



SA Health

Prevocational Medical Education Simulation Based Education (SBE)



Framework



AIM OF THIS SBE FRAMEWORK

The key aim of developing a coherent framework for simulation-based education (SBE) is to help decision-makers address the inequities associated with SBE variability. The first iteration of this framework is intended to be a practical resource in establishing best-practice in SBE and in ensuring growth and sustainability in SBE within pre-vocational medical education.



INTRODUCTION TO SBE

There is a growing evidence base in medical education that supports the effective development and transfer of skills using SBE. SBE has become a feature of contemporary medical education and training programs globally. As a medium for learning, simulation encompasses a broad range of settings, resources, formats and complexities in design and delivery. It is possible to support the learning of non-technical and technical skills through simulation, for the individual, the team and across disciplines and professions. Importantly, SBE seeks to provide a safe and supportive setting for learning and to complement and relate to the learning that necessarily occurs in the real clinical environment. With this in mind, there is significant potential for SBE to bring efficiency to the learning process while avoiding the risk of harm to patients that is associated with learning new skills in the clinical setting.

While a relatively new modality, there is sufficient experience and evidence to conceptualise SBE as a proven and established mode of learning. This means there should be ownership of simulation by the “whole of health”, as a valid and essential learning experience. As such, while oversight and coordination might reside with a few, the broader healthcare community can actively develop and deliver the educational content. Just as clinicians teach by more conventional methods, they can rely on their educational skills to teach using simulation. By adopting this concept, simulation becomes a normal and expected part of everyone’s teaching repertoire and everyone’s learning experience.

Like other educational endeavours, SBE faces a number of key challenges. An effective SBE program requires a clearly defined curriculum to guide what learning should and can be facilitated through simulation. SBE programs require investment of a range of resources, with appropriate oversight and management. A recent audit within South Australia focusing on the pre-vocational medical years identified enthusiasm and commitment to promoting SBE programs (De Klerk & Anthony 2018). The audit also uncovered significant variability in the way SBE programs are resourced, governed, managed, accessed and aligned to meet the needs of junior doctors across SA Health.

PURPOSE OF SBE

In the prevocational medical education context, SBE supports the transition of junior doctors during internship and in their subsequent formative clinical years prior to vocational training. SBE fulfils the need for developing new skills and practicing and refining skills as an explicit learning experience under various conditions and situations. This learning is relevant and responsive to the performance requirements of the junior doctor in their real-life work environment. Less commonly, SBE may assist in formative and summative assessment of performance and may be employed to remediate aspects of performance. A benefit of SBE is the ability to accommodate the learning of an individual as well as a team, with a focus on both technical and non-technical skills.

Therefore, SBE allows teaching and learning of a range of skills which have traditionally been acquired through the 'hidden curriculum'. In addition to creating relevance and authenticity of the learning experience, a well-designed SBE ensures emotional and physical safety for the learner. Overtly, SBE avoids the risk of harm to patients that may arise from learning as a novice if practicing on patients. By appropriately scheduling simulation sessions to complement work-based learning, SBE can bring greater efficiency to the learning process. Ultimately, SBE is aimed at ensuring high quality, effective and safe patient care by junior doctors working in their teams.

SBE PRINCIPLES

The principles of SBE should align with the aim of delivering safe and effective patient care and successful workforce development.

The following table (Table 1) outlines the key principles of SBE which supports success of SBE activities.

Table 1.

Principles	
Mission	<p>SBE has a publicly stated mission that specifically addresses the intent and functions of SBE within the organisation and its goals.</p> <p>SBE goals and aspirations serve as a barometer against which leaders can measure actions.</p> <p>The SBE mission will enhance the visibility of SBE in the organisation and its utility.</p>
Governance	<p>SBE has an appropriate organisational structure and defined resources.</p> <p>The SBE organisational structure has a process for strategic review and approval of its activities and resource allocation.</p> <p>Development of a written plan, with resources, designed to accomplish the mission.</p>
Resources	<p>The SBE program has a dedicated appropriately qualified manager coordinate SBE activities.</p> <p>The SBE manager has the ability to obtain, maintain, and support SBE equipment and relevant technologies.</p> <p>SBE has appropriate resources and physical space for SBE activities.</p> <p>SBE partnerships with content matter experts are essential for successful SBE.</p>
SBE program	<p>The SBE manager provides day-to-day oversight of simulation activities.</p> <p>The SBE manager has the ability to prioritise learning needs and resources as required.</p> <p>SBE programs are mapped to safety and quality standards and educational frameworks.</p> <p>SBE is collaborative and there is sharing of programs, equipment and knowledge within the organisation and with partner organisations.</p>
Learners	<p>Learners are released from duties to attend SBE.</p> <p>Learners are provided with a safe environment to practice skills and are provided feedback in a respectful and protected manner.</p> <p>Learners are given opportunities to assist in the development of SBE.</p> <p>Learners provide evaluation feedback that contributes to quality improvement of SBE.</p> <p>SBE provides an adequate number and variety of SBE activities to support the mission.</p> <p>SBE enhances regular, longitudinal learning.</p>
Evaluation	<p>A range of data is drawn upon to evaluate SBE.</p> <p>SBE has processes in place to identify and address concerns and complaints.</p> <p>SBE is committed to ethical standards and the safety of participants.</p>

SBE PRIORITIES

The following priorities (Table 2) inform development of strategies to plan, design, deliver and evaluate SBE with robust governance and leadership.

Table 2.

Mission	Governance	Resources	SBE Program	Learners	Evaluation
<ul style="list-style-type: none"> ✓ Set goals that align to the organisation strategic plan 	<ul style="list-style-type: none"> ✓ Link SBE to the organisation governance structure 	<ul style="list-style-type: none"> ✓ Recruit a dedicated and appropriately skilled SBE manager 	<ul style="list-style-type: none"> ✓ Employ best practice 	<ul style="list-style-type: none"> ✓ Provide opportunities to clinicians to assist in the development of SBE 	<ul style="list-style-type: none"> ✓ Develop reliable and valid evaluation methods to monitor learning outcomes
<ul style="list-style-type: none"> ✓ Increase awareness 	<ul style="list-style-type: none"> ✓ Deepen relationships with Executives and Leaders 	<ul style="list-style-type: none"> ✓ Catalogue equipment and other resources 	<ul style="list-style-type: none"> ✓ Identify and articulate learning outcomes 	<ul style="list-style-type: none"> ✓ Deploy near peer SBE 	<ul style="list-style-type: none"> ✓ Map to standards
<ul style="list-style-type: none"> ✓ Establish a recognised 'go to brand' 	<ul style="list-style-type: none"> ✓ Support the development of strong SBE Leaders 	<ul style="list-style-type: none"> ✓ Expand engagement with peers internal and external to the organisation 	<ul style="list-style-type: none"> ✓ Embrace innovation ✓ Identify partners 	<ul style="list-style-type: none"> ✓ Create ambassadors 	

ENABLERS AND BARRIERS

Implementation of a SBE program is more than delivery of SBE activities to healthcare professionals. There are important enablers and barriers (Table 3) to consider which will influence the success of a SBE program.

Table 3.

Enablers:		Barriers:	
Mission	Dedicated branding Engagement Awareness	Mission	Isolation Disengagement Out of sight
Governance	Executive buy in Leadership and support Formal governance Positive organisational culture	Governance	Lack of leadership Poor governance Lack of ownership Negative organisational culture
Resources	Funding and resource allocation SBE organisation manager Education Registrars Specialty medical education terms that are accredited Collaboration and sharing	Resources	Lack of funding and resource allocation Poor coordination Disorganisation and siloed work environments Adhoc approach to equipment and resources Lack of whole of organisational perspective on SBE
SBE Program	Stakeholder engagement Professional development opportunities for educators Focus on patient safety	SBE Program	Perceived low priority for medical education Limited professional development opportunities for educators Poorly executed simulation can be damaging
Learners	User engagement and involvement Provision of a safe learning environment Focus on learner needs including emotional and physical safety Scenarios designed with appropriate levels of complexity that meet specific learning outcomes	Learners	Ability to prioritise and coordinate protected time Cultural perspective of individuals Participant anxiety about the experience Poor understanding of learner needs
Evaluation	Focused on quality improvement Evidence to support organisation growth	Evaluation	Deterioration of quality education leading to disengagement Disinvestment in education and training within the organisation

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Reference:

De Klerk, P & Anthony, A (2018) An Audit of Simulation Based Education in South Australia. Unpublished.



For more information

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