

Implementing the situation background assessment recommendation (SBAR) communication in a rural acute care hospital in Kenya

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ABSTRACT

The aim of the study was to successfully introduce the SBAR communication framework for nurses and clinicians and to assess whether the introduction of the communication framework improved the perception of their ability to speak openly and freely to clinicians. Communication failures have been cited as the leading cause of inadvertent patient harm in the United States, as many as 98,000 hospitalized patients lose their lives each year because of preventable medical errors and the majority of these errors are attributed to communication failures. A pilot descriptive project was completed using Lewin's management change theory. A pre and post implementation survey were administered to a sample (N = 25) of healthcare professionals. The intervention was education sessions. Data analysis was conducted using descriptive statistics. Several factors were assessed in the survey. The factors *within group communication openness* and *accuracy* improved with a difference mean \pm standard deviation of 1.10 ± 4.07 and 0.1 ± 3.55 respectively, while the factors of *between group communication openness* and *accuracy* improved with a difference mean \pm standard deviation of 2.0 ± 2.31 and 0.75 ± 3.59 , respectively. The factor of *communication timeliness* improved slightly with a difference mean \pm standard deviation of 0.12 ± 2.51 . The factors of *patient safety issues* and the *frequency of events reported* had a negative difference mean \pm standard deviation. In conclusion, the perception of the framework SBAR was positive and its implementation can improve communication between professionals and improve patient safety.

Keywords: Nursing, communication failure, SBAR, organizational culture change, patient safety.

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INTRODUCTION

Poor communication in hospitals leads to medical errors and adverse events which jeopardize patient safety (Carroll, 2006). Effective communication between health care professionals is an essential element for positive patient care outcomes. There is a lack of evidence in the literature regarding the number of negative patient care outcomes that develop secondary to communication failures in Kenya or Africa.

According to Stevens et al. (2011), as many as 98,000 hospitalized patients lose their lives each year in the United States because of preventable medical errors. These errors are classified into three categories

comprising of perception, assumption, and communication. The majority of errors are attributed to communication failures.

Since 1999, the Institute for Healthcare Improvement (IHI) has recommended nurses and other healthcare members to use a standardized method of the report called Situation, Background, Assessment, and Recommendation (SBAR) when communicating with physicians. The SBAR method provides nurses with a clear and concise format for delivering critical information to physicians and has been shown to improve communication and patient safety outcomes (Beckett and

Kipnis, 2009). In addition, The Joint Commission (TJC) on accreditation of health care organizations established National Patient Safety Goals and recommended the use of SBAR to improve the effectiveness of communication among caregivers (TJC, 2008). The SBAR communication technique provides a standardized framework representing a hybrid of medical and nursing communication styles intended to enhance nurse-physician communication (Kesten, 2010).

The aim of the study was to assess whether the introduction of the communication framework improved perception of their ability to speak openly and freely to clinicians, and thus potentially avert medical errors.

MATERIALS AND METHODS

Aims

The aim of the study was to successfully introduce the SBAR communication framework for nurses and clinicians in a selected unit in the hospital with the eventual goal of adopting the new SBAR framework throughout the hospital. The second aim was to assess whether or not the introduction of the new communication framework improves nursing staff perception of their ability to speak openly and freely to clinicians as measured by the communication survey the Intensive Care Unit Nurse–Physician Questionnaire survey (Shortell et al., 1991).

Design

The descriptive study was implemented at Kijabe Hospital (KH), a non governmental, rural based, mission health facility situated approximately 64 km (106 miles) south west of Nairobi the capital city of Kenya (East Africa). The hospital has 281 beds, and a staff of 220 nurses, 55 clinicians (consultants, physicians, registrars and clinical officers) and 100 nursing students.

Participants/sample

Participants of the study included all nurses and clinicians working in one of the acute wards in the hospital. The clinicians referred to the medical officers, physicians, registrars, consultants and clinical officers. Inclusion criteria included the nurses and clinicians who were working in the acute unit, were available during the study period and also willing to take part in the study. Exclusion criteria included all the clinicians and nurses who did not work in the pilot area and were not on duty during the scheduled days for the training. A convenience sampling method was used to recruit the participants and a sample size of 25 health care professionals was used. A total of 21 nurses and 4 clinicians from the acute units were included in the study.

Instruments and data collection

A modified organization and management of intensive care units Nurse–Physician Questionnaire was used to measure perception of staff on SBAR use in promotion of a culture of patient safety (Shortell et al., 1991). The tool was modified to include only the sections that apply to the study and a few questions were added to address all the concepts of the study. Permission to use and adapt this questionnaire was granted by the developers. The original

survey tool validity and reliability study was completed in 1991 (Shortell et al., 1991).

Primary outcome measures

The ICU Nurse–Physician Questionnaire (short version – sections A & B) consisted of five factors: within-group communication openness (4 items); between-group communication openness (4 items); within-group communication accuracy (4 items); between-group communication accuracy (3 items) and communication timeliness (3 items). The term within group communication was defined as communication within the same profession such as nurses's perception of communicating with nurses. The term between-group communication was defined as communication between different groups of professionals such as physicians perception of communicating with nurses or nurses' perception of communicating with physicians. The items were answered on a 5-point Likert scale ranging from 'Strongly Disagree' to 'Strongly Agree.' Negatively worded items were reverse scored before factor scores were averaged.

Sections C and D consisted of 2 factors: patient safety issues and frequency of events reported. The items were answered on a 5-point Likert scale ranging from Never to Always. Section E assessed how many events reports the staff had filled out in the past 12 months. In section F, the participants were asked to give an overall grade on patient safety in their unit/hospital on a scale of five grades ranging from Excellent to Failing.

In section G, the participants were asked to rate the overall level of job satisfaction and on a scale of five ratings ranging from Very dissatisfied to Very satisfied. Section H was added in the follow-up survey and the participants were asked to report whether they used the SBAR framework in their daily communication after introduction, whether they found the framework useful in making their communication concise and accurate, whether they would recommend the use of SBAR framework in the hospital communications between health care professionals and if yes they were to state some of the challenges which would hinder adoption and benefits that the adoption would bring to the organization. Data was collected at baseline prior to implementation of SBAR education and at the follow up assessment 4 weeks after implementation of SBAR education.

Ethical considerations

The training was required for all the participant, but completion of the survey was encouraged and voluntary. The participants were issued with a personal letter informing them about the objective of the study and that they were expected to attend the trainings, read the SBAR materials given, participate in the role-playing and fill the survey questionnaires before and after the implementation period. Anonymity in the survey results was maintained by use of envelopes and drop boxes for the survey responses. The participants that did attend all the training sessions and participated in the study throughout the implementation period received a certificate of recognition.

RESULTS

Sample characteristics

The response rate at baseline and follow up was 100% (n = 25), with 84% (n = 21) been registered nurses and 16% (n = 4) being clinicians. 68% (n = 17) had worked in the

hospital for a period of fewer than 6 years and 88% (n = 22) had worked in the same unit for a period of fewer than 6 years. 84% (n = 21) worked for 40 to 59 hours per week as illustrated in Table 1.

Outcome

Of the five factors in the ICU Nurse–Physician Questionnaire as illustrated in Table 2, the factor within group openness improved with a difference mean \pm standard deviation (range) of 1.10 ± 4.07 (-6 to 8), within group accuracy improved with a difference mean \pm standard deviation (range) 0.1 ± 3.55 (-5 to 7), between group openness improved with a difference mean \pm standard deviation (range) 2.0 ± 2.31 (0 to 4), and between-group communication accuracy improved with a difference mean \pm standard deviation (range) 0.75 ± 3.59 (-2 to 6). Communication timeliness had a slight tendency to improve with a difference mean \pm standard deviation (range) of 0.12 ± 2.51 (-4 to 8). The patient safety issues had a negative change with a difference mean \pm standard deviation (range) of 0.8 ± 3.87 (-8 to 7) and the frequency of events reported had a negative decline with a difference mean \pm standard deviation (range) of 0.92 ± 3.30 (-6 to 6).

A number of events reported over the past 12 months at baseline and follow-up remained to be below 2 events for the majority of the participants as illustrated in Figure 1.

Regarding the perception of the patient safety grade in the hospital, majority of the participants at both baseline and follow-up recorded that the overall grade was acceptable 64% (n = 16) and 84% (n = 21), respectively (Figure 2). This contradicted with the job satisfaction rating in which 76% (n = 19) indicated that they were either dissatisfied, neither satisfied nor dissatisfied or very dissatisfied at follow-up though at baseline only 20% (n = 5) had indicated the same.

DISCUSSION

SBAR can facilitate communication between professions and increase safety as well as reduce the negative patients events (Randmaa et al., 2013). The study results showed that implementation of the communication tool SBAR resulted in some improvement in staff perception over the short time of implementation. Specifically, improvement in the following factors: within group communication openness, within group communication accuracy, between-group communication openness and between group communication accuracy. The improvement in staff members' perceptions of between-group communication accuracy after implementation of the communication tool SBAR supports the findings in a prospective study where implementation of the SBAR

protocol in anesthetic care resulted in significant improvement in communication accuracy between professionals (Randmaa et al., 2013). In another study by De Meester et al. (2013) implementation of SBAR led to nurse–physician communication improvement.

The perception of communication timeliness results indicated slight decline with implementation of SBAR and the results also revealed gaps in patient safety issues as the rating did not improve and instead it declined with a mean difference of 0.8 ± 3.87 (-8 to 7). The number of events of events reported at both baseline and follow-up had majority indicating less than two events (92%, n = 23 and 96%, n = 24 respectively) this may imply that these events either did not occur or the staff member did not report their occurrence. Reasons for non-reporting could include medico-legal consequences. Regarding the perception of the patient safety grade in the hospital, majority of the participants at both baseline and follow-up recorded that the overall grade was acceptable 64% (n = 16) and 84% (n = 21), respectively. In comparison with the job satisfaction rating, majority of the staff indicated that they were either dissatisfied or neither satisfied nor dissatisfied. This result contradicts with the findings in the institutions that have successfully implemented SBAR technique in settings such as intensive care, emergency departments, and operating rooms which demonstrated improvement of staff satisfaction and patient safety (Leonard et al., 2004; McFerran et al., 2005).

All participants indicated that they used the SBAR framework in their communication after introduction, found the tool useful in making their communication useful and concise, and would recommend the use of the framework in the hospital communications between healthcare professionals. Use of SBAR protocol in critical situations has been shown to increase communication satisfaction among nurses as well as the nurses' perceptions that communications are precise and accurate after implementation (Woodhall et al., 2008).

The participants highlighted the following challenges that could hinder smooth adoption of SBAR: the need to educate all the hospital's staff members which will require more time, dealing with resistance to change, a lot of support and practice required and its applicability when handling emergency situations. According to Pope et al. (2008), implementing the SBAR communication process can be difficult in certain situations and these difficulties include the recipient being unfamiliar with the concept of SBAR and the SBAR requirement of thorough education about the subject matter with necessary follow-up for effective implementation.

The participants indicated the following benefits of adopting SBAR: improving communication skills among the staff members, saving time with better and timely information transfer leading to improvement of patient care and safety, better inter-relationship with improvement of team work because it is easier to pass critical information, and decreased the risk of omitting

Table 1. Number of years worked in the hospital and in the same unit.

No. of years worked in the hospital	Frequency	Percentages	No. of years worked in the same unit	Frequency	Percentages	No. of hours worked in the unit per week	Frequency	Percentages
< 1	9	36	< 1	8	32%	<20 hrs	0	0
1 - 5 yrs	8	32	1 - 5 yrs	14	56%	20 - 39 hrs	2	8
6 - 10 yrs	5	20	6 - 10 yrs	3	12%	40 - 59 hrs	21	84
11 - 15 yrs	1	4	11 - 15 yrs	0	0%	60 - 79 hrs	2	8
16 - 20 yrs	2	8	16 - 20 yrs	0	0%	80 - 99 hrs	0	0
> 21 yrs	0	0	> 21 yrs	0	0%	>100 hrs	0	0
Median	< 1		1 - 5 yrs			40 - 59 yrs		
Total	25			25			25	

Table 2. Staff members' assessment of communication within and between groups, timeliness, patient safety issues, and frequency of events reported at baseline (pre) and follow-up (post).

Measurement factors	Pre	Post	Difference
	Mean \pm SD (range)	Mean \pm SD (range)	Mean \pm SD (range)
Communication openness within groups (N = 21)	16.61 \pm 4.12(8 to 20)	17.71 \pm 2.10 (13 to 20)	1.10 \pm 4.07 (-6 to 8)
Communication accuracy within groups (N = 21)	10.43 \pm 2.16 (8 to 15)	10.52 \pm 3.37 (4 to 15)	0.1 \pm 3.55 (-5 to 7)
Communication openness between groups (N = 4)	15.5 \pm 2.89 (12 to 19)	17.5 \pm 1.75 (16 to 19)	2.0 \pm 2.31 (0 to 4)
Communication accuracy between groups (N = 4)	9.25 \pm 3.10 (5 to 12)	10.0 \pm 0.82 (9 to 11)	0.75 \pm 3.59 (-2 to 6)
Communication timeliness (N = 25)	10.76 \pm 2.05 (4 to 13)	10.88 \pm 1.79 (8 to 14)	0.12 \pm 2.51 (-4 to 8)
Patient safety issues (N = 25)	20.96 \pm 3.09 (14 to 26)	20.16 \pm 2.51 (15 to 25)	0.8 \pm 3.87 (-8 to 7)
Frequency of events reported (N = 25)	8.64 \pm 2.2 (7 to 13)	9.56 \pm 2.2 (7 to 13)	0.92 \pm 3.30 (-6 to 6)

important. According to IHI (2008), SBAR allows for a focused way to set expectations for what is to be communicated and how, which is essential for developing teamwork and fostering a culture of patient safety. A structured communication process has the potential benefits of increasing patient survival, shortening patient length of stay, improving the staff's ability to meet family needs, enhancing professional relationships, promoting team work spirit, raising self esteem, increasing staff satisfaction and increases motivation and commitment to the organization (Boyle and

Kochinda, 2004; Haig et al., 2006; Roussel and Swanburg, 2009). Participants offered additional suggestions to introduce SBAR to all clinical areas and to include it in the organization's policy manual, orientation program, and nursing school content.

Strengths and limitations

The limits of this study include a small sample size preventing statistical evaluation of survey

results and the short time period for implementation. The strengths of this study include use of a reliable and valid data collection tool, the Intensive Care Unit Nurse-Physician Questionnaire survey (Shortell et al., 1991).

Conclusions

The perception of the communication tool SBAR in an acute care hospital was positive and indicated that adoption of the framework across

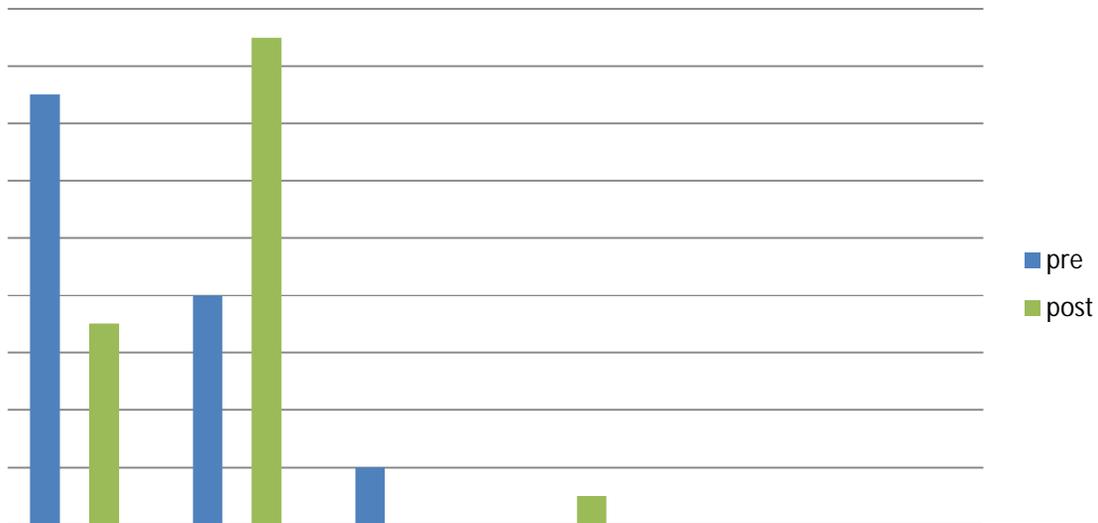


Figure 1. Number of events reported in the past 12 months. N = 25.

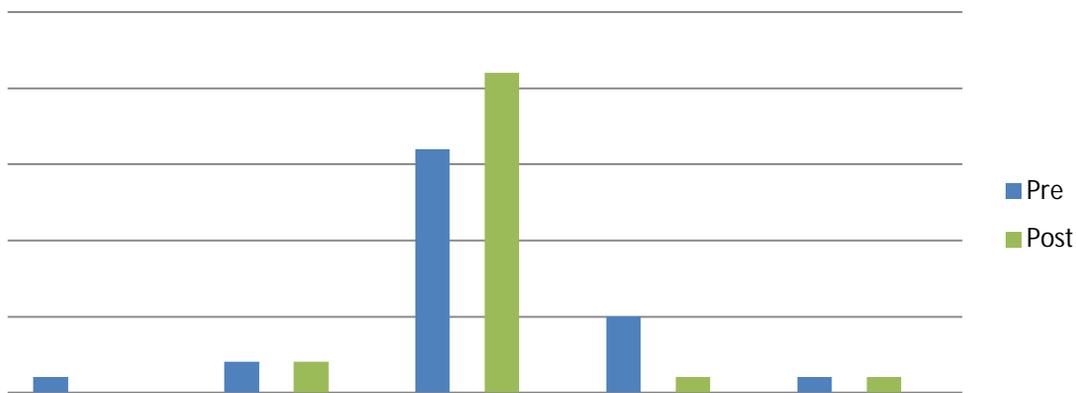


Figure 2. Patient safety grade. N = 25.

the organization can improve communication between professionals, improve patient safety and reduce incidents caused by communication errors.

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APPENDIX 1 (THE IMPLEMENTATION PHASES (Figure 3))

Phase I (Unfreezing)

In the unfreezing phase, hospital leadership and the leadership of the clinical divisions were educated on the evidence that exists in relation to the utilization of SBAR in communication for a promotion of a culture of patient safety, the goals of the study, and the scope. This was done through formal meetings with the leadership over a period of 2 weeks (30th March to 10th April 2015).

Phase II (Moving)

In the moving phase, a steering team of four staff including one clinician and 3 registered nurses was identified to be processed champions. The team was involved in planning the actual implementation and participation in the adoption or modification of the tools used to measure the outcome. The team was integral in maintaining motivation and emphasizing the importance of the project.

Twenty-five clinicians and nurses selected to participate in the study were educated on SBAR during an in-house training course consisting of 4 hours of instruction and role play. The IHI SBAR tool kit comprised of the communication tool, scenarios, lesson plans, report competence check off, phone sticker template and tips for using SBAR were used to conduct the education sessions. All the participants received the printed SBAR guidelines and worksheet and were encouraged to visit the IHI website for more resources.

The primary trainer applied various teaching methodologies to ensure all the concepts of SBAR were presented. The trainees were shown a video on SBAR training for healthcare professionals and the impact SBAR had in the promotion of patient safety. The trainees worked in small groups of four and were given a chance to assess individual competency using the SBAR Training Scenarios and Competency Assessment (IHI, 2011). Using one or more SBAR training scenarios, the trained participants were asked to respond to each scenario with SBAR-based communication to demonstrate understanding and competency in SBAR communication. The participant demonstrated understanding by writing responses on a worksheet and then sharing results with the rest of the group members in a discussion session. The participants received feedback of successful completion and suggested rehearsal resources and asked to repeat the exercise until competency was demonstrated.

All participants received informational material describing SBAR and a pocket card describing the SBAR structure. SBAR posters were posted on the notice boards at the nurse's clinical work area.

Phase III (Refreezing)

In the third phase, the steering team reinforced, encouraged and modeled the use of SBAR during the implementation period of 4 weeks (20th May to 17th June 2015) and beyond. The team continually assessed the use of SBAR technique among staff and provided positive reinforcement or suggestive areas of improvement.

Implementation process

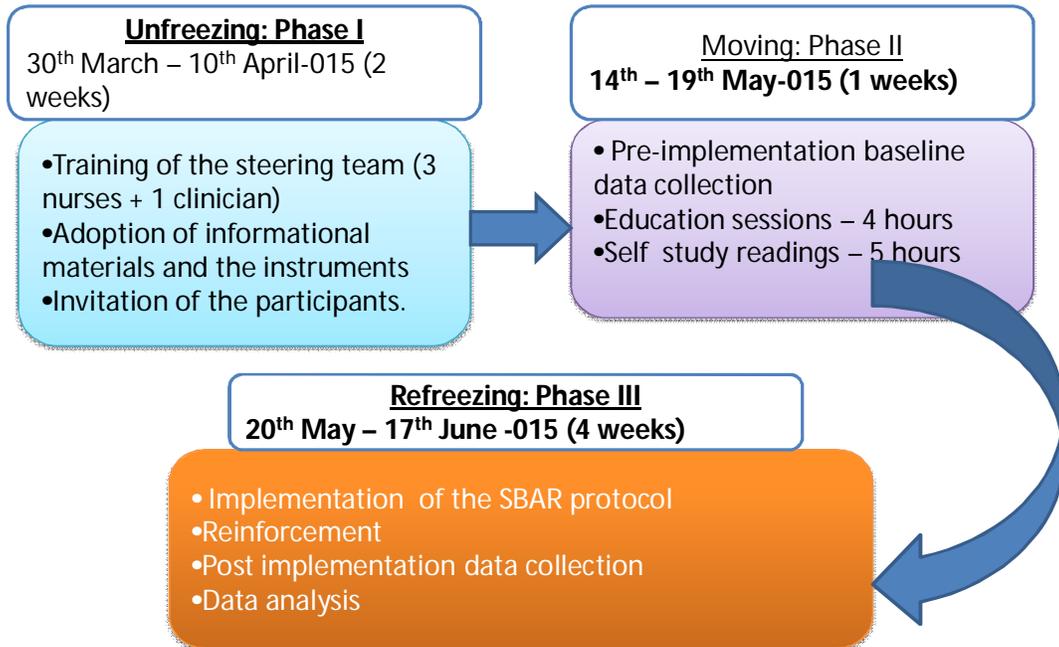


Figure 3. The implementation phases.