



Medical and Health Professional Education  
Best Evidence Medical Education

## **BEME Spotlight 41**

### **Tools for structured team communication in pre-registration health professions education: a Best Evidence Medical Education (BEME) review: BEME Guide No. 41**

Buckley S, Ambrose L, Anderson E, Coleman JJ, Hensman M, Hirsch C, Hodson J, Morley D, Pittaway S, Stewart J

#### **Review citation**

Buckley S, Ambrose L, Anderson E, Coleman JJ, Hensman M, Hirsch C, Hodson J, Morley D, Pittaway S, Stewart J (2016) Tools for structured team communication in pre-registration health professions education: a Best Evidence Medical Education (BEME) review: BEME Guide No. 41. *Medical Teacher* 38.10 (doi:10.1080/0142159X.2016.1215412).

#### **Review website**

<http://bemecollaboration.org/Published+Reviews/BEME+Guide+No+41/>

#### **Keywords**

SBAR, tool, structured communication, standardised protocol, multi-disciplinary team, initial training, systematic review

#### **Headline conclusions**

Our review indicates that pre-registration students, particularly those in the US, are learning to use tools for structured communication, either in specific sessions or integrated into more extensive courses or programmes; and that they are mostly learning to use SBAR and its variants. Interventions that incorporate tools for structured communication are mostly for uni-professional groups and often use simulation. There is some evidence that learning to use one or more tools can improve the clarity and comprehensiveness of student communications, their perceived self-confidence and their sense of preparedness for clinical practice. However, there is as yet little evidence relating to the transfer of these skills to the clinical setting or for any influence of teaching approach on learning outcomes. Educators will need to consider the positioning of such learning with other skills such as clinical reasoning and decision-making.

#### **Background and context**

Standardised protocols for information exchange between health professionals, such as Situation Background Assessment Recommendation (SBAR), are being introduced into clinical practice. Often described as 'tools for structured communication', introduction of such protocols is, in part, the result of efforts to apply good practice from aviation safety to health care.

These developments have resulted in calls for trainee health professionals to understand and be able to use tools for structured communication when they enter clinical practice. In order to help clinical educators decide how best to respond to these calls, we have reviewed the educational literature relating to the integration of one or more tools for structured communication into an educational intervention for pre-registration health professions students.

## Review objectives

Our review aimed to investigate the influence of educational interventions that include tool(s) for structured communication on students' knowledge, skills and attitudes; and the evidence for any influence of teaching method on the nature or extent of student learning. To achieve this, we considered interventions in which the tool(s) are the main focus of the learning and those in which they are component(s) of a more extensive module or course; and adopted an exploratory approach based on a broad overall question: *how does the teaching of a tool for structured communication within and between teams contribute to student learning?*

## Review methodology

**Search Strategy:** Searches of 10 databases (1990-2014) were supplemented by hand searches and by citation searches (to January 2015).

**Inclusion and Exclusion Criteria:** Our review included studies that reported evaluation of an educational intervention incorporating one or more tools for structured communication and that involved undergraduate students from any clinically-focussed health profession. We considered undergraduate students to be those engaged in a course of initial, pre-registration training, regardless of their qualifications on entry. Studies relating to qualified staff or to educational interventions that did not include a tool for structured communication were excluded.

**Data Extraction:** We prepared a comprehensive data extraction form and tested it with a pilot sample of eight articles. The final form was assembled in Distiller SR (Distiller SR Evidence Partners, Ottawa, Canada) and data extraction undertaken by reviewer pairs. Discrepancies in data extraction were resolved by consensus following transfer of data to a spread-sheet (Microsoft Excel Version 14).

**Data Synthesis:** We assessed the methodological quality of included studies using a generic checklist of 11 indicators that were designed to reflect qualities of intellectual rigour applicable to all studies. Studies that met seven or more quality indicators were considered in greater depth and a narrative synthesis of study findings undertaken.

## Implications for practice

- Pre-registration students, particularly in the US, are learning to use tools for structured communication, either in specific sessions or integrated into wider educational interventions.
- Students are mostly learning to use SBAR and its variants, in uni-professional groups and often in simulation.
- There is some evidence that learning to use one or more tools can improve the clarity and comprehensiveness of student communications, their perceived self-confidence and their sense of preparedness for clinical practice.
- As yet, there is little evidence relating to the transfer of these skills to the clinical setting.
- Reported studies suggest that clinical educators will need to consider the positioning of such learning with that for other skills such as clinical reasoning and decision-making.

## References

- Aebersold, M., Tschannen, D., & Culli, G. (2013). Improving nursing students' communication skills using crew resource management strategies. *J. Nurs. Educ.*, 52(3), 125
- Keller, K. B., Eggenberger, T. L., Belkowitz, J., Sarsekeyeva, M., & Zito, A. R. (2013). Implementing successful interprofessional communication opportunities in health care education: a qualitative analysis. 4, 253. doi: 10.5116/ijme.5290.bca6
- Marshall, S., Harrison, J., & Flanagan, B. (2009). The teaching of a structured tool improves the clarity and content of interprofessional clinical communication. *Quality & Safety in Health Care*, 18(2), 137-140. doi: <http://dx.doi.org/10.1136/qshc.2007.025247>
- Marshall, S. D., Harrison, J. C., & Flanagan, B. (2012). Telephone referral education, and evidence of retention and transfer after six-months. *BMC Medical Education*, 12, 38. doi: <http://dx.doi.org/10.1186/1472-6920-12-38>
- Senette, L., O'Malley, M., & Hendrix, T. (2013). Passing the Baton: Using Simulation to Develop Student Collaboration. *Clinical Simulation in Nursing*, 9(2), e39-46. doi: 10.1016/j.ecns.2011.08.005