

COMPETENCY IN RURAL EMERGENCY NURSING

BY

VIVIEN JUTSUM

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Project Committee: Laurel Ash, DNP, RN, C-NP

Kathleen Niska, CSJ, PhD, RN

Date March 31, 2010

Sally Fauchald, PhD, RN  
Chair, Graduate Nursing Department

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## Abstract

The purpose of this clinical project is to improve nursing competency in the emergency room (ER) of a small, rural hospital in Minnesota. The problem of developing and maintaining competency is challenging in this specific situation because critical skills are performed infrequently. The project methodology focuses on simulations of typical, critical ER patient scenarios where nurses are able to practice in a low-risk, but realistic, situation. Tools developed to support nursing performance include protocols from national, evidence-based standards, incorporating principles of teamwork adapted for small teams. Measurements of performance, teamwork and staff satisfaction were made utilizing questionnaires, rating scales, incident reports, and open discussion in real time and during simulations. System changes that should continue to support and improve nursing performance include reorganization of work flow, patient flow, relocation of equipment and medications, and a cultural change that incorporates concepts of competency and teamwork.

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## COMPETENCY IN RURAL EMERGENCY NURSING

### Chapter I: Introduction

#### *Statement of the Problem*

Nurses working in emergency rooms (ERs) are required to assess and manage critically ill patients with potentially life-threatening conditions. In small, rural ERs, life-threatening situations occur sporadically and infrequently. Infrequently performed skills may lead to a lack of competency, where competency is defined as a complex combination of critical thinking skills, interpersonal skills, and technical skills applied to a specific clinical situation. This places the critically ill patient at risk for untimely, incorrect, inefficient, inappropriate, and often unsafe nursing care, increasing the risk for poor patient outcomes (Benner, 1984; Comprehensive Advanced Life Support [CALs], 2007; del Bueno, 2001; Hamilton, 2004).

In a small, rural hospital in southwest Minnesota, only one registered nurse (RN) and one licensed practical nurse (LPN) respond to an ER admission until help is called in as available. There are no dedicated ER nurses in this facility. These nurses perform a variety of nursing functions from low-level acute care, rehabilitation care, observation, outpatient procedures, nurse telephone triage, and emergency care. The majority of the nurses have no emergency or acute-care experience or training outside this facility. An on-call medical provider (physician [MD], Doctor of Osteopathic Medicine [DO], Physician Assistant [PA], Nurse Practitioner [NP]) and laboratory personnel are not always immediately available when an emergency is admitted, having 30 minutes to be present in the ER, according to Critical Access regulations (Centers for Medicare & Medicaid Services [CMS], 2004).

A number of incidents have occurred, some witnessed by this writer, most received as verbal communications from other providers and nurses, but some documented in incident and near-miss reports, indicating poor assessment and decision-making skills. Also noted is a complete absence of teamwork that includes identification of a team-leader and role-appropriate performance, unlike nursing performance in the hospital, and poor performance in some critical technical skills such as identification, location, and appropriate use of infrequently used equipment and medications.

The RNs and LPNs in this facility are required to attend a Basic Life Support (BLS) class every two years. RNs are also required to attend an Advanced Cardiac Life Support (ACLS) class every two years, and Trauma Nursing Core Course (TNCC) every three years. Some RNs are not current on these credentials and LPNs have never been required to attend any course other than BLS, even though they respond to an ER admission with the RN. These courses present a review of theory and knowledge of cardiopulmonary resuscitation, the use of cardiac resuscitation drugs, some limited skill practice, and a written test with a minimum pass rate. The authors of these courses do not profess to certify that attendees are competent to perform the associated skills, merely that they have participated successfully in the course (American Heart Association [AHA], 2008; Emergency Nurses Association [ENA], 2010). Whilst these courses are useful in providing and updating knowledge, and provide an opportunity to perform some technical skills, such credentials do not support competency unless this has already been developed through experience in the practice arena (Alspach, 2008; del Bueno, 2001; Hamilton, 2004).

It is important to understand that, in this small, rural ER, cardiopulmonary resuscitation skills are rarely performed. The majority of patients admitted with potentially life-threatening

conditions require rapid assessment, stabilization, and transport to a higher level of care. During the first 30 minutes after the patient is admitted, nurses often are required to manage the patient without the supervision of a medical provider. The CALS course is specifically designed for small, rural Critical Access ERs. CALS addresses the team approach to the initial assessment and management of the critically ill patient, using case-based simulations. However, these courses are offered only every five years and only one provider from this institution has ever attended. Rapid, correct, initial assessment of the patient's condition, interpretation of patient data, and the subsequent choice of appropriate nursing actions will prevent further disability and may save a life (American College of Surgeons [ACS], 2008; AHA, 2008; CALS, 2007; ENA, 2010).

#### *Purpose of the Project Related to the Problem*

The purpose of this clinical project is to increase nursing competency in the ER of a small, rural hospital in south west Minnesota for patients admitted with potentially life-threatening conditions by providing RNs and LPNs with educational opportunities to develop, improve, and maintain critical thinking, decision-making, technical skill performance, and role-related teamwork. The staff nurses will be oriented to the concept of competency, the problems identified in relation to patient management in the ER, and the plans for problem resolution will be explained and discussed. This will be done in group sessions followed by simulated, case-based learning sessions, performed in the ER. Simulation will be the main teaching method. Tools to support role-specific teamwork, skill development, and practice will be developed that adhere to national evidence-based standards of performance in critical, emergency situations. Criterion-based performance evaluation tools will be utilized. The project goal is the development of a competency training and maintenance program for future use using simulation of typical, critical ER patient scenarios.

### *Significance for Health Care Outcomes and System Change*

According to the Committee on Quality of Health Care in America, Institute of Medicine (IOM), there were at the time of publication over 44,000 estimated deaths in hospitals due to medical errors, half of which could have been prevented. In its landmark publication *To Err is Human: Building a Safer Health System* (Kohn, Corrigan, & Donaldson, 2000), the IOM lays out a national agenda for reducing errors and improving patient safety. This plan recommends components such as credentialing of healthcare professionals that includes performance evaluation of clinical skills as well as knowledge-based testing, a focus on teamwork, and simulators for training. The development of competency with a team focus, based on national performance standards, should not only reduce errors, support effective, evidence-based practice, and reduce the risk of poor patient outcomes, but also increase staff confidence, job satisfaction, and patient safety (AHA, 2008; Brill, 2003; Bucknall & Forbes, 2009; CALS, 2007; Kohn et al.; Morey et al., 2002; Reeves, 2008; Tichon, 2007).

Critical Access rural ERs are intended to provide short-term emergency care for patients who are injured or become seriously ill but require definitive medical care, usually unavailable in a rural facility. These patients require transport to a higher level of care but must be stabilized before being transported. Most small, rural facilities do not have the resources for advanced medical diagnostics or management: transport by road ambulance, or even by helicopter, may take an hour or more. These emergency situations occur infrequently but may be identical to emergency situations in large, well-equipped medical centers. Nevertheless, these patients require the same immediate care and management in those first few minutes. The very nature of these infrequently performed procedures is at the root of the problem for developing and maintaining competency in rural ERs.

In large medical facilities, usually situated in large urban areas, ambulance crews are highly trained and the patient will receive a higher level of care and some treatments before arrival at the medical center where a physician will be immediately available. In many rural areas in Minnesota, the ambulance crews are voluntary and have minimal training. Critical Access ER nurses need to perform what is considered pre-hospital care, as well as ongoing assessment and management, without the immediate supervision of a physician or other medical provider (American College of Surgeons [ACS], 2008; CALS, 2007).

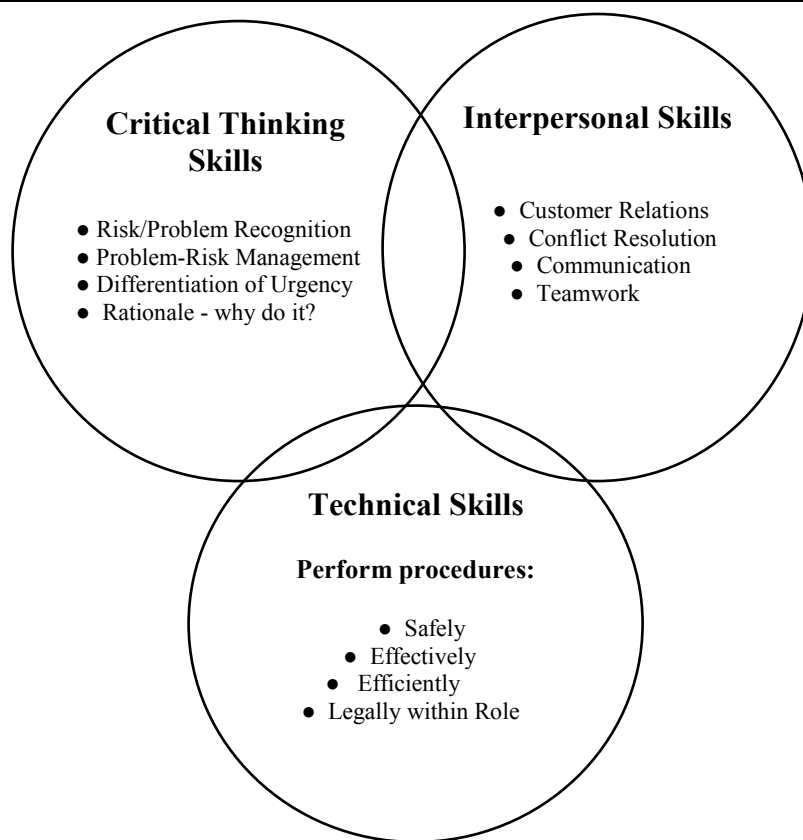
The surrounding rural community has provided financial and volunteer support for its healthcare facility by raising funds for equipment, renovation, and building expansion. This healthcare facility, as a major employer and a local industry, “has a tremendous economic impact on the community and also serves to improve quality of life” (Rural Health Works, 2008, p.1). Members of the public make up the Board of Directors and attend the quality improvement meetings. In this reciprocal relationship, the community of this healthcare facility should feel confident that the nurses in the ER are competent; timely, appropriate, effective patient care with good outcomes will continue to support this view and consequently sustain community support and use of the facility.

### *Theoretical Rationale Guiding the Project*

*Competency in patient care.* Nursing competency is expressed on a continuum from novice to expert where a novice nurse is a beginner who has had no experience in the clinical situation in which they are expected to perform. A novice nurse lacks the ability to make clinical judgments, apply knowledge to new situations, and perform effectively. An expert nurse is one who has experience in a given clinical situation, has the ability to interpret situations holistically, can make complex clinical decisions, and perform effectively. Nurses gain this expertise through

clinical experiences, each clinical experience providing a pattern of behaviors and patient responses that can be built upon, and has been described as pattern recognition learning (Benner, 1984; del Bueno, 2005; Hamilton, 2004).

del Bueno (2001) further describes competency as a complex phenomenon that integrates knowledge, critical thinking, technical, and interpersonal skills for each designated role and work setting, conceptually presented in Figure 1 below. *Team Building* and *Performing Procedures Legally Within Role*, two components of the model, are also strong components of the teamwork identified as a vital component of safe and effective ER performance and an important developmental need of this competency project (Coakes, 2005; Morey et al., 2002).



*Figure 1.* A model for competence and success.

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From "Buyer beware: The cost of competence," by D. J. del Bueno, 2001, *Nursing Economics*, 19, p. 251. Copyright 2001 by Anthony J. Jannetti, Inc. Reprinted with permission.

Inherent in the concept of competency is an understanding that nursing care will be safe, effective, efficient and appropriate. Good patient outcomes from critical situations in the ER will also depend upon the use of evidence-based standards of practice. In reports called the Quality Chasm series, the IOM (2007) created a goal for the American health system to provide care that “is safe, effective, patient-centered, timely, efficient and equitable” (p. xv). In its later series, the Pathways to Quality Health Care, the IOM presents methods to achieve this goal through performance measurement, performance improvement, error reporting and reward of performance that meets the standard of care.

*A leadership role.* The Five Practices of Exemplary Leadership (Kouzes & Posner, 2007) also provide a framework for this writer’s role and behavior in the implementation of this clinical project. This writer has always tried, and plans to continue, to serve as a clinical role model and to incorporate the Five Practices to “bring out the best in others” and “bring them on the journey to accomplishing exceptionally challenging goals” (Kouzes & Posner, 2007, p. 8). The demands on the nursing staff for competency in the ER in this rural facility are exceptionally challenging. This writer is not in a typical, formal leadership position as an NP, and was not easily accepted as part of the nursing staff in this healthcare facility. But, according to Kouzes and Posner (2007), “leadership can happen anywhere, at any time” (p. 8); “leadership is not about personality; it’s about behavior” (p. 15). The Five Practices are: “(a) Model the Way, (b) Inspire a Shared Vision, (c) Challenge the Process, (d) Enable Others to Act, and (e) Encourage the Heart” (Kouzes & Posner, 2007, p. 14).

### *Identification of Stakeholders and Project Mentor*

The stakeholder is someone who is actively involved in, or influenced by, the process and/or outcome of the project (see Table 1). They may have a vested interest in the success of the project, although some may be negatively affected (Campbell & Baker, 2007).

*Project sponsors and mentors.* Mr. R. N., MBA, was Chief Executive Officer (CEO) of this medical center from 2003 until July 2009. He had a very collaborative and open-communication leadership style and facilitated many improvements in the facility. He supported nursing education and personnel development. He understood the problems of competency in the ER and supported this project, including financial support of clinical and educational sessions for the nurses.

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Table 1

#### *Stakeholders and Project Sponsors*

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Name	Title	Project Role
Mr. R. N., MBA	CEO, of two area medical centers	Sponsor and Mentor, Spring 2007 - Spring 2009
Ms. S. B., BA	CEO, of two area medical centers	Sponsor and Mentor, MBA-HCA in progress, Fall 2009 - Spring 2010
Mr. G. K.	COO	Collaboration, 2008-2010
Ms. J. S., RN	Director of Nursing (DON)	Planning and Collaboration
Ms. L. O., RN	Education Coordinator	Collaboration
Ms. D. W., RN, BSN	PI Coordinator	Collaboration
S. F., PhD, RN	Faculty	Project Advisor
L. A., DNP, CNP, RN	Faculty	Project Advisor
Hospital Nursing Staff	RNs & LPNs & NAs	Project Participants
Local Area Population	All ages of the people	Recipients of emergency care

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Mr. R. N. also gave permission to use all available educational materials in the facility. Later in 2008, he made the administrative decision to develop the ER in to a Level IV Trauma Center (Minnesota Department of Health [MDH], 2008) which added support for the implementation of this competency project through the required performance improvement (PI) program and much needed equipment. This decision also required attendance at ACLS for all RNs and providers, CALS or TNCC for all RNs, and CALS or Advanced Trauma Life Support (ATLS) for all providers. In addition, LPNs were required to attend TNCC if they responded with the RN to an ER admission. At that time, it was discovered that less than half the RNs and only one provider were current on the required credentialing.

Ms. S. B., the current CEO, is an experienced member of the facility and a nearby collaborating facility, another Critical Access medical center. She was for many years the Chief Financial Officer (CFO), and recently was appointed to the CEO position by popular vote over many outside contenders. She is completing her MBA/HFA degree. Her response to my request to take over as my mentor was received with enthusiasm. She expressed understanding of the nursing issues as I explained them. She expressed the view that this project may be useful for other nearby rural ERs with a similar structure and function.

### *Summary*

The purpose of this clinical project is to increase nursing competency for patients admitted to the ER with potentially life-threatening problems in a small, rural, Critical Access medical center in southwest Minnesota. Because of limited, infrequent, or no experience in emergency nursing, the majority of the nurses who respond to the ER admissions do not demonstrate competency as defined by del Bueno (2001), displayed in Figure 1, or according to evidence-based standards for management of victims of trauma and/or life threatening conditions

(ACS, 2008; AHA, 2008; CALS, 2007; ENA, 2010). The project is designed specifically for this ER, where there is no dedicated emergency nursing staff, and pre-hospital emergency medical services (EMS) and medical supervision are limited. The significance for improved healthcare outcomes will depend on the development of nursing competency, including role-based teamwork and incorporating evidence-based performance standards. These factors have been shown to reduce errors, improve patient safety and outcomes in the ER (AHA, 2008; Brill, 2003; Bucknall & Forbes, 2009; CALS, 2007; Kohn et al.; Morey et al., 2002). The project stakeholders and sponsors are presented (see Table 1). Educational opportunities for orientation to the concept of competency, role-related teamwork and evidence-based performance standards will be offered. Tools will be developed to support performance. The main teaching method will be simulation of case-based scenarios that mimic typical ER patients with life-threatening conditions.

## Chapter II: Literature Review

### *Literature Related to the Theoretical Rationale*

*Competency.* Dorothy del Bueno in the 1970s spearheaded a focus on evaluation of actual nursing performance instead of relying on credentials and certifications to define staff competence. Since 1982, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has required that processes be in place designed to ensure that the competence of all staff is assessed, maintained, demonstrated, and improved on an ongoing basis (Alspach, 2008; JCAHO, 2007; Roman, 2005). The concept of competency (see Figure 1) applied to nursing described by del Bueno (2001) as a complex integration of knowledge, technical, interpersonal, and critical thinking skills in a designated role and clinical setting is well accepted in other disciplines (Fletcher, McGeorge, Flin, Glavin, & Maran, 2002; Morey et al., 2002; Tichon, 2007).

Pat Benner's (1984) model of novice to expert is based on the Dreyfus model of skill acquisition in aviation training applied to nursing. The model presents a continuum of skill development with five levels: Novice, Advanced Beginner, Competent, Proficient, and Expert. Novices have no real experience of the situations they are likely to encounter in the patient care situations in which they are expected to perform. They have been taught rules and theory but, like the student aviator or student driver, they need to be told what to do. Progression through the levels from Advanced Beginner to Expert requires the experience of coping with real situations, probably over years. The Proficient nurse sees clinical situations holistically and can recognize deviations from normal expectations and anticipate problems. The Expert nurse no longer relies

on the rules but acts with a deep understanding, an intuitive grasp, of the total situation (Benner; Fouché, 2008).

The model is situational, meaning there is a major difference in skills acquired through classroom theory and principles, and skills acquired through experience in real situations. Benner (1984) describes many practical, clinical situations in nursing which support the model. An important point made is that any nurse entering a clinical situation where he or she has no previous experience with the specific patient population, and is unfamiliar with the tools and goals of patient care, will be reduced to the level of performance of a novice or beginner. As in the Dreyfus model, skill acquisition leading to increasing levels of proficiency or expertise is context-dependent and requires situational experience. As del Bueno (2005) states, “being an effective nurse requires practice, practice, practice” (p. 282).

Knowledge gained by nurses through experience helps them to become more competent in clinical decision-making. They develop the ability to recognize relationships between signs and symptoms and possible outcomes, even though no situation progresses identically with another. This is especially important for nurses practicing in the ER because they are likely to have to deal with sudden, critical situations and to work under pressure in a variety of stressful situations (Hamilton, 2004). Dwver (2008), in a study of stress-producing factors in a rural ER in Australia, found that the most significant stress producing factors were found to be inversely related to the number of years of nursing experience.

*Leadership.* There are many theories of leadership, most of them strongly associated with power. Some believe leaders are born, not made, have a certain type of personality that lends itself to leadership, and have charisma. There are theories of leadership style, ranging on a continuum from authoritarian to democratic. The role of a leader can be a formal one, as in an

administrative position such as a CEO, or an informal role such as an influential employee who is just one of the group. A common definition of leadership is: a process of influencing the actions of others to achieve a goal (Natemeyer & McMahon, 2001). According to Kouzes and Posner (2007), leadership has absolutely nothing to do with position, status, or personality, but everything to do with behavior or practice. Their leadership model “The Five Practices of Exemplary Leadership” was developed from years of research in to the actions and behaviors that quite ordinary people do to achieve extraordinary results in organizations.

The Five Practices are: (a) Model the Way, (b) Inspire a Shared Vision, (c) Challenge the Process, (d) Enable Others to Act, and (e) Encourage the Heart.

1. *Model the Way*. Leaders must be models of the behavior they expect of others. Values and guiding principles must be clarified. Words and deeds must be consistent because credibility is the foundation of leadership. Leaders do what they say they will do.

2. *Inspire a Shared Vision*. Leaders have to have a vision of the goal and be able to make it everyone’s vision by clearly and enthusiastically explaining it and how to get there. “If you don’t believe enough to share it, talk about it, and get others excited about it, then it’s not much of a vision” (Kouzes & Posner, 2007, p. 17).

3. *Challenge the Process*. A leader is a change agent, challenging the status quo. Ideas and innovations come, not necessarily from the leader, but more from listening and supporting suggestions and creativity from everyone around, the workers and the customers. Risk-taking is involved in *Challenging the Process*; leaders learn from their mistakes.

4. *Enable Others to Act*. Leaders do not act alone; achieving the goal requires a team effort. The team is all those who have a stake in the vision, the stakeholders. The team functions

collaboratively, trusting that everyone's opinion counts. Most people will achieve great things and rise to the occasion if they have the opportunity, encouragement, and confidence to do so.

5. *Encourage the Heart*. Leaders recognize and celebrate the achievements and contributions of the team. Even small gestures of appreciation on an individual basis can show that the leader cares. These gestures uplift the spirit of the team and provide encouragement to carry on toward the goal.

According to Kouzes and Posner (2003), leadership is a relationship of mutual respect and trust. Leadership is an observable set of skills and abilities that starts with self-development, because a leader has only one instrument to use and that is self.

#### *Literature Related to the Project*

*Measuring performance*. Nursing is a practice profession and it is the nurse's performance of nursing that needs to be observed and measured. The measurement of competency presents the problems inherent in any testing or evaluation situation but is essential to the process of developing and documenting competency. Competency cannot be measured by knowledge testing alone (Benner, 1984; CALS, 2007; del Bueno, 2001; Tichon, 2007). Neither can it be achieved by the usual type of *annual competency fair* that has persisted as a common trend. In this scenario, a group of nurses attend a skill station and get checked off, often as a group. A written test might also be involved. The addition of low frequency, high-risk skills to these annual sessions has been an improvement but remains isolated from the real patient situation and the holistic environment. Measures of competency must be objective, role-specific, location-specific, and must contain objectives that reflect the actual performance required of the nurse and the team being evaluated.

The best place to evaluate nursing performance may be at the bedside where teaching and learning can take place at the same time, although at some point a more formal evaluation may need to be done (Roman, 2005). The role of the advanced practice nurse as a clinical expert, teacher, and role model in this bedside situation is invaluable. However, appropriate measures of performance must be developed. These should be valid and reliable measures developed for each type of patient care. Bondy (1983) presents a system for developing criterion-referenced measures of competency and presents a rating scale with five levels ranging from Independent, to Supervised, Assisted, Marginal, and Dependent (see Table 2, Appendix A). This can be compared to Benner's Novice to Expert scale (1984). A review of the literature shows Bondy's work is still popular (Alspach, 2008; Lenburg, 1999). The characteristics of competency or the clinical criteria to be evaluated are developed from (a) professional standards, role and location specific; (b) quality of performance, i.e., use of time, space, and equipment; and (c) assistance and cues needed to perform safely and effectively. Further education can then be focused on the needs of the individual (Bondy).

*Standards of performance.* For ER management of the patient with potentially life-threatening conditions, evidence-based performance standards are readily available in courses, on-line and in each course's respective manuals: BLS, ACLS, CALS, TNCC, ATLS (ACS, 2008; AHA, 2008; CALS, 2007; ENA, 2010). Although each course has a slightly different focus, they all adhere to the same fundamental standards of performance and order of care. These are (a) the Primary and the Secondary Surveys, (b) immediate treatment of problems as they are encountered on these algorithms or clinical pathways, and (c) admission vs. transport management. The primary purpose is to provide an educational experience that helps nurses and other ER personnel to anticipate, recognize, and treat life-threatening emergencies. The ATLS

course is for medical providers of the trauma patient; BLS is for basic cardiopulmonary resuscitation but is included in the ACLS course, which focuses on algorithms for the recognition and treatment of cardiac dysrhythmias, and assessment and management of heart attacks and stroke; CALS is specifically designed for rural and remote ERs, utilizing simulations of typical cases for all ages, and focuses on the team approach for managing all types of life-threatening situations; TNCC is a basic trauma care course for RNs. All incorporate a knowledge component, skills stations, and simulated case-based scenarios, but they are offered only every two (AHA) to five years (ATLS, CALS, TNCC) which is inadequate to develop or maintain competency where staff perform these skills infrequently. MDH (2008) mandates attendance at approved courses (ACLS and CALS or TNCC), monitoring of performance, and a performance improvement program in its Statewide Trauma System. In addition, national, evidence-based, reference materials are available in a quick look-up format for pediatric and adult problems, incorporating drug dosing and sizing of equipment for procedures by weight and age, and include pre-hospital management (Hennepin County Medical Center, 2004; Schaidler, Hatden, Wolfe, Barkin, & Rosen, 2007).

*Teamwork.* Teamwork in the ER has been defined as members of a group, usually three to eight, working together in their defined roles with a common purpose. There are practical pointers to develop and maintain teamwork in the ER, described under team functions, individual behaviors, and contributions of each member (Limbert, 2005). Coakes (2005) describes the key components of teamwork as: (a) communication, (b) cooperation, (c) collaboration, (d) compromise, (e) contribution, and (f) commitment. A model of six components of teamwork was developed specifically for the ER teams by this writer to include *competency* (see Figure 2, Appendix B). It is interesting to note that many of these team components appear in del Bueno's

(2001) concept of competency displayed in Figure 1. It is also important to review the team process after each emergency experience (what went right, what went wrong, problems regarding equipment and supplies) and to provide a time for emotional support after difficult cases (ACS, 2008; CALS, 2007; Reeves, 2008) (see Table 3, Appendix C).

Medical and nursing errors are a concern of healthcare institutions, JCAHO, the IOM, MDH, professional organizations, and the general public (Alspach, 2008). It has been found that teamwork reduces errors in ERs and improves outcomes. Studies have shown that many errors are preventable when role-related teamwork is implemented. All members of the team should be encouraged to make suggestions and contribute to decisions. This works best in teams that have a less hierarchical structure and has a lower preventable error rate (Bucknall & Forbes, 2009; CALS, 2007; Carter, Lappe, & Schoenfelt, 2009; Morey et al., 2002). The study by Morey et al. (2002) was designed to evaluate the effectiveness of training for teamwork involving nine teaching and community hospital ERs. This was a prospective multi-center evaluation using a quasi-experimental, untreated control group design. The team training course was the Emergency Team Coordination Course that has, as a fundamental premise, the belief that teamwork is a learnable set of skills (Defense Technical Information Center [DTIC], 1997). The study concluded that teamwork training is effective for improving team behaviors, reducing errors, and improving staff attitudes towards the institution and the team. Nurses and all team members express increased satisfaction when their colleagues perform competently within their role. The absence of teamwork was identified as one of the major problems in the rural ER where this clinical project is being implemented.

*Simulation as a method of improving competency in the ER.* Studies have shown that clinical simulations can develop skills that can be directly transferred to the clinical setting.

Practice in a simulated setting can increase self-confidence and improve clinical judgment (Hovancsek, 2007; Reeves, 2008). Simulation requires some form of technology and a lot of creativity to provide a realistic experience of learning that can be taken back to the clinical area. Simulation as a teaching/learning method should provide a safe milieu for nurses to learn, where questions can be asked safely and everyone learns from each other. Simulation of relevant scenarios can also be used for individual or team evaluation purposes, with appropriate clinical measurement criteria and evaluation tools. Students report a reduction in performance anxiety once they are used to it. Debriefing, or post event discussion and analysis of team performance, is considered important after a simulated learning experience. (CALS, 2007; Jeffries & Rogers, 2007; Reeves, 2008).

### *Summary*

A literature review is presented related to (a) the theoretical rationale of the project, and (b) the project implementation. The theoretical rationale consists of Dorothy del Bueno's (2001) definition of competency beyond professional credentialing, Pat Benner's (1984) model of competency development that is dependent upon multiple situational experiences, and Kouzes and Posner's (2007) *Five Practices of Exemplary Leadership* to provide guidance for this writer's leadership behavior in the implementation of this clinical project that will be exceptionally challenging for the nursing staff. Literature related to the implementation of the project is discussed under the topics of (a) measuring performance, (b) evidence-based standards of performance, (c) teamwork, and (d) simulation as a teaching/learning method to develop skills and promote competency.

## Chapter III: Implementation

### *Design of the Project*

The project design consists of four elements implemented over a two-year period, in some cases overlapping. The elements are: (a) conceptual and organizational preparation of staff and management; (b) a variety of educational sessions with nursing staff to expand knowledge and skills; (c) simulated clinical scenarios in the ER to practice role-related teamwork, technical, and critical thinking skills; and (d) team and individual performance evaluation. The overlapping of these elements was to allow for fluctuations in patient census and staff availability that would require changes in plans. It would also allow for on-going development and improvement of tools as the project progressed and staff became more involved.

A logic model (Taylor-Powell, 2008) was used to assist with design of the project (see Appendix D). The assumptions of the model, based on the literature, are that (a) practice sessions in simulated clinical scenarios will improve performance in real-time; and (b) role delineation of skills, incorporated into performance protocols, will improve teamwork and competency, reduce errors and improve outcomes. Short-term, mid-term, and long-term outcomes are shown on the model.

This writer reviewed the Kouzes and Posner (2007) *Five Practices of Exemplary Leadership* and has previously attempted to implement the ten commitments of the model into all staff interactions, regardless of the purpose. This has included (a) functioning as a role model, (b) clarifying values for patient care, (c) developing collaborative relationships, (d) sharing power together in managing patient care, and (e) learning openly from each other's contributions and mistakes to promote trust. For the purpose of this project, and throughout the implementation

period, special focus was directed to inspiring the nursing staff with a shared vision of teamwork, professional growth and change that would, according to the literature, not only improve patient safety and outcomes in the ER, but also increase staff satisfaction and reduce stress. This project was an evidence-based challenge to the long-standing ways that patient care has been provided previously in this ER.

### *Project Goal and Objectives*

The goal of this project is to develop the concepts and components of a nursing competency program specifically for RNs, LPNs, and NAs who infrequently provide emergency care to critically ill patients in the ER of a small, rural hospital by April 31, 2010.

*Objective 1.* By April 2008, perform a literature review to (a) establish national guidelines and standards for nursing performance in emergency situations, (b) identify factors contributing to teamwork in emergency situations, and (c) identify concepts and teaching methods that can be applied to the development and maintenance of nursing competency.

*Objective 2.* By June 2008, develop role-based performance and equipment checklists based on national guidelines and evidence-based standards.

*Objective 3.* By December 2008, provide two classroom and one guided self-study educational opportunities to the ER nursing staff to (a) orient to the concept of competency and role-based teamwork, and (b) teach role-based knowledge and skills specific to emergency situations.

*Objective 4.* By December 2009, provide at least 12 opportunities for simulated team practice sessions in the ER utilizing a mannequin, appropriate equipment and tools, and national, evidence-based performance guidelines.

*Objective 5.* By April 2010, evaluate team and individual performance in simulated emergency situations as measured by the team process evaluation form (see Table 3, Appendix C) and the individual performance evaluation form (see Table 2, Appendix A).

*Objective 6.* Provide opportunities throughout the project to enable staff communication of learning needs and satisfaction with both the educational process and simulation as a means to practice and develop competency as measured by staff satisfaction surveys, discussions and any other verbal or written communication.

*Objective 7.* By April 2010, in simulated emergency situations, all necessary equipment will be located and utilized appropriately, and there will be a minimum average rating of *Good* on the team process evaluation form as reported by direct teacher and team-member observation (see Table 3, Appendix C).

*Objective 8.* Evaluate improvements in nursing performance in the ER observed in real-time as reported by providers and nursing staff during the last six months of the clinical project (see Tables 15, Appendixes N & M).

### *Setting and Population*

This clinical project is being implemented in a small, rural Critical Access hospital in southwest Minnesota. It is the smallest functioning medical center in Minnesota. It consists of a hospital, licensed for eight acute or swing-bed patients; an ER that is open 24 hours, seven days per week, 365 days of the year; a small laboratory and x-ray room staffed from 8 am to 5 pm on weekdays and 8 am to 12 noon on Saturdays; and a family practice clinic, open 9 am to 5 pm on weekdays and 10 am to 12 noon on Saturdays. It is chronically short of medical providers, having one part-time MD, one part-time NP, one full-time NP, and providers from an agency, who may be MDs, NPs, or PAs. Not all providers perform ER services.

The surrounding city is a rural, farming community of less than 800 residents, but there are some smaller townships and farmsteads in the surrounding area whose residents utilize the facility. As well as difficulties with hiring providers, there is a similar difficulty in hiring nursing staff, especially nursing staff with ER experience. New graduate nurses have been hired during the two years of this clinical project to fill positions through attrition. There are twelve RNs, one of whom is the Director of Nurses (DON), seven LPNs, and four Nursing Assistants (NAs) who staff the hospital, provide outpatient procedures, and respond to ER admissions. There is always an RN on-call for emergencies that require extra help and for ambulance transport of critical patients to a higher level of care. Some RNs are employed on a part-time, as needed, basis. There is no dedicated ER nursing staff.

### *Budget*

An educational grant of \$3,500 was proposed to obtain a mannequin suitable for ER simulation practice (see Table 4, Appendix E). However, funding was provided anonymously by a member of the community after he heard indirectly about the education plan and discussed it with this writer. The CEO, who was this writer's first mentor and sponsor, fully supported the use of the organization's resources to implement this program. These resources included space, personnel, copy paper, copiers, use of an overhead projector and display board, and typical equipment that might be used in the ER. The ER itself, and the equipment stored there, was used for simulation scenarios. Nurses attending educational sessions were authorized to clock-in and receive their usual hourly rate of pay for attending.

### *Timeline*

The overall timeline correlated with the objectives with the expectation that there would be overlapping in many areas, and time-line adjustments, due to the small staff and unpredictable

nature of emergencies and the hospital patient census. The overlapping nature of project elements also provided time to improve tools as they were developed, respond to individual staff learning needs, and introduce new equipment and techniques.

*Implementation.* In March 2008, a meeting was held with the DON and the CEO to discuss the competency project, the proposed implementation according to the time-line, and it was approved with their full support. The DON explained that this writer would be responsible for planning and implementing the education component, as no other qualified person was available. The DON and the PI coordinator offered their full support in developing tools and implementing needed change. This writer then attended a nursing staff meeting with the DON, at which time the project plan, time-line and responsibilities were explained. The purpose of this meeting was to orient the nurses to the concept of competency and to discuss the problems being encountered in the ER. This writer attempted to inspire the staff with a vision of the project plan, the idea of team roles, and tools that could be developed through their involvement and ideas.

This writer, the DON and the CEO then discussed the project purpose and plan at the next all-staff meeting. The CEO encouraged full cooperation and assistance from all departments that might be affected by the need to support the project. In April 2008, at two class sessions, the RNs received additional competency orientation, training in evidence-based assessment and management, and some practice in critical skills. At these two sessions, they received a program binder containing further information, tools, references, and practice materials for further self-study.

In July 2008, a self-study packet was provided to all 23 nursing staff with explanations and instructions regarding the plan for initial simulated practice sessions in the ER by the end of 2008. It contained tools developed by the writer and the DON to assist the process of learning

team roles and the principles of competency and teamwork for LPNs and NAs. This packet was intended as reinforcement for the RNs who had previously attended classes. The tools were: (a) a competency checklist, (b) an equipment checklist, and (c) a role-delineated protocol based on national performance standards. The teamwork model *the 6 Cs* was introduced at this time (see Appendix B). These tools and the teamwork model were discussed widely and openly with the nursing staff at every opportunity, and particularly during times of low patient census. The staff participated enthusiastically with the process, providing many new insights and suggestions.

In January 2009, five educational sessions were provided to RNs, LPNs, and Certified Nursing Assistants (CNAs). These consisted of team-oriented, simulated practice of typical ER scenarios for a critically ill patient using a mannequin, the ER setting, and ER equipment. During these simulations and team-related role-play, staff identified problems with location and/or absence of equipment and medications. Discussions ensued with staff, the DON, and the CEO resulting in suggestions for changes in workflows, patient flows, requests for environmental re-organization and new or relocated equipment. Checklists and protocols were also up-dated as needed following suggestions and discussions with staff. The laboratory/x-ray technical staff were also involved in discussions that changed workflow, patient flows and equipment to enable more timely, appropriate, high quality, portable x-rays and standardized blood specimen collection.

In January and early February, 2010 a further eight sessions were provided to all nurses for simulated ER practice in small groups. All updated protocols were utilized at these sessions (see Appendixes H, I, & J), as were re-organized work flows, and new or re-located equipment and medications. This writer facilitated discussions and de-briefing, after both simulated and real-time critical patient scenarios. Throughout the project, this writer attempted to interact with

the nurses to implement the five practices and ten commitments of exemplary leadership (Kouzes & Posner, 2003) to promote collaborative practice, to promote staff buy-in for the project, promote change, and to prepare them for the simulation practice sessions that would incorporate teamwork and the tools that were being jointly developed. Listening, recognition of all contributions and praise for jobs well done, however small, were important behaviors to *encourage the heart*. Encouragement was provided to *challenge the process* by all of us being willing to listen to each other, recognize and discuss problems, recognize mistakes and be willing to learn from them, and problem solve together.

In July 2009, the CEO funded a commercial education company to provide a one-day ER scenario practice session in a mobile skills laboratory. This writer was unavoidably absent during this time period but had collaborated with the DON to prepare appropriate scenarios in advance as requested. The session was “poorly attended by the nursing staff and providers” as reported by the DON, although no records of attendance, student satisfaction, or performance ratings or evaluations were made available. One PA provider attended as an observer only as she was not asked to participate in the scenarios. There were a few reports from attendees that the protocols taught during the scenarios was not evidence-based according current AHA and CALS guidelines and resources.

#### *Outcome Data Collection Process*

The following data were collected:

1. Number of nurses attending classes by type and by licensing status.
2. Results of satisfaction surveys completed by nurses participating in learning activities.
3. Rating of team performance during simulations in the ER.
4. Analysis of the number of patients seen in the ER in 2009 by diagnosis and disposition.

5. Provider assessment of changes and improvements in ER staff performance.
6. Nursing staff assessments of changes and improvements in ER performance.
7. Changes in the number of near misses and incident reports from the ER during the last six months of the project.
8. An analysis of changes in patient flow, workflow, equipment and protocols during the project.

### *Summary*

The project design consists of four overlapping elements that include orientation of the nursing staff to the concepts of competency, learning through simulation, and educational sessions to improve and evaluate competency, knowledge, skills, and teamwork. Planning started in February 2008 and the project was completed in April 2010. A variety of educational opportunities were provided including interactive classes, ad hoc discussion groups, guided self-study, and simulated practice sessions of typical ER scenarios in small teams. There was a focus on development of tools to promote competency and role-related teamwork. The ten components of Kouzes and Posners leadership model were utilized to guide this writer's interactions with staff throughout the implementation of this project. This type of leadership behavior is necessary to encourage and facilitate discussion and participation, to assist in meeting individual learning needs, and to promote on-going tool development and changes to support performance improvement. Anonymous satisfaction surveys were provided at each educational session (see Appendix K). Team process ratings were completed after the 2010 simulation sessions (see Appendix C). At the end of the project, providers and staff were asked to evaluate performance improvements in real-time (see Appendix L). Administrative personnel were asked to assess

occurrence of incident and near miss reports from the ER during the last six months (see Appendix M).

## Chapter IV: Project Findings, Results, and Evaluation

*Data and Process Analysis*

A total of eight RNs attended the two class sessions held in April 2008 out of a possible twelve RNs on staff, although three of the RNs who did not attend had PRN status. Eight satisfaction surveys were received (see Table 10).

Table 10

*Number and Type of Satisfaction Ratings by Nurses Attending Orientation/Skills Classes*

Questions	Ratings			Total
	Yes	No	Partially	
1. Were the educational objectives achieved?	8	0	0	8
2. Did the activity meet your expectations?	6	0	2	8
3. Was the environment conducive to learning?	8	0	0	8
4. Were the teaching methods effective?	7	0	1	8
5. Would you like more opportunities for self-study?	2	6	0	8
	Excellent	Good	Fair	Total
6. Please rate the following:				
Quality of Content	4	4	0	8
Delivery	5	3	0	8
Visual Aids	4	3	1	8
Handouts	5	3	0	8
Opportunity for Questions	6	2	0	8

*Note.* The question numbers in the table do not exactly match the questions in the actual Satisfaction Survey presented in Appendix K. This is because the same form was modified slightly for each different educational session.

Fifty percent of the RNs attended the two simulated practice sessions held in January 2009 and February 2010, that is 12 out of a possible 24. Ten LPNs out of a possible 14, and four NAs out of a possible eight also attended these simulation sessions. A total of 18 satisfaction surveys were received from the simulation sessions out of a possible 26 (see Table 11).

Comments regarding learning needs were varied but overall related to the need for more practice of simulated ER scenarios and specific skills such as drug and airway management. Examples of comments are: “more practice with simulations...trauma, intubation...,” “...need more periodic hands-on...,” “having a more structured role-playing makes me much more comfortable,” “going through scenarios and practicing really helps,” and “others need to know what their job is.”

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Table 11

*Number and Type of Satisfaction Ratings by Nurses Attending Simulation Classes*

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Questions	Ratings			Total
	Yes	No	Partially	
1. Were the educational objectives achieved?	17	0	1	18
2. Did the activity meet your expectations?	16	0	2	18
3. Was the environment conducive to learning?	18	0	0	18
4. Were the teaching methods effective?	17	0	1	18
5. Would you like more opportunities for simulations?	17	0	0	18

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*Note.* The question numbers in the table do not exactly match the questions in the actual Satisfaction Survey presented in Appendix K. This is because the same form format was modified slightly for each different educational session.

Six Team Process Rating forms were completed at the debriefing sessions after the team simulations in February 2010. The results are presented in Table 12. Fifty percent of the ratings (32/60) were in the *good* category. ER preparation, team-leader, and team roles actions were mostly rated highly. Equipment and supplies, availability, and function were rated highly. These were areas of particular importance, having been identified as the weakest areas in team function. It is notable that one team who rated communication as *not done* also rated the team-leader function and assignment of roles as *not done*. This was the first time team process ratings had been implemented as part of the debriefing process. Anonymous completion of this form allows team members and observers to comment freely. Debriefing, after discharge of a critically ill ER patient, is vital to supporting and improving team roles and team function. This is true in real-time as well as after simulated scenarios. Team roles and functions can be reviewed, problem solving can be instituted as needed, and praise and encouragement provided. The focus is on the team process at these debriefings and not on the individual.

In 2009, 431 urgent and emergent patients were seen in the ER (see Table 13). Of those, 63 (14%) required transport to a higher level of care facility. These patients were experiencing severe trauma and/or cardiovascular, respiratory and other critical problems that could not be managed and treated in this rural facility. Eighty-seven (20%) were admitted to the local hospital for 24-hour observation or as an acute admission. Two hundred and eighty-one (65%) were discharged home. Table 13 reveals the expected and typically small numbers of critically ill patients that are seen in this ER. These small numbers substantially contribute to the performance of low frequency skills and the problem with developing and maintaining competency. Many patients, as demonstrated by the number that are discharged home, have non-urgent, minor problems, many of which could have been managed in a clinic setting.

Table 12

*Number and Type of Responses on Emergency Room Team Process Rating Following Simulated Scenarios (N = 6)*

Area of Function	Rating Scale					
	Excellent	Good	Fair	Poor	Not Done	Not Applicable
1. ER preparation	3	1	2			
2. Team leader: Assignment of Roles	1	3	1		1	
3. Immediate Placement and Control of Patient	1	4	1			
4. Initial Survey	1	5				
5. Team Role Actions	1	3	2			
6. Equipment & Supplies: Availability & Function	2	3	1			
7. Documentation	1	5				
8. Lab & X-ray Services	1	1			4	
9. Communication	1	3	1		1	
10. Preparation for Transport	1	4			1	
<b>Total</b>	<b>13</b>	<b>32</b>	<b>8</b>		<b>7</b>	

*Note.* These ratings were made by each team and this writer at the debriefings following simulation sessions.

Table 13

*Number of ER Patients in 2009 Classified by Type of Admission, Transfer, or Discharge and Diagnosis (N = 431)*

Total ER patients		ER patients admitted to local hospital	ER patients transferred to a higher level of care	ER patients discharged home
No.	(%)	No. (%)	No. (%)	No. (%)
431	(100)	87 (20)	63 (14)	281 (65)
Diagnosis	Total No.			
CVS/RESP/OTHER	330 (77%)	77 (23)	40 (12)	213 (64)
TRAUMA	101 (23%)	10 (9)	23 (22)	68 (67)

*Note.* A diagnosis of CVS/RESP/OTHER means one that may involve cardiovascular, respiratory and/or other urgent or emergent diagnoses or problems. A diagnosis of TRAUMA may mean contusions, lacerations, dislocations, fractures, amputations, and/or multiple injuries from a fall or motor vehicle accident.

Numbers may not add up to 100% due to rounding.

*Incident reporting.* A questionnaire (see Appendix M) was sent to the DON, the COO, the PI coordinator, and the CEO requesting information about any increase or decrease in errors or near misses. This writer was informed that these reports are received by the DON and the COO only. They both reported that in the past six months there have been very few near-misses

and incident reports generated from the ER department compared to previously. There was a reduction of reports regarding equipment location and use during the same period. There was an increase in reports regarding medication supplies, knowledge and use, but these were found to be pharmacy related errors and both were identified during simulation scenarios and corrected before any harm could occur. The third medication-related incident report concerned a very low frequency, high-risk, critical procedure in November 2009 that generated an ER medical and nursing staff debriefing. This procedure was reviewed and practiced at the February 2010 simulations.

*Reporting of performance improvement in problem areas.* Providers and nursing staff were asked to complete a confidential questionnaire (see Appendix L) regarding previously identified problem areas and any improvements during the past six months. Responses from providers and nurses are presented separately in Tables 15 and 16. Responses from five providers (100% response rate) are presented in Table 15. Four providers identified previous problem areas as equipment and supplies, location and use; three providers identified patient management skills; two providers identified patient assessment skills, medication supplies, teamwork, and communication. These responses correlate with the mostly verbal complaints from previous providers over the past five to six years, in this writer's experience, although two of those physicians and one PA are no longer employed at the facility. Over the past six months, four out of the five current providers have observed improvements in equipment and supplies, three in equipment location and use, and documentation, and two in medication supplies, teamwork, communication, and patient assessment skills. A total of 21 provider responses indicated improvement during the past six months compared to 23 responses identifying problems during the previous years.

Table 15

*Provider Experience of Problems in ER Performance During Previous Years Compared to Improvements Experienced During the Past Six Months (N = 5)*

Performance Areas	No. Responses	
	Problems Experienced During Previous Years	Improvements Experienced During the Past Six Months
Equipment & supplies	4	4
Equipment location & use	4	3
Medication supplies	2	2
Medication knowledge & use	1	1
Patient assessment skills	2	2
Patient management skills	3	1
Documentation	1	3
Teamwork	2	2
Communication	2	2
Laboratory/x-ray availability	1	1
Other (Explain) Crowd Control	1	0
Total	23	21

*Note.* Providers are two Physicians, two Nurse Practitioners, and one Physician Assistant.

One physician has been providing ER services for one year only; all other providers for four years or more.

Table 16

*Nurses' Experience of Problems in ER Performance during Previous Years Compared to Improvements Experienced During the Past Six Months (N = 9)*

Performance Areas	No. Responses	
	Problems Experienced During Previous Years	Improvements Experienced During the Past Six Months
Equipment & supplies	3	6
Equipment location & use	7	6
Medication supplies	3	3
Medication knowledge & use	4	1
Patient assessment skills	4	3
Patient management skills	6	4
Documentation	5	5
Teamwork	4	5
Communication	7	5
Laboratory/x-ray availability	1	0
Other (Explain) Re-organization of ER	0	1
Total	43	39

*Note.* Nurses responding are eight RNs and one LPN. Currently there are 10 RNs and 6 LPNs on staff. Four RNs are PRN staff. Two RNs completed the questionnaire by telephone with the writer.

Table 16 shows the responses of the nurses to the same questionnaire as the providers (see Appendix L) regarding previously identified problems and improvements noted over the past six months: a total of eight RNs and one LPN (a response rate of 56% because current staffing is short of two RNs and one LPN). Most nurses (50% or more) identified previous problems as equipment location and use, communication, patient management skills, and documentation. Four nurses reported problems in the areas of medication knowledge and use, patient assessment skills, and teamwork. Over the past six months, over 50% of the nurses reported improvements in equipment and supplies, equipment location and use, documentation, teamwork, and communication. Thirty-nine total responses from nurses identified improvements during the past six months compared to 43 identifying problems during the previous years.

Nurses contributed the following comments and suggestions on the questionnaire regarding further improvements (condensed by this writer): (a) nurses need more practice in a small facility because experience is hard to get, (b) need more practice scenarios, (c) continue to review skills to keep everyone proficient, (d) separate/need more/ pediatric equipment/crash cart, (e) improve provider/charge nurse communication, (f) privacy is a problem in a two-bay ER and, (g) a provider needs to be present when patient arrives to direct plan of care; that would help the nurses a lot.

#### *Findings Related to Expected Outcomes and System Change*

*Expected outcomes.* Based on the literature, it was expected that there would be positive outcomes from the implementation of this project with regard to (a) introduction of an ER team process, (b) staff satisfaction with the education opportunities, (c) development of evidence-based performance protocols, (d) clarification of role-based performance expectations, (e) simulated practice, (f) improved availability of equipment and medications, and (g) reduction

in incident reports of errors and near misses. Short-term and medium-term positive outcomes (see Logic Model, Appendix D) were indicated by team process ratings (see Table 12), staff satisfaction ratings (see Tables 10 & 11), a reduction in incident and near miss reports, and providers' and nurses' reports of improvement in previously identified problem areas (see Tables 15 & 16).

As a result of implementation of the project, it was expected that there would be an improvement in nursing competency in the care of the critically ill patient in the ER. Competency was defined at the beginning of this project as a complex phenomenon that included teamwork, communication, role-based technical skills, critical thinking skills, and safe, effective, efficient patient care (del Bueno, 2001). Therefore, to some extent, nursing competency in the ER can be measured by (a) role-based team performance where each team member follows the appropriate assessment and management protocol; (b) implementation of evidence-based care; (c) satisfactory patient outcomes; and (d) the absence, or reduction, of incident reports and preventable errors. However, in this situation of high-risk, low frequency skills, competency is difficult to measure as well as to develop and maintain because of the low numbers of critically ill patients admitted to the ER.

Data on some criteria of evidence-based practice increasingly are being developed and collected nationally. Many of these are *medical*, not *nursing*, predictors of outcome of care, such as performing the 12 lead electrocardiogram (ECG) within 15 minutes of a patient arrival in the ER with chest pain. This type of outcome measure is probably valid in an ER with a provider present who is instantly able to interpret the ECG correctly and treat appropriately. But if, in the absence of that medical provider, the RN is unable to recognize subtle changes of cardiac ischemia and correctly interpret the cardiac rhythm and appropriately treat, or manage it, then the

fact that the 12 lead ECG is performed within 15 minutes of arrival will not demonstrate nursing competency and will not be a predictor of patient outcome. Patient outcomes in this small, rural ER, and other similar ERs, depend on the ability of the RN as team-leader to assess and manage the patient appropriately according to evidence-based performance protocols of care as were implemented in this project (see Appendix H). Data collection to evaluate nursing competency needs to be based on measures of nursing performance to be valid in this type of situation.

Nursing competency, therefore, can be measured by the team process evaluation when that includes initial assessment and management of the patient and follows the appropriate protocol. It needs to be measured and evaluated by direct observation of performance. This was observed in the simulated scenarios. Individual performance evaluations were not approved by the administration because they believed that these would have a negative effect on learning, and because of the need to develop and focus on the team process. This clinical project to improve nursing competency in the ER was not intended to be a *fait accompli*. This project was intended to provide the basis of an ongoing competency development and maintenance program.

*System changes* implemented in the care of the critical ER patient as a result of this project, in collaboration with the nursing staff, are listed as follows:

1. Work Flow. The ER is prepared in advance of patient arrival per protocol (see Appendix H) and the team leader is immediately identified and labeled.
2. Patient Flow. Patients always are taken first to the ER and immediately assessed by the ER team leader. Critical patients are placed on x-ray blocks on the stretcher so that portable, high quality x-rays can be taken in the ER. The patient does not leave the ER until stabilized for admission or transport. Laboratory tests and x-rays are ordered by the team-leader per protocol in

the absence of a provider. Critical patients by-pass the usual electronic registration system to promote more timely x-rays and laboratory tests.

3. Teamwork. Team roles are established by the team leader and member roles clarified in advance of patient arrival, and as new team members are called in, using the role-based protocols (see Appendixes I & J). Patient assessment information is communicated via team-leader to the documenter.

4. Documentation. The team leader selects the appropriate patient care plan and forms for documentation: Ensures key events and data are documented.

5. Tools for protocols and teamwork, including team process evaluation forms, are conveniently placed at eye level at the entrance to the ER.

6. Debriefing after each critical patient is implemented by the team leader as soon as is feasible.

7. The team process evaluation form is completed after patient discharge.

8. Reorganization and relocation of equipment and medications into the ER.

9. Preparation of some high risk, low frequency procedure kits.

10. Cultural change regarding acceptance and support of competency development through practice and teamwork using simulation of clinical skills in typical patient scenarios.

### *Summary*

Process analysis revealed a high level of staff satisfaction with educational opportunities, including simulation sessions, and comments were constructive (see Tables 10 & 11). Not all RNs and LPNs attended but there were no consequences implemented for non-attendance by the DON or facility administration. Five team process ratings were completed following the final simulation sessions in February 2010 (see Table 12). Overall, the ratings were good. Data

analysis revealed that 461 patients were admitted to the ER during 2009 and were analyzed by diagnosis and disposition (see Table 13). Sixty-one required transport to a higher facility indicating potentially life-threatening conditions, revealing the low frequency of high risk patients encountered in this ER contributing to a low level of competency. Providers and nurses responses regarding performance improvement over the last six months of the project were positive (see Tables 15 & 16). The DON and COO reported a reduction in incident and near miss reports from the ER over the past six months. The implementation of teamwork, evidence-based practice protocols, and simulated practice should, according to the literature, promote the development of competency and increase patient safety. System changes in the management of the ER patient are presented.

## Chapter V: Project Summary

### *Discussion of Findings/Outcomes*

This clinical project was not intended to be an end point but to be a beginning process of change for development and maintenance of competency in the ER; to develop tools and processes to support evidence-based practice and performance improvement. Implementation of the project did not progress as smoothly as planned. Many changes have occurred during the two-year process. In July 2008, the CEO announced the intention to register this CAH ER as a Level 4 Trauma Unit. The advantage of this was related to institutional needs for more specific equipment and update of credentials for nurses, including the LPNs, providers, and ambulance crews. All of this has contributed to an increased focus on improving performance, data collection, use of formal documentation, and mandatory reviews for all critical trauma patients. Some of these changes have supported the competency program.

In addition, at the end of 2008 and early 2009, the *owner* facility started the training for implementation of the Electronic Medical Record (EMR) in phases over the next two to five years. This phased training program has interrupted the planning and implementation of the competency program, particularly the simulated practice sessions. It has also created an extra burden on staff time that this writer believes has reduced attendance and is part of the reason why the DON was unwilling to enforce mandatory evaluations. All new forms and workflows were implemented in the hospital and ER to mesh in with the eventual transfer of data to the EMR. The national and institutional focus on evidence-based care has required a number of new standardized protocols and documentation that have been incorporated in the simulation practice sessions. These factors caused considerable disruption in the everyday life and function of

nurses, providers, and ancillary staff. Illness of staff, natural attrition, the hiring of new, inexperienced nurses and agency providers, births to staff members, and family deaths have all contributed to the difficulties of implementing the original plan and timeline.

During late 2008, the CEO made an administrative decision to hire a commercial education company (credentials unknown) offering mobile ER team simulations, similar to the CALS course, tailored to individual institutional needs, at a cost of \$3,500. The scenarios to be simulated were designed by this writer and the DON. The event was postponed several times due to factors beyond our control and finally took place in July 2009. It was poorly attended by the nursing staff, according to the DON, due to forces beyond her control (workload, vacations, and illnesses) and only one agency medical provider attended as an observer. This writer was also away unavoidably. There are no attendance records or ratings for this event. Verbal reports from attendees indicate that this program did not adhere to national evidence-based standards. However, it does indicate support by the administration for training and development of competency using simulation although a lack of shared clinical decision-making with stakeholders.

In May 2009 the CEO, who was mentor to this writer, resigned and took a CEO position in another state. The new CEO agreed to continue to act as a mentor and support the competency project. Throughout the project period, there has been ongoing, open discussion with the DON, the CEO, the COO, nurses, and providers following ER experiences, resulting in revision of tools and equipment to assist nurses' performance in the ER as suggestions and comments have been received. In addition, individualized education has been provided and questions answered on an ad hoc basis when opportunities arose, during real-time ER situations and when workload was low.

This program has set in motion a change process in the system that will, if supported and maintained, continue to improve nursing performance in the ER for critically ill and injured patients. The team process reviews will allow interdisciplinary discussions to assist the team members to continue role and skill development without threat to individual members and should provide increasingly safe, effective, and evidence-based care to the patients.

All members of the organization who have been involved in the implementation of this clinical project, from the CEO to the ancillary staff supporting educational activities and use of the facility resources, have been extremely supportive and generous with their energy and time.

#### *Recommendations for System Change*

1. Quarterly skills stations: content by popular request or as identified as problematic through data collection from incident reports, near misses, and verbal complaints. These should include drug calculations, purpose and appropriate use of drugs in the ER, and practice with infrequently used equipment.

2. Simulated practice sessions in the ER with the mannequin at least every six months with a yearly individual, as well as team, performance evaluation for RNs and LPNs. This should include an education plan for nurses failing to achieve a performance rating less than I or S (see Table 2, Appendix A).

3. Prompt debriefings of actual critical ER patient management followed by discussion for improvement of tools, teamwork, and workflows by all the staff.

4. Encourage all staff to complete team performance reviews after each critical, real-time case, simulations, and satisfaction surveys after each practice session.

5. Hire a qualified, credentialed educator who understands competency, and is also an advanced clinic practice nurse, to manage the competency program and be a clinical role model. This educator could be employed between some of the other local hospitals.

6. Check off and test equipment on a weekly basis, or whenever there is a low workload. Ad hoc group discussions of infrequently used equipment and procedures led by RN team leader when patient census and workload is low.

7. Consider requiring the on-call provider to be in the facility at all times and to respond immediately to ER admissions.

8. Provide separate, pediatric specific resuscitation equipment, and a specialized pediatric training course for all RNs and LPNs. Include pediatric scenarios in simulation practice.

#### *Implications for Maintaining/Sustaining System Change*

Change of any sort will require constant reinforcement to maintain the momentum achieved at any one point in time. An enthusiastic nurse leader and CEO will be an advantage to provide the inspiration and encouragement to improve performance. Each team performing to a high level should be rewarded and recognized. The senior, competent nurses, a few of whom have years of ER and critical care nursing experience, should be paired with the less experienced.

All problems should be openly discussed in debriefing sessions. Problem solving should be directed at the team and not to an individual. Implementation of any education program in an organization will need the support of the top administration and the department manager. Flexible scheduling for educational offerings is essential, especially when the nursing staff experience a very variable workload and because timing of critically ill ER patients is

unpredictable. Practicing with infrequently used equipment and in simulated situations will be beneficial to performance improvement and the development and maintenance of competency.

### *Conclusions*

Simulation is being widely used in nursing and is invaluable in situations where critical skills are infrequently performed. Developing and maintaining competency is dependent, not only on formal didactic teaching and training in technical skills, but also on practice and repeated experiences with clinical situations. Clinical role models are vital to inexperienced nurses. Teamwork, with a clearly designated team leader, is considered an essential component of safe, efficient, effective, appropriate, and timely, evidence-based care in the ER.

### *Plan for Dissemination of Results*

The competency program developed as a result of this project will be presented to the Department of Nursing and the CEO in a binder format. This will include the following divisions: (a) rationale and purpose of the program; (b) literature review; (c) recommendations and plans for regular hands-on skill stations and periodic simulated practice scenarios; (d) the current and any revised tools; (e) evaluation forms that pertain to assessment and management of the critically ill or injured ER patient, e.g., team process and performance evaluation forms; and (f) current clinical pathways and protocols for use in the ER, e.g., Chest Pain, Trauma, Anaphylaxis, Rapid Sequence Intubation, and Stroke protocols. Time and opportunity for discussion of the competency program and recommendations will be made. The mannequin will remain part of the hospital equipment.

### *Summary*

The findings from evaluations and observed performance suggest that this project to develop a competency program is already producing performance improvements and increasing

patient safety. Many tools have been developed that are reported by nursing staff to be helpful in improving performance in the ER. Structural and functional changes have been implemented as a result of the focus on competency and teamwork. Simulated practice sessions have been welcomed and the nursing staff is asking for more. Most nurses are now able to locate and appropriately use the equipment and tools.

Recommendations are made for continuing competency development and maintenance, to support the momentum of change in practice and performance improvement. The program will be prepared in a labeled binder format for a formal presentation to the CEO, COO, PI Coordinator, and the DON, and the recommendations will be discussed. This writer recommends the hiring of a credentialed clinical expert and nurse educator to manage and update the competency program, and to mentor and be a role model for new and inexperienced nurses. Continued development and support of ER evidence-based, nursing performance standards and teamwork should promote safe, timely, effective, efficient patient care, reduce errors and improve patient outcomes.

## References

- Alspach, G. (2008). Editorial: Recognizing the primacy of competency and exposing the existence of incompetence. *Critical Care Nurse*, 28(4), 12-14.
- American College of Surgeons [ACS], Committee on Trauma. (2008). *Advanced trauma life support (ATLS)* (8<sup>th</sup> ed.). Chicago: Author.
- American Heart Association [AHA]. (2008). *Advanced cardiovascular life support manual (ACLS)*. Dallas: Author.
- Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Menlo Park, CA: Addison-Wesley.
- Bondy, K. N. (1983). Criterion-referenced definitions for rating scales in clinical evaluation. *Journal of Nursing Education*, 22, 376-382.
- Brill, K. (2003). Emergency medicine built on teamwork. *Washington Post*. Retrieved October 11, 2009, from <http://www.iseek.org/news/fw/fw4413FutureWork.html>
- Bucknall, T., & Forbes, H. (2009). There is no "I" in TEAM: Working cooperatively to implement evidence into practice. *Worldviews on Evidence-Based Nursing*, 6, 187-189.
- Campbell, G. M., & Baker, S. (2007). *The complete idiot's guide to project management* (4<sup>th</sup> ed.). New York: Penguin Group (USA).
- Carter, D. C., Lappe, K., & Schoenfelt, S. (2009). CALS training for rural emergency health care provider teams. *Certification and EM Workforce Section Newsletter*, (15)2. Retrieved July 25, 2009, from <http://www.acep.org/ACEPmembership.aspx?id=44306>
- Centers for Medicare & Medicaid Services. (2004). *Certification and compliance: Critical Access Hospitals*. Retrieved July 11, 2009, from [http://www.cms.hhs.gov/certificationandcompliance/04\\_CAHS.asp](http://www.cms.hhs.gov/certificationandcompliance/04_CAHS.asp)

- Coakes, J. (2005). The good manager: Key components to teamwork. *Progressive Resources*. Retrieved July 13, 2008, from jaybird@thegoodmanager.com
- Comprehensive Advanced Life Support. (2007). *CALS: A team approach to rural emergency care* (11th ed.). Minneapolis: Author.
- Defense Technical Information Center. (1997). *Team performance in emergency medicine (MedTeams), Draft 3: Instructor guide*. Retrieved July 13, 2008, from <http://stinet.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=h...>
- del Bueno, D. J. (2001). Buyer beware: The cost of competence. *Nursing Economic\$, 19*, 250-257.
- del Bueno, D. J. (2005). A crisis in critical thinking. *Nursing Education Perspectives, 26*, 278-282.
- Dwver, T. M. (2008). Stress in the rural emergency room. *The Australian Journal of Rural Health, 4*, 270-274
- Emergency Nurses Association [ENA]. (2010). *Trauma nursing core course (TNCC)*. Des Plaines, IL: Author.
- Fletcher, G. C. L., McGeorge, P., Flin, R. H., Glavin, R. J., & Maran, N. J. (2002). The role of non-technical skills in anaesthesia: A review of current literature. *British Journal of Anaesthesia, 88*, 418-429.
- Fouché, N. A. (2008). Benner is back! *SAJCC, 24*(2), 46-49.
- Hamilton, S. (2004). Clinical decision-making: Thinking outside the box. *Journal of Emergency Nursing, 12*(6), 18-20.
- Hennepin County Medical Center. (2004). *Pediatric emergency drug book*. Minneapolis: Author.

- Hovancsek, M. T. (2007). Using simulations in nursing education. In P. R. Jeffries (Ed.), *Simulation in nursing education: From conceptualization to evaluation* (pp. 1-10). New York: National League for Nursing.
- Institute of Medicine. (2007). *Rewarding provider performance: Aligning incentives in Medicare*. Washington, DC: National Academies Press.
- Jeffries, P. R., & Rogers, K. J. (2007). Theoretical framework for simulation design. In P. R. Jeffries (Ed.), *Simulation in nursing education: From conceptualization to evaluation* (pp. 21-33). New York: National League for Nursing.
- Joint Commission on Accreditation of Healthcare Organizations. (2007). *Comprehensive accreditation manual for hospitals*. Oakbrook Terrace, IL: Author.
- Kohn, L. T., Corrigan, J. M., & Donaldson, M. S. (Eds.). (2000). *To err is human: Building a safer health system*. Washington, DC: The National Academies Press.
- Kouzes, J. M., & Posner, B. Z. (2003). *Leadership practices inventory* (3<sup>rd</sup> ed.). San Francisco: Wiley.
- Kouzes, J. M., & Posner, B. Z. (2007). *The leadership challenge* (4<sup>th</sup> ed.). San Francisco: Wiley.
- Lenburg, C. B. (1999). The framework, concept and methods of the Competency Outcomes and Performance Assessment (COPA) Model. *The Online Journal of Issues in Nursing*, 4(2), 1-10. Retrieved September 27, 2008, from <http://cms.nursingworld.org/MainMenuCategories>
- Limbert, J. (August, 2005). Emergency department teamwork: Practical pointers. *Electronic handbook of legal medicine*. Retrieved May 12, 2008, from [http://www.medlit.info/guests/medical\\_error\\_news/](http://www.medlit.info/guests/medical_error_news/)

- Minnesota Department of Health. (2008). *Minnesota statewide trauma system: Fact sheet*. Retrieved October 12, 2008, from <http://www.health.state.mn.us/traumasystem>
- Morey, J. C., Simon, R., Jay, G. D., Wears, R. L., Salisbury, M., Dukes, K. A., et al. (2002). Error reduction and performance improvement in the emergency department through formal teamwork training: Evaluation results of the MedTeams Project. *Health Services Research, 37*, 1553-1581.
- Natemeyer, W. E., & McMahon, J. T. (2001). *Classics of organizational behavior* (3<sup>rd</sup> ed.). Long Grove, IL: Waveland Press.
- Reeves, K. (2008). Using simulated education for real learning. *Medsurg Nursing, 17*, 219-220.
- Roman, M. (2005, June). Assessing nursing competency. *MedSurg Nursing*. Retrieved July 12, 2008, from <http://findarticles.com/p/articles>
- Rural Health Works. (September, 2008). *Economic impact of the Sanford Westbrook Medical Center and related health sectors of Cottonwood County*. Office of Rural Health and Primary Care, Minnesota Department of Health. Retrieved December 4, 2008, from [www.health.state.mn.us/divs/orhpc/flex/studies/rhwcottonwood.pdf](http://www.health.state.mn.us/divs/orhpc/flex/studies/rhwcottonwood.pdf)
- Schaider, J. J., Hayden, S. R., Wolfe, R. E., Barkin, R. M., & Rosen, P. (Eds.). (2007). *Rosen and Barkin's 5-Minute Emergency Medicine Consult* (3<sup>rd</sup> ed.). Philadelphia: Lippincott Williams & Wilkins.
- Taylor-Powell, E. (2008). *Developing a logic model: Teaching and training guide*. Retrieved June 9, 2008, from <http://www.uwex.edu/ces/pdande>
- Tichon, J. (2007). Training cognitive skills in virtual reality: Measuring performance. *CyberPsychology & Behavior, 10*, 286-289.

Appendix A

Table 2. Performance Evaluation Form

Table 2. Performance Evaluation Form

CRITERIA FOR CLINICAL EVALUATION			
Scale Label	Standard Procedure	Quality of Performance	Assistance
Independent	Safe Accurate Effect) Each Affect) time	Proficient, coordinated, confident Occasional expenditure of excess energy Within an expedient time period	Without supporting cues
Supervised	Safe Accurate Effect) Each Affect) time	Efficient, coordinated, confident Some expenditure of excess energy Within reasonable time period	Occasional supportive cues
Assisted	Safe Accurate Effect) Each time Affect) Most of the time	Skillful in parts of behavior Inefficiency and uncoordination Expend excess energy Within a delayed time period	Frequent verbal and occasional physical directive cues in addition to supportive ones
Marginal	Safe but not alone Performs at risk Accurate – Not always Effect) ) Occasionally Affect)	Unskilled, inefficient Considerable expenditure of excess energy Prolonged time period	Continuous verbal and frequent physical cues
Dependent	Unsafe Unable to demonstrate behavior	Unable to demonstrate procedure/behavior Lacks confidence, coordination, efficiency	Continuous verbal and physical cues
x	Not Observed		

From Bondy, K. N. (1983). Criterion-referenced definitions for rating scales in clinical evaluation. *Journal of Nursing Education*, 22, 376-382. Copyright 1983 by SLACK, Incorporated. Reprinted with permission.

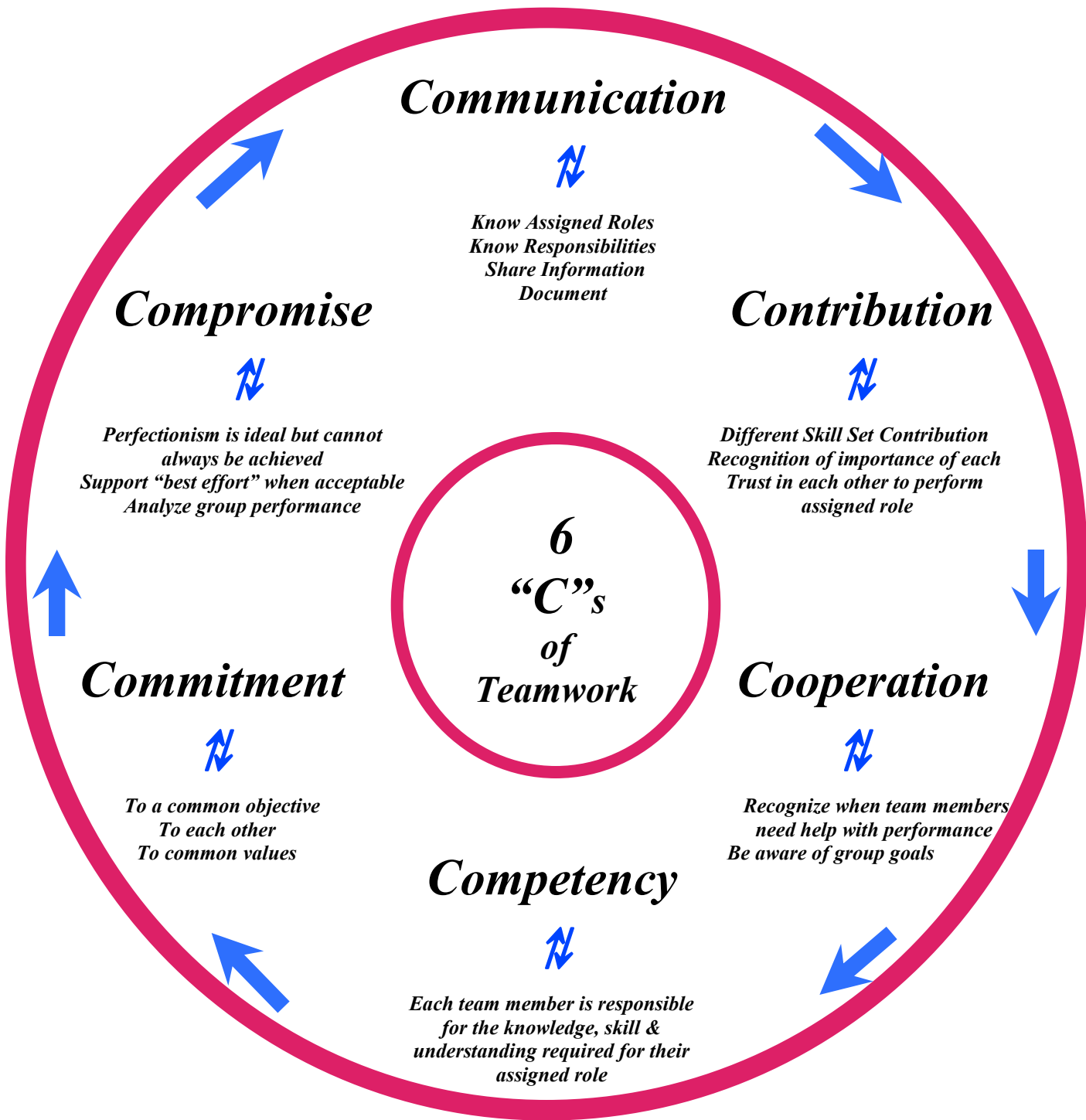
Appendix B

Figure 2. Teamwork Model

Figure 2. Six Components of Teamwork in the ER

Adapted from "The good manager: key components to teamwork," by J. Coakes, 2005, *Progressive Resources*.

Retrieved 7/13/08 from: jaybird@thegoodmanager.com Six Components of Teamwork



## Appendix C

### Table 3. Emergency Room Team Process Evaluation

Table 3. EMERGENCY ROOM TEAM PROCESS EVALUATION

Date: \_\_\_\_\_ Type of Case: Trauma \_\_\_ CVS \_\_\_ Resp. \_\_\_

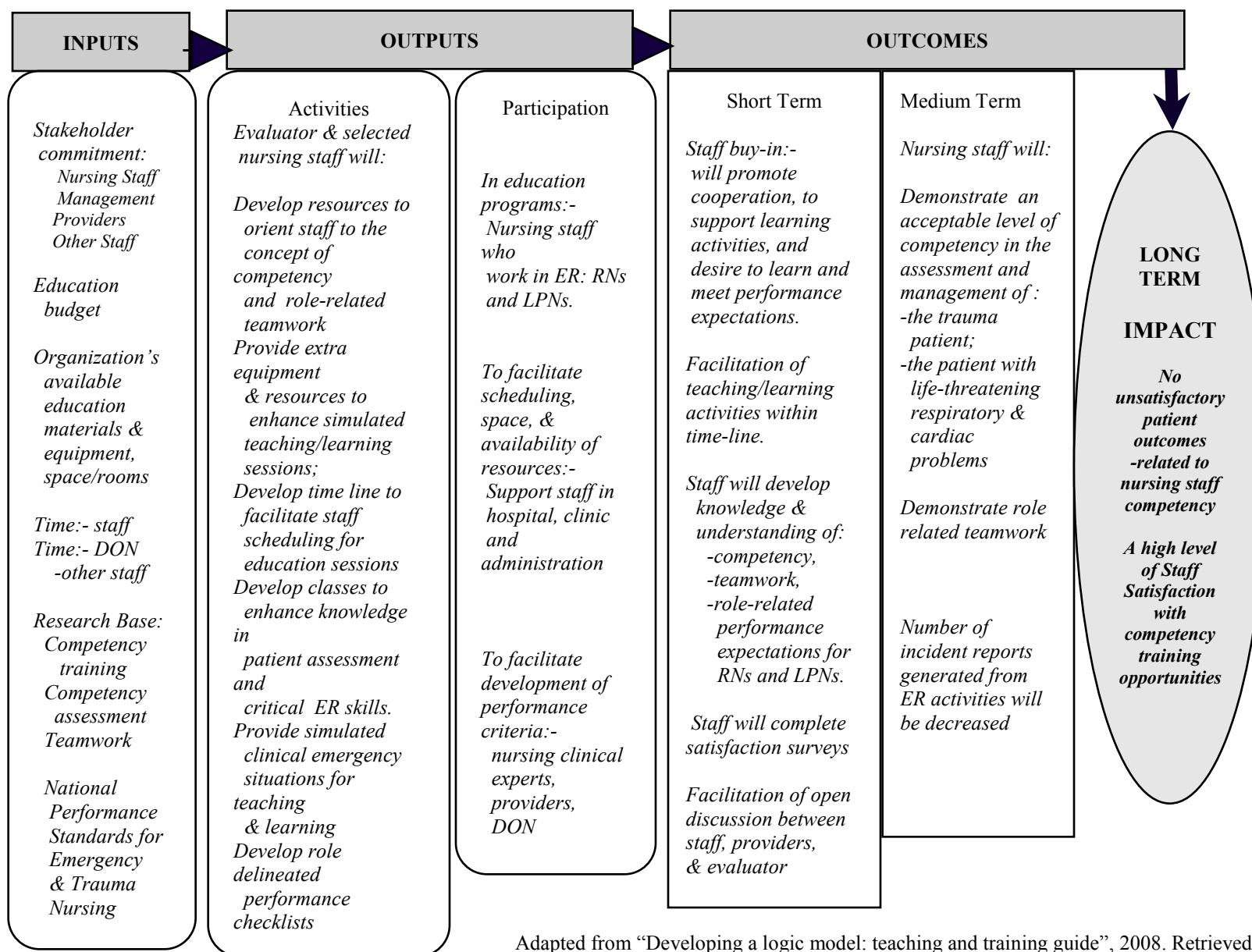
No. of Staff: \_\_\_\_\_ RNs \_\_\_\_\_ LPNs \_\_\_\_\_ NAs \_\_\_\_\_ Secretarial/Admin  
\_\_\_\_\_ Providers \_\_\_\_\_ Lab \_\_\_\_\_ Others (describe) \_\_\_\_\_

Area of Function	Rating Scale <i>Please circle one rating below</i>
ER preparation Team activation	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Team leader assigned roles	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Immediate placement & control of patient	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Initial Survey: the ABCDs	
A	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
B	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
C	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
D	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Team Role Actions	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Equipment/Supplies availability and function	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Documentation	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Lab & Xray services	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Communication with the patient and others	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Preparation for admission or transfer	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Universal precautions Personnel safety	<i>Excellent Good Fair Poor Not Done Not Applicable Unknown</i>
Other Comments:	

Adapted from "CALs: A team approach to rural emergency care," 11<sup>th</sup> ed., 2007. In *Comprehensive Advanced Life Support Manual*, Copyright 2007, Author.

Appendix D

Figure 3. Logic Model



Adapted from "Developing a logic model: teaching and training guide", 2008. Retrieved

6/9/2008 from <http://www.uwex.edu/ces/pdande>

Appendix E

Table 4. Timeline

Table 4. Timeline

2008											2009											2010	
Feb	Mar	April	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan
Formal discussions with Faculty & Mentor																							
Literature review: theoretical framework, related research																							
Program planning & implementation with Evaluator & DON; formal & informal meetings for scheduling, review, and troubleshooting																							
Evaluator-taught classes with groups of nurses: Topics- competency concepts, project orientation & planning, new skills											Guided self-study packets; individualized sessions for nurses as learning needs identified; simulated practice sessions in teams utilizing checklists & protocols followed by group discussion and debriefing; satisfaction data collected with each session: by Evaluator.												
Development of case-based, role-specific, competency and equipment checklists: informal discussions with Evaluator, DON, RNs, & LPNs											Multiple offerings: simulated emergency situations in teams Team and individual performance ratings and satisfaction data collection												
Data analysis Final report to Faculty, DON, & Mentor																							

Appendix F

Table 5. ER Equipment Checklist

**Table 5. ER Equipment Checklist**  
**Ensure that you can identify, locate & know the purpose for all equipment listed**

<b>Equipment</b>	<b>RN</b>	<b>LPN</b>
Airways: Oral, Nasopharyngeal (Nasal Trumpet), Adult/PEDS Lubricant	✓	✓
Ambu bag & masks: Adult/PEDS	✓	✓
Suction equipment: machine, tubes: Yankauer (hard), soft (pharyngeal/tracheal)	✓	✓
Qualitative end-tidal CO <sub>2</sub> detector	✓	✓
Maghill Forceps	✓	✓
CPR Stool	✓	✓
Nasogastric Tube (NG): Adult/PEDS Lubricant	✓	✓
Foley Catheter and bag kit: Adult/PEDS	✓	✓
Cervical collar: Adult/PEDS	✓	✓
Blood Glucose Monitor	✓	✓
Air Splints, Splinting materials	✓	✓
RSI Kit (Rapid Sequence Intubation)	✓	✓
Intubation Tubes: ET (Endotracheal Tube); LMA; King Lubricant	✓	✓
Hypothermia Rectal Thermometer	✓	✓
PEDS Manual	✓	✓
Syringes/needles; IV normal saline for flushing in drugs	✓	✓
IV/ IO supplies. IV Fluids: Normal Saline is never wrong	✓	✓

Equipment	RN	LPN
Drugs: <i>Succinylcholine; Vecuronium; Valium; Morphine; Aspirin; Nitroglycerine (NTG) SL; Epinephrine; Atropine; Benadryl; Etomidate; Versed; Lorazepam; Fosphenytoin; NTG IV; Saline Flush</i>	✓	✓
Trans-tracheal needle:	✓	✓
Restraints	✓	✓
Back Board vs Slider (transfer) Board	✓	✓
Anaphylaxis Kit	✓	✓
Pediatric/infant BP cuff/monitoring equipment	✓	✓
Chest Tube Insertion Kit	✓	✓
Cardiac monitoring leads; Combi pads	✓	✓
Laryngoscope and blades	✓	✓

**Please add any other equipment not on the list that should be**

**Ask for help if you cannot find any item, or do not know what it is for**

**Please review this list at least every 2-3 months at quiet times**

**Do it in groups so you can share knowledge**

## Appendix G

### Table 6. ER Competency Checklist

## Table 6. ER - Competency Checklist

*These are the competencies you should be able to demonstrate and perform as part of a team, according to your role and scope of practice.*

Competency - knowledge, skill, application	RN	LPN	NA
Prepare ER; Activate ER team ( <i>call in necessary help</i> ); Notify Provider & Lab personnel Select appropriate protocols and forms	✓	<b>assist</b>	<b>assist as directed</b>
Perform the Team Leader role: allocate jobs, roles; supervise	✓	<b>support</b>	
Explain MOI (Mechanism of Injury) - <i>Know the MOIs that require immobilization (application of collar and back board)</i>	✓	✓	
Immobilize patient using a back board and cervical collar	✓	<b>assist</b>	<b>assist as directed</b>
Assess Airway, Breathing & Circulation; A V P U	✓	✓	
Identify & treat life-threatening problems per ACLS protocols: <i>Insert appropriate airway; Ambu bag ventilation; control hemorrhage</i>	✓	<b>assist</b>	
Apply cervical collar with a partner; utilize Magill forceps	✓	<b>assist</b>	
Perform in-line immobilization of spine	✓	✓	
Expose patient: cut off clothing, remove jewelry	✓	✓	<b>assist as directed</b>
Perform a log roll as part of a team - 4 people	✓	✓	
Set-up suction and associated equipment	✓	✓	
Perform Blood Glucose Monitoring	✓	✓	
Perform Primary Survey: ABCDE	✓	<b>assist</b>	

Competency - knowledge, skill, application	RN	LPN	NA
Prepare for & assist with RSI (Rapid Sequence Intubation); Gather & Test equipment	✓	assist	
Perform Sellicks maneuver (cricothyroid pressure)	✓	✓	
Perform Vital Signs Q 5 - 15 mins: HR, RR, BP, SaO <sub>2</sub> ;	✓	✓	
Establish GCS; SAMPLE History	✓	✓	
Establish cardiac monitoring; Apply Combi-pads	✓	✓	
Make and apply a Hip Wrap	✓	✓	assist
Transfer patient - stretcher to .....anywhere..... as part of a team.	✓	✓	assist
Use Hypothermia Rectal Thermometer when appropriate	✓	✓	
Apply Air Splints - all limbs	✓	assist	assist
Apply Restraints	✓	✓	
Communicate ( <i>call out</i> ) vital signs and changes in condition	✓	✓	
Utilize PEDS Manual	✓	✓	
Document	✓	✓	✓

## Appendix H

### Table 7. ER/Trauma Protocol

Table 7. ER/Trauma Protocol

Performance Criteria	RN	LPN
<p><b><i>Prepare the ER:</i></b>  <i>Receive information of impending arrival of a trauma/ER patients</i>  <i>Establish the Mechanism of Injury (MOI) if Trauma</i>  <i>Select appropriate protocols</i>  <i>Notify Provider &amp; Lab personnel</i></p>	<p>Communicate to all staff present  Call in more help if needed  Direct &amp; Prepare ER:  Use equipment check-list  Identify RN Team Leader  Allocate Roles -</p>	<p>Report to RN  Assist with preparing the ER</p> <p>Oxygen, Blocks, IV, Monitor,  Ambu-bag &amp; mask  Suction  Unlock drawers  Forms</p>
<p><b><i>As patient arrives:</i></b>  <i>Establish immediate control</i>  <i>Immobilize -if indicated- (patient agitated, not immobilized and MOI suggests immobilization)</i></p>	<p>RN takes charge - Team Leader  Start ABCs  Rigid cervical collar application  Back board - Log roll to apply  Ambulance crew to stay  A V P U</p>	<p>Apply restraints if necessary  Assist with spine immobilization &amp; back board</p>
<p><b><i>Primary Survey:</i></b></p> <p><i>* Identify &amp; Treat Life Threats</i></p> <p><i>Team Leader delegates resuscitation activities to appropriate personnel</i></p> <p><i>Team Leader notifies provider</i>  <i>- contacts other resources if provider not available</i>  <i>-calls for transport as indicated</i></p>	<p><b>ABCDEs;</b>  Identify &amp; treat life threats  A: provide /protect airway  B: use manual ventilation prn  C: control bleeding; establish if shock- assess type  D: Disability - limb/neuro exam  E: Exposure - rash/wounds/limb deformity/</p> <p><b>SAMPLE history</b>  S: signs &amp; symptoms  A: allergies  M: medications  P: past history; check if pregnant  L: last meal  E: events, environment</p>	<p>Vital Signs Q 5 -15 mins.  Continuous SaO<sub>2</sub>,  Apply oxygen; ECG Monitor  Glasgow Coma Scale (GCS)  Blood glucose</p> <p>Report vital signs/call out</p> <p>Document (may delegate)</p> <p>Remove/cut off all clothing  Provide privacy  Remove jewelry  Do not remove backboard or collar</p>

Performance Criteria	RN	LPN
<b><i>Simultaneous Interventions</i></b>	IV Access: 2 large bore IVs IVI NS Labs & Xrays per Team Leader --CBC, PT/INR/UA/HcG/Drug Screen/CMP/Blood Alcohol/ extra tubes. Urinary catheter if no blood on perineum/penis CXR, Pelvis (Portable) Xray (C-Spine-consider)	Report presence/location of blood  Report/call out vital signs  Document (may delegate)
<b><i>Secondary Survey: with Provider if present</i></b>	Head-to-toe assessment Log roll for back view (4 people)	In-line immobilization Assist with log roll Continue monitoring, verbal reports and documentation
<b><i>Admission  or  Transport</i></b>	Prepare for admission or transport	Assist with documents or delegate  Continue to monitor vs

Appendix I

Table 8. ER Team Leader Protocol

Table 8. ER TEAM LEADER PROTOCOL

Performance Criteria	RN
<p><b><i>Prepare the ER:</i></b>  <i>Receive information of impending arrival of a trauma/ER patients</i>  <i>Establish the Mechanism of Injury (MOI) if Trauma</i>  <i>Select appropriate protocols/forms</i>  <i>Notify Provider &amp; Lab personnel</i></p>	<p>Communicate to all staff present</p> <p>Call in more help if needed</p> <p>Direct other staff &amp; Prepare ER</p> <p>Allocate Roles - LPN &amp; NA, other staff if available</p>
<p><b><i>As patient arrives:</i></b>  <i>Establish control as Team Leader</i>  <i>Immobilize -if indicated-</i>  <i>- Rigid cervical collar application</i>  <i>- Back board - Log roll to apply</i></p>	<p>If patient on backboard - position on x-ray blocks</p> <p>Start ABCs: immediate assessment of AIRWAY</p> <p>A V P U &amp; GSC</p> <p>Ambulance crew to stay</p>
<p><b><i>Primary Survey:</i></b></p> <p><i>* Identify &amp; Treat Life Threats</i></p> <p><i>Team Leader directs resuscitation actions to appropriate personnel</i></p> <p><i>Team Leader notifies provider</i>  <i>- contacts other resources if necessary</i>  <i>- calls for transport as indicated</i></p>	<p><b>ABCDE - Identify &amp; treat life threats</b></p> <p>A: provide /protect airway  B: use manual ventilation prn  C: control bleeding; establish if shock - assess type  D: Disability - limbs/ brief neuro exam  E: Exposure - wounds / limb deformity</p> <p><b>SAMPLE history</b></p> <p>S: signs &amp; symptoms  A: allergies  M: medications  P: past history; check if pregnant  L: last meal  E: events, environment</p>
<p><b><i>Simultaneous Interventions</i></b></p>	<p>IV Access: 2 large bore IVs - Hang NS</p> <p>Xrays: CXR, Pelvis (Portable) - (other ?)</p> <p>LABS: CBC, CMP, Peripheral Blood Sugar (other ?)</p> <p>Urinary catheter if no blood on perineum/penis</p>
<p><b><i>Secondary Survey:</i></b>  <i>with Provider if present</i></p> <p><b><i>Admission vs Transport</i></b>  <i>(discuss with Provider or other resource)</i></p>	<p>Head-to-toe assessment - ABCDE (more detailed)</p> <p>Log roll for back view (4 people)</p> <p>Prepare for admission or transport</p>

## Appendix J

### Table 9. ER LPN/2<sup>nd</sup> RN Protocol

**Table 9. ER LPN/ 2<sup>nd</sup> RN Protocol**

<b><i>Prepare the ER</i></b>	Identify & Report to RN Team Leader (TL) Unlock drawers, crash-cart and fridge SET UP: Suction; Oxygen with Face mask Ambu-bag and correct sized mask Xray Blocks IV tubing, prime with NS Set-up cardiac monitor & electrodes, - defib pads Lifting sheet on stretcher Documentation / Forms Get patient chart/info – if available Identify person to document
<b><i>Patient Arrives</i></b>	Assist with transfer to ER stretcher Apply Oxygen Apply monitor electrodes AVPU assessment - call out In-line spine immobilization Get vital signs – call out to TL & documenter Peripheral blood glucose asap Cut off all clothing (provide privacy)
<b><i>Continuing Actions</i></b>	Monitor VS - Call out - Note changes Document Assist with ABCDE primary assessment - call out any changes GCS
<b><i>Documentation</i></b>	Time of arrival Times with vital signs Time help arrived Time provider arrived Time of any events As requested

## Appendix K

### Table 14. Education Program Evaluation

Table 14. Education Program Evaluation

Program Title: \_\_\_\_\_

Location: \_\_\_\_\_ Date: \_\_\_\_\_

Presented By: \_\_\_\_\_

NAME: <i>(Optional)</i>					
1. Did this learning activity achieve the stated objectives? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially					
Comments:					
2. Did this learning activity meet your expectations? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially					
Comments:					
3. Was the environment/atmosphere conducive to learning? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially					
Comments:					
4. Were the teaching methods effective? Did you learn? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially					
Comments:					
5. Please rate the following:					
	Exc.	Good	Fair	Poor	N/A
Quality of content:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Usefulness of visual aids:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of handouts:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opportunity for questions:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opportunity for discussion:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Would you like more opportunities for ER simulations? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Comments:					
7. Please comment on your learning needs as they apply to your care of the ER/Trauma patient					
Comments:					

Appendix L

Questionnaire: Evaluation of ER Performance

## Evaluation of ER Performance Questionnaire

***This Questionnaire is Confidential.***

Date Completed: \_\_\_\_\_

This Questionnaire applies **only** to the seriously and/or critically ill patients you have experienced and worked with in the ER.

I AM: <i>(Please √one)</i> _____ PA _____ NP _____ MD _____ RN _____ LPN _____ NA		
1. During the previous few years, what problems did you experience in the ER regarding patient care? <i>(Please √all that apply)</i>	<input type="checkbox"/> Equipment supplies <input type="checkbox"/> Equipment location/use <input type="checkbox"/> Patient Assessment Skills <input type="checkbox"/> Documentation <input type="checkbox"/> Laboratory/X-ray availability <input type="checkbox"/> Other (Please Explain)	<input type="checkbox"/> Medication supplies <input type="checkbox"/> Medication knowledge/use <input type="checkbox"/> Patient Management Skills <input type="checkbox"/> Teamwork <input type="checkbox"/> Communication
COMMENTS:		
2. During the past six months, please indicate where you have observed improvement or changes for the better in the ER <i>(Please √all that apply)</i>	<input type="checkbox"/> Equipment supplies <input type="checkbox"/> Equipment location/use <input type="checkbox"/> Patient Assessment Skills <input type="checkbox"/> Documentation <input type="checkbox"/> Laboratory/X-ray availability <input type="checkbox"/> Other (Please Explain)	<input type="checkbox"/> Medication supplies <input type="checkbox"/> Medication knowledge/use <input type="checkbox"/> Patient Management Skills <input type="checkbox"/> Teamwork <input type="checkbox"/> Communication
COMMENTS:		
3. Are there other areas regarding performance, equipment and/or supplies in the ER that you feel are needed to improve patient care ?		
COMMENTS/SUGGESTIONS:		

Thank you!

## Appendix M

Questionnaire: Reporting of Near-Misses and Incidents in the ER

## Questionnaire: Reporting of Near Misses and Incidents in the ER

*This Questionnaire is Confidential.*

Date Completed: \_\_\_\_\_

I AM: (Please <i>√</i> one) _____ DON _____ PI Cord. _____ COO _____ CEO		
1. During the past six months, has there been a <u>reduction</u> in reported /documented errors and near-misses in any of the following areas?  (Please <i>√</i> <b>all</b> that apply)	<input type="checkbox"/> Medication supplies <input type="checkbox"/> Equipment location/use <input type="checkbox"/> Laboratory/X-ray <input type="checkbox"/> Documentation <input type="checkbox"/> Meeting Evidence-based criteria <input type="checkbox"/> Other (Please Explain) <input type="checkbox"/> Unknown	<input type="checkbox"/> Medication knowledge/use <input type="checkbox"/> Equipment availability <input type="checkbox"/> Following protocol <input type="checkbox"/> Teamwork
COMMENTS:		
2. During the past six months, has there been an <u>increase</u> in reported /documented errors and near-misses in any of the following areas?  (Please <i>√</i> <b>all</b> that apply)	<input type="checkbox"/> Medication supplies <input type="checkbox"/> Equipment location/use <input type="checkbox"/> Laboratory/X-ray <input type="checkbox"/> Documentation <input type="checkbox"/> Meeting Evidence-based criteria <input type="checkbox"/> Other (Please Explain) <input type="checkbox"/> Unknown	<input type="checkbox"/> Medication knowledge/use <input type="checkbox"/> Equipment availability <input type="checkbox"/> Following protocol <input type="checkbox"/> Teamwork
COMMENTS:		
3. Please comment on any/other areas that might be of current concern regarding nursing care in the ER.		
COMMENTS:		

Thank you!

Appendix N

Mentor/Sponsor Agreements

1. Mr. R. N., CEO, CAH Medical Center
2. Ms. S. B., CEO, CAH Medical Center

The College of St. Scholastica  
 Doctor of Nursing Practice Program  
**Mentor Agreement**

**Instructions for students:** Please complete this form *in its entirety* for the mentor (clinical expert/systems mentor) with whom you arrange your clinical experience. Since mentor agreements must be in place *before* the experience begins, please return completed forms to the Department of Graduate Nursing as soon as possible. Your mentor's signature is required for the form to be complete.

Student Name: VIVIAN TUTSUM

Course Name: CLINICAL PROJECT

Course Number: 8201

Circle all that apply:  Fall  Spring  Semester

Academic Year: 2008 - 20010

Number of hours/semester \_\_\_\_\_

Mentor Name: Richard Nordahl Credentials: MBIT-NCA  
 (Please print clearly to ensure correct spelling)

- Email Address: nordahlr@sanfordhealth.org Telephone #: 507-212-4129
- FAX #: 507-629-3202
- Mentor License # (if appropriate) \_\_\_\_\_ Expiration Date: \_\_\_\_\_

I agree to participate as a mentor for the above student in the Doctor of Nursing Practice (DNP) Program at The College of St. Scholastica. The hours will be arranged between the above student and myself for the time frame specified above.

Richard Nordahl  
 Mentor Signature

3/25/08  
 Date

Agency Name: Westbrook Health Center (Sanford Westbrook)  
 (Please print clearly to ensure complete & correct spelling)

- Agency Address: 920 Bell Westbrook MINN 56183  
 (Street) (City) (State) (Zip)
- Agency Phone Number: 507-274-6121 Fax: 507-629-3202
- Affiliate with health care system: yes Sanford Health  
 (If no affiliation, indicate "None")
- Agency Representative Name and Title: Richard Nordahl
- Agency Representative Phone (if different): 507-212-4129
- Agency NPI Number: \_\_\_\_\_

Mentor Agreement returned: \_\_\_\_\_ Entered in Database: \_\_\_\_\_

**The College of St. Scholastica  
Doctor of Nursing Practice Program  
Mentor Agreement**

**Instructions for students:** Please complete this form *in its entirety* for the mentor (clinical expert/systems mentor) with whom you arrange your clinical experience. Since mentor agreements must be in place *before* the experience begins, please return completed forms to the Department of Graduate Nursing as soon as possible. Your mentor's signature is required for the form to be complete.

Student Name: VIVIEN JUTSUM

Course Name: CLINICAL PROJECT

Course Number: NSG 8205

Circle all that apply:  Fall  Spring  Semester

Academic Year: 2009 - 20010

Number of hours/semester \_\_\_\_\_

Mentor Name: Stacy Barstad

(Please print clearly to ensure correct spelling)

Credentials: CEO  
Acquiring MBA-HCA

- Email Address: barstadsp@sanfordhealth.org Telephone #: 507.212.4129
- FAX #: 507.629.3202
- Mentor License # (if appropriate) \_\_\_\_\_ Expiration Date: \_\_\_\_\_

I agree to participate as a mentor for the above student in the Doctor of Nursing Practice (DNP) Program at The College of St. Scholastica. The hours will be arranged between the above student and myself for the time frame specified above.

Stacy Barstad  
Mentor Signature

10/6/09  
Date

Agency Name: SANFORD WESTBROOK MEDICAL CENTER  
(Please print clearly to ensure complete & correct spelling)

- Agency Address: 920 BELL AVENUE, WESTBROOK, MIN 56183  
(Street) (City) (State) (Zip)
- Agency Phone Number: 507 274 6121 Fax: 507 274 5630
- Affiliate with health care system: SANFORD HEALTH, SIOUX FALLS  
(If no affiliation, indicate "None")
- Agency Representative Name and Title: Stacy Barstad
- Agency Representative Phone (if different): 507-212-4129
- Agency NPI Number: \_\_\_\_\_

Mentor Agreement returned: \_\_\_\_\_ Entered in Database: \_\_\_\_\_

Appendix O  
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Joe Tonzelli <Tonzellj@ajj.com>  
 To: Vivien Jutsum <vjutsum@gmail.com>

Thu, Feb 18, 2010 at 11:56 AM

Hi Vivien,

Tonzellj should have worked too. I have many variations of my last name as an email address because people had trouble getting in touch with me. Go figure!

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Joe

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"Be excellent to each other." - Abraham Lincoln

>>> Vivien Jutsum <[vjutsum@gmail.com](mailto:vjutsum@gmail.com)> 2/18/2010 11:51 AM >>>

[Quoted text hidden]

---

Vivien Jutsum <[vjutsum@gmail.com](mailto:vjutsum@gmail.com)>  
 To: Joe Tonzelli <Tonzellj@ajj.com>

Thu, Feb 18, 2010 at 12:01 PM

Thankyou so much for your time and for the permission.

Vivien Jutsum

[Quoted text hidden]

1. From Jannetti Publications, Inc. for Figure 1 (see page 6) in:

del Bueno, D. J. (2001). Buyer beware: The cost of competence. *Nursing Economic\$, 19*, 250-

257.

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INCORPORATED

September 29, 2009

Vivien Jutsum  
College of St. Scholastica  
Duluth, Minnesota  
PO Box 6  
Westbrook, Minnesota 56183  
USA

**Reference #:** J05796037

**Material Requested:** Figure 2

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2. From Slack, Incorporated for Table 2 (see Appendix A) in:

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*Journal of Nursing Education. 22, 376-382.*