Safety in Health

Situation, Background, Assessment, Recommendation (SBAR) Communication Tool for Handoff in Health Care – A Narrative Review

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Abstract

Continuity of patient care is achieved by the clear and concise transfer of patient clinical information from one health care provider to another during handoff. Effective communication is a vital factor in providing safe patient care. Communication failure in a health care setting could lead to serious medical errors. Sharing patient-specific health care information during handoff requires situational awareness. In the hospital setting, most of the communication related to patient care occurs between nurses and physicians. Challenges of communication among health care providers are not limited to differences in training and reporting expectations. The Joint Commission, Agency for Healthcare Research and Quality (AHRQ), Institute for Health Care Improvement (IHI), and World Health Organization (WHO) recognize SBAR (Situation, Background, Assessment, Recommendation) as an effective communication tool for patients' handoff. SBAR is a reliable and validated communication tool which has shown a reduction in adverse events in a hospital setting, improvement in communication among health care providers, and promotion of patient safety. This narrative review has highlighted the challenges of communication among health care providers, use of the SBAR tool for effective handoff and transfer of patient care in various health care settings, and comparison of SBAR tool with other communication tools to assess the effective communication and limitations of SBAR communication tool.

Keywords: SBAR—Situation, Background, Assessment, Recommendation, Communication, Health care providers, Health care setting, Patient safety
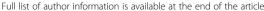
Background

A handoff between health care providers is the key factor in fostering continuity of care and providing safe patient care [1]. The handoff from one health care provider to another is recognized to be vulnerable to communication failures [2–9]. Effective communication is therefore central to safe and effective patient care [10]. The Joint Commission reviewed a total of 936 sentinel events during the year of 2015; communication was identified as the root cause in more than 70% of serious medical errors [11]. The consequences of failed communication during handoff are medication errors, inaccurate patient plans, delay in transfer of a patient to critical care, delay in hospital

discharge, and repetitive tests among others [12]. The Joint Commission has introduced the National Patient Safety Goal to improve the communication among caregivers [13]. The aim identified by the Institute of Medicine (IOM) is to provide a safe, patient-centered, timely, effective, efficient, and equitable health care [14].

Communication errors among health care providers are complicated by a hierarchical reporting structure, gender, education, cultural background, stress, fatigue, ethnic differences, and social structure [2, 15–18]. It is reported that differences in communication styles between nurses and physician are one of the contributing factors to the communication errors [19]. Nurse-physician communication is subject to the effects of differences in training and reporting expectations [20]. A structured communication tool would be beneficial to effectively communicate the patient information, reduce the adverse events, promote

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patient safety, improve the quality of care, and increase health care provider satisfaction. The aim of this paper is to review the challenges of communication among health care providers in clinical setting, to review the use of the standardized Situation, Background, Assessment, Recommendation (SBAR) communication tool during handoff, and to compare the SBAR tool with other communication tools to assess the communication during patient handoff.

Challenges of communication in health care

Sharing patient-specific health care information during handoff requires situational awareness, which is an understanding of a patient's current condition and clinical trajectory. Loss of situational awareness could lead to adverse events and hence compromise the patient care [21]. Within the context of contemporary interdisciplinary teams providing care for patients, sharing the patient information should be aimed at ensuring a common understanding of the individual patient's care plans and expectations. Achievement of this objective through a consistent, structured, and reproducible means will likely lead to improved patient satisfaction and outcomes. Communication failure risk to patient safety is always a topic of discussion for researchers, health care providers, administrators, and regulatory agencies.

Communication problems are multidimensional, being influenced by technology, personnel, process, information design, and biology itself [22]. Despite huge investments in technology to record, store, disseminate, and access information, studies still find communication in health care continues to be problematic [23]. Health care providers need to be cognizant of the challenges facing handoffs, including physical setting, social setting, language barriers, and communication barriers [24]. Some of the most commonly reported environmental obstacles to effective communication are distractions, insufficient time, and interruptions [25].

Health care providers involved in transferring patient information may be distracted by easily overlooked factors such as lighting, background noise, television/computer screens, crowding, or busy nursing stations [26–28]. To avoid these preventable distractions, it is recommended that nurses and other health care providers share patient information in designated areas away from distraction [28, 29]. Moreover, it has been suggested that it is imperative that the handoff process be standardized and trainees must be taught the most effective, safe, satisfying, and efficient ways to perform handoffs [24].

SBAR defined

The prevailing gold standard handoff structure, Situation, Background, Assessment, Recommendation (SBAR), was originally developed and effectively used during submarine duty handoff by the US Navy. The Joint Commission [30]

describes the SBAR communication technique as, Situation: what is the situation; why are you calling the physician? Background: what is the background information? Assessment: what is your assessment of the problem? Recommendation: how should the problem be corrected? In a health care setting, the SBAR protocol was first introduced at Kaiser Permanente in 2003 as a framework for structuring conversations between doctors and nurses about situations requiring immediate attention [31]. SBAR was originally implemented in health care settings with the intent of improving nurse-physician communication in acute care situations; however, it has also been shown to increase communication satisfaction among health care providers as well as their perceptions that communication is more precise [31, 32]. The role of the SBAR tool during handoff has been highlighted and supported by various specialties such as anesthesia [33, 34], perioperative medicine [35, 36], postoperative medicine [37], obstetrics [38, 39], emergency medicine [40], acute care medicine [41, 42], pediatrics [43], and neonatology [44].

Example of SBAR tool in clinical setting

An RN on the pediatric floor has an order for a child to have fluids by mouth as he is admitted with vomiting and abdominal pain. Initially, the patient has pain in the periumbilical area and now it is radiating to the right lower quadrant. The ordering physician needs to be called to review the patient's condition and clarify the order regarding fluid intake.

Situation: "Dr. Smith, this is Nancy on Pediatric floor, I have an order for clear fluid intake for little Jonny who is in room 420 with abdominal pain, I would like to update you regarding Jonny's condition and clarify orders with you."

Background: "I see that Jonny was admitted through Emergency Department with abdominal pain and vomiting. His abdominal pain has gotten worse and now radiating to right lower quadrant. Oral fluids were ordered for him."

Assessment: "Jonny looks unwell as his abdominal pain has increased and he has been throwing up more since he was admitted."

Recommendation: "I think we should keep him nil per os (NPO) and give him intravenous fluids. Do we need to arrange ultrasound to rule out appendicitis?"

SBAR communication tool for handoff

Medical associations and leading health care organizations (German Association of Anesthesiology and Intensive Care Medicine—Deutsche Gesellschaft für Anästhesiologie und lntensivmedizin (DGAI), the Australian Commission for Safety and Quality in Health Care (ACSQHC), AHRQ, IHI, and WHO) are endorsing the SBAR method as the standard communication tool for handoff among health care providers [36, 45–48]. During handoffs, mnemonics may increase the memory of important steps and

provide a structured and standardized process to follow. The SBAR format provides a structured format for presenting medical information in a logical and succinct sequence; moreover, it is concise and easy to use [49, 50]. Riesenberg et al. included 46 articles in a systematic review focused on health care handoffs using mnemonics; the review yielded 24 handoff mnemonics, with SBAR (Situation, Background, Assessment, and Recommendation) cited most frequently, approximately 69.6% [10].

Communication handoffs are critically important in creating a shared mental model around the patient's condition [16]. The absence of a good shared model or a flaw in the shared mental model could lead to medical tragedies [21]. Our daily experience in a health care setting has taught us that there are many opportunities to improve the transfer of information during handoff. Haig and colleagues performed a quality improvement project with the aim of sharing a common mental model in communication among care providers. There was an increase in use of the SBAR tool, improvement in the medication reconciliation, and reduction in the rate of adverse events (Table 1). Hence, the SBAR tool was effective in bridging the communication styles [16].

Physicians' perception of the quality of communication and nurses' use of the SBAR tool after SBAR communication tool implementation was assessed by Compton and his colleagues. The authors reported two third of these nurses had "good to high" proficiency with SBAR and two third of physicians perceived that the last report they received from nurses regarding patients was adequate to make clinical decisions (Table 1). Due to concerns related to the uptake of the SBAR tool after the initial SBAR education and its consistent use in a clinical setting, the authors have suggested refresher education for nurses after initial SBAR education and a policy of annual validation of the use of the SBAR tool [51].

Communication breakdown, collaboration failure, and inability to recognize the clinical deterioration of patients are the main reasons for the occurrence of serious events in the hospital setting [52]. De Meester et al. conducted a study to determine the effect of the SBAR tool on the incidence of serious adverse events (SAEs) in hospital wards. This study showed an increase in unplanned ICU admission and a significant reduction in unexpected patient deaths following the introduction of SBAR (Table 1). This represents a shift in direction toward earlier detection, trigger, and response through better communication, likely due to SBAR tool [53].

In the ICU setting and operative room, clear and precise communication among team members is essential. Wong et al. performed chart review of all ICU transfers to evaluate the critical message (CM) quality, the rapid response team (RRT) calling criteria, time to RRT activation, the presence of vitals, and the quality and timeliness of physician response (Table 1). This study highlights the fact that communication failure can delay the activation of the rapid response team which is associated with an increase in in-hospital deaths. (Table 1). Authors reported significant correlation with in-hospital survival and the number of SBAR components in the CM. The authors suggest that the nurses' education on the use of the SBAR tool for communicating the critical information to clinicians would improve the situation awareness and likely improve patient outcomes [54].

The German Society of Anesthesiology and Intensive Care Medicine (DGAI) recommend the use of SBAR structured format for patient handoff in a perioperative setting [36]. Postoperative care of patients requires handoff between the outgoing anesthetic team and the incoming intensive care team. These patients have complex medical and surgical histories, and communicating information during handoff should include the perioperative anesthetic and surgical issues, as well as recommended postoperative management [55].

Fabila and colleagues conducted a study to evaluate the recipient perception, completeness, and comprehensiveness of verbal communication and usability of the SBAR document during handoff from anesthetists to pediatric ICU care providers. This study was comprised of four phases from assessment of current practice of handoff to development of the handoff process to implementation of the tool and post-intervention assessment. The author reported that the SBAR tool was perceived as a useful tool in prioritizing the high-risk patient information and immediate patient management during handoff between anesthesia and pediatric ICU care providers (Table 1); moreover, there was reduction of omission errors and fewer inconsistencies in patient descriptions [37].

Similarly, another study was performed by Funk et al. to establish a structured handoff based on the SBAR framework in the pediatric post-anesthesia care unit (PACU). Over 50 handoff interactions were observed to assess the completeness and comprehensiveness of verbal communication and usability of the SBAR document ISBARQ (introductions, situation, background, assessment, recommendation, and questions) checklist. The ISBARQ checklist was associated with improvement in content information of handover and increased the provider's satisfaction; however, there was no significant change in duration of handover (Table 1) [56].

Most of the health care facilities have electronic medical records (EMR) with the goal of improving patient care by accurate and transparent documentation. Several evaluation studies have reported that the electronic handoff tools which are integrated into the EMR systems are superior to paper-based approaches as the electronic handoff tool provides more and better information to the team members during hand over [12]. The role of

Table 1 Studies on SBAR communication tool for handoff in health care setting

Authors	Year	Country	Study design	Study characteristics	Results
Haig et al [16]	2006	USA	Pre- and post-intervention study	Nursing staff in Bloomington, Illinois. A telephone survey of 10 nurses prior to the intervention. The intervention included an education session on SBAR tool and its implementation for handoff. Methods for collecting post-intervention data not described	Increase in use of SBAR by 95%, improvement in admission medication reconciliation from mean of 72% to a mean of 88% and discharge reconciliation from a mean of 53% to a mean of 89%, and reduction in adverse events from 89.9 per 1000 patient days to 39.96 per 1000 patient days
Compton et al [51]	2012	USA	Survey	Baylor Health Care System initiated a campaign to implement SBAR and train staff in SBAR techniques across 13 hospitals. 156 nurses interviewed after implementation of SBAR package with the nurse audit tool	97.4% nurses had been educated about SBAR and 58.3% used SBAR for critical communication only. 73% of nurses demonstrated good or high proficiency. Among the nurses who did not use SBAR, the leading reason was lack of comfort with SBAR. 78% of physicians reported they received adequate information from nurses regarding patient condition
Meester et al [53]	2013	Belgium	Pre- and post-intervention study	16 hospital ward nurses of Antwerp University Hospital were trained to use SBAR to communicate with physicians in cases of deteriorating patients. Patient records were checked for SBAR items up to 48 h before a SAE.	There was increase in the use of all 4 components of SBAR by 34%, total score on the questionnaire increased in nurses ({from 58 (range 31–97) to 64 (range 25–97)}; $p < 0.001$, the number of unplanned in ICU admissions increased ((from 13.1/1000 to 14.8/1000) admissions; relative risk ratio = 50%; 95% CI 30–64; $p = 0.001$) and unexpected deaths decreased from 0.99/1000 to 0.34/1000 admissions; RRR = − 227%; 95%CI − 793 to − 20; NNT1656; $p < 0.001$)
Wong et al [54]	2017	Canada	Retrospective chart review	Chart review of all ICU transfers from General Internal Medicine (GIM) wards of Toronto General Hospital	Out of a total of 615 messages for 179 of the 236 patients, 93 (39%) patients had a CM in the 48 h prior to ICU transfer. 13 patients (17%) did not have RRT activation prior to transfer to ICU and 63 (83%) patients had delayed RRT activation after the CM. In the subgroup of 63 patients with delayed RRT activation, the only significant correlation ($p = 0.047$) with in-hospital survival was the number of SBAR components in the CM.
Fabila et al [37]	2016	Singapore	Prospective interventional study	A total of 52 CICU personnel participated in the study which include 7 pediatric consultants, 1 rotating pediatric registrar, and 44 nurses working in shifts at KK Women's and Children's Hospital (KKH)	There was a significant increase in the proportion of nurses who indicated that information transfer during verbal face-to-face handover was frequently sufficient, as compared to the pre-intervention phase (95.5 vs. 31.8%; difference 63.7%; 95% CI 51.4–81.8%; $p < 0.0001$). Overall, the perceived usefulness of SBAR document during handovers significantly increased by about 33.0% (95% CI 15.0–53.0%; $p = 0.0004$).
Funk et al [56]	2016	USA	Pre- and post-intervention study	52 pre-implementation handovers and 51 post-implementation handovers were observed at PACU of Duke University Medical Center	There was a statistically significant increase in the percentage of use of ISBARQ items ($p < 0.001$) and provider's satisfaction ($p < 0.01$) from pre-implementation to post-implementation and no significant change in duration of handoff (mean = 5.80 ± 3.80 min) to post (mean = 6.80 ± 2.30 min), $p = 0.15$.
Panesar et al [42]	2016	USA	Prospective study	84 patient events were recorded from 542 admissions to the pediatric intensive care unit of Stony Brook Children's Hospital. 3 time periods were studied: (1) paper documentation only, (2) electronic documentation, and (3) electronic documentation with SBAR template.	There was an increase in the frequency of critical patient event notes but not statistically significant ($p = .07$) and improvement in quality scores significantly from paper documentation to electronic SBAR-template notes. Moreover, 100% documentation of nurse and attending physician communication was achieved during electronic SBAR note period.
Ting et al [38]	2017	Taiwan	Pre- and post-intervention study	The SBAR course was offered as a 1-h session by obstetricians annually at Far Eastern Memorial Hospital from 2012 to 2015. All nurses were asked to answer the Safety Attitudes Questionnaire (SAQ) before and after the intervention. 6 safety dimensions	29 nurses completed the pre-intervention survey, 34 completed the first post-intervention survey, and 33 completed the second post-intervention survey. There was improvement in the value ratings for teamwork climate ($p = 0.002$), safety

Table 1 Studies on SBAR communication tool for handoff in health care setting *(Continued)*

Authors	Year	Country	Study design	Study characteristics	Results
				of SAQ were assessed which include team-work climate, safety climate, job satisfaction, stress recognition, perception of management and working conditions	climate ($p = 0.01$), job satisfaction ($p = 0.002$), and working condition ($p = 0.02$).
McCrory et al [57]	2012	USA	Pre- and post-intervention study	Each of the 26 pediatrics interns at John Hopkins University reviewed a scenario involving a decompensating pediatric patient and gave a simulated handoff to a responder. A didactic session on ABC-SBAR was given, then performed a second handoff using another scenario. A total of 52 handoffs were included for analysis.	The mean score of handoffs increased after ABC-SBAR training (from 3.1/10 to 7.8/10; $p < 0.001$). Handoff report of the airway, breathing, and circulation increased (from 35 to 85%; $p = 0.001$) after the training, the information was also shared earlier (25 vs. 5 s; $p < 0.001$) in post-intervention period. Total handoff duration was increased (pre-intervention 29 s vs. post-intervention 36 s, $p = 0.004$).
Townsend-Gervis M et al [23]	2014	USA	Prospective study	111 nurses participated from 3 medical and surgical unit of Baptist Memorial Health Care Corporation .Nurses used SBAR in a variety of circumstances, including shift reports and physician rounds (both paper and electronic copy of SBAR was available for patient presentation)	Over the 3-year period, Foley compliance improved (from 78 to 94%; $p < 0.001$) and re-admissions decreased (from 14.5 to 2.1%; $p < 0.001$), both significant. Patient satisfaction trended positively but was not significant
Vanderman et al [60]	2012	USA	Qualitative case study	Nurses had received training in SBAR for use primarily in communication with physicians. Data were collected from 80 semi-structured interviews with nurses ($n = 66$), nurse manager ($n = 9$), and physicians ($n = 5$), and observations were made on nursing, other hospital activities, and documents that related to the implementation of the SBAR protocol.	SBAR tool has impact on schema formation (quick decision making when bombarded with load of information), development of legitimacy, development of social capital (networking), and reinforcement of dominant logics in addition to improvement in nurses and physician communication
Renz SM et al [61]	2013	USA	Pre- and post-intervention study	137 bed skilled nursing home, part of a faith-based continuing care retirement community in suburban Pennsylvania. 40 nurses participated in pre-intervention phase and 32 participated in post-intervention phase	87.5% of nurses found SBAR tool useful to organize information when communicating to medical providers. 78% ($n = 51$) had complete documentation, while the remaining 22% ($n = 14$) had some missing documentation. The physician reported improvement in the quality of nurse-physician communication related to change in resident condition after implementation of the project

EMR in communication among health care providers has been evolving. To evaluate the impact on clinicians of integrating an EMR with a structured SBAR note on communications related to an acute change in patient condition, Pancesar et al. performed a study in a Pediatric ICU. The author reported that integrating SBAR with the electronic medical record was associated with a complete documentation of critical pediatric patient events and an increase in documentation of attending physician and nursing notification (Table 1) [42].

Like other areas of medicine, health care providers in obstetrics medicine have patient safety concerns related to communication errors during critical events. Ting and colleagues conducted a study to evaluate the impact of the SBAR technique on safety attitudes in the obstetrics department. In this study, the SBAR collaborative communication education course, which included an educational session on fetal heart rate monitoring, was implemented. The Safety Attitudes Questionnaire (SAQ) was completed by the nurses before and after the SBAR course. Most of the value ratings for the teamwork climate, safety climate, job satisfaction, and working conditions significantly improved in a post-intervention survey (Table 1) [38].

In emergency medicine, it has been emphasized to learners that clear and patient-focused handoff is important to make sure an accurate diagnosis is made and patients receive life-saving treatment in a timely manner. McCrory et al. published a study to assess whether a modified "ABCSBAR" mnemonic (Airway, Breathing, Circulation followed by Situation, Background, Assessment, and Recommendation) improves handoffs by pediatric interns in a simulated clinical emergency without delaying or omitting the information on Airway, Breathing, and Circulation (ABC). The author concluded that there was improvement in inclusion and timeliness of essential information such as ABC; however, handoff duration was increased (Table 1) [57].

In a hospital setting, patients with complex needs are managed by an interdisciplinary team. Communication among interdisciplinary team members should be

consistent, clear, and concise to make sure that all of the team members have a good understanding of the patient's clinical information. The SBAR communication tool supports common language among team members. It promotes shared decision making and conflict resolution among team members [58] which will likely improve patient satisfaction and outcomes. Structured SBAR protocol for the presentation of patient cases by nurses during interdisciplinary rounds has resulted in shorter review time during interdisciplinary rounds [59].

Townsend-Gervis et al. tested the impact of using the SBAR tool in the context of daily interdisciplinary rounds (IDR) to improve patient outcomes such as patient satisfaction, Foley catheter removal, and patient re-admission rates in the medical/surgical units of a hospital. This study showed significant improvement in Foley catheter removal, reduction in re-admissions rate, and improvement in patient satisfaction. This study's results support the value of using SBAR during IDR to improve situational awareness and to maintain focus on relevant clinical issues (Table 1) [23].

The SBAR tool has shown improvement in communication among health care providers in a clinical setting by creating a common language; however, SBAR communication tool has a broader application which was assessed by Vanderman and his colleagues [60]. A qualitative case study was conducted to explore the implementation of the SBAR protocol and to investigate the potential impact of SBAR on the day-to-day experiences of nurses. Three unique and related concepts, schema development, social capital, and dominant logic, were assessed. The authors revealed that SBAR may help nurses in rapid decision making (schema development), provide social capital and legitimacy for less-tenured nurses, and reinforce a move toward standardization in the nursing profession (Table 1).

Ineffective communication between nurses and physician in the nursing home setting could affect the nursing home residents' care and the work conditions for nurses and physicians. To examine the feasibility and utility of SBAR protocol in long-term care, Renz et al. conducted a quality improvement project to evaluate the impact of the SBAR tool on nurse communication with medical providers. There was an improvement in nurse–medical provider communication. Over 80% of nurses found the tool useful, helping them to organize the resident's clinical information and provide cues on what needs to be communicated to the care providers (Table 1). Limitations reported by nurses include the time required to complete the tool and non-verbal communication barriers not addressed by the SBAR tool [61].

Comparison of SBAR with other communication tools

There are few studies which have looked into the comparison of SBAR with other tools to assess communication during handoff in a health care setting. Horwitz and colleagues

developed an easy-to-remember mnemonic SIGN-OUT (Sick, Identifying Data, General Hospital Course, New Events of the Day, Overall Health Status, Upcoming Possibilities with Plan, Task to Complete Overnight with Plan) tool for medical house staff. SIGN-OUT was compared by in-house physicians to SBAR using pretest and posttest self-reported attitudes following an hour educational session. Perceived comfort with providing SIGN-OUT increased (mean score from 3.27 ± 1.0 to 3.94 ± 0.90; $p < .001$). SIGN-OUT was ranked as important or very important to patient care by all participants and was rated as useful or very useful by all participants. SIGN-OUT received a slightly higher rating than SBAR [62].

Ilan et al. performed a study using the video recording of patient handoff in an academic ICU in Canada to describe handoff communication patterns used by physicians in the ICU setting and to compare this with currently popular, standardized schemes for handoff communication. Forty individual patient handoffs were randomly selected by attending physicians. Two independent coders reviewed handoff transcripts, documenting elements of three communication tools: SBAR, SOAP (Subjective, Objective, Assessment, Plan), and MAN (Medical Admission Note). This study shows that the majority of handoff content consisted of recent patient status and the recommendation component of the handoff was missing in 50% of the handoffs. Elements of all three standardized communication tools appeared repeatedly throughout the handoff without any consistent pattern. The author concluded that ICU physicians do not commonly recommend communication tools during handoff and likely these tools do not fit the clinical work of handoff within the ICU setting due to the complexity of the cases [63].

Adams and colleagues conducted a study to compare the D-BANQ (Demographics and Stability, Before I Began to Provide Care, As I Provided Care, and Next Care Provider, Needs to Know, Question) communication tool with WHO-SBAR (SBAR tool recommended by WHO) and CDPH-TJC (Joint Commission Communication During Patient Handoff). This study resulted in an alternative structure for handoff, D-BANQ, which aligns with WHO-SBAR and TJC-CDPH handoff structures and provides an easy-to-follow chronological format for the content that nurses identified as necessary to communicate during nursing activity. This study is supportive of both the WHO-SBAR and the TJC-CDPH structures for nursing handoff, and D-BANQ format provides additional refinement and clarification in communication thereby preventing errors and maximizing patient safety during handoff [64].

Handoff protocol Flex 11 has been studied and compared with SBAR communication tool; overall, there was no difference in workload, the amount of information required for handoff, and duration of handoff except

Flex 11 was rated high for "ease of use" and "being help-ful" as compared to SBAR tool [65].

Limitations of SBAR tool
SBAR is a reliable and validated communication tool that can be easily implemented in hospital-based practice for sharing information among health care providers; how-ever, there are limitations of use in patients with complex medical histories and care plans, especially in the critical care setting. The SBAR tool requires training of all clinical staff so that communication is well understood. It requires a culture change to adopt and sustain structured commu-nication formats by all health care providers.

Strengths and limitations of review
This narrative review identifies the challenges faced by health care providers during daily transfer of patient care and provides broader use of the SBAR communication tool for patient handoff in various health care settings including acute care. Another strength of this review is to provide greater insight into the SBAR tool by identifying the studies which have compared the SBAR tool with other communi-cation tools for patient handoff as such readers can have a better understanding of SBAR tool usage.

There are few potential limitations to describe. It is a nar-rative review as such it might not be comprehensive enough to synthesize all the evidence on use of the SBAR communication tool for handoff in health care setting. Moreover, this review mainly focuses on the use of SBAR communication tool for patient handoff between nurses and physicians, therefore, findings of this review are not ne-cessarily applicable to other types of communications such as nurse to nurse or physician to physician handoffs.

Future directions
There is a need for future research to assess the impact of a structured SBAR tool on patient-important outcomes and cost-effectiveness of the SBAR tool implementation compared to adverse events related to communication er-rors. Future studies on validation of the SBAR tool in vari-ous medical subspecialties, strategies to reinforce the use of SBAR during all patient-related communication among health care providers, and comparison studies on SBAR communication tool with I-PASS (Illness severity, Patient summary, Action list, Situation Awareness/contingency plan and Synthesis by receiver) communication tool would be beneficial. Minimizing communication errors in all spheres of medical practice will substantially improve patient safety and outcomes, quality of care, and satisfac-tion among health care providers.

Conclusions
Patient safety is the priority in patient care, and commu-nication errors are the most common cause of adverse events during patient care. Health care providers make every effort to avoid communication errors during pa-tient handoff. SBAR communication tool is a structured communication tool which has shown a reduction in ad-verse events in a hospital setting. Various medical associ-ations and leading health care organizations have been endorsing SBAR communication tool for handoff among health care providers. This communication tool creates a shared mental model around the patient's condition and has been used for transfer of patient care in various clin-ical settings. SBAR communication tool is easy to use and can be modified based on most of the clinical set-tings; however, it can be challenging to use for complex clinical cases such as ICU patients. Moreover, the use of SBAR communication tool requires educational training and culture change to sustain its clinical use. Future re-search is needed to assess the impact of the SBAR com-munication tool on patient outcomes, validation of tool in other subspecialties, and its comparison with other communication tools such as I-PASS.

Ethics approval and consent to participate
Not applicable

Consent for publication
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Competing interests
The authors declare that they have no competing interests.

Publisher's Note

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