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Implementing SBAR Training with Acute Care Nurses

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The document mentioned above has been reviewed and accepted by the student's advisor, on behalf of the advisory committee, and by the Assistant Dean for MSN and DNP Studies, on behalf of the program; we verify that this is the final, approved version of the student's DNP Project including all changes required by the advisory committee. The undersigned agree to abide by the statements above.

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DNP Practice Inquiry Project

Implementing SBAR Training with Acute Care Nurses

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University of Kentucky

College of Nursing

Summer 2016

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Dedication

This practice inquiry project is dedicated to my loving husband Pete, who knows me better than I do, to my children, Johnny and Katie, to my father, Mike and my sister, Cindy, who have supported me and inspired me with their love. In loving memory of my mother, Martha, who always believed in me. I love you all. Additional thanks are owed to my friends, particularly those who served in the Gulf Wars. This is possible because of your love and support, and I am grateful to you all.

Acknowledgements

I have been blessed with great teachers along the way throughout my nursing school and career, but there are a few who have gone above and beyond excellence in teaching and, at times when most needed, showed humanity and compassion. I would like to thank Melanie Hardin-Pierce, Liz Burckardt, Mike Kellihan, Peggy El-Mallakh, Nora Warshaw, Amanda Wiggins, Nancy Burgess, Quinn Chipley and Chris Knoop for sharing both your wisdom *and* your compassion.

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Introduction/Overview

The selection of implementing SBAR training was made based a consolidation of interests in improving patient safety, improving satisfaction with interprofessional communication and incorporating a military based and tested method of improving safety with communication. This interest in the military roots of SBAR arose from researching parallel fields to nursing, paramedics and other healthcare personnel in the military equivalents of medic and corpsman, and the difficulties faced by returning veterans to transition into civilian healthcare fields.

This practice inquiry project begins with a brief introduction to the origin of the SBAR, showing similarities between the field of medicine and the military. Next is a review of the literature focused on implementing SBAR in acute care settings. This is succeeded by the actual implementation project. Finally, a position paper suggesting methods to assist returning Gulf War veterans in transitioning into civilian healthcare fields follows the project.

A chemical engineer named Doug Bonacum enlisted in the US Navy and served for 8 years aboard a submarine as an ensign (a low ranking commissioned officer.) His duty was night watch and he was chiefly responsible for communicating overnight events and potential threats to the captain in the mornings (IHI, 2016). In 1994, he joined Kaiser Permanente in Denver, Colorado. Five years later, in 1999, the Institute of Medicine came out with a report titled, *To Err is Human* (IOM, 1999). The report stated that upwards of 98,000 deaths per year were due to medical errors in hospitals. Joining forces with Michael Leonard, they introduced a concise, structured method for communication in a tool known as SBAR to reduce errors arising from miscommunication. SBAR stands for Situation, Background, Assessment and Recommendation. It is a simple outline to help direct the content of a message to be communicated.

Twenty years prior to this, the aviation industry was taking cues from the military trained pilots of NASA and developing a structured communication known as Crew Resource Management between pilot and copilot and pilot and air traffic controllers to reduce the number of airplane crashes (Wiener, Kanki and Helmreich, 2010). Aircraft, nuclear submarines and healthcare are all high stakes environments where there is zero room for error. The relationship between an ensign and a captain, between a copilot and a pilot and between a nurse and a physician is a hierarchical relationship, forming a barrier to communication. The culture and communication styles of enlisted personnel and high ranking officers, of nurses and physicians are different. Nurses and enlisted persons tend to be more narrative and descriptive, whereas officers and physicians prefer direct communication methods (IHI, 2016). A structured communication tool was the answer for the military and is the answer for healthcare.

Manuscript 1

Implementing SBAR in an Acute Care Setting: An Integrative Literature Review

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Abstract

Objective: Communication errors have been implicated in 70% of medical errors. The SBAR method of standardized communication has been suggested to reduce this number. The purpose of this literature review was to assess effectiveness of education of the SBAR method on knowledge of SBAR and satisfaction with interprofessional communication.

Method: Multiple databases for articles on implementing SBAR education were searched from 2010 through 2015. Inclusion criteria included inpatient acute care settings in adult, non-obstetric populations and SBAR education/implementation, nurses/doctors as subjects and measured outcomes. Exclusion criteria included reviews, ambulatory setting, pediatric and obstetric populations and publications in foreign languages.

Results: 8 articles met the inclusion criteria. Two of the articles found reductions in errors as a result of SBAR training. One found that SBAR education resulted in clinicians being abler to make informed decisions regarding patient care. One descriptive study showed that confidence increased in RNs and trust increased in physicians after SBAR education. Another study showed an increase in satisfaction with interprofessional communications. One study showed improvement in handoff communications by residents as measured by independent raters. Two studies examined high fidelity or role-playing in SBAR education and suggested that role-playing augmented SBAR learning.

Conclusions: Implementation studies suggest but do not conclude that increased knowledge and satisfaction with interprofessional communication can be accomplished with SBAR education and that education should be done incorporating role-playing or active participation. Additional implementation studies would strengthen these findings.

Integrative Literature Review

Would implementing an education initiative about the Situation Background Assessment Recommendation (SBAR) form, a structured communication tool, result in an increase in communication knowledge and satisfaction among nurses orienting to a healthcare facility? This is the research question that drove this literature review and the purpose of this review was to discover whether this question had been answered satisfactorily or whether further investigation is warranted.

Method

A formal PICOT-driven search in CINAHL and Medline using the terms “SBAR” for intervention, “AND,” “communication,” “OR,” “outcomes,” “OR,” “collaboration,” for outcomes/comparisons “AND,” “nurse-physician” (along with MESH analogues, such as interprofessional and interdisciplinary) (population) with limiters of English, full text and human subjects within the last 5 years was conducted resulting in 11 publications. After evaluating the abstracts of these 11 papers, 8 met the inclusion criteria as follows: inpatient, acute care setting, adult, non-obstetric population, education on and/or implementation of SBAR and exploration of outcomes (Table 1). Levels of evidence are defined in Table 2.

SBAR Defined

The SBAR form (Appendix A) directs communication from a sender to a listener by beginning immediately with the situation at hand, i.e. “What is the problem?” For example, a patient is having difficulty breathing (situation/problem). The second part of the SBAR is background, which helps the sender, usually an RN, to provide enough background information to provide context to help make sense of the present situation or problem, such as “He is a

chronic dialysis patient admitted yesterday for a urinary tract infection and his wife just told me he missed his Friday dialysis appointment two days ago,” (pertinent background). This section is followed by an assessment (supporting data) section, e.g. patient O2 sats are 91% on non-rebreather, coarse rales in bases of both lungs, respiratory rate >30, hypertensive, tachycardic and agitated, with possible causes optional, e.g., “I think he may be fluid overloaded.” The form ends with a section for recommending or requesting a course of action, e.g. “His nephrologist is Dr. Name, would you like a stat consult for stat dialysis orders, labs, or chest x-ray?” In this way, any health care provider covering for the attending can gather enough information to make a safe and informed decision on how to proceed. This is especially critical with telephone and after-hours communication and/or conveying information to providers who are unfamiliar with the patient.

Results

Impact on Errors Due to Communication

Randmaa, Martensson, Swenne & Engstrom (2014) conducted a pretest posttest quasi-experimental design study that evaluated safety attitudes and percentage of incident reports due to communication errors for one year prior to and one year after implementing a comprehensive training program on using SBAR for communication. The percentage of incidence reports due to communication error decreased from 33% of all incidence reports to 25% of all incidence reports with a p value < 0.001 with other evidence indicating between group communications improved as well. In Telem, Buch, Ellis, Coakley & Divino (2011) the researchers measured sentinel events and errors in order entry in 45 surgical residents before and after SBAR training and against a group who had not received SBAR training. A 2.3% reduction (p=0.033) in order entry errors was found in the SBAR training group compared to baseline and compared to untrained

residents. There were too few sentinel events to analyze. A summary of the findings in all papers is in Table 3.

Impact on Provider Ability to Make Clinical Decisions

Compton, Copeland, Flanders, Cassity, Spetman, Xiao & Kennerly (2012) found a significant increase in physician ability to make a clinical decision based on whether the telephone communication they received was SBAR driven. Based on survey driven data, it was found that physicians were able to make a clinical decision on 78% of calls that were determined to be SBAR driven. Of the 27 telephone calls audited that were not SBAR driven, physicians were unable to make a clinical decision in 25/27 of the calls. On a few of the calls audited, it was unable to be determined whether the call was SBAR driven. This was a large study, encompassing a 13 hospital system.

Other Positive Impacts

In a descriptive study, nursing administration described newly oriented nurses who had been trained on SBAR as progressing more rapidly toward skill mastery and the physicians interviewed indicated more confidence in the nurses based on telephone communications (Vardaman, Cornell, Gondo, Amis, Townsend-Gervis, & Thetford, 2012).

Andreoli, Fancott, Velji, Baker, Solway, Aimone & Tardif. (2010) found that numbers of falls did not decrease with SBAR use; they were unable to correlate actual safety with use of SBAR. The staff trained on SBAR developed greater safety awareness and scores on satisfaction surveys increased.

New residents were trained on the use of SBAR as a means of organizing their formal bedside report to attending physicians. With strong interrater reliability, two individual raters

judged the appropriate and relevant details conveyed to the attending before and after SBAR training, finding significant levels of improvement $p < 0.002$, and found improvements on multiple choice test scores $p < 0.0002$ for first year interns through senior residents (Mitchell, Lee, Arora, Kenney-Moore, Liem, Landry, Moneta, Sevdalis, 2013).

Teaching with the SBAR

Nursing students were randomly assigned lecture vs lecture plus role-playing to learn SBAR and were tested before and after on knowledge of SBAR. Kesten (2011) found statistically significant increases in knowledge in the lecture plus role-playing format ($p < 0.005$.) Fay-Hillier, Regan and Gordon (2012) used simulated patients who used SBAR to communicate their chief complaints and history of present illness, while the nursing students had an opportunity to use SBAR to communicate their perceptions of a given scenario. The nursing students reported feeling comfortable and confident using this format for structured communication. Although it was not an experiment or quasi-experimental study, the findings support the reports from the descriptive study by Vardaman et al., 2012. It also supports the role playing which was found to be important in Kesten (2011).

Synthesis

Using the SBAR has been shown to reduce errors in communication, facilitate clinical decisions on the part of providers and increase staff satisfaction with communications and awareness of safety. The SBAR sharpens the ability to present information in formal presentations and reduces errors in order entry. SBAR education has been shown to increase a healthcare provider's ability to make an informed decision regarding the care of a patient. It has not been shown to significantly affect the outcome of adverse events. The SBAR can facilitate

increased confidence in presenting situations to other healthcare providers and can expedite the orientation process. The best way to learn how to use the SBAR is a combination of didactic learning and active role-playing. The evidence relies mainly on weaker studies. No multicenter randomized control trials were found to champion this communication tool.

Implications for Practice

But while there are no major studies proving the SBAR results definitively in saving lives, evidence suggests that implementing the SBAR tool, especially by using a combined teaching technique of didactic and role-playing, could result in less communication errors, enhanced ability to appropriately address problems presented through telephone calls and increased staff satisfaction with interprofessional communication. Gaps in the peer reviewed literature include a lack of well-designed comparative effectiveness studies of the SBAR in nursing practice. There exists a promising and growing body of evidence on the use of SBAR driven communication to improve quality and safety in health care settings. It would therefore be warranted to implement the SBAR as a structured communication tool in an adult acute care facility to increase communication knowledge and satisfaction among nurses orienting to a healthcare facility.

References

Andreoli, A., C. Fancott, K. Velji, G. R. Baker, S. Solway, E. Aimone and G. Tardif. (2010).

Using SBAR to communicate fall risk and management in inter-professional rehabilitation teams... Situation-Background-Assessment-Recommendation. *Healthcare Quarterly* 13(1) 94-101. Retrieved online 10/5/2015 from <http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2010851012&site=ehost-live&scope=site>

Armola, R. R., et al., *Critical Care Nurse*, 2009 29(4), p. 7

Compton, J., Copeland, K., Flanders, S., Cassity, C., Spetman, M., Xiao, Y., and Kennerly, D.

(2012). Implementing SBAR across a large multihospital health system. *Joint Commission Journal on Quality & Patient Safety* 38(6) 261-268. Retrieved online 10/5/2015 from <http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2011576761&site=ehost-live&scope=site>

Fay-Hillier, T. M., Regan, R.V., and Gordon, M. G. (2012). Communication and patient safety in simulation for mental health nursing education. *Issues In Mental Health Nursing* 33(11)718-726. doi: 10.3109/01612840.2012.709585

Kesten, K. S. (2011). Role-Play using SBAR technique to improve observed communication skills in senior nursing students. *Journal of Nursing Education* 50(2)79-87. doi: 10.3928/01484834-20101230-02

Leape, L. (1994). Error in medicine. *Journal of the American Medical Association*. 272(23) 1851-1857.

Mitchell, E.L., Lee, D. Y., Arora, S., Kenney-Moore, P., Liem, T. K., Landry, G. J., Moneta, G.

L., Sevdalis, N. (2013). Improving the quality of the surgical morbidity and mortality conference: A prospective intervention study. *Academic Medicine: Journal of The Association of American Medical Colleges* 88(6) 824-830. Retrieved 9/15/2015 online from

<http://search.ebscohost.com/login.aspx?direct=true&db=cmedm&AN=23619062&site=ehost-live&scope=site>

Randmaa, M.G., Mårtensson, C., Swenne, L., and Engström, M. (2014). SBAR improves

communication and safety climate and decreases incident reports due to communication errors in an anaesthetic clinic: A prospective intervention study. *British Medical Journal Open* 4(1) e004268-e004268. doi: 10.1136/bmjopen-2013-004268

Telem, D. A., Buch, K. E., Ellis, S., Coakley, B., and Divino, C. M. (2011). Integration of a

formalized handoff system into the surgical curriculum: resident perspectives and early results. *Archives of Surgery* 146(1) 89-93. doi: 10.1001/archsurg.2010.294

Vardaman, J. M., Cornell, P., Gondo, M. B., Amis, J. M., Townsend-Gervis, M., and Thetford,

C. (2012). Beyond communication: The role of standardized protocols in a changing health care environment. *Health Care Management Review* 37(1) 88-97. Retrieved online 9/17/2015 from

<http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2011417725&site=ehost-live&scope=site>

Table 1

Inclusion and Exclusion Criteria for Articles in Literature Review

Inclusion Criteria	
-	Inpatient acute care setting; adult non obstetric population
-	Nurses/physicians as subjects
-	SBAR education/implementation
-	Outcomes measured
Exclusion Criteria	
-	Ambulatory setting; pediatric or obstetric population
-	Foreign language

Table 2

AACN Levels of Evidence (LOE)

LOE	Examples
Level A	Meta-analysis of multiple controlled studies or meta-synthesis of multiple qualitative studies with results that consistently support a specific action, intervention or treatment
Level B	Well designed controlled studies, both randomized and nonrandomized, with results that consistently support a specific action, intervention or treatment
Level C	Qualitative studies, descriptive or correlational studies, integrative reviews, systematic reviews, or randomized controlled trials with inconsistent results
Level D	Peer-reviewed professional organizational standards, with clinical studies to support recommendations
Level E	Theory-based evidence from expert opinion or multiple case reports
Level M	Manufacturers' recommendations only

Adapted from "AACN levels of evidence: What's new?" by R. R. Armola, et al., *Critical Care Nurse*, 2009 29(4), p. 7

Table 3

Summary of Included Articles

Reference	Design/ Method	Sample/ Setting	Major Variables/ Definitions	Measurement	Data Analysis	Findings	Level of Evidence
Andreoli, A., C. Fancott, K. Velji, G. R. Baker, S. Solway, E. Aimone and G. Tardif. (2010)	Pre posttest intervention Hospital Survey on Patient Safety Culture	1700 Hospital Survey on Patient Safety Culture sent (all staff of inpatient rehabilitation center with high number of falls); 31% of all responded to pretest and 33% of all responded to post test, 87% of target staff responded to pretest and 69% of target staff responded to post test	N/A	Safety and communications scores measured Falls, major and near misses measured	Staff indicated higher satisfaction in four dimensions of safety culture, including communication— true overall and especially in target group (the staff on the two floors with highest numbers of falls) No decrease in number of falls reported.	Staff pleased with SBAR use and continued using the form and found new uses for the form, such as transition of care and shift report.	C
Compton, J., Copeland, K., Flanders, S., Cassity, C., Spetman, M., Xiao, Y., and	152 RNs trained on SBAR and 155 MDs audited on whether they were able to make clinical	13 hospital system SBAR introduced to improve communications	Proficiency of RN use of SBAR (72.6% high proficiency), percentage of use by RN in critical communications	Surveys, audits	Increase in MDs able to make clinical decisions based on telephone communications from baseline	Communication improvements as already delineated	C

Kennerly, D. (2012)	decisions based on latest phone call		(58.3% self-report) % of MDs who stated they were able to make clinical decisions based on last call (78.1%); 25/27 calls that they were unable to make decisions on were not given in SBAR format				
Fay-Hillier, T. M., Regan, R.V., and Gordon, M. G. (2012)	Evaluating simulation as an appropriate method for introducing SBAR	Simulation by standardized patients giving feedback via SBAR format to enhance communication skills in nursing students during mental health nursing course. Nursing students also used SBAR format	N/A	N/A	N/A	Students "reported" feeling better about communicating via SBAR.	D
Kesten, K. S. (2011)	Instruction on SBAR randomly assigning one group to didactic only; other group to didactic plus roleplaying. Pre and posttest	Convenience sample of nursing students N=115; 91.3% female, random number generator assigned the two groups	Variables measured were scores on 5 component evaluation test on SBAR proficiency. Chi square on total test score as well	All groups improved pre to post test. A one tail t-test demonstrated a t=-2.6 or moderate effect of 0.56 p=.005 indicating that	←	Statistically significant results in instructing on SBAR with role-playing added to didactic	B

	design.		as individual items. T-test performed	role-playing plus didactic resulted in better overall test score			
Mitchell, E.L., Lee, D. Y., Arora, S., Kenney-Moore, P., Liem, T. K., Landry, G. J., Moneta, G. L., Sevdalis, N. (2013)	Implementation of SBAR and pre-posttest evaluation of competency in delivering rounding report by surgical residents as measured on a multiple choice questionnaire on comprehending the case Presenters (PGY3–8) included 24 surgical residents during the pre-intervention stage and 19 during the post-intervention stage	Evaluation of 66 rounding reports in surgical morbidity and mortality rounds. Convenience sample of med students and residents.	Variables are scores on faculty evaluation of presentation on a validated form with high interrater reliability before and after SBAR	User satisfaction scores and comprehension scores on multiple choice assignment as well as measures on presentation, e.g. how well did surgical resident comprehend what is needed next for patient...	Statistically significant as follows→	significant improvements in presentation quality for three sections— Background information, Assessment and root cause analysis, and Recommendations for preventing Future complication p<.002 overall, improvement on multiple choice test p<.0002 for all students, junior level and senior level residents alike	C
Randmaa, M.G., Mårtensson, C., Swenne, L., and Engström, M. (2014)	Pretest posttest design with secondary measures of incident reports	OR, PACU and other perioperative LPN and RNs in Dutch anesthesiology clinic 194 staff members altogether trained	ICU nurse-physician questionnaire and Safety Attitudes Questionnaire and Incident reports for one year prior to and	Scores on surveys and numbers of incident reports	Wilcoxon, Mann-Whitney, X2 and Fischer's tests used	Between group (RN-MD) communication improved significantly p<.001 Before intervention 33% of incident reports were from communication errors; after the	C

		on SBAR	one-year post intervention			intervention only 25% of incident reports were from communication errors p<.0001	
Telem, D. A., Buch, K. E., Ellis, S., Coakley, B., and Divino, C. M. (2011)	Pre and post intervention evaluation of sentinel events and errors in order entry 30 days prior and post intervention with comparison group who did not undergo training	45 surgical residents in academic dept.	Numbers of sentinel events, Numbers of errors at baseline (30 days prior to intervention), numbers of errors in order entry 30 days after intervention	Unpaired t test and chi square	No significant difference in sentinel events; 2.3% reduction in errors from baseline in order entry in intervention group p=.003 with no change in errors for group that did not receive SBAR training	Statistically significantly reduces errors in order entry—sentinel events too few to evaluate	C
Vardaman, J. M., Cornell, P., Gondo, M. B., Amis, J. M., Townsend-Gervis, M., and Thetford, C. (2012)	Qualitative case study	at hospitals in 80 semi structured interviews of 66 staff RNs, 9 nurse managers and 5 MDs	Interviews were codified, then categories emerged followed by themes	Interviews recorded, transcribed verbatim, mainly and extensive use of field notes used. No mention of using interraters.	4 dimensions emerged: schema formation, developmental legitimacy, development of social capital and reinforcement of dominant logics	in addition to finding that SBAR resulted in standardized communication, as intended, it had unintended positive consequence like rapidly establishing trust between RNs and MDs unfamiliar with one another and rapidly bringing new RNs up to speed with RNs of longer tenure	C

Manuscript 2

Implementing Didactic Plus Role-Playing Education with Nurses in an Inpatient Acute Care
Setting

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Abstract

Objectives: The objectives of this practice improvement project were to evaluate the knowledge about SBAR, a structured communication handoff tool, and satisfaction with interprofessional communication of nurses following education on the use of SBAR.

Background: Nurses are required to routinely communicate important medical information with a variety of healthcare professionals. The IOM estimates almost 100,000 medical errors a year occur and the Joint Commission posits that 70% of the root cause of medical errors stems from communication errors. The use of SBAR has been shown to have positive outcomes in reducing communication errors and is suggested for use by the Joint Commission. The use of role-playing in the education about SBAR has shown promise in increasing knowledge about handoff communication and satisfaction with interprofessional communications.

Materials and Methods: Nurses on a neuroscience telemetry floor were given an hour long education on SBAR which was given as a PowerPoint presentation followed by role-playing typical situations. Prior to the education, a baseline assessment of knowledge about SBAR handoff communication was given in a 10 question multiple choice knowledge test (MCKT). A 10 question Likert scale survey about satisfaction with interprofessional communication was also administered prior to the education. Lower scores on the survey indicate greater satisfaction with interprofessional communication. The same MCKT and survey were administered again one month after the education.

Results: 26 out of the 27 nurses (96% female) completed the study through the conclusion. Mean score of the MCKT was 8.33 [SD=1.00] for the group prior to the education with an insignificant increase to 8.50 [SD=.997] after the education $p=.545$. Mean overall score of the survey prior to the education was 28.56 [SD=3.12] and mean overall score of the survey after the education decreased to 26.62 [SD=3.87] $p<.05$. 9/10 of the survey questions showed no statistically significant change except item 10 which asked each nurse if they were overall satisfied with their job: before education mean score for item 10 was 1.96 [SD=.587] and after education was 1.62 [SD=.496] $p<.05$.

Conclusion: Although there was an increase in mean scores of the MCKT, it was not statistically significant. There appeared to be an increase in satisfaction with interprofessional communication overall and job satisfaction in particular, however, limitations of the study design do not permit concluding that the SBAR education accounted entirely for this change.

Background of SBAR

It has been reported in the Institute of Medicine (IOM) publication *To Err is Human* that every year there are almost 100,000 deaths in hospitals due to medical errors (Leape, 1994). The evidence from Leape, 1994 is based on data from the 1980's. A more recent systematic review of the literature focusing on data from 2008 through 2011 revealed 210,000-400,000 estimated deaths in hospitals due to preventable adverse events (James, 2013). The Joint Commission has listed communication error as the root cause of 70% of sentinel events including deaths for the past 15 years (The Joint Commission, 2014).

To reduce communication errors on nuclear submarines, the Situation Background Assessment Recommendation (SBAR) technique was developed for communication handoffs (Eberhardt, 2014). Seeing the value of SBAR in the Navy, the Kaiser Permanente Healthcare system adapted it for use in the healthcare setting in the 1990's (Renz, Boltz, Wagner, Capezuti & Lawrence, 2013).

Impact on errors due to communication. Randmaa, Martensson, Swenne and Engstrom (2014) conducted a pre-test post-test quasi-experimental study that evaluated safety attitudes and percentage of incident reports due to communication errors for one year prior to and one year after implementing a comprehensive training program on using SBAR for communication. The percentage of incidence reports due to communication errors decreased from 33% of all reports to 25% of all reports with a $p < .001$. In Telem, Buch, Ellis, Coakley and Divino (2011) the researchers measured sentinel events and errors with medical order entry in 45 surgical residents before and after SBAR training and against a group who had not received training. A 2.3% reduction ($p = .033$) in medical order entry errors was found in the SBAR group. Too few sentinel events occurred for analysis.

Impact on provider ability to make clinical decisions. Compton, et al. (2012) found a significant increase in physician ability to make a clinical decision based on whether the telephone communication they received was SBAR driven. They were able to make a clinical decision on 78% of calls that were SBAR driven but unable to make decisions based on 93% of phone calls that were not SBAR driven.

Other positive impacts. Newer nurses who were unfamiliar with the providers reported more confidence in reporting situations. In the same descriptive study by Vardaman et al. (2012), nurse managers supervising the new nurses reported the new nurses were communicating more effectively and at a rapid pace compared with previous cohorts and physicians reported higher trust in this cohort of new nurses compared with other cohorts. Another study involving training surgical residents to use SBAR forms for morbidity and mortality rounds found significant improvements in presentation quality as measured by independent raters ($p < .002$) and found improvements on multiple choice test scores ($p < .0002$) for the students independent of years of residency (Mitchell, et al., 2013).

Teaching with SBAR. Kesten (2011) demonstrated clearly that having students learn SBAR by using didactic plus role-playing resulted in higher proficiency at using SBAR versus didactic alone based on test scores ($p < .005$). These findings were duplicated in a large randomized control trial with Taiwanese nursing students. The experimental group (didactic plus role playing) had higher competency of communication scores than the control group (didactic alone) with a $p < .001$ (Li-Ling, Wen-Hui & Suh-Ing, 2015). Confidence and satisfaction were increased in nursing students who used SBAR in a simulation/role playing implementation as demonstrated by Fay-Hillier, Regan and Gordon (2012).

Despite the IOM and Joint Commission's strong recommendations to use SBAR (Appendix A) for telephone and handoff communications, no formal training was in place at a small, tertiary acute care hospital in the Southeastern U. S. This constituted a gap between best practices recommendations and actual use. It was for this reason that this practice improvement project was proposed. It is termed a practice improvement project to incorporate SBAR into the formal training for nurses in the hospital settings to improve communication, satisfaction, and reduce errors. Closing the evidence-practice gap constituted the practice improvement.

Purpose

The purpose of this evidence based practice improvement project was to implement a didactic plus role-playing SBAR training with nurses on a medical surgical floor of a 118 bed tertiary acute care hospital in the Southeastern U. S. The goal was to achieve 80% participation in this project. One objective of the project was to assess learning by measuring scores on a multiple choice knowledge test before and after the educational training. The goal was to see an increase in mean test scores. The other objective was to assess the nurses' satisfaction with communication by measuring scores on a communication satisfaction survey before and after the training. The goal was to see an increase in overall satisfaction with communication.

Methods

Design

This descriptive study was an evidence based practice improvement project that utilized a pre and posttest measurement of knowledge and satisfaction to assess the effectiveness of SBAR education on knowledge of SBAR and satisfaction with interprofessional communication. Effectiveness of teaching was measured by a multiple choice knowledge test

(MCKT) (Appendix B). Effects on the satisfaction with communication and collaboration were measured in nurses with an abbreviated form of a validated survey (Appendix C) with permission from the author.

During the last week of March of 2016 over a period of 7 days, the nurses of a neurology focus medical surgical floor participated in a one-hour educational training session on SBAR. Just prior to the education, a pretest of knowledge (MCKT) was administered and a survey of satisfaction was administered. 27 nurses participated in small groups of 6 or less in 6 separate sessions offered at various times of the day and evenings and on the weekend. After four weeks elapsed, during the last week of April over the course of 7 days, the nurses were approached in small groups to complete the posttest MCKT and post survey of satisfaction. This also occurred at various times of the days and at night and during the weekend during slower times of the nurses' shifts. 26 of the original 27 nurses participated; one nurse was unable to participate in follow up due to maternity leave.

Timeline of Project

March 21-March 27, 2016
Pre test (before education)
Pre survey (before education)
Education

March 28-April 23, 2016
(approximately four weeks)

Posttest
Post survey
April 24-April 30, 2016

Measures

MCKT. To assess whether teaching (the practice improvement) had an impact on the nurses, a 10 question MCKT about SBAR was given before and after the education. This test, while not empirically validated, has been utilized successfully by Sharp HealthCare in San Diego (Sharp HealthCare, 2007). The test contained 10 multiple choice questions about understanding the purpose of SBAR (subscale) (questions 1-4) and the application of SBAR (subscale) (questions 5-10). Range of scores could be as low as 0/10 to as high as 10/10. The same identical test was administered before and 4 weeks after the education. The overall mean and standard deviation was calculated for the entire group of nurses prior to education and after the education.

Survey. The Short Version ICU Nurse-Physician Questionnaire (ICUNPQ-SV) was selected to measure the level of satisfaction with interprofessional communication before and one month after the educational program among the full time registered nurse staff of the neurology unit of a small, Southeastern U.S. hospital. The ICUNPQ-SV has been validated in hospital settings. Cronbach alphas calculated for between group and within group generally exceeded .70 in almost all scales, frequently in the .87 range. Convergent and discriminant validity were reported as three identified factors with high internal consistency with factor loading exceeding .40 and eigenvalues reported higher than 1.0. Analysis of between vs within groups revealed such correlations in within group responses that a group's values could be predicted by an individual's responses. The instrument was modeled after a widely researched instrument of work culture: The Organizational Culture Inventory (Shortell, 1991). Permission was sought and received to use the instrument and to modify it for the purposes of this study (Appendix F).

The questionnaire was a 10 question, 5 point Likert scale with 4/10 questions reverse coded (items 6, 8, 9 and 10) to reduce acquiescence bias. Strongly Disagree=1, Disagree=2, Neither Disagree Nor Agree=3, Agree=4 and Strongly Agree=5 points. After reverse coding, higher scores would correspond to a more negative attitude toward satisfaction with interprofessional communication and likewise a lower score would correspond with greater satisfaction with interprofessional communication.

Scales on the ICUNPQ-SV that were selected for this abbreviated version were: Communication, Team Cohesion and Job Satisfaction. Items 1-3 were Communication questions with the subscale of within group accuracy with a reliability given as Cronbach's α of .78. Items 4 and 5 were Communication questions with the subscale of between group (nurse to physician) with a reliability given as α of .88. Item 6 was Communication scale; between group openness with α .88. Item 7 was a Communication scale; between group understanding subscale with α of .86. Item 8 was a Communication scale; timeliness of communication subscale with α of .64. Item 9 was Team Cohesion scale; perceived effectiveness subscale with α of .76 (Shortell, 1991). Item 10 was Job Satisfaction scale; overall job satisfaction subscale. Internal consistency of single item overall job satisfaction question is α of .92 and has a concurrent validity of $r=.82$ (Dolbier, Webster, McCalister, Mallon, & Steinhardt, 2005). The possible range of scores for this instrument ranged from 10/50 to 50/50. Lower scores indicate greater satisfaction with interprofessional communication and higher scores indicate greater dissatisfaction with communication. Means and standard deviations of overall survey scores before and after the education were measured. Means and standard deviations of individual item scores for the group were calculated for both the before and after education surveys.

Education intervention. SBAR education was implemented via one hour didactic plus role-playing simulation. Specifically, there was a 10-minute PowerPoint presentation (Appendix D) introducing SBAR, why it is important, how to use it and when to use it. To allow for active participation of the participants, there was a maximum of 6 nurses per class. Immediately following the PowerPoint presentation, five scenarios were provided. The subjects had access to blank paper copies of the SBAR (Appendix A) form to complete (based on information from the scenarios) and were called upon to role-play telephoning a physician in four scenarios and handing off a patient to a nurse unfamiliar with the patient in one scenario. While attending the education was mandatory for all of the neurology medical/surgical floor nurses (and compensated) the participation in (pre and post) test of knowledge and satisfaction with communication (pre and post) was strictly voluntary for the nurses and the first 10 minutes were spent carefully explaining this and obtaining informed, written consent.

Setting

The study occurred during March and April of 2016 at a 118 bed tertiary, acute care hospital in the Southeastern U. S. using a convenience sample of the nursing staff of a 24 bed neurology medical/surgical floor. Six didactic educational class sessions were offered over the course of 7 days at the end of March. All shifts and weekends were included. Follow up occurred with PI returning to the neurology floor during slower work times to administer the posttest and post survey over the course of one week in April, approximately 4 weeks after the SBAR education on several different shifts. Tests and surveys were collected, shuffled and placed in a secure, sealed envelope to ensure that nobody, not even the PI, knew the identity of the test takers. All tests and all surveys were administered in the presence of PI and each subject was undisturbed while completing the items.

Population

A convenience sample of registered nurses employed on a progressive neurological floor at a small, tertiary, acute care hospital in the Southeastern U. S. was the population for this study. Ages ranged from 22 to 55. There were 31 full time nurses on this floor. 30/31 were female; 1/31 was male. 3/31 nurses were born outside the United States, but spoke English fluently and were fluent in Western and, particularly, Western/US culture. 3/31 nurses were Asian; the remaining 28/31 were White. One nurse was on vacation and one was on medical leave during the education and were unable to participate. One nurse participated in the education, but not the follow up a month later due to maternity leave. Two nurses did not elect to participate due to schedule conflicts, leaving n=27 participating in the education. All of the nurses who participated in the pre-test and pre-survey, participated at follow up, except the nurse on maternity leave, leaving n=26 at follow up. 26/27 of the participants were female; 24/26 of the females were White. 2/24 females were Asian and the one male nurse was White. The nurse who did not participate in the follow up was a White female. 9/27 nurses who participated had greater than one year of experience; 18/27 had less than one year of experience.

Protection of Subjects

Prior to the start of the project, permission was sought and received from the Institutional Review Board of the University of Kentucky. Permission was sought and received from the IRB of the tertiary hospital. Permission was sought and received from the manager of the neurology floor and the Chief Nursing Officer of the hospital. Informed written consent was sought and received from each of the subjects prior to the start of the study.

Results

The questionnaire contained questions of a sensitive nature, such as satisfaction with coworker ability and job satisfaction and was administered in small groups. To maintain the strictest of confidence and safeguard anonymity, an independent comparison of means was performed for the surveys and tests rather than a repeated measure. An independent samples t-test was performed with SPSS v 22.0. Significance was set at $p < 0.05$.

On the MCKT, the difference between the mean scores for the pre and post tests for the two groups overall were 8.33 [SD=1.00] and 8.50 [SD=.99] out of 10 points possible which was not significant at $p=0.55$ (Table 1).

An independent samples t-test was conducted on the overall mean of the total group scores of the survey (the grand total of all points possible) before the education and on the overall mean of the total group scores one month later. Range of scores could have been as low as 10 or as high as 50. The mean for the overall total survey scores before education was 28.56 [SD=3.12] and 26.62 [SD=3.87] after education. This difference was significant at $p=.049$ (Table 2). Equal variance was assumed, since the two groups were identical in makeup except for one nurse absent on leave in the follow up. Based on how items were scored, a lower score meant higher satisfaction with communication and a higher score indicated dissatisfaction.

An item by item means comparison was conducted using the independent samples t-test. No single item showed significant improvement except for item 10 which asked the subjects to indicate overall job satisfaction. Possible range for this item was a low of 1 to a high score of 5. Pre survey mean score for this item was 1.96 [SD=.59] and post survey mean score for this item was 1.62 [SD=.50] with $p=.024$. Individual item analysis in Table 3.

Discussion

Although the mean score of tests of knowledge went up, it did not do so significantly. The objective of increasing knowledge about SBAR was not met. Overall satisfaction with interprofessional communication did increase as did job satisfaction. The objective of increasing satisfaction with interprofessional communication was met. This section also explores the results in context of the studies in the literature review.

As with Telem et al. (2011), too few sentinel events occurred during the four week time following the study to evaluate. Unlike the study with Telem et al., (2011), this study did not review physician order entry. In their study, they found that following SBAR training of surgical residents in an inpatient acute care setting, the number of physician order errors was reduced significantly. While the Telem et al. (2011) study supported the strength of SBAR in improving communication of physicians with nurses and with other physicians, it did not address directly knowledge of SBAR or satisfaction with communication.

Randmaa, et al. (2014) conducted SBAR training for perioperative nurses in an acute care setting. As with this study, they used the ICUNPQ survey. Their findings differed from the findings here in that there was a statistically significant increase in between group (nurses and physicians) satisfaction with communication $p < .003$. This study found statistically significant increase in overall job satisfaction $p = .024$. An analysis of errors for the Randmaa, et al. (2014) study also concluded that the percent of errors due to communication decreased significantly ($p < .001$).

In the Compton, et al. (2012) study, they reported physicians were able to make a clinical decision on 78% off calls that were SBAR and unable to make good clinical decisions on 93% of

phone calls that were not SBAR driven. This evidence based project did not assess percent of time nurses used SBAR nor physician attitudes or abilities, rendering a valid comparison not possible.

The Vardaman et al. (2012) qualitative study examined positive effects on new nurses more rapidly establishing confidence in communicating with physicians and establishing trust from the physicians. In contrast, this project did not directly assess physicians and their opinions about trust, but it did examine overall satisfaction with communication. The results were an overall statistically significant increase in satisfaction with communication, $p=.049$. During the follow up posttest and post survey, several of the nurses spontaneously expressed that going through the SBAR training helped them “feel more organized,” “feel more confident about what I want to talk to the doctor about,” and “feel less scared to call the doctors at night.” These findings were consistent with findings from Fay-Hillier et al. (2012) who interviewed nurses following SBAR training and use of simulated patients. Although this study was not a qualitative design, those were common themes emerging and while it cannot be posited to support the Vardaman et al. (2012) study or Fay-Hillier et al. (2012) report, the statements given do not contradict the findings.

Mitchell et al. (2013) examined both knowledge about SBAR in the context of giving report, with statistically significant improvement shown in learning on a MCKT $p<.0002$ and had raters independently rate surgical residents and medical students on quality of reporting based on SBAR format, showing statistically significant improvements in reporting Background, Assessment and Recommendation $p<.002$. This study involved nurses, not surgical residents as the Mitchell et al. (2013) study did and did not have raters evaluate the nurses using SBAR for comparison. The Mitchell et al. (2013) study showed a much greater learning effect, for while

the mean scores on the SBAR MCKT rose after the education, it did not do so in a statistically significant way. The nurses mentioned that they had all heard of SBAR in nursing school, so SBAR, which has been introduced several years ago, was not unfamiliar to them. It raises questions about whether SBAR was introduced in the medical schools represented in the Mitchell et al. (2013) study or whether SBAR was novel to the medical students and junior residents.

The preceding studies explored effects of SBAR and instruments to measure knowledge and communication satisfaction with SBAR use. The remaining two studies included in the literature review explored how best to teach SBAR to nursing students and nurses. Both of them concluded that a didactic presentation along with role-playing was superior to didactic presentation alone. Kesten (2011) found the group with didactic plus role-playing learned better than those in the didactic only group $p < .005$ and Li-Ling et al. (2015) repeated these findings with a multihospital randomized control trial $p < .001$. Based on these findings, the education format of didactic plus role-playing was selected for this project design. The findings of this project did not reveal a statistically significant increase in knowledge and no control group of didactic only was employed in this study design.

This study design did not find a statistically significant increase in learning as evidenced on scores on a MCKT. Several factors could be at play. The nurses may have had a great deal of exposure to SBAR in school compared to the other study groups. Not using a repeated measures design may have hampered finding small, statistical differences. Using class times that were convenient to the subjects (immediately preceding or following shifts) may not have been conducive to learning. The instrument used may not have been ideal. It had not been empirically validated and extensive searches did not discover any empirically validated

instruments to assess knowledge as a proxy for learning the concept of SBAR. The error may have lied in the PowerPoint presentation or with the presenter. The sample size was very small (n=27) which makes finding a statistically significant difference all the more difficult. The cause may have been multifactorial, involving any combination of the possible causes listed and other causes not listed.

As a group, overall, the mean total score on the satisfaction survey decreased from before the education to after education, resulting in a statistically significant finding of an overall increase in the satisfaction with communication $p=.049$. Item by item analysis demonstrated one measure, overall job satisfaction increased $p=.024$. The small sample size of this practice improvement project, the lack of control groups, the relative homogeneity of the subjects (93% white females) render the findings of this study to be not generalizable to the general population of nurses. Even if the findings were generalizable, it is not clear that the education was the reason for increase in satisfaction. During the week of follow up, acuity of patients could have been lower or staffing could have been better than during the week of the education. The physicians on call during the follow up week may have had better rapport with the nurses than the physicians on call during the week of the education. The setting of the follow up was during slow times on the shifts of the nurses, as opposed to the pre survey, pretest and education, which were scheduled at times just prior to or immediately following shifts (although some nurses elected to come in on their days off to participate rather than extend their shifts an hour.) The cause for increase in satisfaction may have been an actual increase in satisfaction or one or more of the listed reasons or for reasons not known and may be multifactorial.

Strengths

Using a validated survey was a strength. Having the full support of management to conduct the project was a strength. Upon learning that anonymity would be guarded carefully, 100% of the nurses who attended the education session which was mandatory participated in the data collection, which was voluntary. 100% minus the nurse on maternity leave participated in the follow up.

Limitations

The selection of prioritizing privacy over statistical significance in selecting independent vs repeated measures tests for differences in means meant a lower likelihood of detecting a significant difference. The results would be more meaningful, not only with more subjects, but assigning them randomly to different conditions, such as education without role-playing.

Recommendations

While the results are mixed, an expansion of the pilot, increasing the number of subjects and perhaps selecting the paired t-test would yield more definitive results. Because of the possibility that unknown variation existed in presenting the didactic or role-playing material, it is possible that adhering closer to emphasizing test items and standardizing the teaching element, as with a brief video, might result in greater increases in test scores. The addition of independent raters with high interrater reliability to assess quality of and compliance with use of SBAR might strengthen findings. Several of the nurses suggested it would be a worthwhile addition to hospital orientation classes.

Conclusions

The primary objective was to implement a didactic plus role-playing education on the use of the structured communication tool known as SBAR and to have 80% of the staff participate. Of the 31 nurses available to participate only 27 actually did resulting in 87% participation, meeting the goal of the main purpose. The first objective was to demonstrate an increase in knowledge by showing improvement in the mean MCKT test scores after the education compared with before the education. Although the mean MCKT test scores did increase from 8.33 before the education to 8.50 after the education, this was not statistically significant ($p=.55$). The objective of increased learning was not met. The second objective of this practice improvement project was to assess change in satisfaction with interprofessional communication. The goal was to see an increase in overall satisfaction with communication. Not only was this goal met, $p=.049$, but there was also an increase in overall job satisfaction, $p=.024$.

The findings of the study did not match some of the outcomes of studies in the literature review, in that previous studies found statistically significant increases in learning after the implementation of SBAR training, particularly when it was didactic plus role-playing. The findings of this study did match some previous studies in showing some increases in satisfaction with communication, including one study, Randmaa, et al. (2014), that used the same instrument (ICUNPQ). While some findings showed statistically significant changes, it would not be correct to conclude causation since other, unknown factor(s) could explain greater satisfaction with interprofessional communication and increased job satisfaction, such as fluctuating work environment or different testing environment. Finally, it would not be possible to generalize the findings due to the small sample size and study design. That being said, the findings do suggest

that a larger study would likely be beneficial, especially for newer nurses, such as those orienting to the hospital.

References

- Andreoli, A., C. Fancott, K. Velji, G. R. Baker, S. Solway, E. Aimone and G. Tardif. (2010). Using SBAR to communicate fall risk and management in inter-professional rehabilitation teams... Situation-Background-Assessment-Recommendation. *Healthcare Quarterly* 13(1) 94-101. Retrieved online 10/5/2015 from <http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2010851012&site=ehost-live&scope=site>
- Compton, J., Copeland, K., Flanders, S., Cassity, C., Spetman, M., Xiao, Y., and Kennerly, D. (2012). Implementing SBAR across a large multihospital health system. *Joint Commission Journal on Quality & Patient Safety* 38(6) 261-268. Retrieved online 10/5/2015 from <http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2011576761&site=ehost-live&scope=site>
- Dolbier, C. L., Webster, J. A., McCalister, K. T., Mallon, M. W., & Steinhardt, M. A. (2005). Reliability and validity of a single-item measure of job satisfaction. *American Journal of Health Promotion*, 19(3), 194-198.
- Eberhardt, S. (2014). Improve handoff communication with SBAR. *Nursing2015*, 44(11), 17-20. doi: 10.1097/01.NURSE.0000454965.49138.79
- Fay-Hillier, T. M., Regan, R.V., and Gordon, M. G. (2012). Communication and patient safety in simulation for mental health nursing education. *Issues in Mental Health Nursing* 33(11)718-726. doi: 10.3109/01612840.2012.709585

- James, J. T. (2013). A new, evidence-based estimate of patient harms associated with hospital care. *Journal of patient safety*, 9(3), 122-128. doi: 10.1097/PTS.0b013e3182948a69
- Joint Commission. (2014). Hot topics in health care. Transitions of care: the need for a more effective approach to continuing patient care. 2012. Retrieved online 1/18/2016 from https://www.jointcommission.org/assets/1/18/Hot_Topics_Transitions_of_Care.pdf
- Kesten, K. S. (2011). Role-Play using SBAR technique to improve observed communication skills in senior nursing students. *Journal of Nursing Education* 50(2)79-87. doi: 10.3928/01484834-20101230-02
- Leape, L. (1994). Error in medicine. *Journal of the American Medical Association*. 272(23) 1851-1857.
- Mitchell, E.L., Lee, D. Y., Arora, S., Kenney-Moore, P., Liem, T. K., Landry, G. J., Moneta, G. L., Sevdalis, N. (2013). Improving the quality of the surgical morbidity and mortality conference: A prospective intervention study. *Academic Medicine: Journal of The Association of American Medical Colleges* 88(6) 824-830. Retrieved 9/15/2015 online from <http://search.ebscohost.com/login.aspx?direct=true&db=cmedm&AN=23619062&site=ehost-live&scope=site>
- Randmaa, M.G., Mårtensson, C., Swenne, L., and Engström, M. (2014). SBAR improves communication and safety climate and decreases incident reports due to communication errors in an anaesthetic clinic: A prospective intervention study. *British Medical Journal Open* 4(1) e004268-e004268. doi: 10.1136/bmjopen-2013-004268

- Renz, S. M., Boltz, M. P., Wagner, L. M., Capezuti, E. A., & Lawrence, T. E. (2013). Examining the feasibility and utility of an SBAR protocol in long-term care. *Geriatric Nursing, 34*(4), 295-301. doi: 10.1016/j.gerinurse.2013.04.010
- Sharp HealthCare. (2007). Communication Using the SBAR Model. December, 2007. Retrieved online 9/2/2015 from <http://www.sharp.com/instructors-students/upload/SBAR-Self-Learn.pdf>
- Shortell, S. M., Rousseau, D. M., Devers, R. R., Simons, K. J. and Tony, L. (1991). Organizational Assessment in Intensive Care Units (ICUs): Construct Development, Reliability, and Validity of the ICU Nurse-Physician Questionnaire. *Medical Care 29*(8) 709-726. doi: 10.2307/3766099
- Telem, D. A., Buch, K. E., Ellis, S., Coakley, B., and Divino, C. M. (2011). Integration of a formalized handoff system into the surgical curriculum: resident perspectives and early results. *Archives of Surgery 146*(1) 89-93. doi: 10.1001/archsurg.2010.294
- Vardaman, J. M., Cornell, P., Gondo, M. B., Amis, J. M., Townsend-Gervis, M., and Thetford, C. (2012). Beyond communication: The role of standardized protocols in a changing health care environment. *Health Care Management Review 37*(1) 88-97. Retrieved online 9/17/2015 from <http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2011417725&site=ehost-live&scope=site>

Table 1

Means and Standard Deviations for the Group Total Scores on the MCKT

Variable	N	M	SD	<i>t</i>	<i>p</i>
Total Group Score					
Before education	27	8.33	1.00	-.61	.55
After education	26	8.50	.99		

M = mean; SD = standard deviation

Table 2

Means and Standard Deviations for the Group Total Scores on the ICUNPQ-SV

Variable	N	M	SD	<i>t</i>	<i>p</i>
Total Group Score					
Before education	27	28.56	3.12	2.01	.049
After education	26	26.62	3.87		

M = mean; SD = standard deviation

Table 3

Means and Standard Deviations for the Individual Survey Items on the ICUNPQ-SV

Variable	N	M	SD	<i>t</i>	p
Question 1					
Before education	27	3.74	.71	1.52	.14
After education	26	3.42	.81		
Question 2					
Before education	27	3.56	.93	.99	.33
After education	26	3.31	.88		
Question 3					
Before education	27	2.85	.77	.55	.58
After education	26	2.73	.83		
Question 4					
Before education	27	3.07	1.07	.56	.58
After education	26	2.92	.89		
Question 5					
Before education	27	3.11	.80	.32	.75
After education	26	3.04	.87		
Question 6					
Before education	27	2.93	1.00	.82	.42
After education	26	2.69	1.09		
Question 7					
Before education	27	3.56	.80	1.21	.23
After education	26	3.27	.92		
Question 8					
Before education	27	1.93	.55	.26	.79
After education	26	1.88	.59		
Question 9					
Before education	27	1.85	.77	.66	.51
After education	26	1.73	.53		
Question 10					
Before education	27	1.96	.59	2.32	.024
After education	26	1.62	.50		

M = mean; SD = standard deviation

Manuscript 3

Facilitating the Transition of Veterans with Healthcare Experience into Related Civilian Fields

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Executive Summary

Conceptual Framework

- Kingdon Policy Model
- Transformational Leadership Model

Problem Stream

- Projected shortfall of 765,000 allied healthcare professionals by 2022
- Approximately 1 million veterans projected to return home within 5 years
- Current veteran unemployment rate nearly 10%; greater than civilian rates
- Veterans with experience face many obstacles attempting to transition to similar civilian jobs, forcing them to take lower paying positions or face unemployment

Political Stream

- House of Representatives just passed H. R. 1818 Veteran Emergency Medical Technician Support Act of 2015
- Senate currently reviewing it and its Senate counterpart S. 453 in committee
- Several states have begun legislation efforts to help veterans transition
- White House has conducted research and issued ideas and suggestions
- National Governors Association has convened and made recommendations
- National and state mood favors assisting veterans at this time

Policy Stream

- 20 colleges and universities have taken initiative and started programs designed to help veterans overcome obstacles, but there are over 4,700 who have not yet begun
- A few state boards have elected to reconsider policy on accepting previous military experience and training
- There still exists a knowledge gap for key stakeholders who hold influence in shaping policy at academic, board certifying and state and federal legislative levels

Proposal

- Construct informational brochure
- Disseminate to key stakeholders
- Lobby certifying bodies and academic institutions

Transitioning Veterans into Civilian Healthcare Positions

The military has a need for and makes use of healthcare personnel, just as civilians do. While there exists much overlap in the titles and positions of these workers, there are some differences, as well. The military employs physicians, registered and practical/vocational nurses, physician assistants and paramedics. Additionally, they have, out of necessity, created the role of medic (Army) and corpsman (Navy). The closest analog to the medic or corpsman would be a high level paramedic, or perhaps physician assistant, since their scope of practice permits them to prescribe and administer certain medications, intubate, set fractures and suture wounds, for example. Medics and corpsmen receive training from their respective military branches and are often sent into the battlefield with the expectation that they will triage and give emergency treatment. The military also employs ambulance drivers who possess varying degrees of paramedic expertise. Very often, when these soldiers and sailors return home after serving their country, they are met with obstacles to becoming employed in similar healthcare fields.

Projected Shortage in Healthcare

Growth in nursing and emergency medical technician fields stateside is expected to grow 25% (Bureau of Labor Statistics (BLS), 2015). It is anticipated that Emergency Medical Technician (EMT) need from 2012 to 2022 will be 55,300 (BLS, 2015). An increase in need for Licensed Practical Nurses (LPNs) from 2012 to 2022 is expected to be 182,900 (BLS, 2015) while an increase in need for Registered Nurses (RNs) from 2012 to 2022 is projected to be 526,800 (BLS, 2015). In all, the Bureau of Labor Statistics projects need for 765,000 allied healthcare professionals (BLS, 2015).

Veteran Unemployment

The unemployment rate of Gulf War II veterans is 9.9% compared to 7.9% non-veterans of the same age group (BLS, 2012; Plumer, 2013). Approximately one million service members will be seeking employment in the next five years as tours of duty overseas come to a conclusion (Appelbaum, 2012). One million returning veterans with high unemployment is contrasted with a 765,000-person shortfall. The US Military trains 12,500 combat medics annually, including the Navy Corpsmen (Lynch, 2012). 12,500 medics times 15 years since 9/11/01 makes 187,500 highly trained and experienced healthcare professionals.

Gap Between Military Training and Civilian Requirements

Veterans returning to the United States after combat discover that the training they received in the military is not accepted by universities and state licensing boards in the field of nursing and for paramedics (National Governor's Association (NGA), 2013). As a result, veterans are faced with having to take, and in some cases, re-take courses for which they have already demonstrated mastery. There is a lack of skills verification and communication between licensing boards and medic training in the military (NGA, 2013). Veterans are faced with having to enroll in the full course of pre-requisite and core curriculum courses, which consumes their time and money (NGA, 2013). Other obstacles that veterans face include getting the GI Bill to pay for their tuition. It isn't always clear which technical and academic programs are approved by the GI Bill (NGA, 2013).

Initiatives to Bridge the Gap

Federal Legislative Initiatives

In February of 2015, Rep Adam Kinzinger (R)-IL introduced H. R. 1818 Veteran Emergency Medical Technician Support Act of 2015 and Sen Bill Cassidy (R)-LA introduced S. 453 Veteran Emergency Medical Technician Support Act of 2015. As of May 16, 2016, the House of Representatives passed the legislation which directs Health and Human Services to facilitate streamlining state licensing requirements for emergency medical technicians with military service as such. S. 453 went into committee soon after introduction and H. R. 1818 was sent to the Senate, was read and sent to committee on May 16th, 2016 (Congress, 2016). Previous efforts to assist veterans to transition to comparable fields have been in the forms of S. 492 and S. 495, both proposed in 2013 and both ended in committee. Those two proposals were considered overly ambitious at best and imposing on the 10th Amendment at worst by mandating state licensing bureaus to accept federal standards and, thus, authority.

State Legislative Initiatives

A number of states have taken initiative to facilitate veteran transition to civilian fields, especially healthcare. As of 2013, 20 states have enacted bills attempting to facilitate veteran medic transitions to healthcare professions and 16 others had bills in progress (EOP, 2013). An extensive review of available online sources on 12/8/15 and again on 5/17/2016 revealed only one update, and that was that California, per the CA Health and Safety Code-Division 2.5 EMS [1797.210], is permitting military pre-hospital transporters to sit for the EMT-basic exam without the time and expense of classes unless refresher courses are desired. Colorado was one of the first states to require certifying boards to acknowledge and give credit for courses and experience

in the military in 2011, followed by Washington, also in 2011 and Oklahoma in 2012 (EOP, 2013).

Academic Initiatives

In Michigan, Lansing Community College has implemented the Military Medic to Paramedic Program in response to MI Governor Rick Snyder's vision to fast track veterans to meaningful employment. It has gone on to partner with Michigan State to offer a bridge curriculum with the College of Nursing, such that courses offered toward the Paramedic training count towards the BSN-RN degree, if so desired, often in less than 2 years. This program has enjoyed great success and satisfaction from vets who have matriculated (Maloy, 2014). In Arizona, GateWay Community College fast tracks medics and corpsmen into LPNs (NGA, 2013). Universities in Illinois offer a course to Army, Navy and Air Force medics which provides the curricula not addressed in military training at which point the Illinois Board of Nursing allows these veterans to sit for the NCLEX-PN (NGA, 2013). On 9/11/15, the University of Kentucky announced receiving a 3 year grant from Health Resources and Services Administration (HRSA) to help veteran medics undergo training to become baccalaureate prepared registered nurses headed by professor Frances Hardin-Fanning, Ph.D., RN (University of Kentucky College of Nursing, 2015). One of the professed goals of this program is to eliminate unnecessary courses and decrease time-to-matriculation.

Executive Initiatives

The White House was first to publish an executive initiative. The Executive Office of the President (EOP) drafted The Fast Track to Civilian Employment: Streamlining Credentialing and Licensing for Service Members, Veterans, and their Spouses. Published in Feb of 2013, it

summarized the culmination on research into the problem of why veterans were not successfully becoming gainfully employed in comparable fields upon discharge. The National Governor's Association Center for Best Practices (NGACBP) convened and produced a whitepaper in November of 2013 which used the data gathered from the EOP and came up with an 8-point plan to remedy the problems.

Summary of 8-point Plan

The eight point plan by the NGA begins with clearly defining veteran for the purpose of the plan, suggests cutting federal bureaucratic red tape, promotes collaboration and cooperation between federal agencies by enhancing communication, maintaining accurate and up to date records in a central location on veterans, reducing redundancies and inefficiencies in the system to save money, reporting quarterly to Congress and the Administration about claims statuses and setting aside funds for critical training, such as healthcare. It also endorses aligning federal and military training to be more in line with state and other civilian standards and expectations and promotes assisting veterans by streamlining language and expectations regarding use of funds such as the GI bill (NGACBP, 2013). Short of infringing on the States' Constitutionally protected rights to govern licensing, the plan strongly encourages the states to adopt a more open and flexible stance on assisting veterans to achieve the goal of obtaining licensing for healthcare jobs and suggests educational outreach to the states (NGACBP, 2013).

Policy Options

According to Kingdon's Stream Theory, three essential items must be in place for policy to change: a problem stream, a policy stream and a political/legislative stream (Kingdon, 1997). The problem stream is defined here as the gap between medically trained returning veterans and

the ability to obtain meaningful employment in analogous civilian fields. The policy stream has been established by the leadership in the executive branches of the states and of the federal government through their research into the extent of the problem and the initiatives put in place by academic institutions and state licensing agencies. The legislative stream exists in the forms of H. R. 1818 and S. 453 as well as state initiatives which have been passed or proposed. With the three streams in place, according to Kingdon, it is the optimal time to make an effort toward effecting policy change.

Options

1) Focusing on passage of S. 453. Pros: This is the easiest option and requires lobbying of the sponsors, co-sponsors, the healthcare trained members of Congress listed in the appendices and local representatives (Sen Rand Paul (R-KY), Sen Mitch McConnell (R-KY), Rep John Yarmuth (D-KY-3) and tapping into the stakeholders listed in Appendix E. Cons: This option boosts the number of EMTs, but does not address nursing (the bulk of the shortfall).

2) Focus on the 8-point plan set forth by the National Governor's Association. Pros: The 8-point plan is broad and comprehensive, covering things from the military altering their training to be more relevant to civilian training to encouraging licensing bodies to relax certain training and geographic restrictions and benefits a wide variety of healthcare fields. Cons: The same things which make the 8-point plan great are also its greatest weakness, i.e., breadth. It is such a large, encompassing and broad plan without specific enough and measurable goals, that it would be nearly impossible to achieve realistically, particularly by an individual.

3) Zero in on closing the information gap. There remains a gap between information and funds and actually helping out veterans. Pros: The good news is, the gap has been identified and moneys have been appropriated to help facilitate veterans to transition. The problem is that not

enough states, universities, faculty and licensing bodies are aware of how to access and use the funds. Nor are they sufficiently aware of the unique problems facing veterans who enter academia. While veterans show exemplary team work, leadership, initiative and perseverance, they falter in the less structured environment, face awkward questions from both students and faculty and sometimes face gender bias issues, often being male minorities in a female dominated environment (Dyar, 2015). Cons: This option would take a great deal of perseverance and will be time consuming to reach all of the necessary parties.

Recommendation

To come up with a recommendation it is important to look at several factors: Cui bono, or who benefits? How much does each option cost (including expenses avoided)? Are there any unintended consequences to each option? Policy option 1 is tempting due to its relative simplicity, but the drawbacks are large in that it does not fully address the problem of a projected shortfall of qualified nurses (over half a million). Option 2 has a great deal of merit, but the execution is unrealistic. This leaves us with Policy Option 3, which benefits all stakeholders, and while difficult and time consuming, is still more achievable than the other options.

Strategy

So now that Option 3 has been selected as the best recommendation, a strategy to implement this policy change must be made. Every strategy should have goals and the hallmark of a good goal is that it is specific, measurable, attainable, realistic and has a timeframe and lists the “somebody” who will execute it (SMARTS). A summary of the strategy is to create an educational brochure, send it to key stakeholders and invite the key stakeholders to use their realm of influence to pass the message along. See Table 1 and the brochure in Figure 1.

Impact

To assess the impact of this strategy it is necessary to first evaluate the potential impact of failing to implement this educational initiative. Failing to educate key stakeholders and, in turn, other stakeholders, could result in many institutions failing to understand the unique skills, background, experience and needs that medically trained veterans have when they re-enter civilian life. Failing to execute this strategy could result in money that was set aside to assist our heroes falling to the wayside, unused and wasted. And worst of all, failing to execute this strategy could cause the high unemployment of veterans to worsen, the shortage of healthcare workers to increase and the overall care of patients to decline.

On the other hand, by adopting this simple and inexpensive three step plan, more key people with influence and power to address these problems and disburse these funds will be newly informed. By adopting this plan, veterans can more quickly step into careers that can sustain them and a family, if desired. Adopting this plan adds to diversity in the provider population which will better serve the public. This particular brand of providers (veterans) is what is needed to care for the growing current and future vet population. Additionally, it will help address the current and projected future shortages of EMTs and nurses, which will lead to better patient care. The potential savings alone from having even part of the 9.9% unemployed of a pool of one million soldiers gainfully employed and paying taxes offers an attractive financial incentive.

References

- American Nurses Association (ANA). (2015). Nurses Currently Serving in Congress. Nursing World. Retrieved online 10/20/2015 from <http://www.ana.org>
- American Physicians Association (AMA). (2015). Physicians of the 114th Congress. Patients' Action Network. Retrieved online 10/20/2015 from <http://www.ama.org>.
- Appelbaum, B. (2012). The Enduring Consequences of Unemployment, N.Y. Times, Mar. 28, 2012, Retrieved online 10/20/2015 from http://economix.blogs.nytimes.com/2012/03/28/the-enduring-consequences-of-unemployment/?_r=0
- Busigin, M. (2011). *Income, energy and the cost of unemployment*. Retrieved online 11/1/2016 from <http://www.businessinsider.com/income-energy-and-the-cost-of-unemployment-2011-2>
- Department of Labor, Bureau of Labor Statistics, Employment Situation of Veterans (2012). (Mar. 20, 2013). available at <http://www.bls.gov/news.release/vet.htm>.
- Dyar, K. L. (2015, July). Veterans in transition: implications for nurse educators. In *Nursing forum*. doi: 10.1111/nuf.12135
- Executive Office of the President (EOP). (2013). The Fast Track to Civilian Employment: Streamlining Credentialing and Licensing for Service Members, Veterans, and their Spouses. (February, 2013). Retrieved online 10/20/2015 from https://www.whitehouse.gov/sites/default/files/docs/military_credentialing_and_licensing_report_2-24-2013_final.pdf

Kelly, K. (2013). Assistant Secretary for Department of Labor Veterans' Employment and Training Service Keith Kelly, Remarks at the National Convention for AMVETS (Aug. 1, 2013), Retrieved online 10/20/2015 from http://www.dol.gov/_sec/media/congress/20130801_Kelly.htm.

Kingdon, J.W. (1997). *Agendas, alternatives, and public policies*. 2nd edition. New York: Addison Wesley.

Maloy, N. (2014). Supporting returning veterans: the military medic to paramedic program. HealthAffairs Blog. (October 14, 2014). Retrieved online 10/20/2015 from <http://healthaffairs.org/blog>

National Governor's Association. (2013). *Best Practices for Recognition of Military Training and Experience*. November, 2013. Retrieved online 10/20/2015 from <http://www.subnet.nga.org/downloads/1402-Best-Practices-for-Recognition-of-Military-Training.pdf>

National Governor's Association (NGA) (2014). *Veterans' Licensing and Certification Policy Academy*. (2014). *Menu of Technical Assistance Resources*. (June 3, 2014). Retrieved online 10/20/2015 from <http://www.ncsl.org/documents/veterans/EShanbacker-license53014.pdf>

National Governor's Association (NGA). (2013). Retrieved online 10/20/2015 from <http://www.nga.org/files/live/sites/NGA/files/pdf/2013/1311VeteransPolicyAcademy-Ch4.pdf>

National Association of Emergency Medical Technicians. (2015). Support Transition of Military Medics to Civilian EMS; Become a Co-sponsor of S. 453, H.R. 1818. Retrieved online 10/20/2015 from <https://www.naemt.org/docs/default-source/advocacy-documents/emshd-documents/veteran-emt-support-act-request.pdf?sfvrsn=2>

Plumer, B. (2013). The unemployment rate for recent veterans is incredibly high. The Washington Post Wonkblog. Nov. 11, 2013, Retrieved online 10/20/2015 from <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/11/11/recent-veterans-are-still-experiencing-double-digit-unemployment/>.

Teitelbaum, J.B, & Wilensky, S.E. (2013). Essentials of Health Policy and Law (Second Edition). Burlington, MA: Jones & Bartlett Learning.

U.S. Department of Labor's Bureau of Labor Statistics Occupational Outlook Handbook (BLS). (2015). Retrieved online 10/26/2015 from <http://www.bls.gov/ooh/healthcare/registered-nurses.htm>

U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA). (n.d.) Helping Veterans Become Nurses: Veterans' Bachelor of Science Degree in Nursing (VBSN). Retrieved online 10/20/2015 from <http://www.hhs.gov>

Veteran Emergency Medical Technician Support Act of 2015, S. 453, 114th Cong. (2015).

Veteran Emergency Medical Technician Support Act of 2015, H.R. 1818, 114th Cong. (2015).

Table 1


Proposal Analysis

GOALS	SPECIFIC	MEASURABLE	ATTAINABLE	REALISTIC	TIMEFRAME	SOMEBODY
CREATE EDUCATIONAL BROCHURE	Yes	Either it was created or it was not	Easily	Very	Completed and attached (Figure 1)	This author
DISSEMINATE THIS BROCHURE TO KEY STAKEHOLDERS WHO ARE LIKELY TO TAKE UP CAUSE AND FURTHER SPREAD ADVOCACY MESSAGE	AACN, ANA, SVA, members of Congress with healthcare degrees (Appendix E)	Either the key stakeholders were educated with brochure and cover letter or, better, personal meeting, or they were not	Yes, cost will be travel to meet with some of these stakeholders, printing costs of brochures and postage	Yes	By August 4, 2017	This author
LOBBY STATE BOARDS OF NURSING AND THE UNIVERSITIES AND COMMUNITY COLLEGES	Yes	More difficult to measure as the number of targeted groups is large and responsible party is not this author	Yes, there remains the costs of travel, printing or postage	Moderately so	By August 4, 2017	Key stakeholders

Call to Action

What You Can Do

Funds are available to academic institutions. See to it that your school is doing what it can to fund veterans, to grant them credit for previous training. Ensure that services on your campus exist to help adapt successfully to integrating into civilian collegiate life. Contact your representatives and press for bills to help veterans like S. 453 and H.R. 1818. Help state certifying bodies understand that veterans have unique needs and may need to have geographic requirements waived, for example. Make others aware of the obstacles that veterans are facing trying to apply their valuable experiences. Ask the veterans on your campus for other ideas and for their feedback and input in the process.



Transitioning Veterans
into Healthcare Careers

**Heroes to
Healers—A
Policy
Proposal**



Figure 1. Heroes to Healers Brochure.

Background



The gap between veterans who are trained in healthcare fields and securing employment in analogous fields

Since 9/11/01 2.5 million people served in the Iraq and Afghan conflicts, sometimes known as Gulf War Veterans.

Every year 12,500 soldiers have been trained as medics since 2001 (US Army Medical Department Center and School, 2012)

12,500 x 15yrs = 187,500 potential civilian allied health professionals; 62,500 in the next five years

Growth in nursing and emergency medical technician fields expected to grow 25% (BLS, 2015)

Healthcare provider shortage

Emergency Medical Technician (EMT): increase in need from 2012 to 2022 is 55,300 (BLS, 2015)

Licensed Practical Nurse (LPN): increase in need from 2012 to 2022 is 182,900 (BLS, 2015)

Registered Nurse (RN): increase in need from 2012 to 2022 is 526,800 (BLS, 2015)

765,000 allied healthcare professionals needed (US Dept of Labor's Bureau of Labor Statistics Occupational Outlook Handbook (BLS), 2015)

Unemployment and underemployment of veterans

Unemployment rate of Gulf War II veterans is 9.9% compared to 7.9% non-veterans (BLS, 2012; Plumer, 2013)

Approximately one million service members will be seeking employment in the next five years as tours of duty overseas come to a conclusion (Appelbaum, 2012)

The solution could not be more obvious. Transition veterans to healthcare careers, particularly those with military healthcare experience. Reduce veteran unemployment while simultaneously reducing predicted shortages in healthcare providers.

How You Can Help

Determine common grounds of military and civilian training and identify gaps

Grant credit for relevant experience

Advocate for national, as opposed to state and local, certifications, which carry more portability

Assist veterans in addressing gaps

Advocate for veterans in pre-determining and pre-selecting qualified programs for GI bill and other grants

Streamline payment of GI bill and other grants to qualified programs

Ensure clarity of requirements and, when possible, encourage online access to materials and examinations

Educate the educators and certifying boards on evidence based demonstrations of equivalency of training and experiences (8 point plan from the National Governor's Association, 2013)

References

Appelbaum, B. (2012). The Enduring Consequences of Unemployment. N.Y. Times, Mar. 28, 2012

Department of Labor, Bureau of Labor Statistics, Employment Situation of Veterans—2012 (Mar. 20, 2013)

National Governor's Association. (2013). *Best Practices for Recognition of Military Training and Experience*. November, 2013

Plumer, B. (2013). The unemployment rate for recent veterans is incredibly high. The Washington Post Wonkblog, Nov. 11, 2013

U.S. Department of Labor's Bureau of Labor Statistics Occupational Outlook Handbook (BLS). (2015)

Figure 1. Heroes to Healers Brochure continued.

Summary/Conclusion of DNP Practice Inquiry Project

The main purpose of this practice improvement project was to close the evidence practice gap by implementing an SBAR education for the nurses. The main objective of having 80% of the staff participate in the education was met; 87% of eligible nurses participated. The results of the SBAR education were mixed. One objective of the project was to increase learning. The goal was to see an increase in the mean scores of the MCKT. The mean did increase to 8.50 after the education from 8.33 before the education, but with a small sample size this was not statistically significant. It should be noted that even prior to the education, the mean score on the MCKT was already greater than 80%. Although not formally assessed, a number of the nurses mentioned that they had heard of SBAR in nursing school, which may have dulled the effect.

The other objective was to assess the nurses' satisfaction with different aspects of communication. The goal was to see an increase in the overall satisfaction with communication after the education compared to before the education as measured on the ICUNPQ. Results of the SBAR education on satisfaction with interprofessional communication did show statistically significant improvement on the overall mean score after the education took place, and in particular with job satisfaction. Because this was a small pilot lacking randomization, control for confounding variables cannot be confidently stated, however, the results of the study do suggest that by increasing the sample size, randomizing conditions and perhaps utilizing a repeated measures design may yield more promising results.

Facilitating the Transition of Veterans with Healthcare Experience into Related Civilian Fields is a paper advocating policy change to improve patient outcomes nationwide while also

improving conditions for veterans and healthcare workers. Whereas SBAR is an example of the military leading the way for healthcare, this policy proposal demonstrates how healthcare can lead the way in affecting a change in the policy that will benefit multiple populations on a national level.

SBAR Documentation Form

BEFORE CALLING THE PHYSICIAN

1. Assess the patient. Involve the patient in plan recommendations, if possible.
2. Review the chart for recent medication or order changes / changes in condition.
3. Know the primary / pertinent diagnoses.
4. Have the following available when speaking with the physician: **Chart, Allergies, Medications, Labs / Results**

**FOCUS ON THE PROBLEM
BE CONCISE**

S
B
A
R

<u>SITUATION</u>	Date _____	
State your name and agency I am calling about: (Patient Name)		
The problem I am calling about is: (briefly state problem, when happened/started, and how severe. Code status would be helpful. Notes: _____		
<u>BACKGROUND</u>		
State the primary and pertinent diagnosis & the date of admission to agency . Relate the complaint given by the patient. Pay special attention to emotional/ mental status . List current medications, allergies, most recent vital signs, most recent lab results or treatments. Notes: _____		
<u>ASSESSMENT</u>		
Give conclusions about the situation. Words like "might be" or "could be" are helpful. A diagnosis is not necessary. Relate how severe the problem might be. Describe changes from prior assessment:		
Weight	Blood Pressure	Blood Sugar
Mental Status	Temperature	Pain
Neuro changes	Respiratory rate/quality	Wound
Musculoskeletal	Pulse rate/quality	GI/GU (Nausea / Vomiting / Diarrhea / Output)
Notes: _____		
<u>RECOMMENDATION: Say what you think would be helpful or what needs to be done.</u>		
<input type="checkbox"/> Change treatment to: _____ <input type="checkbox"/> Adjust medications for: _____ <input type="checkbox"/> Place telehealth monitor? _____ <input type="checkbox"/> Obtain consult for discipline (e.g., PT, OT, ST, WOCN, SN, SW, etc.) _____		
<input type="checkbox"/> Have the patient come in to see you at your office today or within 24 hrs? _____ <input type="checkbox"/> Transfer the patient to hospital? _____ Increase visit frequency to: _____ Any labs / tests needed? _____ Make sure to clarify under what circumstances and when the physician wants us to call again. _____ Notes: _____		

Appendix B MCKT with Answer Key

1. Approximately 98,000 hospitalized patients die each year as a result of medical errors. Communication failure has been found to be the root cause in _____ of these errors.

A. 90% B. 70% C. 45% D. 15%

2. Which of the following statements is TRUE?

A. Standardization and structured communication usually leads to communication barriers. B. Communication barriers are sometimes caused by cultural differences in authority, gender, and race. C. All healthcare providers have similar communication styles. D. All of the above.

3. Non-physician team members often use detailed, descriptive narratives.

A. True B. False

4. The SBAR model ...

A. is an effective and efficient way to communicate. B. closes the gap between differing communication styles. C. standardizes communication by using four common elements. D. All of the above E. C is correct

5. In the following situation, indicate which portion of the SBAR model is described: Dr. Ross, this is Mary caring for your patient Mrs. Sanchez. She is complaining of a new onset of severe abdominal pain.

A. S - Situation B. B - Background C. A - Assessment D. R - Recommendation

6. No preparation is required when using the SBAR model of communication.

A. True B. False

7. Most people have difficulty with the _____ step of the SBAR model.

A. S - Situation B. B - Background C. A - Assessment D. R - Recommendation

8. In the following situation, indicate which portion of the SBAR model is described: Doctor, the patient needs to be evaluated ASAP. I think he needs a chest tube.

A. S - Situation B. B - Background C. A - Assessment D. R - Recommendation

9. In the following situation, indicate which portion of the SBAR model is described: The patient is 3-days post-op from a colon resection. The patient has been on room air for the past 24-hours. A. S - Situation B. B - Background C. A - Assessment D. R - Recommendation

10. In the following situation, indicate which portion of the SBAR model is described: I'm concerned because he has labored breathing, decreased breath sounds on the right side, a respiratory rate of 36, and O2 Saturations of 85% on room air.

A. S - Situation B. B - Background C. A - Assessment D. R - Recommendation

Answers

1	B	6	A
2	B	7	D
3	D	8	D
4	A	9	B
5	D	10	C

Appendix C ICUNPQ-SV

For each of the following statements, please circle the number under the response that best reflects your judgment.

Statement	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
	1	2	3	4	5
1. I can think of a number of times when I received incorrect information from nurses in this unit.	1	2	3	4	5
2. It is often necessary for me to go back and check the accuracy of information I have received from nurses in this unit.	1	2	3	4	5
3. The accuracy of information passed among nurses of this unit leaves much to be desired.	1	2	3	4	5
4. I can think of a number of times when I received incorrect information from physicians in this unit. ¹		2	3	4	5
5. The accuracy of information passed between nurses and physicians of this unit leaves much to be desired.	1	2	3	4	5
6. It is easy to ask advice from physicians in this unit. ¹		2	3	4	5
7. I feel that certain physicians don't completely understand the information they receive.	1	2	3	4	5
8. In matters pertaining to patient care, nurses call physicians in a timely manner.	1	2	3	4	5
9. Overall, our unit functions very well together as a team.	1	2	3	4	5
10. Indicate your satisfaction with your job overall					
Very Dissatisfied	Dissatisfied	Neither Dissatisfied Nor Satisfied	Satisfied	Very Satisfied	
1	2	3	4	5	



SBAR

Situation

Background

Assessment

Recommendation

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What is SBAR?

- SBAR is a structured method for communicating critical information that requires immediate attention and action
- SBAR improve communication, effective escalation and increased safety
- Its use is well established in many settings including the military, aviation and some acute medical environments
- SBAR has 4 steps
 - Situation
 - Background
 - Assessment
 - Recommendation

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Why use SBAR?

- To reduce the barrier to effective communication across different disciplines and levels of staff.
- SBAR creates a shared mental model around all patient handoffs and situations requiring escalation, or critical exchange of information (handovers)
- SBAR is memory prompt; easy to remember and encourages prior preparation for communication
- SBAR reduces the incidence of missed communications

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How can SBAR help me?

- Easy to remember
- Clarifies what information needs communicating quickly
- Points to action

Prevents “hinting and hoping”

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Uses & Settings for SBAR

- Inpatient or outpatient
- Urgent or non urgent communications
- Conversations with a physician, either in person or over the phone
 - Particularly useful in nurse to doctor communications
 - Also helpful in doctor to doctor consultation
- Discussions with allied health professionals
 - e.g. Respiratory therapy
 - e.g. Physiotherapy
- Conversations with peers
 - e.g. Change of shift report
- Escalating a concern
- Handover from an ambulance crew to hospital staff

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Situation

- Identify yourself the site/unit you are calling from
- Identify the patient by name and the reason for your report
- Describe your concern
- Firstly, describe the specific situation about which you are calling, including the patient's name, consultant, patient location, resuscitation status, and vital signs.

For example:

"This is Lou, a registered nurse on Nightingale Ward. The reason I'm calling is that Mrs Taylor in room 225 has become suddenly short of breath, her oxygen saturation has dropped to 88 per cent on room air, her respiration rate is 24 per minute, her heart rate is 110 and her blood pressure is 85/50."

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Background

- Give the patient's reason for admission
- Explain significant medical history
- Overview of the patient's background: admitting diagnosis, date of admission, prior procedures, current medications, allergies, pertinent laboratory results and other relevant diagnostic results. For this, you need to have collected information from the patient's chart, flow sheets and progress notes.

For example:

"Mrs. Taylor is a 69-year-old woman who was admitted from home three days ago with a community acquired chest infection. She has been on intravenous antibiotics and appeared, until now, to be doing well. She is normally fit and well and independent."

Assessment

- Vital signs
- Clinical impressions, concerns

For example:

"Mrs. Taylor's vital signs have been stable from admission but deteriorated suddenly. She is also complaining of chest pain and there appears to be blood in her sputum. She has not been receiving any venous thromboembolism prophylaxis."

- You need to think critically when informing the doctor of your assessment of the situation. This means that you have considered what might be the underlying reason for your patient's condition.
- If you do not have an assessment, you may say:

"I'm not sure what the problem is, but I am worried."



Recommendation

- Explain what you need - be specific about request and time frame
- Make suggestions
- Clarify expectations
- Finally, what is your recommendation? That is, what would you like to happen by the end of the conversation with the physician? Any order that is given on the phone needs to be repeated back to ensure accuracy.

"Would you like me get a stat CXR? and ABGs? Start an IV? I would like you to come immediately"



Summary

- Incorporating SBAR may seem simple, but it takes considerable training.
- It can be very difficult to change the way people communicate, particularly with senior staff.

Appendix E Legislators Who Are Also Healthcare Professionals

United States Congresspersons of the 114th Congress who are also healthcare professionals

Registered Nurses

House of Representatives

Karen Bass (D-CA-33)

Diane Black (R-TN-06)

Lois Capps (D-CA-23)

Renee Ellmers (R-NC-02)

Eddie Bernice Johnson (D-TX-30)

Senate

N/A

Physicians

House of Representatives

Ralph Abraham (R-LA-05)

Dan Benishek (R-MI-01)

Ami Bera (D-CA-07)

Charles Boustany (R-LA-03)

Larry Bucshon (R-IN-08)

Michael Burgess (R-TX-26)

Scott DesJarlais (R-TN-04)

John Fleming (R-LA-04)

Andy Harris (R-MD-01)

Joe Heck (R-NV-03)

Jim McDermott (D-WA-07)

Tom Price (R-GA-06)

David “Phil” Roe (R-TN-01)

Raul Ruiz (D-CA-36)

Senate

John Barrasso (R-WY)

Bill Cassidy (R-LA)

Rand Paul (R-KY)

Healthcare Professionals in KY House of Representatives

Mary Lou Marzian, RN

Addia Wucher, R

Appendix F Permissions to Implement Study on 3 West and Use ICUNPQ-SV



4960 Norton Healthcare Blvd.
Louisville, KY 40241
(502) 446-8000

July 17, 2015

To Whom It May Concern:

Greetings! I am writing this letter in support of Maureen K. Murray's DNP capstone project which is a quality improvement project involving SBAR reporting format. I recently met with Maureen and her unit manager Chassidy Weatherford and we discussed the perils and pitfalls of nursing research and I believe that Maureen has thoroughly vetted the pertinent aspects as they relate to conducting nursing research in an acute care setting. I am in full support of moving forward with all aspects as outlined in her research plan.

Maureen continues to be a tremendous asset to our hospital and specifically to our neuroscience unit. Her clinical acumen, emotional intelligence and desire to improve patient outcomes is noteworthy. It is my pleasure to support her doctoral work and I am honored to assist as needed. Please don't hesitate to contact me if I may be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'Regina J. Hyler'.

Regina J. Hyler, DNP, RN, CENP
VP, Patient Care Services / Chief Nursing Officer



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Maureen K. Murray,
RN University of
Kentucky 8802
Cranborne Ct.
Louisville, KY 40241

Dear Ms. Murray:

I am writing in response to your recent request for permission to use our ICU nurse-physician questionnaire. This letter should serve as formal indication that you have our permission to use the questionnaire as long as it is cited in any publications and written materials that may result from your research. The proper citation for use is: "Excerpted from The Organization and Management of Intensive Care Units. Copyright 1989, Shortell and Rousseau." I would like to emphasize that **permission does not extend to either Section II (The Workplace and Facilities) or Section III (The Organization Culture) of the original full-length questionnaire that are under control of Human Synergistics and require written permission from Human Synergistics (these sections are not in the short version)**. You may adapt any of the other questions in the questionnaire as necessary for your purposes. Additional information regarding the ICU project and related materials is available at <http://shortellresearch.berkeley.edu/ICU.htm>.

We would be very interested in learning of the results (a summary only) of your research. Our best wishes in your work.

Sincerely,

Stephen M. Shortell

Stephen M. Shortell, Ph.D.

Bibliography

- American Association of Colleges of Nursing (AACN). (2016). The Essentials of Doctoral Education for Advanced Nursing Practice, October 2006. Retrieved online 03/10/2015 from <http://www.aacn.nche.edu/dnp/Essentials.pdf>
- American Nurses Association (ANA). (2015). Nurses Currently Serving in Congress. Nursing World. Retrieved online 10/20/2015 from <http://www.ana.org>
- American Physicians Association (AMA). (2015). Physicians of the 114th Congress. Patients' Action Network. Retrieved online 10/20/2015 from <http://www.ama.org>.
- Andreoli, A., C. Fancott, K. Velji, G. R. Baker, S. Solway, E. Aimone and G. Tardif. (2010). Using SBAR to communicate fall risk and management in inter-professional rehabilitation teams... Situation-Background-Assessment-Recommendation. *Healthcare Quarterly* 13(1) 94-101. Retrieved online 10/5/2015 from <http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2010851012&site=ehost-live&scope=site>
- Appelbaum, B. (2012). The Enduring Consequences of Unemployment, N.Y. Times, Mar. 28, 2012, Retrieved online 10/20/2015 from http://economix.blogs.nytimes.com/2012/03/28/the-enduring-consequences-of-unemployment/?_r=0
- Bonacum, D. (2008). Profiles in Improvement: Doug Bonacum of Kaiser Permanente. Retrieved online 04/05/2016 from <http://www.ihi.org/resources/pages/audioandvideo/profilesinimprovementdougbonacumofkaiserpermanente.aspx>

Busigin, M. (2011). Income, Energy, and the Cost of Unemployment. Retrieved online 11/01/2015 from <http://www.businessinsider.com/income-energy-and-the-cost-of-unemployment-2011-2>

Compton, J., Copeland, K., Flanders, S., Cassity, C., Spetman, M., Xiao, Y., and Kennerly, D. (2012). Implementing SBAR across a large multihospital health system. *Joint Commission Journal on Quality & Patient Safety* 38(6) 261-268. Retrieved online 10/5/2015 from <http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2011576761&site=ehost-live&scope=site>

Department of Labor, Bureau of Labor Statistics, Employment Situation of Veterans—2012 (Mar. 20, 2013), available at <http://www.bls.gov/news.release/vet.htm>.

Dolbier, C. L., Webster, J. A., McCalister, K. T., Mallon, M. W., & Steinhardt, M. A. (2005). Reliability and validity of a single-item measure of job satisfaction. *American Journal of Health Promotion*, 19(3), 194-198.

Doody, O., & Doody, C. M. (2012). Transformational leadership in nursing practice.

Eberhardt, S. (2014). Improve handoff communication with SBAR. *Nursing2015*, 44(11), 17-20. doi: 10.1097/01.NURSE.0000454965.49138.79

Executive Office of the President (EOP). (2013). The Fast Track to Civilian Employment: Streamlining Credentialing and Licensing for Service Members, Veterans, and their Spouses. (February, 2013). Retrieved online 10/20/2015 from https://www.whitehouse.gov/sites/default/files/docs/military_credentiaing_and_licensing_report_2-24-2013_final.pdf

- Fay-Hillier, T. M., Regan, R.V., and Gordon, M. G. (2012). Communication and patient safety in simulation for mental health nursing education. *Issues in Mental Health Nursing* 33(11)718-726. doi: 10.3109/01612840.2012.709585
- Gordon, S., Mendenhall, P., and O'Connor, B. B. (2012). Beyond the checklist: What else health care can learn from aviation teamwork and safety. Ithaca: Cornell University Press.
- James, J. T. (2013). A new, evidence-based estimate of patient harms associated with hospital care. *Journal of patient safety*, 9(3), 122-128. doi: 10.1097/PTS.0b013e3182948a69
- Joint Commission. (2014). Hot topics in health care. Transitions of care: the need for a more effective approach to continuing patient care. 2012. Retrieved online 1/18/2016 from https://www.jointcommission.org/assets/1/18/Hot_Topics_Transitions_of_Care.pdfs
- Kelly, K. (2013). Assistant Secretary for Department of Labor Veterans' Employment and Training Service Keith Kelly, Remarks at the National Convention for AMVETS (Aug. 1, 2013), Retrieved online 10/20/2015 from http://www.dol.gov/sec/media/congress/20130801_Kelly.htm.
- Kesten, K. S. (2011). Role-Play using SBAR technique to improve observed communication skills in senior nursing students. *Journal of Nursing Education* 50(2)79-87. doi: 10.3928/01484834-20101230-02
- Kingdon, J.W. (1997). Agendas, alternatives, and public policies. 2nd edition. New York: Addison Wesley.

Leape, L. (1994). Error in medicine. *Journal of the American Medical Association*. 272(23) 1851-1857.

Maloy, N. (2014). Supporting returning veterans: the military medic to paramedic program. HealthAffairs Blog. (October 14, 2014). Retrieved online 10/20/2015 from <http://healthaffairs.org/blog>

Mitchell, E.L., Lee, D. Y., Arora, S., Kenney-Moore, P., Liem, T. K., Landry, G. J., Moneta, G. L., Sevdalis, N. (2013). Improving the quality of the surgical morbidity and mortality conference: A prospective intervention study. *Academic Medicine: Journal of The Association of American Medical Colleges* 88(6) 824-830. Retrieved 9/15/2015 online from <http://search.ebscohost.com/login.aspx?direct=true&db=cmedm&AN=23619062&site=ehost-live&scope=site>

National Governor's Association. (2013). Best Practices for Recognition of Military Training and Experience. November, 2013. Retrieved online 10/20/2015 from <http://www.subnet.nga.org/downloads/1402-Best-Practices-for-Recognition-of-Military-Training.pdf>

National Governor's Association (NGA); Veterans' Licensing and Certification Policy Academy. (2014). Menu of Technical Assistance Resources. (June 3, 2014). Retrieved online 10/20/2015 from <http://www.ncsl.org/documents/veterans/EShanbacker-license53014.pdf>

- National Governor's Association (NGA). (2013). Retrieved online 10/20/2015 from <http://www.nga.org/files/live/sites/NGA/files/pdf/2013/1311VeteransPolicyAcademy-Ch4.pdf>
- National Association of Emergency Medical Technicians. (2015). Support Transition of Military Medics to Civilian EMS; Become a Co-sponsor of S. 453, H.R. 1818. Retrieved online 10/20/2015 from <https://www.naemt.org/docs/default-source/advocacy-documents/emshd-documents/veteran-emt-support-act-request.pdf?sfvrsn=2>
- Plumer, B. (2013). The unemployment rate for recent veterans is incredibly high. The Washington Post Wonkblog. Nov. 11, 2013, Retrieved online 10/20/2015 from <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/11/11/recent-veterans-are-still-experiencing-double-digit-unemployment/>
- Randmaa, M.G., Mårtensson, C., Swenne, L., and Engström, M. (2014). SBAR improves communication and safety climate and decreases incident reports due to communication errors in an anaesthetic clinic: A prospective intervention study. *British Medical Journal Open* 4(1) e004268-e004268. doi: 10.1136/bmjopen-2013-004268
- Renz, S. M., Boltz, M. P., Wagner, L. M., Capezuti, E. A., & Lawrence, T. E. (2013). Examining the feasibility and utility of an SBAR protocol in long-term care. *Geriatric Nursing*, 34(4), 295-301. doi: 10.1016/j.gerinurse.2013.04.010
- Sharp HealthCare. (2007). Communication Using the SBAR Model. December, 2007. Retrieved online 9/2/2015 from <http://www.sharp.com/instructors-students/upload/SBAR-Self-Learn.pdf>

- Shortell, S. M., Rousseau, D. M., Devers, R. R., Simons, K. J. and Tony, L. (1991). Organizational Assessment in Intensive Care Units (ICUs): Construct Development, Reliability, and Validity of the ICU Nurse-Physician Questionnaire. *Medical Care* 29(8) 709-726. doi: 10.2307/3766099
- Teitelbaum, J.B, & Wilensky, S.E. (2013). Essentials of Health Policy and Law (Second Edition). Burlington, MA: Jones & Bartlett Learning.
- U.S. Department of Labor's Bureau of Labor Statistics Occupational Outlook Handbook (BLS). (2015). Retrieved online 10/26/2015 from <http://www.bls.gov/ooh/healthcare/registered-nurses.htm>
- U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA). (n.d.) Helping Veterans Become Nurses: Veterans' Bachelor of Science Degree in Nursing (VBSN). Retrieved online 10/20/2015 from <http://www.hhs.gov>
- Telem, D. A., Buch, K. E., Ellis, S., Coakley, B., and Divino, C. M. (2011). Integration of a formalized handoff system into the surgical curriculum: resident perspectives and early results. *Archives of Surgery* 146(1) 89-93. doi: 10.1001/archsurg.2010.294
- Vardaman, J. M., Cornell, P., Gondo, M. B., Amis, J. M., Townsend-Gervis, M., and Thetford, C. (2012). Beyond communication: The role of standardized protocols in a changing health care environment. *Health Care Management Review* 37(1) 88-97. Retrieved online 9/17/2015 from <http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2011417725&site=ehost-live&scope=site>
- Veteran Emergency Medical Technician Support Act of 2015, S. 453, 114th Cong. (2015).

Veteran Emergency Medical Technician Support Act of 2015, H.R. 1818, 114th Cong. (2015).