessment prior to oral intake increased by 41.3% ($p = 0.003$) (Considine & McGillivray, 2010). The discussions that resulted from the sessions helped to facilitate nursing's understanding of the rationale made in the guideline. Additionally, the importance of nursing's influence on outcomes for patients with acute stroke was stressed during the educational sessions.

Although education alone has been demonstrated to be a factor in improving adherence, Johnson and May (2015) concluded that multifactorial strategies such as monitoring and feedback, along with diverse educational strategies, work best to improve guideline adherence Another example of this was the work by Reynolds, Murray, McLennon, Ebright, and Bakas (2016a). The researchers used a bundle of strategies to improve both nurses' knowledge and self-perceived anticipatory adherence levels of multiple components of a spinal cord injury CPG. Nurses reported improved knowledge and self-perceived anticipatory adherence levels in three of the four areas and overall scores. Although, the results were not statistically significant, they were found to be sustainable over time.

Community acquired pneumonia (CAP) guidelines adherence improved when a bundled approach, including focused education and follow-up, was used with emergency department staff and physicians (Almatar et al., 2016). Adherence rate after the general hospital education was 22%, but after the emergency department targeted intervention, CAP guideline adherence rates ranged from 44.9% to 77.3%, which was statistically significant ($p < .001$). This method for improving overall adherence rates is relevant to dysphagia screening at the study site because this measure is just one component to the overall data captured in the stroke guidelines.

In a randomized controlled trial, Funk et al. (2018) also used a bundled interventional approach, combining education and senior staff nurses on the units who served as unit champions. After ST-segment monitoring intervention, both nurse knowledge and patient outcomes improved, and in-hospital myocardial infarctions declined. These results were sustained at 15-months after the intervention. Providing ED focused interventions, such as these, will likely improve organization-wide CPG adherence rates.

Nurse Champions. The role of a nurse champion is often filled by someone who is socially and clinically respected by the peer group, and is typically a person with courage, willingness, and a desire to make changes that will benefit patient outcomes (Creehan, 2015). With the role of mentoring and motivating nurses for change, nurse champion positions have been held by staff nurses (Creehan; Burnett, Lewis, Joy & Jarrett, 2012) and advanced practice nurses, (Burket, Hippensteel, Penrod, & Resnick, 2013). The advanced practice nurses that served as champions used positive reinforcement and informal and individual meetings with staff to assist staff with integrating the EBP into their workflow (Burket, et al., 2013). The outcome of champion interventions strengthened nurse beliefs about EBP, and increased EBP care provision.

Creehan (2015) described champions as having a sense of empowerment to facilitate change among their peers. After detailed training, bedside nurses with expert level knowledge, or who had been identified as a potential leader, took on the role of champion. Nurses were trained in a ‘boot camp’ and signed a commitment letter that explained their role and responsibilities. In addition to role-modeling behaviors for patients and nurses, responsibilities included meeting attendance, data collection, and analyzing and reporting the data. As a result of these efforts, the unit saw a decline in unwanted pressure ulcers and a positive change in the unit culture regarding this important guideline.

The nurse champion role has also been used to conduct research on nursing units and to recruit other nurses to conduct research as well (Burnett et al., 2012). For these champions, much of the time was spent re-engaging nurses in data collection and providing staff with reminders of when and how to use the data collection tools. This created a negative experience for the champions.

Regardless of the level of nurse in the role, nurse champions discussed the importance of having support from others in leadership roles in order to be successful. Support ranged from open availability for questions, to 'endorsement' of time away from patient care to conduct monitoring and data collection tasks (Creehan, 2015; Burnett et al., 2012).

Implications for practice. Because of the direct relationship to morbidity and mortality, early identification of stroke is imperative to ensure time-specific treatments are initiated (Barnard, 2011; Henke et al., 2017). However, the emergence of a gap between EBP guidelines and practice has been documented (Lam et al., 2016; Warren et al., 2016). As frontline caregivers, most often encountering the patient before a physician, ED nurses are instrumental in providing timely and appropriate care (Barnard, 2011). Therefore, interventions that address both barriers and facilitators to EBP uptake and the use of new approaches need to be considered when operationalizing a process improvement plan.

The evidence indicates that nurses respond positively to educational interventions to improve adherence to CPG, and patients benefit from the increased adherence to CPGs (Case, 2017; McGillivray & Considine, 2009; Saherwala et al., 2018). However, a bundled interventional approach to improve outcomes has also been successful and has shown sustainability over time (Almatar et al., 2016; Considine & McGillivray, 2010; Funk et al., 2018; Johnson & May, 2015; Reynolds et al., 2016a; Reynolds et al., 2016b). While there is minimal

literature available, the use of a nurse champion on the unit may address the internal factors, such as motivation and attitude in a way that cannot be achieved with a top-down approach (Creehan, 2015; Burkett et al., 2013; Burnet et al., 2012; Jun et al., 2016; Lam et al., 2016; Munce et al., 2017). Having a peer as a source of expertise and support may offset some of the external barriers to CPG adherence, such as leadership responsiveness and the clinical environment (Burnet et al., 2012)

Organizational leadership should ensure that frontline staff are around the table when making decisions that directly impact patients (Barnard, 2011). Interacting directly with the healthcare consumer, frontline nurses have the eyes and ears needed to provide insight for problem-solving for goals of an organization to be met. It must be recognized that without clinicians' use of standardized practices via guideline implementation, the goal of patient specific, effective, affordable, care cannot be achieved.

Normalization Process Theory

Background of the theory. Arising from what some may view as a less prominent body of knowledge, the Normalization Process Theory (NPT) originates from implementation science, which is:

> the study of methods to promote the adoption and integration of evidence-based practices, interventions and policies into routine health care and public health settings. Implementation research plays an important role in identifying barriers to, and enablers of, effective global health programming and policymaking, and leveraging that knowledge to develop evidence-based innovations in effective delivery approaches (Fogarty International Center, 2018).

Using a theory that addresses the underpinnings of how to improve the integration

of evidence-based interventions, such as dysphagia screening for stroke patients, is an innovative method to improve outcomes. May and Finch's (2009) NPT, is based on the theory that professional behavior that is sustained, without reminder, is 'embedded' or "normalized" over the passage of time. The theorists assert that a behavior then becomes the new 'norm' in a given scenario. Relating this theory to changing health care policy and practices, professional behavior is expected to parallel the changes so that the new and improved processes become embedded into daily routines (Johnson & May, 2015).

Unique to the NPT is the idea that human behavior must be embedded practices, within a social context (May & Finch, 2009). Since human behavior is also determined by contextual factors, it is necessary to consider how human behavior is impacted by contextual factors such as the social group or culture. Thus, the theory veers away from other behavioral frameworks that rely heavily on the relationship between personal intention and action, since these traditional frameworks can only explain 25% of variance in outcomes (May & Finch, 2009). May and Finch explain that today's "complex interventions in complex settings tend to be implemented through collective action when people work together, rather than as a result of individual behavioral processes" (May & Finch, 2015, p. 2). The NPT is considered an action theory that can be utilized to explain the behaviors that occur as new technology or complex interventions are implemented (NPT, 2019)

The work that people do is called, 'material practices' (May et al., 2018). Implementing innovation is the impetus of changing material practices within an organization. It well known that implementation of change crossing multiple disciplines and departments within an organization is not simple. On the contrary, change becomes 'a complex intervention' comprised of smaller structures and processes necessary to generate outcomes that align with defined

agendas and priorities (Johnson & May, 2015). Dysphagia screening is one process of a larger evidence-based ‘complex intervention’ to improve outcomes for the stroke-patient population.

Constructs. Human actors, those people that work in organizations and are engaged in material practices, are called ‘agents’ (May & Finch, 2009). Nurses conducting the material practice of dysphagia screening, along with those leading QI practices, are the agents. When new knowledge is used to positively impact patient outcomes, it imperative that nurse agents’ material practices become normalized and embedded behaviors. If this change does not happen, variance in behavior leads to unfulfilled organizational expectations, such as undocumented dysphagia screening. The NPT provides an explanation and an understanding of “the social processes that frame the implementation of material processes” (May & Finch, 2009). Therefore, the NPT was selected to improve the material processes conducted by ED nurse agents to improve adherence to the organization’s complex interventions.

According to the NPT, key concepts including coherence, cognitive participation, collective action, and reflexive monitoring are the mechanisms through which material processes are operationalized (Figure 3) (May & Finch, 2009; NPT 2019). Users of the theory have had success with a flexible application of the concepts using a linear approach where coherence is necessary prior to cognitive participation; and a degree of cognitive participation is necessary before collective action is realized (May et al., 2018). The NPT will be tested by exploring the use of a ‘local opinion leader’, a unit-based nurse champion, to impact coherence, cognitive participation, and collective action related to bedside dysphagia adherence.

NPT Resources. It is important to mention that the United Kingdom-based social science organization, Economic and Social Research Council, provided grant funding to disseminate information about the NPT and how it can be utilized to close the gap in innovation uptake

(NPT, 2019). This open resource website provides several assistive tools. Along with an educational PowerPoint that can be downloaded, there is survey instrument to assess implementation processes from the perspective of staff. In addition, there is an interactive toolkit to help organizations consider various implementation/evaluation problems involved in implementation work.

Figure 3. Normalization Process Theory Constructs

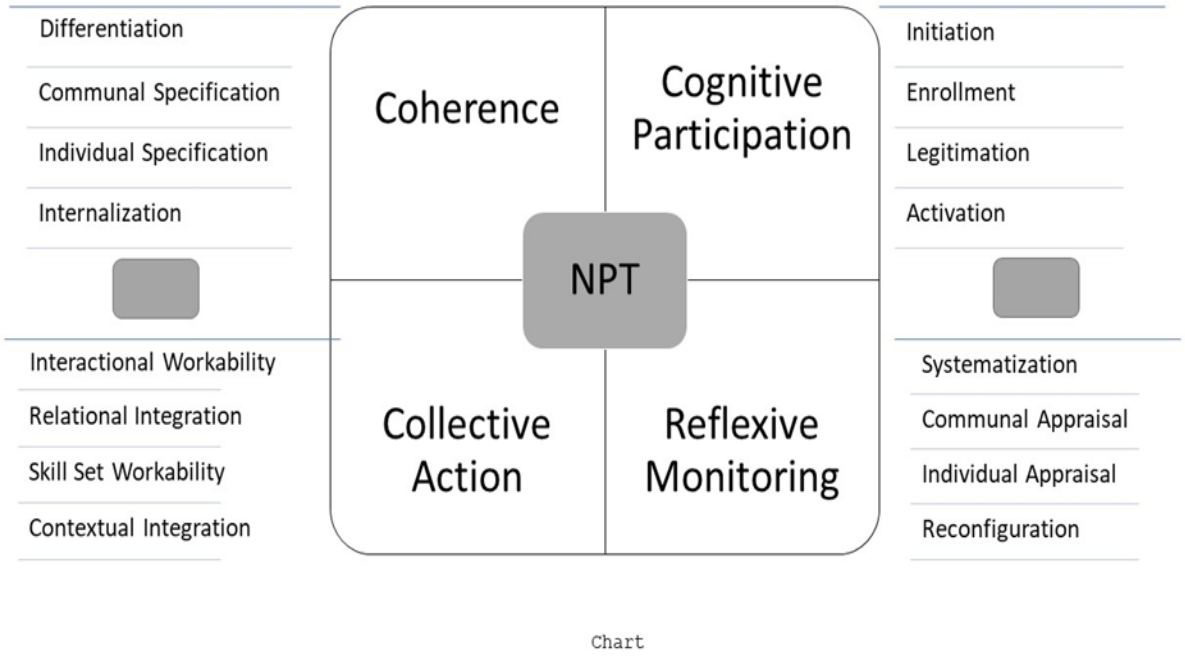

Figure 3. This figure explains the four constructs and each of their four components.

Chapter II: Methodology

Needs Assessment

Many existing strengths and future opportunities were found during the SWOT analysis (see Appendix C). For example, high quality stroke care is valued by the organization. After receiving a new level of certification by TJC in the past year, the facility has an existing quality structure in place to support ongoing advanced treatments for stroke. Additionally, the organization has also received the Gold Plus Quality Achievement Award for its sustained dedication to achieving high quality stroke related outcomes (AHA, n.d.)

Having the organizational infrastructure to support frontline care providers is also a key component to achieving high quality outcomes. According to Wilson et al., (2015) nurses

working in Magnet® organizations reported fewer barriers to EBP. As an American Nurses Credentialing Center (ANCC) Magnet® awarded hospital, the study site is supportive of transformational change and engaging nurses in EBP and places the achievement of reliable and sustainable results among its top priorities.

There were positive factors that contributed to the success of this project: the small staff and experienced nurses; the DNP student researcher's willingness to participate as the champion; and the ED manager and speech therapy department's support.

Designation of a stroke champion assists with providing education and meeting competency expectations. Moreover, this intervention serves to overcome the weakness associated with infrequent contact with the organization-wide ED educator. Furthermore, by embedding a process for provide QI audits, the value of the stroke champion increased as quality standards began to rise.

Project Design

This QI project was intended to improve current practice to impact the dependent variable: nursing's adherence to dysphagia screening. Definition and employment of a unit-based nurse champion was utilized as the independent variable.

Setting

The study was piloted in one of three FSEDs affiliated with a large, urban, teaching, 'thrombectomy capable' stroke certified center in the Midwest. The main hospital's average daily census is 400-450 per day; while the hospital ED and FSED have an average daily census of 160-170, and 50 per day, respectively. The FSED operates as an outpatient service only, therefore, if a patient needs a higher level of care for admission or surgical intervention, they are transferred either to the main hospital, or a nearby sister hospital. The FSED is managed by a

master's prepared nurse who was once a staff nurse on the unit. There is one educational leader for all four emergency departments, and much of the education is provided via electronic communication, read and sign handouts, and HealthStream educational resources.

Typical staffing during peak hours in the FSED includes five nurses, one nursing technician, a physician, a medical resident, and a physician assistant. Other staff included in the function of the FSED include a registration clerk, a security guard, and a laboratory and radiology department technician. Nursing is responsible to provide gaps in service that pertain to orthopedic interventions and respiratory treatments. Night shift staffing drops to three nurses, one physician, and one nursing technician.

Population

The behaviors of a population of approximately 25 registered nurses working in the FSED were studied by auditing their documentation in patient EHRs. Patient EHRs were included for review if they were between the ages 18 and 89, with the complaint of classic stroke (facial droop, extremity weakness, changes in speech) or atypical/gray-zone symptoms (frequent falls, weakness, blurred vision, syncope, or dizziness. Demographic data (patient age, gender and presenting symptom), ED system data (date of arrival, and disposition), and risk management data (documentation of two-step dysphagia screening) were also collected.

Tools

An educational unit-based champion toolbox (see Appendix D) comprised of teaching/learning objectives, a PowerPoint presentation, and wall-poster were used by the stroke champion. Additionally, the Dysphagia Screening Tracking Sheet (see Appendix E) was devised to capture EHR data. To outline the role for future stroke champions a champion commitment

letter (see Appendix F) was adopted and revised with permission of Creehan (2015) (see Appendix G),

Project Plan

The dependent variable, defined as the adherence to dysphagia screening, was measured by the presence of dysphagia screening documentation in patient EHRs. Creation of an educational tool and document explaining the role of the champion were among the measurable outcomes achieved during the project. The educational resources and stroke champion description were the result of interprofessional collaboration between the speech and language pathologist, ED satellite manager, and the stroke quality coordinator. The preparation, implementation, monitoring, and evaluation of the project is outlined the GANTT chart in Appendix H.

Data Analysis

Retrospective data was collected from patient EHRs twice for comparison, 30 days prior to (pre-intervention) and 30 days after (post-intervention) the educational intervention. Data was gathered manually by the DNP student, acting in the champion role. The champion used a specific process to gather data from the patient EHRs (see Figure 4).

The data collection process included a succession of steps that included: accessing the EHR; running the ED census report for the chosen calendar day; manually reviewing the triage chief complaint column of the list; and selecting applicable charts from triage chief complaint column. Once a patient with specified symptoms that were considered an opportunity to perform a dysphagia screening was discovered the chart was entered as a denominator. Next, the champion opened the EHR for manual review of the nursing documentation. The documentation

was assessed for the presence of accurate and complete dysphagia screening documentation. The chart was considered “YES” if all elements were present and entered as the numerator.

Figure 4. Data collection process.

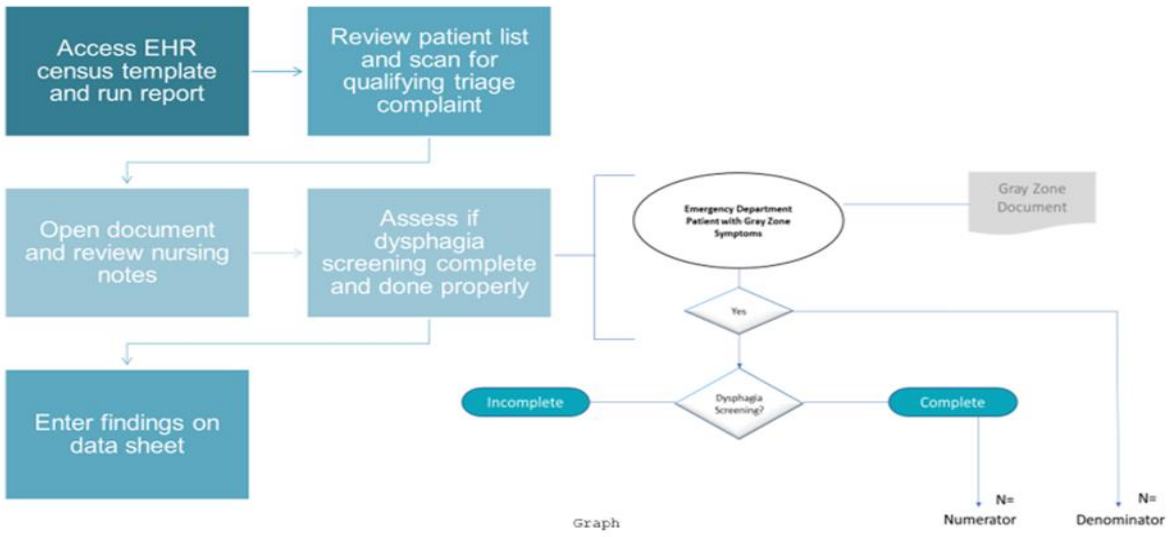

Figure 4. Explaining the process of auditing an EHR for the presence and accuracy of dysphagia screening in the nursing documentation.

Sustainability.

A framework for sustainability is in place through the clinical ladder program if the FSED manager finds this project will meet his/her objectives for QI. Stroke champions will hold the position role for one year minimum and will be asked to sign the commitment letter of intent (see Appendix F). The future need for the stroke champion will be reevaluated by the manager and continuation of the program will be based on normalization of behavior as evidenced by the ongoing monthly data collection.

Institutional Review Board.

An application for approval of this QI project was submitted to the Institutional Review Board (IRB) at the study site. Since it was deemed QI, it did not require IRB oversight (see

Appendix I). As the study site's IRB reviewed the project, The Bradley University Committee on the Use of Human Subjects in Research (CUHSR) waived its review.

The study method was compliant with the Privacy Rule of the Health Insurance Portability and Accountability Act (HIPAA) as only aggregate data was obtained from the EHRs and no personal identifying information about the patients or staff was collected. Since nursing education is mandatory for stroke certified organizations, all ED nurses in the pilot facility received this education as a component of the mandatory stroke-specific education and informed consent was not be required.

Chapter III. Organizational Assessment & Cost Effectiveness Analysis

Organizational Assessment

Readiness for Change. Within the previous year of the planned project, the FSED and the affiliate hospital had merged with a larger regional hospital organization so the unit was accustomed to change. Due to the fact that ED initiates the bedside dysphagia screening and this data is included in organization-wide quality data that is eventually entered into national databases, the stroke quality coordinator initiated the call for manager assistance to improve dysphagia screening adherence.

Anticipated Barriers and Facilitators to implementation. The organizational changes related to the hospital merger caused the nurses to experience rapid and frequent changes. The DNP student considered that the addition of another change or responsibility may create a negative response. Also, since the intervention was provided by a peer, there was a chance staff may harbor resentment or jealousy toward the staff nurse acting as the stroke.

Attempting to avoid any negative perceptions of the staff nurse acting as the champion, when appropriate opportunities were available, the staff nurses were included in decision

making. From the initiation of the project, the DNP student researcher had full support of the nurse manager who was instrumental in helping navigate the organizational structure.

Risks or Unintended Consequences. As previously mentioned, there was risk that the ED staff nurses would resent the staff nurse that was conducting research and acting as the nurse champion, however, this risk was successfully mitigated.

Role of Interprofessional Collaboration. Very early in the investigation of this project, the speech language pathologist was sought for her expertise. She voiced a shared concern for the outcome for stroke patients in the ED and was very willing to collaborate. Sharing her knowledge and expertise, the speech pathologist produced educational materials for the stroke champion to use to become more knowledgeable. The time spent during meetings with the speech pathologist helped the DNP student researcher have a wider appreciation of the role of speech pathology in general.

The stroke quality coordinator was instrumental in the success of the project. The DNP student researcher spent time learning about the process of chart auditing and what metrics were abstracted for entry into the national stroke databases. This high-level overview of stroke quality outcomes provided a framework for understanding the role of the ED nurse in relation to the organization-wide stroke quality metrics.

Cost Factors.

The ED manager initially suggested the idea to this staff nurse/ DNP student as a possibility to improve dysphagia screening outcomes and approved 4-hours per week for the champion to continue ongoing QI EHR audits. The total cost for maintenance of the project was the cost of the nurse's salary for an extra 208 hours (4 hours weekly X 52 weeks), or approximately $6,000 to $7,000 (see Appendix J). However, initiating the pilot study incurred

minimal, if any, additional cost since the DNP student served as the nurse champion and a large portion of the staff education was provided during worktime. The nursing salary to implement and sustain this project during the course of a year is minimal compared to the cost of one case of healthcare acquired pneumonia.

In a recent study, it was determined that 4 to 15.9 additional hospital days are required when one patient is diagnosed with (non-ventilator) healthcare acquired pneumonia (Giuliano, Baker, & Quinn, 2018). With acute care stays, ranging from $28,000 - $40,000 per day (Giuliano et al.,), the cost of additional days in the hospital due to a preventable complication creates a heavy burden. Therefore, if the hospital chooses to employ the unit-based stroke champion, a significant cost savings could be realized.

Chapter IV: Results

Analysis of Implementation Process

Using the reports feature of the EHR, an ED census report specific to the FSED, data was collected 30 days before and after the educational intervention. Over a 10-day period, the DNP student, acting as the unit-based stroke champion, held individual meetings with each of the part-time and full-time nurses (n=22). Meetings lasted approximately 10-15 minutes and were held either during a worked shift, or before or after a scheduled shift.

The champion was a night shift staff nurse. The champion provided education to most night shift staff during down-time on a worked shift; but, in order to minimize return trips to the organization during time off, the work schedule was studied so that a majority of nurses could be encountered at one time. A popular time to encounter both day shift (7a -7p) and night shift (7p - 7a) staff was during the half hour prior to the shift. Encounters with mid-shift staff (9a - 9p/11a -

11p) were best accomplished at 10:30 am. The 10:30 am time frame was also used to encounter day shift staff not reached at the change of shift.

The impact that stroke has on swallowing was discussed during each session. Additionally, the champion reviewed the complications associated with dysphagia, the evidence behind the dysphagia screening CPG, the two-step swallowing screen process and how to properly document the dysphagia screening results in the new EHR. Nurses were encouraged to provide their ideas about what they learned, reflect on their current knowledge, and ask questions.

Impacting the implementation phase and resulting in subsequent deviations from the project's original proposal were both structural and leadership changes on the unit. The FSED manager that aided and supported this innovation since the project's inception, accepted a new position and was not present during the time of the intervention. Subsequently, formulation of the stroke champion role, did not include collaborative input from one of the important stakeholders. This may impact the adoption of the pilot project for future use. At the time of the project's completion, a replacement manager had not yet been identified. Findings were reported to the interim manager with plans to discuss this pilot project and the findings once a new manager is seated.

Post-intervention data collection began immediately after the staff education was complete. Data was collected from the for 30 days and EHRs were evaluated for dysphagia screening adherence. The triage chief complaint was used to identify a patient EHR that would be included in the study. All symptoms except for 'frequent falls' were among the triaged patient complaints. Therefore, there was no data collected for this category.

Analysis of Project Outcome Data

Table 1.

Screening for Dysphagia - Pre-intervention

SYMPTOM		COMPLETED SCREENS (Numerator)	OPPORTUNITIES TO SCREEN (Denominator)	% ADHERENCE
Typical Stroke Symptoms	Change in Speech	0	0	
	Extremity Weakness	2	2	
	Facial Droop	0	0	
	Total	2	2	100%
Atypical Stroke Symptoms	Dizziness	6	30	
	Generalized Weakness	1	10	
	Syncope	0	7	
	Blurred Vision	0	0	
	Frequent Falls	0	1	
	Total	7	48	15%
	TOTAL All Symptoms	9	50	18%

There were 50 opportunities for nurses to conduct dysphagia screenings in the pre-intervention phase and 44 opportunities for screening in the post-intervention phase (see Tables 1 & 2). Of the 50 patients meeting dysphagia screening criteria in the pre-intervention period, nine (18%) dysphagia screenings were completed. Of the 44 patients meeting dysphagia screening criteria in the post-intervention period, 18 (44%) dysphagia screenings were completed (see Figure 5). This increase in dysphagia screening adherence for patients presenting with all types of stroke symptoms was a significant change, X^2 (1, N = 94) = 6, p = .01.

Table 2.

Screening for Dysphagia - Post-intervention

SYMPTOM		COMPLETED SCREENS (Numerator)	OPPORTUNITIES TO SCREEN (Denominator)	% ADHERENCE
Typical Stroke Symptoms	Change in Speech	2	2	
	Extremity Weakness	2	2	
	Facial Droop	0	0	
	Total	4	4	100%
Atypical Stroke Symptoms	Dizziness	5	20	
	Generalized Weakness	7	12	
	Syncope	1	5	
	Blurred Vision	1	3	
	Frequent Falls	0	0	
	Total	14	40	35%
	TOTAL All Symptoms	18	44	41%

The majority of patients with qualifying stroke symptoms presented with atypical stroke symptoms as shown figure 4. Nurses conducted dysphagia screenings 100% of the time for all patients presenting with a typical stroke presentation both pre- and post-intervention. Conversely, for patients presenting with atypical stroke symptoms, nurses conducted dysphagia screens 15% of the time during the pre-intervention phase and 35% of the time in the post-intervention phase (See Figure 5). This increase in dysphagia screening adherence for patients presenting with atypical stroke symptoms demonstrated a significant difference, X^2 (1, N = 88) = 5, p = .03.

Figure 4. Pie chart of total EHR Audited During the Study

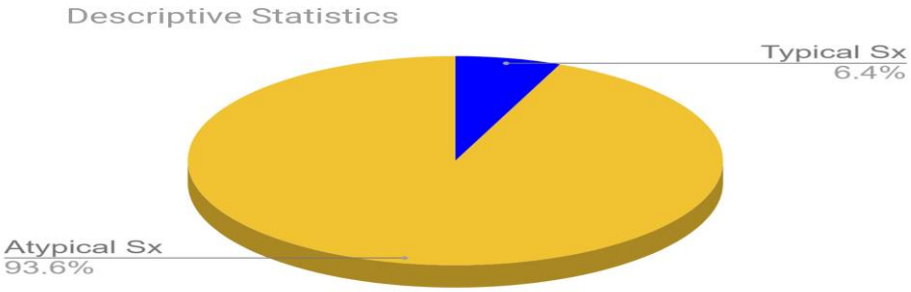

Figure 4. Percentage of EHR records audited and the breakdown according to symptom.

Figure 5. Dysphagia screening adherence.

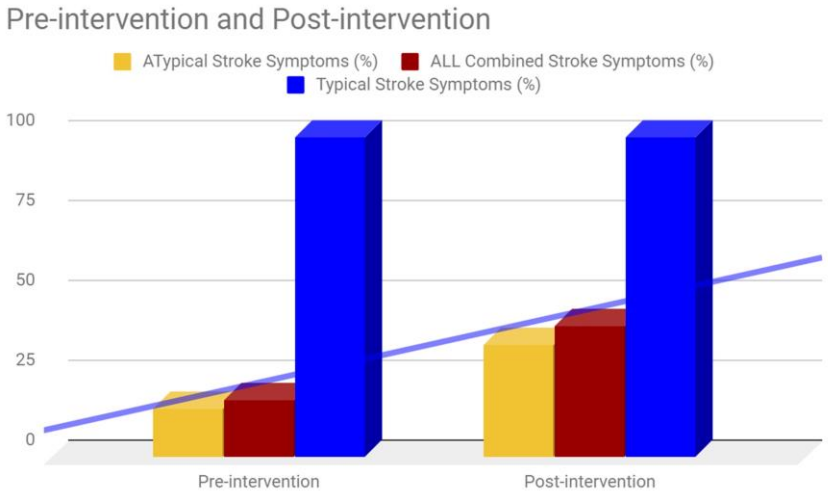

Figure 5. Comparison of dysphagia screening adherence before and after intervention.

Throughout the educational intervention, the DNP student researcher was prepared to clarify educational material and documentation processes. During individual meetings with staff, nurses commented about their experience with the dysphagia screening process, the elimination of the gray-zone reminder, and the new education. Anecdotal notes were utilized to capture these conversations (see Appendix L).

Regarding the dysphagia screening process, two nurses mentioned they were still using applesauce to assess dysphagia even though this process was eliminated after the two-ounce water test was adopted more than a year prior. One nurse who was hired in the past year mentioned she had never been trained when or how to complete a dysphagia screening.

After changing to the new EHR system and eliminating the gray-zone checklist reminder, one experience nurse confided, “since going away from the gray-zone checklist, my patients have not been getting dysphagia screenings”. Several nurses admitted to forgetting about dysphagia screening until the patient was ready to leave the department. In many of these instances, their patients had already received their aspirin PO. Along these lines, two nurses remarked that they were unaware that rectal aspirin was indicated if a patient failed a dysphagia screening. More than one nurse did not know aspirin could be given rectally in any instance, or that it was available in the medication dispensing unit. Overall, many nurses lacked knowledge pertaining to dysphagia prevalence among stroke patients and mentioned they were happy to receive the new education

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Chapter V: Discussion

Summary of Major Findings

Education provided by a newly appointed unit-based stroke champion positively impacted nurse behavior. New knowledge beyond the original CPG implementation was previously recognized as a facilitator of CPG use (Case, 2017; Jun et al., 2016; Saherwala et al., 2018). In the current project, the increase in dysphagia screening documentation observed among patients with atypical stroke symptoms, may be the result of nurse attainment of new knowledge, beyond the initial CPG implementation.

Noted in the researcher's anecdotal notes were staff admissions of the lack their knowledge of atypical stroke symptoms, and the impact that dysphagia has on stroke patients. Increased nurse awareness of the relationship between increased disease severity and use of CPG is known (Aftab et al..2014; Jun et al., 2016; Presseau et al., 2017). The climb in dysphagia screening adherence among the atypical symptom cohort may be the result of nurse recognition of the urgency of posterior strokes, even though the presentation is not urgent in appearance (Considine & McGillivray, 2010).

The education alone may not be the key factor in the rising rates of dysphagia adherence. Instead, bundling the education together with the stroke nurse champion, may have been a facilitator of CPG adherence (Johnson & May, 2015). Bundling two interventions together has proven to be more successful in translation of knowledge into practice than single strategies (Almatar et al., 2016; Considine & McGillivray, 2010; Funk et al., 2018; Johnson & May, 2015; Reynolds et al., 2016a; Reynolds et al., 2016b). Additionally, bundled interventions have been shown to improve a unit's culture pertaining to a CPG's usage (Jun et al., 2014). Funk et al. (2018) employed a bundled approach to sustain the change of unit culture surrounding

electrocardiogram (ECG) monitoring. These researchers realized an immediate change in ECG monitoring practices that was sustained over a 15-month period. Also, recognizing the superiority of a multiple strategy intervention, Reynolds et al. (2016b) observed both increased nurse knowledge and EHR documentation in their study. After implementing a bundled intervention for pressure ulcers and noting a significant change in both unit culture and pressure ulcer prevalence, one organization disseminated the format hospital-wide for use with other nurse-sensitive indicators (falls prevention, pain management, diabetes education, stroke awareness) (Creehan, 2015).

Dialog that occurred during individual educational sessions provided opportunities for the champion to note barriers that nurses were having regarding the CPG. Considine and McGillivray (2010) explained how robust conversations that emerged during educational tutorials provoked debate and eventual understanding the guideline recommendations. Furthermore, this opportunity was used to explain the nurses' role in creating optimal stroke patient outcomes. During conversations with the staff, the DNP student researcher noted multiple factors that were barriers and facilitators to dysphagia screening adherence. These were captured using anecdotal notes (see Appendix L).

Lack of knowledge was one of the emerging themes and was a finding echoed by Reynolds et al. (2016b). Many nurses voiced surprise about the prevalence and impact of dysphagia among patients with gray-zone symptoms. Also, they many were not aware that the symptoms listed on the gray-zone paper were possibly symptoms of a stroke. More specifically, most were not aware of the association between the well-known typical stroke symptoms with anterior stroke location, versus the atypical stroke symptoms associated with a posterior stroke. Many voiced that this new knowledge would help them adhere to the recommendations for

dysphagia screening for gray-zone patients since they understood the dysphagia screening rationale.

Nurses' existing insight about their lack of adherence was another interesting theme that emerged during these conversations and has not been documented in the literature. Few could recall why they stopped doing dysphagia screening for gray-zone patients but were aware that they had stopped doing them. Some nurses recalled being more compliant when the gray-zone paper process was still in place. Ohers explained they only conducted dysphagia screenings for patients with obvious stroke symptoms. This is a confirmed finding as 100% of patients with typical stroke symptoms received dysphagia screening in both pre and postintervention data collection (see Tables 3 & 4).

In the dual role of staff nurse and DNP student, the researcher recognized that many nurses perceived change, additional education and responsibilities negatively, even when there was obvious 'down-time' from patient care. Jun et al., (2016) identified that poor attitude, lack of motivation and resistance to change are barriers to CPG adherence. Recognizing the importance of creating a relational experience that would set the tone for positive future interactions with a designated stroke champion, and one that would differ from traditional hierarchical education, the DNP student researcher developed a concern for how to create a valued experience.

During the planning stage for this project, the DNP student researcher sought the advice of a respected nurse colleague working at the FSED. C.B. pointed out that burdened nurses do not want to come back to work for education. Additionally, she suggested that the stroke champion should offer a 'candy incentive' (ie. chocolate) to create a 'hook'. C.B. suggested that the candy incentive would serve to soften the 'blow' of what was ordinarily considered a negative experience and an interruption in usual workflow.

An interesting phenomenon was observed when this technique was employed. Several choices of chocolate were offered on the unit, where the education was held with each staff member. The overall mood on the unit seemed lighter and one nurse said, “we really needed this”. During the interactions with staff, dialog was open and there was both laughter and learning. When staff saw that others were eating candy and laughing in a small group, others gathered around to see what was happening. This positive scene made the introduction of the educational meetings progressively easier for the champion. Additionally, participants within proximity of the champion waited nearby or sought out the champion to receive the candy and education.

Change in care delivery. The NPT provides a framework so that users of the complex interventions can build an understanding about how people: make sense of the work of implementing and integrating a complex intervention (coherence); how they engage with it (cognitive participation); enact it (collective action); and appraise its effects (reflexive monitoring) (May et al., 2015). The DNP student researcher appraised the themes that emerged during conversations and evaluated each them using the coherence construct (see Appendix M).

The three main components of the NPT: agent, object, and context are employed to discuss a champion’s impact on normalization of nursing adherence behaviors (May et al., 2018). The union between the dysphagia screening complexity and the nature of the ED environment forms the context surrounding the work of ED nurses. The object being manipulated is the dysphagia screening CPG; the agents are the nurses that interacting with the object.

A CPG such as the dysphagia screening would be considered a complex intervention and is necessary to improve patient outcomes. However, CPGs will only benefit patients to the extent to which they are utilized (Murray et al., 2010). Murray et al., (2010) explicated how low

coherence leads to low cognitive participation and subsequently low collective action. The presence of these three constructs build successively on one another from coherence. Therefore, if coherence is lacking, it would reason that normalization of behavior will be undermined.

Having the champion among the group changes the context, allowing for several things to take place. First, additional education about dysphagia and the dysphagia screening process provides nurses with the opportunity to improve their understanding of how to ‘differentiate’ who needs the screening. Next, a ‘shared understanding’ of the aims, objectives, and expected benefits of the object is fostered by the champion, leading to, ‘individual specification’ (see Appendix M)

Subsequently, the opportunity for agents to gain a better understanding of the tasks and responsibilities associated with the set of practices during individual specification yields an improved understanding of the value, benefit, and importance of a set of practices. This is called 'internalization’. Once internalization is attained, coherence is achieved, and the agents are on the path to normalized, embedded behaviors.

In summary, the work and presence of the unit champion elicits internalization. Internalization of behaviors surrounding QI among an entire staff leads to a collective sense of professional pride and ownership, normalizing not only the dysphagia screening behavior but behaviors associated with being active partners in the quality care of patients. Ultimately, unit culture is evolving and changing the way care is delivered.

Limitations and Deviations from Project Plan

One limitation was the inability to determine if this intervention is sustainable over time, since outcomes were only monitored for one month. Additionally, there was a risk for a

Hawthorn effect since staff nurses may have wanted to help the DNP student researcher achieve a positive outcome for the project.

Both structural and leadership changes on the unit impacted the implementation phase, resulting in subsequent deviations from the project's initial plan. The nurse champion's role was written independent of nurse manager collaboration after the FSED manager accepted a new position elsewhere in the organization. In place of this collaborative venture, champion responsibilities and expectations were outlined in a commitment letter originally devised by Creehan (2015) (see Appendices F & G). An additional limitation was the inability to reach four staff members who work infrequently/on an as needed basis.

Implications for Practice Change.

As leaders in healthcare face problems of implementing new ways of thinking, acting, and organizing healthcare (process problems), as well as integrating new systems of practice into organizational settings (structural problems) (May et al., 2018), consideration must be given to the impact of driving change from those closest to the patient – the frontline nursing staff. Their unique vantage point of healthcare combined with structural and cultural inroads with other frontline nursing staff may be the missing link to achieving quality healthcare 100% of the time.

Noting the existing 100% adherence to dysphagia screening adherence for patients with typical stroke symptoms, it could be implied that nurses are well educated on typical stroke presentation, but educational opportunities exist for future use of this protocol. As a key to diagnosis, treatment, and, referral, stroke recognition competency, is imperative for optimal outcomes and prevention of complications (Considine & McGillivray, 2010). Efforts to ensure

stroke CPG adherence in the ED setting should include assessment of nursing knowledge and competency.

Sustainability.

Since dysphagia screening adherence only reached 35% using the bundled intervention, many patients presenting with atypical stroke symptoms are still not receiving evidence-based care. Continued improvement in adherence rates might be achieved by building a component of reflexive monitoring into the protocol. This construct of the NPT includes the appraisal of work that has been completed using four components: systematization, communal appraisal, individual appraisal, and reconfiguration (May et al., 2015). If the bundled education-champion intervention is adopted by organization leadership, using the following steps to achieve reflexive monitoring: (a) collecting outcome data (systematization); (b) working in groups to determine successes and opportunities (communal appraisal); (c) considering the impact the new set of practices are having on individual behaviors (individual appraisal); and, (d) adjusting and modifying practices accordingly (reconfiguration) (May et al., 2015).

It is not until the practices associated with a CPG become sustained will improvement in healthcare be achieved. While electronic methods are used from centralized sources to convey education to improve provider practices when resources are limited, a unit-based champion has proven to overcome variability in outcomes. As the costs associated with champion implementation are minimal, this should not be a problem for sustainability. Additionally, the organization has a process in place for nurses that take on extra leadership and quality roles to be reimbursed through the clinical ladder program. Once the organizational dissemination plan has been implemented, ED satellite managers will likely utilize the unit-based champion approach.

Generalizability. Normally it is difficult to generalize QI work. However, because quality care is needed everywhere, and all nurses need education and support, it seems reasonable that this could be easily generalizable in any setting. It is important to consider is that a champion-education bundled intervention has been successfully implemented to improve many different nurse-sensitive quality indicators (Creehan, 2015).

Implications for Future Research

If this study was replicated in the future, it could be improved upon by monitoring outcomes for a longer time-frame to test for sustainability. Also, the champion concept was effective for a small and experienced staff in a satellite setting. Future work with unit-based champions should include evaluation on units with a larger and less experienced staff to determine if similar outcomes are achievable.

An experimental design should be utilized to compare outcomes between like nursing units to gain better support for the intervention. It might also be useful to study a design that utilizes more than one champion for multiple cohorts of staff on a larger nursing unit to determine if the effect size is lost when nurse to champion ratio changes.

Unit-based champions could collaborate with many different disciplines to improve patient care, even if there are no associated CPG. For instance, in the FSED setting, nurses collaborate with ED physicians to initiate respiratory equipment (ie. the ventilator). Since ventilator usage is not common in the FSED setting, this task can cause nurses to feel stressed and uncomfortable with trouble-shooting alarms. It would be appropriate to collaborate with the respiratory department and ED physicians to set up a unit-based champion to support nurses for this phenomenon.

Nursing impact

The results of this study provide additional support for the use of this novel approach in answering the call for nurses to lead in healthcare (Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine, 2011).

Implications for Health Policy Change

For ED dysphagia screening to be effective, it must be implemented correctly and consistently which requires both training and ongoing monitoring (Schrock, Lou, Ball & Van Etten, 2018). Traditional top-down nurse education and training may not result in normalization of nurse behaviors necessary to support successful use of CPG.

Moreover, the literature suggested the use of local, unit-based nurse champions to close the gap between evidence-based practice guidelines and actual clinical practice. (Almater et al., 2016; Burnett et al., 2012; Burket et al., 2013; Considine & McGillivray, 2010; Creehan, 2015; Funk et al., 2018; Jun et al., 2016; Johnson & May, 2015; Lam et al., McGillivray & Considine, 2009; Munce et al). The outcomes of this project indicated that human oversight and intervention is needed to normalize behaviors necessary to eliminate the variability in healthcare outcomes that negate the effect of evidence-based CPG. Those interested in improving clinical practice guideline outcomes might consider implementation of unit-based stroke champions.

Chapter VI: Conclusion

Value and Impact of the Project to Healthcare and Practice

Because dysphagia screening is a universal performance metric for stroke certified organizations, it is a component of evidence-based care for stroke patients. While the study organization's single-faceted interventions, emailing staff and adding a dysphagia screening prompt to the EHR, were not successful in eliciting the desired change, the bundled education-champion intervention transformed nurse behaviors in this study. Improving the uptake of complex interventions such as evidence-based CPG is necessary for patients to benefit from the evidence.

Deconstructing a complex intervention using the NPT provides an opportunity to discover components that are facilitators or barriers to successful embedding of practice behaviors into everyday nursing practice. The evaluative methodology of the NPT helps provide a more in depth understanding about why a unit-based champion is effective for improving nurse adherence with CPG. Unit-based champions assist with implementation of complex innovations by providing a structure to build coherence surrounding an innovation.

Knowing that a strategy works to improve an outcome is beneficial; but, generating an understanding about why a specific intervention works is even more valuable. Not only does this work help fill the gap in literature about the translation of guidelines for stroke care [in the ED], it adds to a limited body of knowledge about what bundled interventions are most effective for this translation (Reynolds et al., 2016b).

Plan for Dissemination

Results of the pilot project were verbally disseminated to the interim satellite unit manager and plans are being made to share the findings with the shared governance council of the organization, the stroke quality coordinator, and the newly appointed FSED manager. Additionally, the abstract has been accepted for poster presentation on May 15, 2019 at the *2019 Collaborative Annual Research Conference* being held in Kent, Ohio. Finally, together with her mentor, the DNP student is planning to write a manuscript for submission to the *Journal of Nursing Care Quality* or *Journal of Neuroscience Nursing.*

DNP Essentials

Essential I: Scientific Underpinnings for Practice. In today's modern healthcare atmosphere, that includes the diffusion of knowledge into evidence-based practice, the use of NPT, a theory from implementation science, was aligned to accomplish the objectives outlined in this essential and meet the needs of this project.

Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking. Ensuring patient safety requires that someone is responsible to take care of caregivers, so they are highly educated, competent, and immersed in a culture of quality. Creating a point of care nurse role, poised to drive quality outcomes through education and peer encouragement, shifts leadership from traditional hierarchical authority to peer-based guidance that will result in a dynamic shift in the unit's professional culture.

Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice. An existing a body of knowledge explains the barriers and facilitators to innovations in healthcare. What's more, work has been completed to understand nurse's beliefs and attitudes about the implementation of innovation. Using the NPT framework to understand the uptake of innovation, this novel work begins to illuminate how nurses make sense of innovation and the

processes they use to normalize behaviors within the various contexts that surround their work. Beginning to analyze the NPT constructs individually, other researchers may expand this work and continue bridging the gap between implementation and uptake of innovation.

Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care. Creating a new daily census report for the ED, the DNP student researcher utilized the EHR system to obtain information to determine if the care they received was aligned with CPG's outlined for a population of stroke patients.

Essential V: Health Care Policy for Advocacy in Health Care. The knowledge generated in this pilot study provides evidence to influence the way future education and clinical practice guidelines are implemented.

Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes. Implementation of this project was possible thanks to the transfer of knowledge and expertise that took place during the meetings with the organization's speech pathologist and stroke quality coordinator. The influence of knowledge and insight from experts in other fields expanded this DNP student researcher's nursing perspective beyond its current frame of reference, enriching the value of the experience and creating a better insight into the patient's perspective.

Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health. Laden with the chaos of acute illness and trauma, the ED is an unexpected candidate for clinical prevention and population health advocacy. However, when ED nurses utilize evidence-based CPG they are participating in improving the stroke population's long-term health outcomes. Meeting the objectives of this project assists nurses with implementing behaviors associated with these guidelines.

Essential VIII: Advanced Nursing Practice. Emergency department nursing staff have general knowledge and experience pertaining to many different human ailments. Providing ED caregivers with a pathophysiological understanding of the less obvious signs and symptoms of stroke and the significance and prevalence of dysphagia, required increased knowledge-base and sophistication prescribed in this DNP Essential.

Attainment of Personal and Professional Goals.

After a ‘luke-warm’ welcome into the nursing profession twenty-six years ago, I vowed to someday help nurses feel supported by their nurse-peers to build a positive working environment. Acting as the unit-based champion and devising the educational intervention to improve dysphagia screening adherence has been a lesson in how to help my peers understand the evidence behind the work they do and become better versions of themselves.

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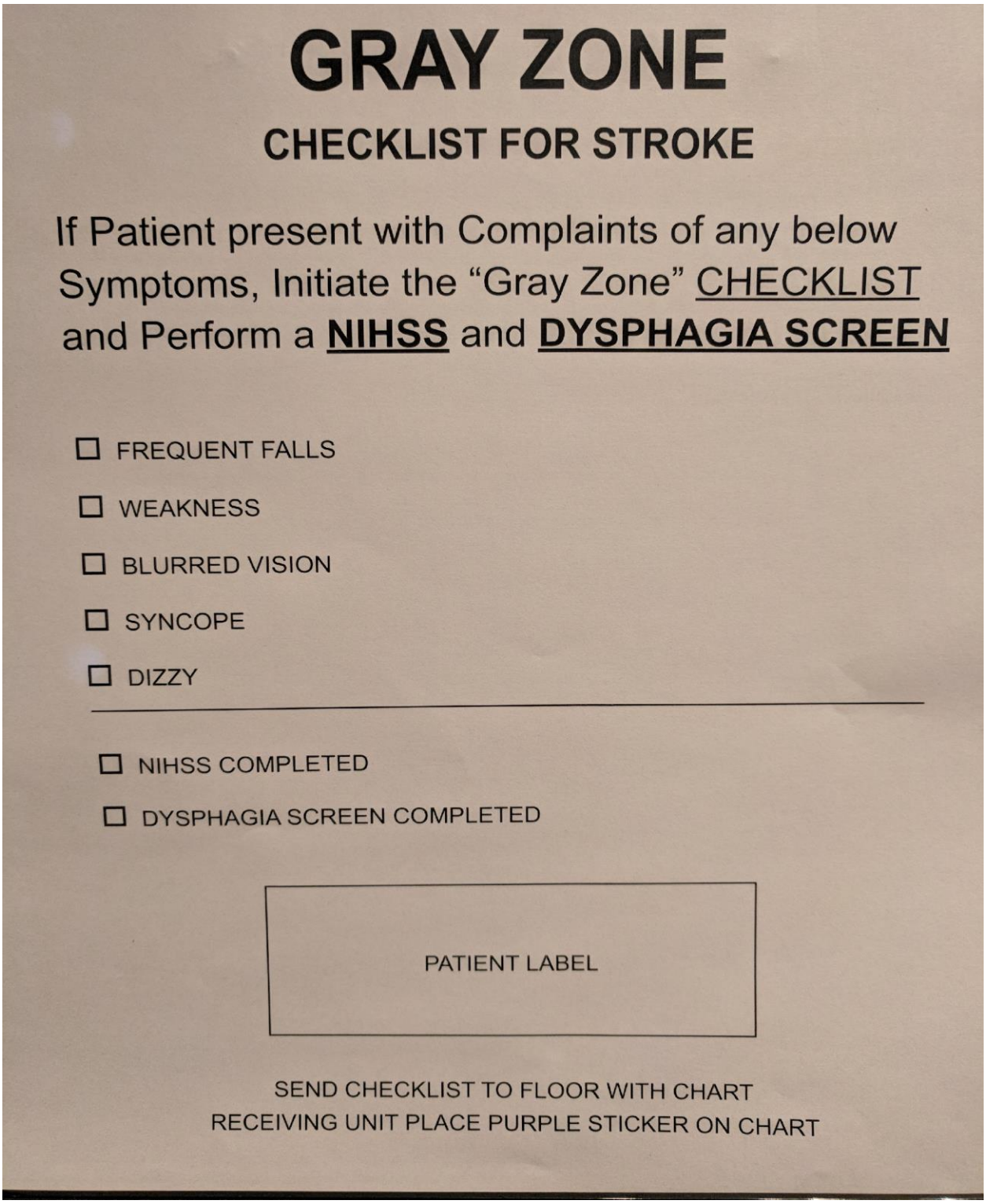
Appendix A

Gray-zone Document



GRAY ZONE

CHECKLIST FOR STROKE

If Patient present with Complaints of any below Symptoms, Initiate the "Gray Zone" CHECKLIST and Perform a **NIHSS** and **DYSPHAGIA SCREEN**

- ☐ FREQUENT FALLS
- ☐ WEAKNESS
- ☐ BLURRED VISION
- ☐ SYNCOPE
- ☐ DIZZY

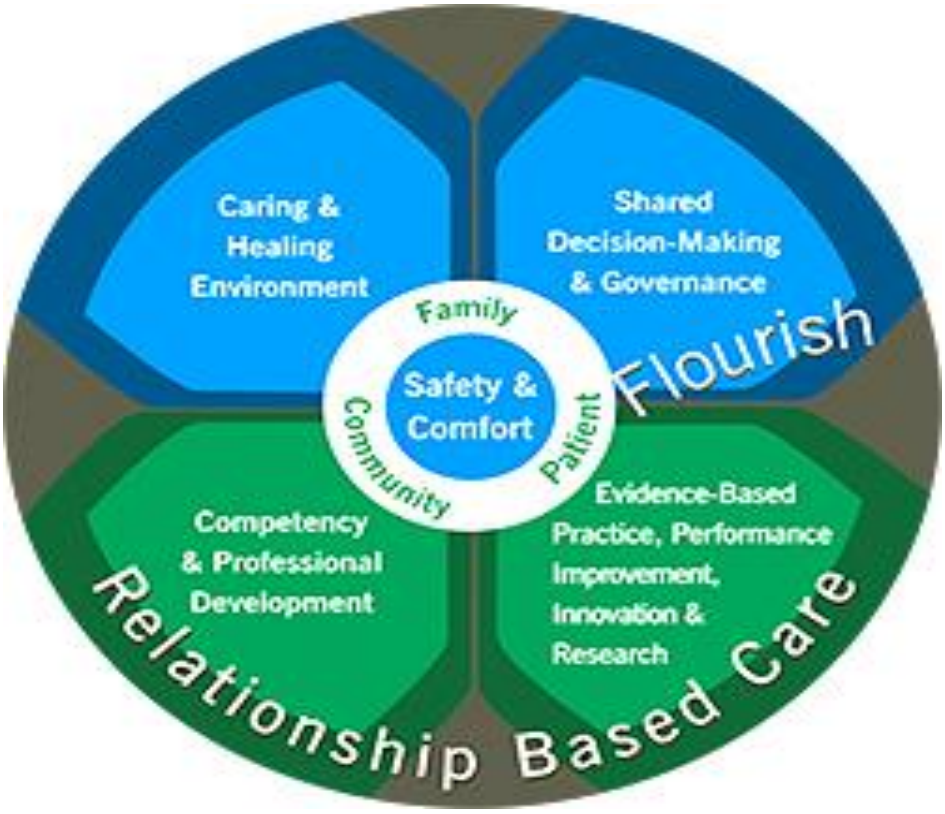
- ☐ NIHSS COMPLETED
- ☐ DYSPHAGIA SCREEN COMPLETED

PATIENT LABEL

SEND CHECKLIST TO FLOOR WITH CHART
RECEIVING UNIT PLACE PURPLE STICKER ON CHART

Appendix B

Model for Care



Appendix C

SWOT Analysis

Strengths	Weaknesses
● ED staff is small and experienced ● DNP student willing to act as champion ● ED manager offers both dedicated time and fiscal support of the champion	● Do not have frequent interaction with organization-wide educator ● Main source of education provided via email and read/sign ● Staff not accustomed to immediate feedback or oversight of work
Opportunities	**Threats**
● Speech Language Pathologist very willing to assist and improve nurse knowledge of dysphagia screening ● Unit based education could be new mode for delivering quality improvement in future ● Direct care nurses have direct impact on quality outcomes that are normally directed from management ● May be able to incentivize the program by adding it to the Nursing Clinical Ladder Program	● Lack of staff support to serve as champions in future after DNP student leaves the role ● Difficulty defining the champion role and holding the champion accountable for enthusiasm in future ● If change in management occurs, then support for the program could be lost

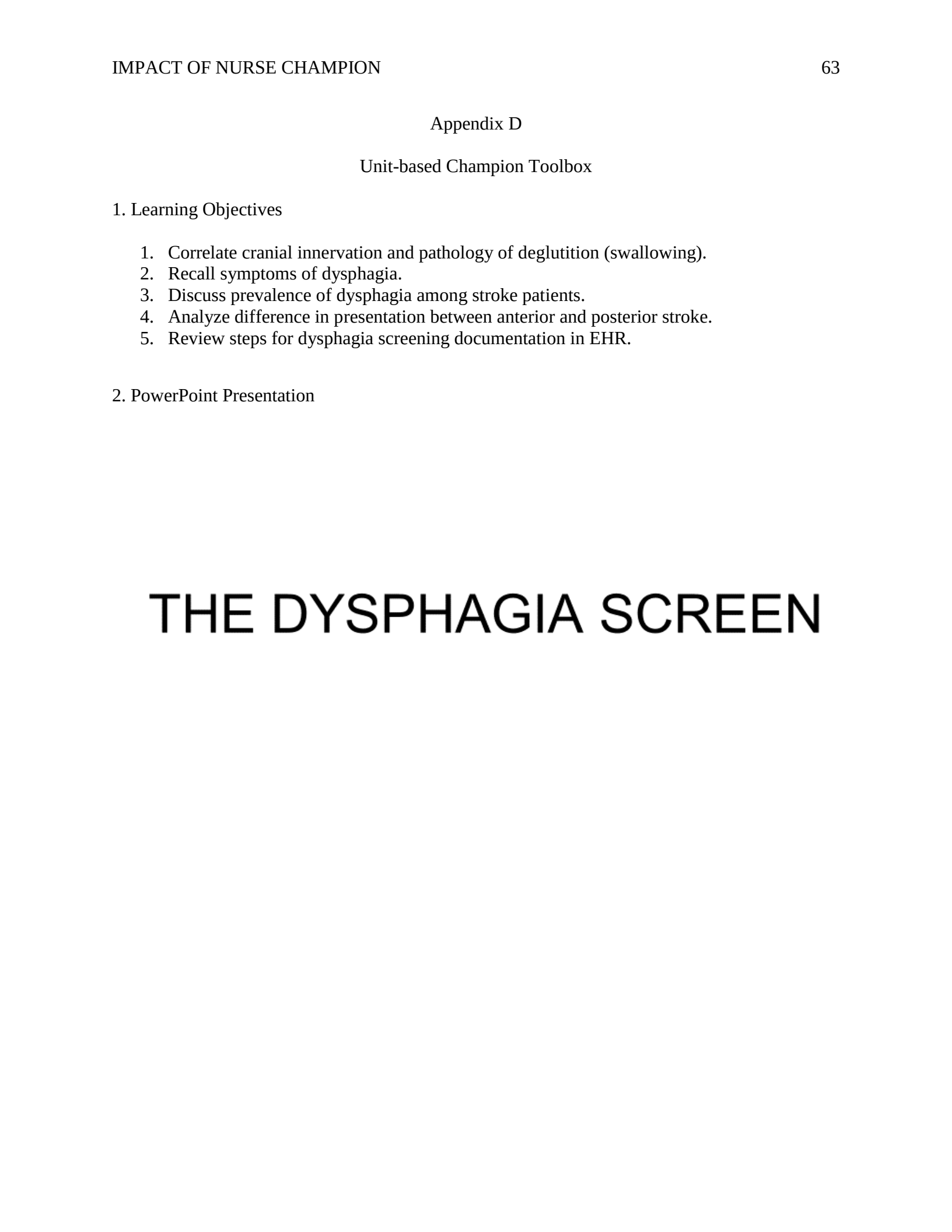
Appendix D

Unit-based Champion Toolbox

1. Learning Objectives

1. Correlate cranial innervation and pathology of deglutition (swallowing).
2. Recall symptoms of dysphagia.
3. Discuss prevalence of dysphagia among stroke patients.
4. Analyze difference in presentation between anterior and posterior stroke.
5. Review steps for dysphagia screening documentation in EHR.

2. PowerPoint Presentation



Neurological Control of Swallowing

Sensory Input

Cranial Nerves V, VII, IX, X

A Control Center

Brainstem. Cerebral Cortex

Motor response

Cranial Nerves V, VII, IX, XII

https://www.amyspeechlanguagetherapy.com/brain--cns.html

DYSPHAGIA

Impacts 47-50% of stroke survivors

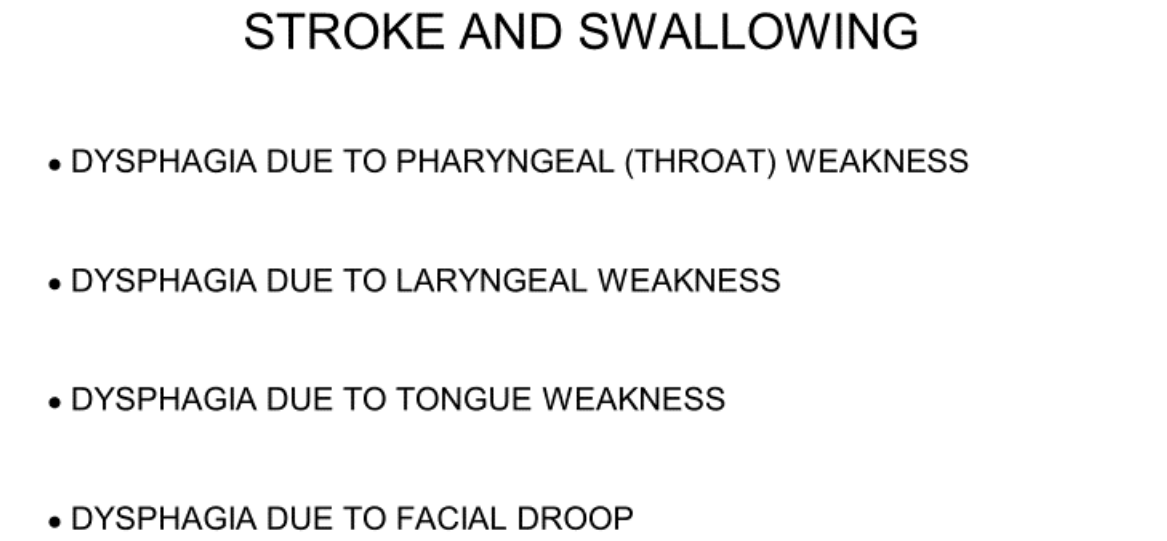
(Ding & Logemann, 2000; Smithard et al., 1996)

Patient awareness of the problem can vary

Symptoms also can vary

https://www.amyspeechlanguagetherapy.com/brain--cns.html


Dysphagia symptoms
Inability to recognize food
Difficulty placing food in the mouth
Inability to control food or saliva in the mouth
Coughing before, during, or after a swallow
Gagging
Attempts to clear throat during or after swallow
Frequent coughing toward the end or immediately after a meal
Wet/gurgly voice quality after swallow
Inability to produce voice
Increase in secretions in the pharynx or chest after a swallow,
Change in rate of respiration
Difficulty/inability to breathe
Change in lung sounds
Chest pain
Back pain
Facial grimacing
https://www.amyspeechlanguagetherapy.com/brain--cns.html


STROKE AND SWALLOWING
DYSPHAGIA DUE TO PHARYNGEAL (THROAT) WEAKNESS
DYSPHAGIA DUE TO LARYNGEAL WEAKNESS
DYSPHAGIA DUE TO TONGUE WEAKNESS
DYSPHAGIA DUE TO FACIAL DROOP

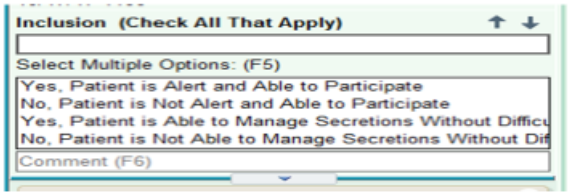
Dysphagia Screening in the ED

IN THE ADULT ASSESSMENT 1, DYSPHAGIA ASSESSMENT FOR ED NURSES

Dysphagia Screening in the ED

- ALERT AND ABLE TO PARTICIPATE
- ABLE TO MANAGE SECRETIONS

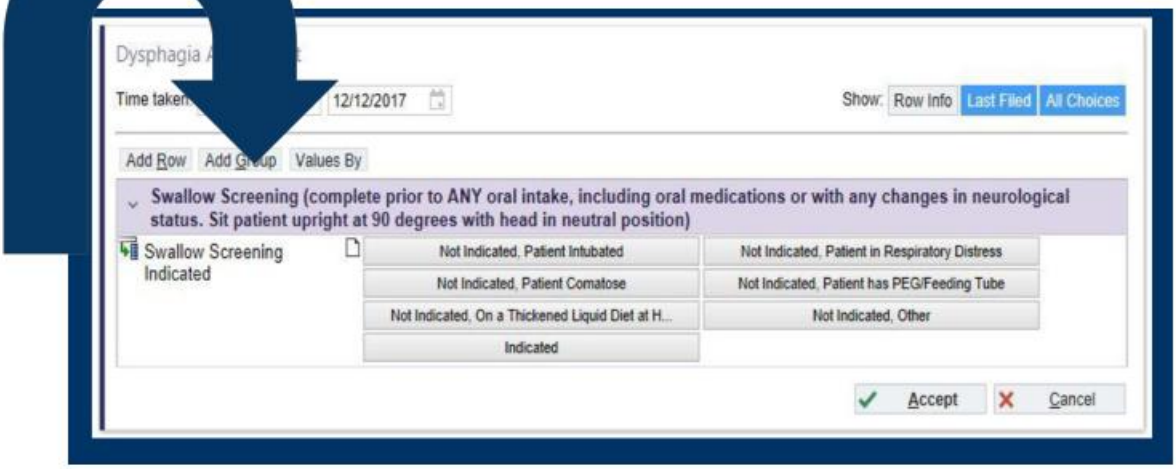
→ MUST SELECT BOTH!



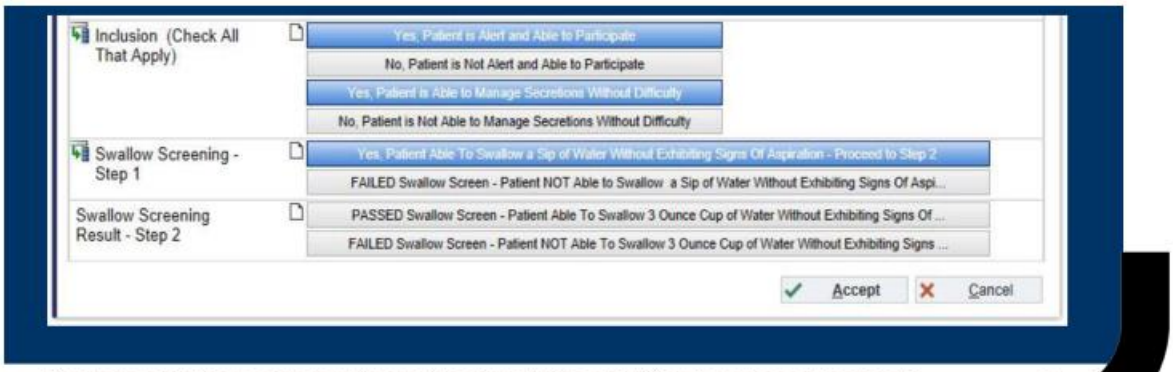
- IF NO,
- STOP THE SCREEN AND CONSULT SPEECH THERAPY
- NPO ORDER
- ASA rectal

Dysphagia Screening in the ED

Before Medications, Food, Drink is documented in chart.



Dysphagia Screening in the



- If able to drink 1 sip of water via cup (no straw) without difficulty, proceed to step 2
- If unable to drink 1 sip of water via cup (no straw), STOP. The patient has failed.
  - *The patient is to be made NPO and Speech Therapy is to be consulted*

Dysphagia Screening in the ED

Reminder: Patients with

- Blurred vision
- Weakness
- Frequent Falls
- Syncope
- Dizziness

MUST HAVE 2-step DYSPHAGIA SCREEN Documented
If the nurse encounters any signs that the patient is having difficulty swallowing, then

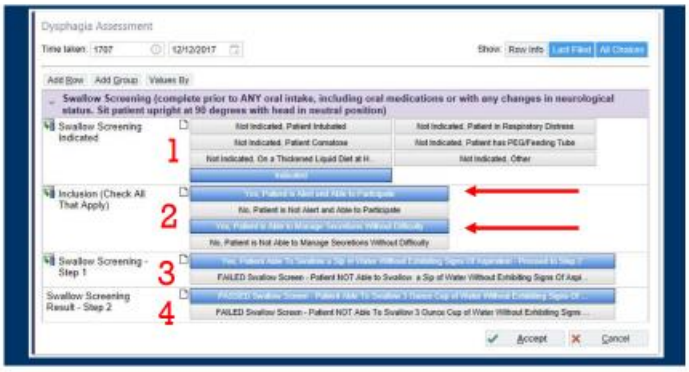
The patient is to be made NPO, Speech Therapy is to be consulted, Medications IV or Rectal and ask for order to be changed.

DYSPHAGIA SCREEN

- Step ONE - SIP
- Step TWO- 3 Oz.

Document Both Steps or it doesn't give the nurse credit for completion

No applesauce.
No Straw
Ensure NPO until after speech therapy consulted.



REFERENCES/CONTACT INFORMATION

- CARRIE W's – WROBELC@CCF.ORG SCREEN SHOT OF ED DYSPHAGIA SCREEN

- MATILYN (MATTI) K, SLP KOPCSIM@CCF.ORG

3. Wall Poster

Appendix E

Dysphagia Screening Tracking Sheet

No= **0**, Yes = **1**. Male = **2,** Female = **1**.

Facial droop (1); extremity weakness (2); change in speech (3);

Frequent falls (4); Weakness (5); Blurred vision (6); syncope (7); Dizziness (8)

Month	Age	Gender	Symptom	Dysphagia screening complete Yes (1) /No (2)	Admission? Yes (1)/No (2)

Appendix F

Champion Commitment Agreement

CCF- AG
Satellite ED

Date: 2019
To: Satellite Team Members
RE: Unit-based Champion Commitment Agreement

In alignment with the organizational stroke quality goals, it is the intent of the Satellite Emergency Managers to improve the care we provide to patients with stroke by preventing complications. This localized initiative will take the commitment of everyone to accomplish but will be championed by designated unit-based nurse champions.

One important aspect of this project is the attendance of the stroke quality committee meeting, an organization-wide interdisciplinary committee. As a member of the ED satellite quality team, I understand my role to include:

- Attending monthly unit meetings and huddles,
- Performing timely monthly dysphagia screening audits on my unit
- Analyzing my units' data,
- Reporting information from the monthly meetings to my nurse manager, and staff as directed by the nursing leadership on my unit
- Role modeling excellence in stroke care and dysphagia screening as I care for patients,
- Implementing any education efforts, or other activities identified by ED interdisciplinary stroke team, ED satellite manager,
- Making dysphagia screening visible on my unit,
- Identifying a coworker who will share in the responsibilities when I am unavailable

As the nurse manager and assistant nurse manager for the employees named below, we support participation as a unit-based champion and the outlined responsibilities.

Nurse Manager signature: _____

Assistant Nurse Manager signature: _____

Unit-based Champion primary member: _____

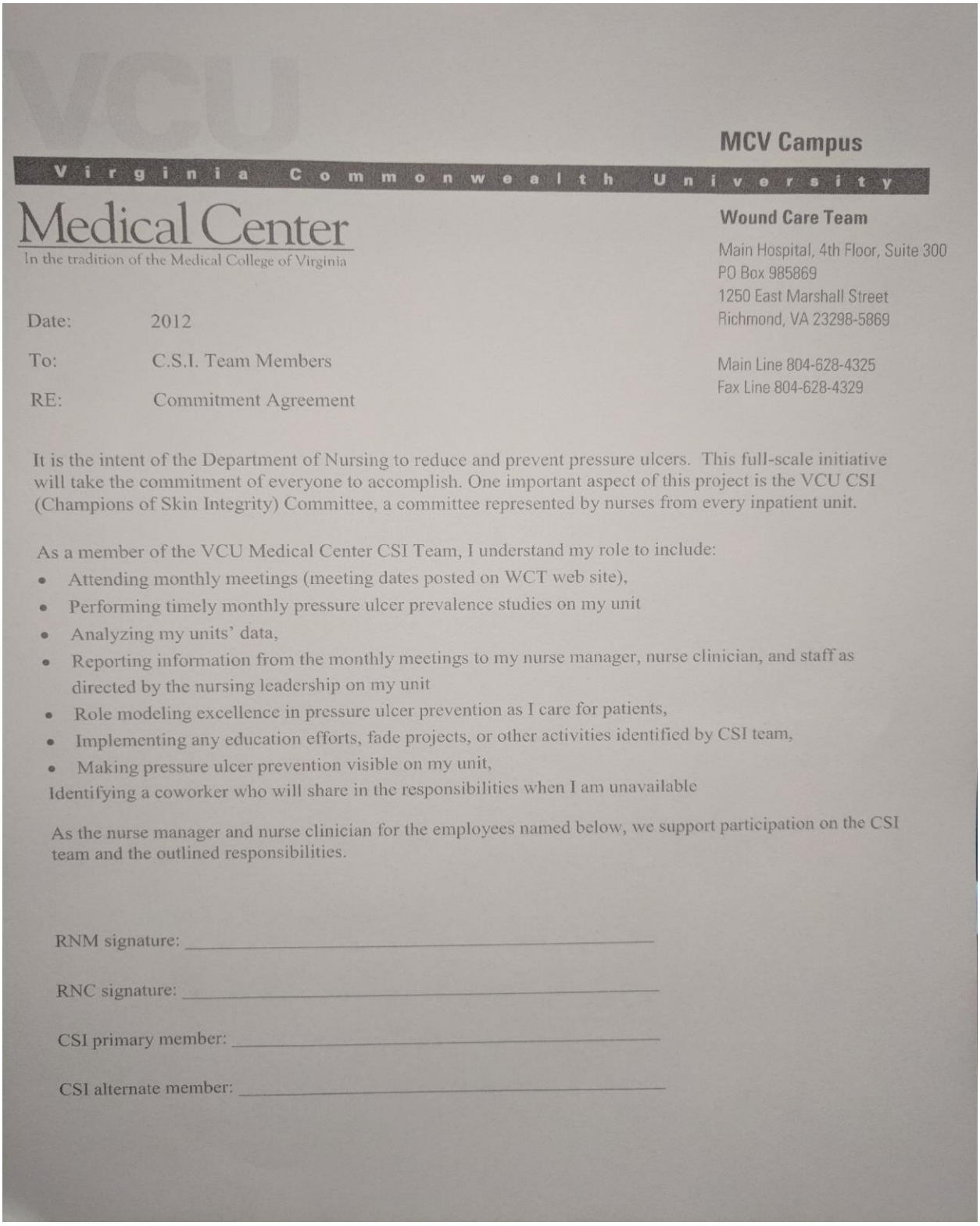
Unit-based Champion *alternate member*: _____

____ (initials) Yes, I would be willing to participate in other quality champion roles as opportunities become available.

Revisions made with permission by Creehan, S (2015), VCU Health.

Appendix G

Original Commitment Agreement from VCU Medical & Creehan Email Granting Permission



MCV Campus

Virginia Commonwealth University

Medical Center

In the tradition of the Medical College of Virginia

Wound Care Team

Main Hospital, 4th Floor, Suite 300
PO Box 985869
1250 East Marshall Street
Richmond, VA 23298-5869

Main Line 804-628-4325
Fax Line 804-628-4329

Date: 2012

To: C.S.I. Team Members

RE: Commitment Agreement

It is the intent of the Department of Nursing to reduce and prevent pressure ulcers. This full-scale initiative will take the commitment of everyone to accomplish. One important aspect of this project is the VCU CSI (Champions of Skin Integrity) Committee, a committee represented by nurses from every inpatient unit.

As a member of the VCU Medical Center CSI Team, I understand my role to include:

- Attending monthly meetings (meeting dates posted on WCT web site),
- Performing timely monthly pressure ulcer prevalence studies on my unit
- Analyzing my units' data,
- Reporting information from the monthly meetings to my nurse manager, nurse clinician, and staff as directed by the nursing leadership on my unit
- Role modeling excellence in pressure ulcer prevention as I care for patients,
- Implementing any education efforts, fade projects, or other activities identified by CSI team,
- Making pressure ulcer prevention visible on my unit,

Identifying a coworker who will share in the responsibilities when I am unavailable

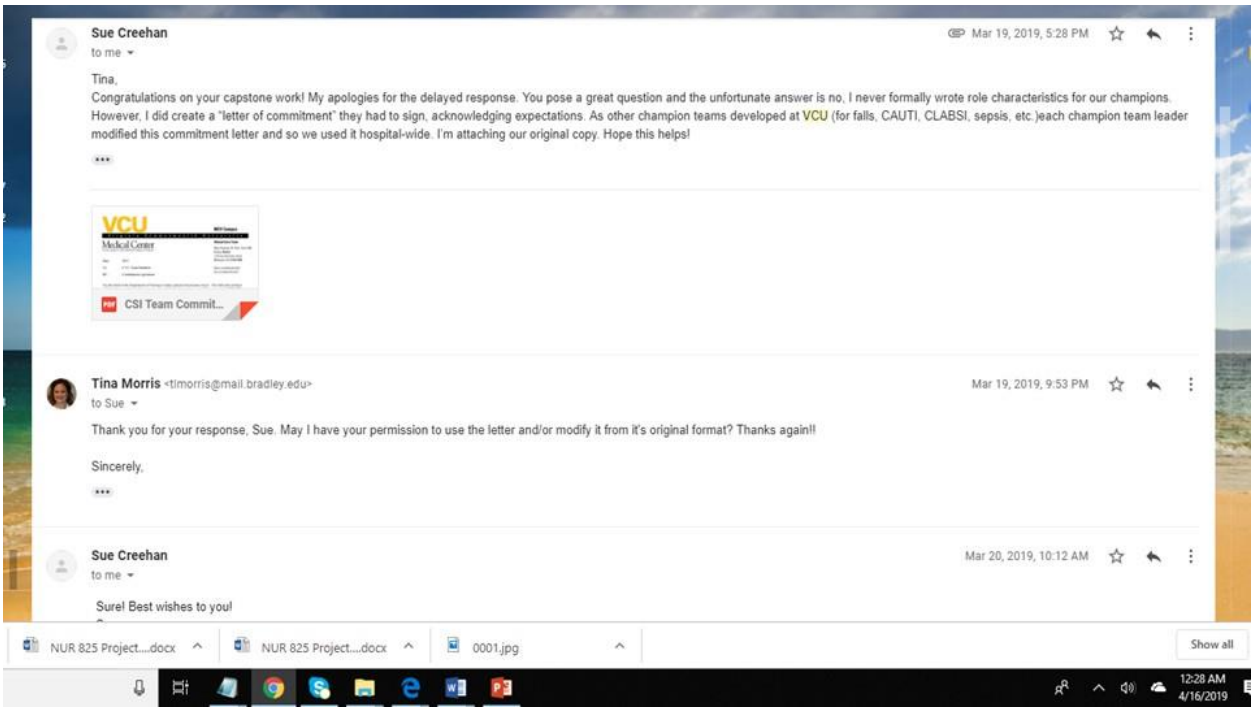
As the nurse manager and nurse clinician for the employees named below, we support participation on the CSI team and the outlined responsibilities.

RNM signature: _____

RNC signature: _____

CSI primary member: _____

CSI alternate member: _____


Sue Creehan
to me
Mar 19, 2019, 5:28 PM
Tina,
Congratulations on your capstone work! My apologies for the delayed response. You pose a great question and the unfortunate answer is no, I never formally wrote role characteristics for our champions. However, I did create a "letter of commitment" they had to sign, acknowledging expectations. As other champion teams developed at VCU (for falls, CAUTI, CLABSI, sepsis, etc.)each champion team leader modified this commitment letter and so we used it hospital-wide. I'm attaching our original copy. Hope this helps!
VCU
Medical Center
CSI Team Commit...
Tina Morris <timorris@mail.bradley.edu>
to Sue
Mar 19, 2019, 9:53 PM
Thank you for your response, Sue. May I have your permission to use the letter and/or modify it from it's original format? Thanks again!!
Sincerely,
Sue Creehan
to me
Mar 20, 2019, 10:12 AM
Sure! Best wishes to you!
NUR 825 Project....docx
NUR 825 Project....docx
0001.jpg
Show all
12:28 AM
4/16/2019

Appendix H

GANTT Chart

Nurse Champion in the Emergency Department

December				January				February				March			April				
1-7	8-14	15-21	22-31	1-7	8-14	15-21	16-31	1-7	8-14	15-21	22-28	1-7	8-14	12-21	22-31	1-7	8-14	15-21	
IRB	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx														
	Train	xxxx																	
		ED	xxxx	xxxx	xxxx														
		Build	xxxx	xxxx	xxxx														
				Data1	xxxx			Data2	xxxx	xxxx	xxxx	xxxx							
		Meet	xxxx	xxxx															
						DO	DO												
												Anlze	xxxx	xxxx					
															Manu	xxxx	xxxx	xxxx	xxxx
															Diss	xxxxx	xxxx	xxxx	xxxx
									Ongo	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

IRB apply and wait for reply.
Train-Train the trainer
Ed-Develop the education and outline champion role
Meet-Meet with ED educator, LSP, statistician
Build- Educational presentation, posters, reminders

DO-Implement education, posters, reminders
Data 1 (Time 1= Pre Intervention)
Data 2 (Time 2= Post intervention)
Anlz-Analyze data
Manu-begin manuscript writing
Diss-Look for conferences, apply, prepare poster
Ongo-Ongoing reminders and education as needed as role of champion with monthly data collection

Appendix I

IRB Approval Letter

Cleveland Clinic
Akron General

December 19, 2018

Tina L. Augusta Morris, BSN, RN
Cleveland Clinic Akron General
1 Akron General Avenue
Akron, OH 44307

Dear Ms. Morris,

RE: Dysphagia Screening Adherence in the ED: Impact of a Nurse Champion

Thank you for submitting this project to the Institutional Research Review Board (IRRB) at Cleveland Clinic Akron General. After reviewing this submission, it has been determined that the project does not meet the criteria to be considered research and thus does not require IRRB oversight.

This project would be considered a Quality Improvement/ Quality Assurance project. The results of the study may still be eligible for submission to a professional society poster presentation or publication. If your intention was for this project to be considered "Research" please contact me and I can help you with the study design to make it such.

When submitting a project that has been categorized as QA or QI for publication or presentation, it is recommended that the following language be used: "This project was submitted to the Cleveland Clinic Akron General Institutional Research Review Board where it was decided that it met the criteria for Quality Assurance/ Quality Improvement thus not requiring IRRB oversight." ***Do not use the term "Exempt" as this has entirely different connotations when it comes to the categorization of research projects and could create significant confusion.***

QA/QI activities should not pose any risk to individuals, infringe on individual privacy, or breach individual confidentiality.

The IRRB appreciates your diligence in submitting this project for review. If you have any questions concerning this decision, please call the IRRB office at 330-344-6947.

Sincerely,

Kalisha Washington, MA
IRRB Compliance Coordinator
Assurance #FWA00001299 (Expires 7/05/2022)

The Cleveland Clinic Foundation
1 Akron General Ave.
Akron, Ohio 44307
Tel 330.344.6947
research@akrongeneral.org

Appendix J

Budget

Budget (Current)

EXPENSES		**REVENUE**	
Direct		Billing	-
Nursing Salary	-	Grants	-
Supplies	20	Institutional budget support	-
Services	-		
Incentive snacks	15		

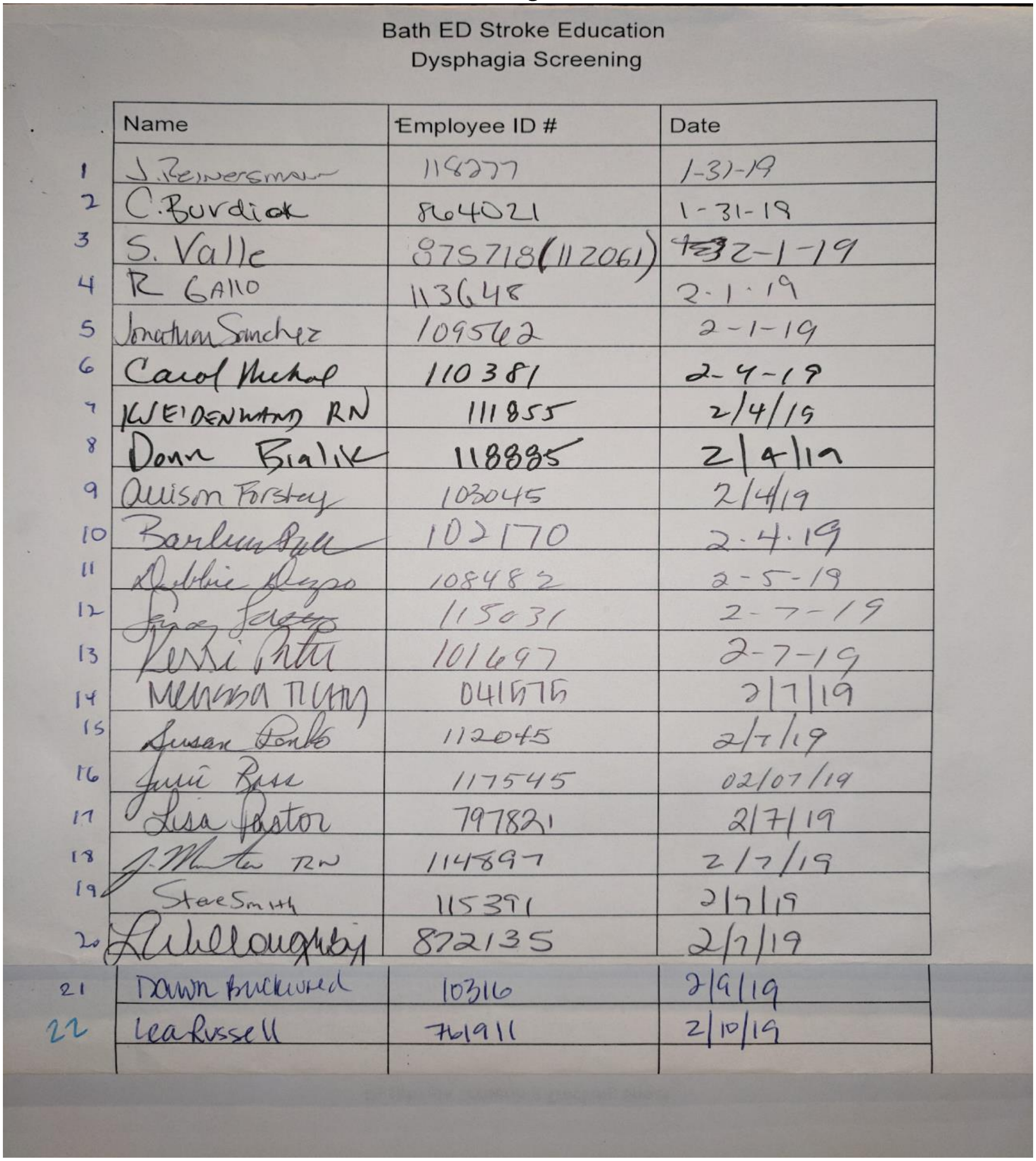
Budget (Potential)

EXPENSES		**REVENUE (LOSS)**	
Nurse Salary 208 hours (4 hours week x 52 weeks) X hourly $30 (min) X hourly $35 (max)	 6,240 – 7,280	Billing **one** case of pneumonia Per diem (min) $28,000 *4 days *15.9 days Per diem (max) $40,000 *4 days *15.9 days	 (112,000 – 445,200) (160,000 – 636,000)

*average length of stay added for healthcare acquired pneumonia 4 days to 15.9 days

Appendix K

Education Sign in Sheet



Bath ED Stroke Education
Dysphagia Screening

	Name	Employee ID #	Date
1	J. Reinersman	118277	1-31-19
2	C. Burdick	864021	1-31-19
3	S. Valle	875718(112061)	2-1-19
4	R Gallo	113648	2-1-19
5	Jonathan Sanchez	109562	2-1-19
6	Carol Michael	110381	2-4-19
7	KWEIDENWAND RN	111855	2/4/19
8	Donn Bialik	118885	2/4/19
9	Allison Forster	103045	2/4/19
10	Barbara [illegible]	102170	2.4.19
11	[illegible]	108482	2-5-19
12	[illegible]	115031	2-7-19
13	Kerri Potter	101697	2-7-19
14	Melissa Tiffany	041575	2/7/19
15	Susan Ponto	112045	2/7/19
16	Julie Ross	117545	02/07/19
17	Lisa Pastor	797821	2/7/19
18	J. Martin RN	114897	2/7/19
19	Steve Smith	115391	2/7/19
20	L Willoughby	872135	2/7/19
21	Dawn Buckwald	10316	2/9/19
22	Lea Russell	761911	2/10/19

Appendix L

Anecdotal Notes

- Didn't know about check-marking the exclusion criteria in the data fields
- Some of the symptoms for inclusion for dysphagia screening were unknown
- Did not know to observe patient for 1-2 minutes following the dysphagia screening
- Did not know to ask for rectal aspirin if failed screening and did not know stock on the unit
- Unaware of relationship between 'gray-zone' atypical symptoms to posterior stroke
- "A lot of my patients have not been getting dysphagia screenings since the Gray-zone: Check List went away"
- "I just got away from doing them when the paper went away"
- "I just haven't been doing these for fa long time-A reminder system would be helpful"
- "I forget to do them until I'm giving report to the nurse when the patient is being admitted and then I run back in a do it"
- Did not realize applesauce no longer being used with the dysphagia screening process.
- Unaware of frequency of dysphagia among stroke patients or that possibility of dysphagia possible for patients with atypical stroke symptoms.
- Many voiced they don't do them for young patients with dizziness because it is probably related to stress, dehydration, or vasovagal response.

Themes:

1. Knowledge related to stroke and dysphagia

2. Knowledge about the screening process

3. Documentation system problems

4. Forgetting/Omission (choose non adherence based on contextual judgement of the patient)

Appendix M

Applying the Coherence Construct

COHERENCE	Subcategories of Coherence	DNP student researcher's exploration of the subcategories (May et al., 2015; NPT, 2019) using probing questions	DNP student researcher's interpretation of the Coherence construct's subcategories as it relates to anecdotal notes
	Differentiation	*What do RNs do to understand and organize/differentiate who needs dysphagia screens*.	When they are fully aware of the connection of the patient's symptom as a possible stroke symptom, many assess the entire situation that surrounds the patient and judge the scenario while others trust the protocol without hesitation and perform the screening
	Communal specification	*How do nurses work together in the ED to build a shared understanding of the aims, objectives and expected benefits?*	With a full understanding of the work environment from working alongside the nurses in the ED, the champion has the ability to build a shared understanding.
	Individual Specification	*What do the nurses do to help themselves understand the specific tasks and responsibilities surrounding a specific set of practices.*	Becoming educated about the science and pathophysiology, potential complications is one potential avenue for building this understanding
	Internalization	*How do nurses derive value, benefit, and importance of the set of practices*	When nurses realize their work is making a difference/value the outcomes for patients, they are more likely to