EFFICIENCY OF PATIENT INFORMATION HANDOVER

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ABSTRACT

Background: Handover is an essential activity in nursing because it is the communication between nurses from the previous shifts to the next changes. It is the transfer of patients’ information accurately. Efficient data forwarding will provide patients with continuous and quality of care.

Aims: To develop SBAR (Situation, Background, Assessment, and Recommendation) hand over model, and to study the completeness of SBAR hand over regarding the communication error in SBAR hand over and the satisfaction of professional nurses at the operational level who use SBAR.

Methods: This was a research and development method (R&D) conducted in Lampang Hospital, Thailand. The study samples were 102 registered nurses working in 8 patient wards. The samples were chosen through purposive sampling. The research tools were: 1) SBAR hand over model developed by the researcher, and 2) Questionnaire for using SBAR hand over model. The data were collected through a questionnaire, which included the SBAR timing record format and satisfaction questionnaire via used SBAR. Data were analyzed by descriptive statistics (percentage, mean, and standard deviation).

Results: Participants who used SBAR for hand over, reported that the completeness of data was 79.06%. The reported incidents of miscommunication were three times, decrease to 42.86%. The average satisfaction level was 76.75%, increased from 10.67%. The average spend time was 3.26 minutes per person and 46.03 minutes per shift. This is no different from the original model.

Conclusion and Recommendations: SBAR can reduce the discrepancy of communication during hand over. However, it is not possible to reduce the transmission time including overall satisfaction. Quality assurance must be managed using the PDCA Demand Cycle to study the results in the long run as well as extending the results to another ward.

Keywords: SBAR hand over, Communication, Nursing care

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Introduction

Handover is an activity in nursing care process to transfer the information about the patient's condition, the medical treatment which already been done, nursing practice outcomes including the patient problems that remain and need to follow by the next shift. Nursing handover demonstrated the continuity of care and improving the quality of care by the effective inter-shift information communication (Javad et al., 2013). It is said that communication is a central factor for safe and high quality (Lingard, 2012). The efficient handover among the nursing team will allow the care team to know the complete information of the patient. Therefore, the care team can work continuously and make the patient safe (Karen, 2013).

SBAR is a communication concept developed to promote patient safety (Leonard et al., 2004). There are comprise of Situation, Background, Assessment, and Recommendation used for clear communication between physicians and nurses (JCAHO, 2004). SBAR is recognized that as a useful tool for healthcare team (Narayan, 2013) that is accurate and relevant (Dufour, 2012). The detail of SBAR is that: S-Situation is information about the current patient situation. B-Background is the information about the patient's background. A-Assessment is an ongoing assessment of patient’s condition. R-Recommendation is to inform or recommend the requirements (Velji et al., 2008; Karen, 2016). A systematic review of handover literature reported that SBAR is now the most commonly utilized handover tool, cited in 36 out of 42 articles (69.6%) (Riesenber, Leitzsch, & Little, 2009).

Lampang hospital is a tertiary hospital of 800 beds. There is a policy of continuous quality improvement in patient care service and patient safety. The Nurses’ Administrator has supported the use of SBAR techniques to enhance effective communication of the nursing personnel and healthcare team in the care delivery process. The implementation of SBAR techniques in Lampang hospital have the problems such as the SBAR has not been fully deployed to all patients, no specific format, incomplete patient data for continuity of care, it took a long time to hand over the next shift and nurses have a reduced quality of life.

Hence, this study aimed to develop an effective SBAR hand over model by adapting from Template Communication (Narayan, 2013), SBAR Report Form (Karen, 2016), Adapted SBAR tool (Velji et al., 2008) and SBAR checklist cheat sheet (Dufour, 2012). The efficient SBAR delivery model should be by Lampang hospital context. There were also considerations in maximizing the quality of patient care services and achieved organizational goals. Additionally, it should take into the quality of nursing care; reduce errors in communication in the delivery process and increased nurses’ satisfaction. The current study focus on nursing outcomes by using the continuous quality improvement process (Deming, 1993 cited in McLaughlin & Kaluzny, 1999) consisted of planning to improve the process (plan), implementation plan (do), practical inspection (check) and 4) confirm the action and continual improvement (act). The continuous quality improvement process is also encouraging the staffs within the organization to participate in the development process (Kelly, 2012) resulting in a positive impact on the patient.

Objective

The research objective of this study is to develop SBAR hand over model and to study the completeness of SBAR hand over regarding the communication error in SBAR hand over and the satisfaction of professional nurses at the operational level.
Method

This was a research and development method (R&D) conducted in Lampang hospital, Thailand. The study samples were 102 registered nurses working in 8 patient wards (2 medical wards, two orthopedic wards, Neurosurgical ward, Chest & Heart surgery ward, trauma critical care ward and newborn intensive care ward). The samples were chosen through purposive sampling.

The research tools were 1) SBAR hand over model developed by researcher team using Template Communication (Narayan, 2013), SBAR Report Form (Karen, 2016), Adapted SBAR tool (Velji et al., 2008) and SBAR checklist (Dufour, 2012); 2) Questionnaire for using SBAR hand over model. The items used rating scales consisting of the time of using, the completeness of the information, the accuracy of the patient information, data to use for patient care plan, satisfaction with delivery as overall, the convenience of use, the effectiveness for communication in nursing team and the efficiency for communication in multidisciplinary teams involved in patient care. Data were collected through questionnaires which included the SBAR record format and nurse satisfaction. The researcher team researched these steps:

1) The research team meets nursing administrator and head nurse of 8 patient wards to present the purpose of the study, the process of study and cooperation in studying and implementing.

2) The research team organized meetings with eight patient ward representatives to analyze the problem of current handover model and the improvement using the SBAR concept. The SBAR handover records form was approved by three experts and the researcher then adjusted to the appropriate recommendations. The SBAR concept manual was developed and provided to all samples.

3) The research team collected the data from the samples about the using of current handover and satisfaction before using the SBAR hand over model.

4) The research team organized meetings with the samples to clarify the usage of SBAR handover model and how to use the manual. For the samples which cannot attend the meeting, the researchers have to meet them individually to make clear understanding about the SBAR handover model.

5) Implementation of the SBAR hand over the model with eight patient wards for two weeks.

6) The research team collected the data from the samples about their satisfaction after using the SBAR hand over model.

7) Verification of the accuracy of the data before analysis. Descriptive statistics (percentage, mean, and standard deviation) were used for data analysis.

8) The research team organized meetings with the samples to present the outcomes of using the SBAR handover model and recommendation

Results

The SBAR hand over model of Lampang hospital consists of 4 parts as follows:

1) The situation, the first part described specific information of the patient including general information (bed, name, age, health Insurance, date of admission, diagnosis, type of
operation, date of operation, doctor's name, and current health status /health problems). This part provided a brief description and communicated with the environment of the patient. The health care professionals could identify the patient with whom they are speaking, informing their current health status /health problems.

2) Background, the second part described the patient’s background (chief complaint, past of illness, allergic history, and history of treatment). The goal of knowledge is to be able to identify to determine the background or context of the patient's admission from their history of medical status. The patient’s background should ready to set up for the assessment.

3) Assessment, the third part is a comprehensive assessment of patients in the present system including neurological signs, respiratory system (a type of ventilation, size of endotracheal tube and mark, oxygen therapy), gastrointestinal system (nasogastric tube, drainage), and musculoskeletal system (activity, skin, wound, pain score). There is the information about the treatment being received by the patient (type of intravenous fluid, medication, fluid intake, and output). Also, there are laboratory results and special examinations (electrocardiogram, computerized tomography scan, ultrasound, magnetic resonance imaging). The focus list also noted to inform the specific problems and communicate with the care team. In this part, vital signs outside of standard parameters are specifically mentioned, as well as the medical professional's clinical impression of the severity of the patient's status and additional concerns.

4) The recommendation, the last part gives the specific information based on the situation, background, and assessment of each patient. These are very precise and provide descriptive explanations on precisely what the patient needs during that time frame as well as possible solutions that could correct the situation (consult, laboratory results follow up, monitoring some specifics signs and symptoms)

The results from the implementation of SBAR hand over model in the nursing team found that:

1) The completion and accuracy of patient’s information were increased to 79.06% from 71.84%.

2) The incidence of miscommunication during shift changing was three times lower than before implementation of SBAR hand over model that the frequency of up to seven times.

3) The satisfaction of registered nurses was 76.75%, higher than before application of SBAR hand over model that level of 69.35%.

4) The average time spending for hand over per person was 3.26 minutes, from 3.53 minutes per person.
### SBAR HAND OVER LAMPA NG HOSPITAL

<table>
<thead>
<tr>
<th>SBAR</th>
<th>Data Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Situation</td>
</tr>
</tbody>
</table>
|      | Bed:........Name: Surname:........Age:........Health: Insurance:........
|      | Date of Admit:...Diagnosis:........Operation:........Date:........Doctor:........Current Health Status / Health Problems:........|
| B    | Background       |
|      | Chief complaint:........Past of Illness:........Allergic History:........History of Treatment:........|
|      | Health Assessment |
|      | Neuro: N/S pupil:........IVF:........
|      | Respiratory: ETT size:........mark:........O2 box mask:........PM:........Intake:........Output:........
|      | Ventilator mode:........rate:........Ti:........FiO2:........Pain score:........
|      | Adjust setting/wearing:........
|      | Cardiac, EKG Echo CAG:........Medication:........G1, NG / OG:........Diet:........1
|      | Drains:........2
|      | Musculoskeletal Activity:........3
|      | Skin wound:........4
|      | Lines, central peripheral Position:........5
| A    | Assessment       |
|      | Lebs

![Diagram of Lebs]

| Focus list (CTMRI U/S:........)
| 1
| 2
| 3

<table>
<thead>
<tr>
<th>R</th>
<th>Recommendation</th>
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<tbody>
<tr>
<td></td>
<td>Consult:........</td>
</tr>
<tr>
<td></td>
<td>COC:........</td>
</tr>
<tr>
<td></td>
<td>Notify Doctor:........</td>
</tr>
<tr>
<td></td>
<td>Follow Lab Result:........</td>
</tr>
<tr>
<td></td>
<td>Follow X-ray:........</td>
</tr>
<tr>
<td></td>
<td>Follow Blood transfusion:........</td>
</tr>
<tr>
<td></td>
<td>Precaution suicide:........</td>
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</tbody>
</table>
|     | Monitor (Fall Alcohol withdrawal:........)
|     | Est:........|

**Figure 1** SBAR HANDOVER LAMPANG HOSPITAL
Discussion

The SBAR handover in Lampang hospital will be discussed in four aspects: Firstly, information completeness by using SBAR. Secondly, the incidences of communication errors in nursing care. Then, the satisfaction of nurses and finally, time spending when using SBAR.

1) Information completeness by using SBAR

The completion and accuracy of patient’s information were increased to 79.06% from 71.84% due to SBAR model which has a clear focus on patients’ precision and conciseness of information. Beckett and Kipniss (2009) stated that the Situation, Background, Assessment, Recommendation (SBAR) model was a tool for organizing information in an understandable and brief format to facilitate collaborative communication among healthcare providers. Furthermore, SBAR template provides a consistent easy-to-remember framework for communicating with patient care information efficiently and professionally (IHI, 2016). Similar results reported the benefit of SBAR tool that improved the efficiency, efficacy, and accuracy of the content in the handover report. (Stewart, 2016; Blom et al., 2015; Randmaa et al., 2013; Lepman & Hewett, 2008). Also, during the implementation of SBAR model in Lampang hospital, the researcher team created a handbook for assessing the patients correctly and completely. Therefore, nurses can give the complete information of patients during handover between the previous shift and the next shift and use the information for planning nursing care for the patient. Improving the clarity of information exchanged in handover report translates into a decrease in the number of incidents related to error communication (Marshall et al., 2009).

2) The incidence rate of error communication in nursing care and affect the medical treatment

The incidence of miscommunication during shift changing was three times lower than seven times before the implementation of SBAR handover model. SBAR model of Lampang hospital was created with concern about patient safety. Moreover, the hospital has prevented and monitored the incidence of medical treatment following the guidelines of the Institute for Hospital Quality Assurance (HA). Velji et al. (2008) found that after using adapted SBAR tool, both individual and team communications were improved, and affected perceived changes in the safety culture of the study team. SBAR can enhance the perception of efficient communication between healthcare workers and promotes a culture of patient safety in healthcare organizations (Stewart, 2016). Several studies showed that implementing SBAR tool was correlated with enhancement in communication between professionals’ team and a decreased proportion of incident reports related to communication errors. (Randmaa et al., 2014; De Meester et al., 2011).

3) The satisfaction of registered nurses

The satisfaction of registered nurses was 76.75%, higher than the previous level of 69.35% before the implementation of SBAR handover model. It increases by 10.67% for the reason that the leaders in each unit conducted a meeting to describe the principle of SBAR handover before using. The opportunity to participate and discuss the occurrence of problem or misunderstanding is also helpful. In addition, nurses have the chance to try the SBAR before the real practices that make them understand the users better. SBAR framework and hand out for patients assessment is also created to clarify the purpose. Moreover, in the past, Lampang hospital did not have formal or standard of handover, when SBAR model has been used, it made handover during shifts more standardized than the past. The effectiveness of SBAR use for
handoff showed that nurses’ satisfaction scores increased (Harris, 2008; Martin & Ciurzynski, 2015; Landau & Wellman, 2014).

4) Time spending when using SBAR

The average time spending for hand over per person was 3.26 minutes, from 3.53 minutes per person and was 46.03 minutes per shift from 45 minutes. The result was not with an agreement with the previous studies which showed that results in handover reductions in time spent, decreases in the overall time spent giving and receiving the report (Cornell et al., 2014; Christie & Robinson, 2009). The reason may be, nurses had a short time for trying SBAR and novice nurses lack assessment skills, and they focused on the complex problems of patients. Also, there were high numbers of new patients which need a lot of background data.

Conclusion: SBAR could reduce the discrepancy of communication during hand over. However, it is not possible to reduce the transmission time including overall satisfaction. Quality assurance must be managed using the PDCA Demand Cycle to study the results in the long run as well as extending the results to another ward.

Recommendations

1) Nursing administrators should encourage and support nursing personnel to adherence to the implementation of SBAR hand over the model in all patient wards. The continuous evaluation should apply to develop and improve high standards and sustainability of nursing practices.

2) Nursing administrators should support the necessary and adequate skills for nursing personnel to enhance the accurate and comprehensive assessment of patients in specific wards such as advance health assessment training, patient assessment guideline, clinical decision making and communication skills.

References


