

CLINICAL PRACTICE

The structured communication tool SBAR (Situation, Background, Assessment and Recommendation) improves communication in neonatology

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Background. Effective communication, co-operation and teamwork have been identified as key determinants of patient safety. SBAR (Situation, Background, Assessment and Recommendation) is a communication tool recommended by the World Health Organization and the UK National Health Service. SBAR is a structured method for communicating critical information that requires immediate attention and action, contributing to effective escalation of management and increased patient safety. To our knowledge, this is the first study showing use of SBAR in South Africa (SA).

Objective. To determine the effectiveness of adopting the SBAR communication tool in an acute clinical setting in SA.

Methods. In the first phase of this study, neonatal nurses and doctors at Groote Schuur Hospital, Cape Town, were gathered in a focus group and given a questionnaire asking about communication in the neonatal department. Neonatal nurses and doctors were then trained to use SBAR.

Results. A telephone audit demonstrated an increase in SBAR use by registrars from 29% to 70% when calling consultants for help. After training, the majority of staff agreed that SBAR had helped with communication, confidence, and quality of patient care. There was qualitative evidence that SBAR led to greater promptness in care of acutely ill patients.

Conclusions. Adopting SBAR was associated with perceived improvement in communication between professionals and in the quality and safety of patient care. It is suggested that this simple tool be introduced to many other hospitals in SA.

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Effective communication, co-operation and teamwork have been identified as key determinants of patient safety. SBAR (Situation, Background, Assessment and Recommendation) is a structured method for communicating critical information that

requires immediate attention and action. It contributes to effective escalation of management and increased patient safety and is recommended by the World Health Organization (WHO)^[1] and the UK National Health Service.^[2]

WHO Millennium Development Goal 4 is aimed at reducing the number of deaths of children under the age of 5 years by two-thirds from 95/1 000 to 31/1 000 by 2015.^[3] In South Africa (SA), early neonatal mortality accounts for 33% of deaths of children under the age of 5.^[4]

In root-cause analysis of nationally reported cases of infant death and permanent disability in the USA, communication issues among team members were the single most important factor identified.^[5] Faulty or delayed communication was considered the primary cause of adverse events in 72% of cases.

The WHO Collaborating Centre on Patient Safety Solutions^[1] has suggested a 'standardized approach to hand-over communication between staff', proposing the use of the SBAR technique. This can be simplified as follows:^[6]

- **Situation:** What is going on with the patient?
- **Background:** What is the clinical background or context?
- **Assessment:** What do I think the problem is?
- **Recommendation:** What would I do to correct it?

The use of SBAR has been shown to increase the impact of telephone referrals between doctors,^[7] and decreases the time taken for junior doctors to relay key facts in an emergency situation.^[8] Doctors are assisted in making clinical decisions from a nursing report when SBAR is used.^[9] Most notably, SBAR decreases unexpected patient deaths when taught to nursing staff, along with training in airway-breathing-circulation resuscitation.^[10] SBAR is currently in use in the UK,^[2] Europe,^[10] the USA^[7] and Australia.^[8]

Objective

To determine the effectiveness of adopting the SBAR communication tool in an acute clinical setting in SA.

Methods

The nursery at Groote Schuur Hospital, Cape Town, is a 75-bed tertiary unit that admits over 2 000 infants a year, of whom about 530 have a birth weight of <1 500 g.


		<h2 style="color: #e91e63;">Neonatal Escalation SBAR</h2> <p>A 30-60 second report</p>	<p>Before calling the dr:</p> <ol style="list-style-type: none"> 1. Assess the baby 2. Read most recent notes 3. Have chart in hand
Situation	<p>My name is ____, I am calling from ____ Who am I speaking to? I am calling about Baby Boy or Girl ____ who is ____ old I'm calling because... the baby is blue, grunting, irritable, jaundiced, hypoglycaemic etc. Include vital signs here in an emergency situation</p>		
Background	<p>The baby was admitted because of.... very low birth weight, respiratory distress etc. Gestation Weight Born via: C/S (give reason) NSVD Forceps Ventouse Apgars: Maternal history HIV Y/N Problem list Ventilation/O₂: Intubated CPAP Nasal cannulae ____ litres O₂ Medications Test results</p>		
Assessment	<p>Vital signs: Airway/Breathing RR Oxygen Saturations Circulation HR BP Temperature Blood Glucose I think this patient might have..... an infection, Hypoxic Ischaemic Encephalopathy, RDS etc. Or <i>"I'm not sure what's wrong with this patient, but I am worried"</i></p>		
Recommendation	<p>I have already... increased the oxygen, put the baby on monitoring, started phototherapy etc. I think this baby needs.... CPAP, intubation, antibiotics, review etc. I think this needs doing within the next ____ mins/hrs/days How often should I do observations? When shall I call you back if there is no improvement? Can I repeat the plan back to you?</p>		

Fig. 1. Neonatal escalation SBAR table, adapted.^[11] (SBAR = Situation, Background, Assessment and Recommendation.)

SBAR training, over a number of sessions, was given to 95% of neonatal doctors and 87% of neonatal nursing staff in November 2013. Each session lasted 1 hour and included case scenario practice. Nurses and doctors were trained separately.

Posters and stickers were placed by telephones to remind staff to use the structure when communicating. A neonatal SBAR escalation table was developed to encourage standardisation of information over the telephone (Fig. 1).

Laminated sheets were developed to act as a prompt for nursing handover, as were escalation and handover stickers for the patient notes. Tools for obstetric training, together with handover and escalation stickers, were also developed and trialled. Links to all these resources can be found on the internet (<http://www.tvwleadershipacademy.nhs.uk/improving-global-health-through-leadership-development>).

A qualitative questionnaire was administered 1 month after training to evaluate perceptions of SBAR in the nursery. Nurses and doctors were asked how often they were using SBAR and whether it had helped with certain domains, with the option of replying agree strongly/agree slightly/neutral/disagree slightly/disagree strongly. They were also

Table 1. Results from second neonatal staff questionnaire

	Nurses (%)	Doctors (%)
Using SBAR daily or every other day	76	76
Agree has affected clinical practice	44	76
Agree has helped with		
Ease of communication	86	94
Asking for help	86	71
Confidence with structure	86	94
Confidence with making a recommendation	86	94
Doctors giving clearer instruction	76	53
Doctors attending more promptly	79	41
Quality of patient care	86	88
Training and learning	77	82
Senior perception		
Juniors' confidence with structure		65
Juniors' confidence with diagnosis		59
Being able to give clearer instructions		100
Being able to attend more promptly		71
Agree should be taught to incoming staff	90	100

SBAR = Situation, Background, Assessment and Recommendation.

asked for examples of how SBAR had helped in a clinical situation.

A telephone audit was performed before and 2 weeks after SBAR training. On-call consultants

covering the nursery recorded the outcome of their telephone consultations and whether SBAR was used. Fifty calls were compared over two 3-week periods before and after training.

Ethics approval for this study was obtained from the Human Research Ethics Committee, Faculty of Health Sciences, University of Cape Town.

Results

The telephone audit demonstrated an increase in SBAR use from 29% before training to 70% after training.

The questionnaires, filled in 1 month after SBAR training, were returned by 21 nurses and 17 doctors, of whom 70% and 100%, respectively, had attended SBAR training. The results are set out in Table 1.

There was qualitative evidence that SBAR had facilitated prompter patient care and senior review. The following were responses to the question 'Describe a clinical situation in which SBAR was helpful':

'There was an infant on nasal ventilation who was experiencing apnoeas with no breath movement. The doctor was informed immediately ... and intervention was dealt with appropriately and effectively.' (Neonatal nurse)

'Was on-call: the registrar was busy in a different department. I was called to theatre for C-section – baby came out and needed resuscitation. I could give clear explanation of the scenario to the registrar and he could respond with clear instructions using SBAR.' (Neonatal intern)

'New admission to nursery – very unstable – understood issues and realised I needed to attend promptly.' (Neonatal consultant)

There was additional qualitative evidence that SBAR had facilitated patient transfer, structured ward rounds and training.

Discussion

SBAR is a structured method for communicating critical information that requires immediate attention and action, contributing to effective escalation of management and increased patient safety. It reduces the barrier to effective communication across different hierarchies and levels of staff by acting as a memory prompt that encourages prior preparation for communication.

To our knowledge, this is the first study showing implementation of the use of SBAR in SA. The concept was successfully implemented despite certain challenges, e.g. reluctance on the part of nursing staff to write in the notes and use the handover stickers owing to

perceived hierarchy, lack of space in the patient record(s), and time constraints. As a result, laminated handover prompts were developed to enable standardised verbal handover. As seen in Table 1, the nurses embraced regular use of SBAR. Among doctors, the juniors were the most enthusiastic about using SBAR.

SBAR was shown to be helpful in a wide range of domains (Table 1). In SA, SBAR is due to be introduced to maternity services in the Western Cape Province following a recommendation from the National Committee on Confidential Enquiries into Maternal Deaths (Dr Stefan Gebhardt, personal communication 21 December 2013).

Conclusions

Adopting SBAR was associated with improvement in communication between professionals and in the perception of quality and safety of patient care. With the proven link between mortality and poor communication and the need to meet Millennium Development Goal 4, it is hoped that SBAR will be introduced to neonatal and maternity services across the country.

1. WHO Collaborating Centre for Patient Safety Solutions. Patient Safety Solutions Preamble – May 2007. Geneva: World Health Organization, 2007. <http://www.jointcommissioninternational.org/assets/3/7/PreambleandSolutionsENGLISH.pdf> (accessed 4 November 2014).
2. NHS Institute for Innovation and Improvement. Quality and Service Improvement Tools. SBAR - Situation - Background - Assessment - Recommendation. NHS Institute for Innovation and Improvement, 2008. http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/sbar_-_situation_-_background_-_assessment_-_recommendation.html (accessed 19 September 2013).
3. United Nations. Millennium Development Goals and Beyond 2015. Goal 4: Reduce Child Mortality – Fact Sheet. United Nations, 2013. <http://www.un.org/millenniumgoals/childhealth.shtml> (accessed 25 September 2013).
4. Pattinson R, Woods D, Greenfield D, et al. Improving survival rates of newborn infants in South Africa. *Reprod Health* 2005;2(4):1-13. [<http://dx.doi.org/10.1186/1742-4755-2-4>]
5. Joint Commission on Accreditation of Healthcare Organizations. Sentinel Event Alert Issue 30, 2004. Joint Commission on Accreditation of Healthcare Organizations, 2004. http://www.jointcommission.org/assets/1/18/sea_30.pdf (accessed 4 November 2014).
6. Leonard M, Graham S, Bonacum D. The human factor: The critical importance of effective teamwork and communication in providing safe care. *Qual Saf Health Care* 2004;13:85-90. [<http://dx.doi.org/10.1136/qshc.2004.010033>]
7. Cunningham NJ, Weiland TJ, van Dijk J, et al. Telephone referrals by junior doctors: A randomised controlled trial assessing the impact of SBAR in a simulated setting. *Postgrad Med J* 2012;88(1045):619-626. [<http://dx.doi.org/10.1136/postgradmedj-2011-130719>]
8. McCrory MC, Aboumatar H, Custer JW, et al. ABC-SBAR training improves simulated critical patient hand-off by pediatric interns. *Pediatr Emerg Care* 2012;28(6):538-543. [<http://dx.doi.org/10.1097/PEC.0b013e3182587f6e>]
9. Compton J, Copeland K, Flanders S, et al. Implementing SBAR across a large multihospital health system. *Jt Comm J Qual Patient Saf* 2012;38(6):261-268.
10. De Meester K, Verspuy M, Monsieurs KG, et al. SBAR improves nurse-physician communication and reduces unexpected death: A pre and post intervention study. *Resuscitation* 2013;84(9):1192-1196. [<http://dx.doi.org/10.1016/j.resuscitation.2013.03.016>]
11. Premier Inc. Perinatal SBAR 2005. https://www.pdfiller.com/en/project/23815498.htm?form_id=100036182 (accessed 4 November 2014).

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