



Government of **Western Australia**
Department of **Health**

Women and Newborn Health Service

Simulation education toolkit
January 2015

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1. Introduction

This Toolkit applies to Simulation Based Education (SBE) activities provided by King Edward Memorial Hospital (KEMH). The Toolkit provides guidance for all professional disciplines involved in the planning, development, management or evaluation of SBE for KEMH/WNHS. The aim of SBE in this environment is the enhancement of learning and teamwork to improve the safety and quality of patient care.

While it is acknowledged that SBE can take place in a range of different environments, the Toolkit includes specific information for the use of the Simulation facility located with the Department of Nursing and Midwifery Education and Research (DNAMER) at KEMH.

2. Overview

“Simulated learning environments (SLEs) are an essential part of modern clinical education and training. They improve the quality of training and facilitate interprofessional learning (IPL), where appropriate, to provide significant safety and cost-efficiency benefits to healthcare.” (WA Health Simulation Training Strategy, 2011)

Benefits of Simulation Based Education

- Enhancing patient safety
- Improving performance of both technical and non-technical skills
- Reducing medical error
- Strengthening teamwork, enriching the educational experience, and allowing for interprofessional learning
- Learning to debrief
- Objectively assessing skills for accreditation purposes and competency assessments
- Enhancing the effectiveness of existing ward-based training by accelerating attainment of clinical skills
- Increasing capacity in WA Health to train and up-skill the workforce
- Contributing to attraction and retention of health professionals in WA's health workforce

3. Simulation education sub group

In recognition of the current evidence to support SBE concepts and its use within hospital training environments, the WNHS Education Stakeholders Committee created the Simulation Education sub-group in October 2013.

The purpose of the Simulation Education sub-group is to:

- Identify and seek opportunities, including new technologies and potential funding, to improve the provision of simulation education within King Edward Memorial Hospital (KEMH).
- Contribute to the development of simulation based education (SBE) that is of high quality, evidence-based and meets the needs of all professional disciplines at KEMH.
- Inform and provide feedback on existing and emerging issues concerning SBE including the development of processes for managing SBE at KEMH.

4. Business rules

The following business rules apply to SBE within KEMH/WNHS to ensure the maintenance of quality standards:

- i. The SBE Toolkit will be utilised by all professional disciplines to provide a framework for the development of simulation education activities.
- ii. Individual course design, conduct and evaluation will be managed by the respective disciplines in order to meet their specialist needs.
- iii. The DNAMER Head of Department (HOD) is responsible for the operational management of the DNAMER Simulation facility including equipment located within DNAMER, some of which is owned by Curtin University, School of Nursing and Midwifery. Other facilities and equipment will remain the responsibility of the respective 'owners'.
- iv. Technical support for selected SBE activities will be provided under contract as agreed by the Executive Director Midwifery, Nursing and Patient Support Services, Chair of Education Stakeholders Committee.
- v. Departments intending to utilise the SLE should acknowledge they have read this toolkit and book their simulation by completing the application form. (Appendix A)
- vi. SLE bookings in DNAMER are available from 0800 – 1600hrs Monday to Friday.
- vii. Where possible a DNAMER representative will be allocated to assist with SBE sessions.

Enquiries about booking the SLE or for further information about SBE contact:

DNAMER Head of Department
Janice Butt
Tel: 9287 3010 or 9340 2222, pager 3270
Mobile: 0438 445 138
Fax: 9287
E-mail: Janice.Butt@health.wa.gov.au

5. Policies and Procedures

A safe learning environment is one of the required features for effective SBE. The following guidelines have been developed to facilitate a safe Simulated Learning Environment. These guidelines aim to protect course participants and instructors alike.

5.1. Booking/cancellations

- i. Bookings are usually made at least 2 weeks in advance.
- ii. The booking form (Appendix A) must be completed to secure a session time and date.
- iii. The equipment should be checked by the organisers at least 30 minutes prior to the participants arriving.
- iv. 48 hours' notice is required if the booking is to be cancelled.
- v. DNAMER HOD will schedule the rooms and equipment once the booking form has been submitted.
- vi. Sessions may be denied due to unavailability of rooms, equipment and staff scheduling conflicts.
- vii. Session organisers are responsible for notifying participants of cancellations.

5.2. Dress Code

Participants and instructors are to wear appropriate clothing, closed in footwear and personal, protective equipment (PPE) during the simulation session. Scrubs or similar are the preferred uniform. An identification badge must be worn at all times. A policy on maintaining confidentiality has been developed for the following reason:

- i. Prevent participants/learners from discussing each other's performances. It is important to create an environment where people can learn from their mistakes, discuss their performance openly and self-appraise without fear of ridicule.
- ii. Simulation scenarios take time to create, test and refine and therefore participants should avoid discussing the specifics of scenarios outside the SLE. This enables the reuse of the scripted scenarios for other learners without affecting their unique learning experience in a repeated SBE session.
- iii. Participants agree to maintain confidentiality by signing the Simulation Confidentiality Agreement and Consent to Video Recording Form (Appendix B) prior to the scheduled SBE or at session sign in.

5.3. Orientation

Participants will require orientation to the course, facility, scenario and equipment to provide an understanding of the planned simulation and to identify the expectations of them as learners. They also need to know who to go to if they have any concerns.

The orientation should include the following:

i. Instructors orientation

Introduction to staff and their roles and introduction of fellow learners (this is often achieved with group activities/teamwork icebreaker exercise/s).

Instructors unfamiliar with the SLE will need to schedule an orientation to the equipment and facilities in advance by contacting the DNAMER Head of Department.

ii. Facility orientation

Physical features such as the location of the skills room, debrief room, simulation area (how to use the props such as patient monitors) and the refreshment and toilet locations. Occupational health & safety considerations e.g. fire and evacuation procedures, sharps use/disposal, use of gloves.

iii. Ground Rules

The following rules apply and need to be conveyed to participants, instructors and observers usually during orientation:

- Participants, instructors and observers must sign the attendance sheet at the beginning of the session.
- Participants must wear full uniform inclusive of appropriate closed in shoes to maintain Occupational Health and Safety Principles and to promote fidelity of SBE.
- No eating or drinking in the facility.
- Mobile phones and pagers are to be set to vibration or turned off.
- Bags and personal effects are not to be taken into the demonstration room.
- Encourage participants to treat the demonstration room as they would a clinical environment; keep noise to a minimum. There may be more than one group using the facility at the same time, some of whom may be undertaking formal assessment.
- Encourage participants to treat the manikins as they would a patient; don't leave uncovered etc.
- Ensure participants adhere to hand hygiene guidelines and use PPE as appropriate to the skills.
- Please follow health and safety policies for disposal of sharps and managing needle stick injuries.
- No violation of privacy, rights privileges, health or safety of other participants, instructors or observers.
- No equipment shall be removed from the demonstration room without permission from the Head of Department.
- Professional behaviour shall be exhibited at all times.

- Equipment will be used as specified.
- Universal precautions and aseptic techniques will be maintained.
- The manikin is to be treated with the respect of a live patient.
- The demonstration room will be left as per a clinical site; safe, clean, organised and ready for use by the next group.
- Hospital identification badges will be worn at all times.
- Participants are to perform at their own professional level.
- Participants are to function as they normally would in the workplace ("codes" in real time).

5.4. Familiarisation with equipment

All learners should be familiarised with the manikins and simulation room props, prior to participating in SBE. This procedure is necessary to:

- Ensure safety of the participants. They need to know any safety requirements pertaining to the use of manikins/task trainers.
- Ensure safety of the manikins/task trainers. The participants need to know what they can and can't do to the manikin,
- Allow for full participation and engagement in scenarios and improved immersion by understanding limitations of the simulation equipment.

5.5. Role Play Policy

Role play is an important component of SBE and needs to be carefully considered and guided by the instructors. Role play conduct briefing is required to ensure:

- Participants stay within the role specified. It is recommended that participants use their usual clinical role. (RMO is RMO, midwife is midwife etc.).
- Standardised patients (or patient actors), often played by instructors or trained actors, are able to maintain the level of fidelity required for the scenario.
- Confidentiality is enforced and participant safety is ensured. What happens during SBE stays within the SLE; scenarios, performance, judgements and feedback are not discussed outside of the SLE or following the session/s.

5.6. Instructors Behaviour

Part of providing a safe learning environment for participants is ensuring that all instructors act in a professional manner. Participants will be confronted by a certain level of vulnerability by performing in front of peers, instructors and possibly being video recorded. As such, instructors need to be aware of these elements and act accordingly. It is important that instructors ensure the participants understand:

- The expectations of them
- That their actions and opinions are respected
- Their behaviour requirements before, during and after SBE session

- iv. What to do if they become distressed and what support is available for them

5.7. Evaluation

Quality improvement of SBE involves evaluation by both the learners and the instructors. Post session instructors debriefing is valuable and can assist in refining the session/s. Consideration should be given to developing an evaluation tool for providing instructors with feedback on their performance as well as evaluating the learning experience of participants. This will assist to:

- Motivate the instructors
- Standardise approaches
- Identify learning needs or areas for improvement
- Mentor less experienced instructors
- Improve the learning experience

5.8. Storage of AV recordings

The storage and disposal of recordings requires careful management to maintain confidentiality for the learner and to maintain a safe SLE. It is recommended that video recordings be deleted following the session/s unless prior written consent ([Photography and Videography within the WNHS W136](#)) allowing the use of recordings for another purpose such as research or teaching is given.

The recordings cannot be viewed on devices other than those in DNAMER.

5.9. Equipment, stock, maintenance

The Sim Mom and Sim NewB laptops must not be connected to the internet. Settings for these laptops must not be altered in any way. Documents, other software or media items must not be transferred to these laptops e.g. transferring files from a flash drive to the laptop. The DNAMER HOD must be contacted if technical issues arise.

A wide range of medical, surgical equipment and medications are used as part of SBE. No schedule 8 medications are kept or to be used in the facility. Administration of mock drugs and/or 'out of date' medications may be used, they are not to be taken out of the facility unless supplied by the session organisers.

All usual safety precautions must be observed when using equipment in the SLE. Instructors must have appropriate training in the use of the equipment. Information or assistance with orientation to the equipment can be arranged through the DNAMER Head of Department.

The following rules apply to the use of equipment and other stock:

- i. Equipment is checked by the organisers at least 24 hours prior to the session.
- ii. Stock that is used during sessions is to be replaced by the organisers.

- iii. Faults, breakage, malfunctions or other problems with equipment need to be reported to the HOD using the available reporting form. (Appendix C)
- iv. The room is to be set-up in advance by the organisers.
- v. A technician may be available to provide AV support during the session. This needs to be arranged with the Head of Department.

A list of equipment available for use is available upon request.

- i. A pre equipment checklist is to be completed and returned to the DNAMER Secretary for filing. (Appendix D or E)
- ii. The post equipment checklist will be completed by a DNAMER representative.
- iii. The SLE is not a latex free environment; measures will need to be taken by the session organisers to ensure safety with respect to this and any other identified allergies.

5.10. Conducting a session

- i. Session organisers are responsible for scheduling, communicating and notifying participants.
- ii. Session organisers are responsible for arranging equipment that is not available in the demonstration room.

5.11 Scenario planning

DNAMER has purchased a variety of pre-installed maternal and neonatal scenarios which include:

Maternal

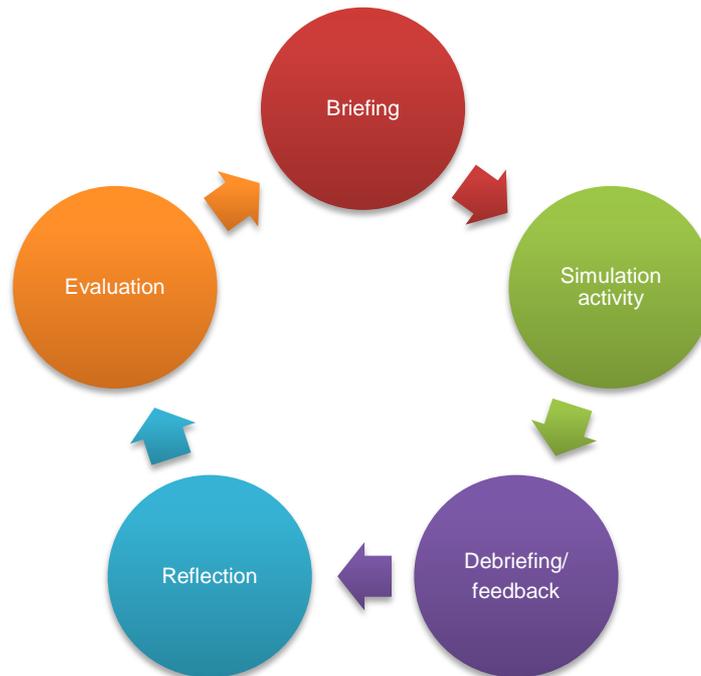
- Acute uterine inversion
- Cord prolapse
- Eclampsia
- Maternal collapse- amniotic fluid embolism
- Normal birth
- Operative vaginal delivery
- PPH – retained lobe
- Sepsis
- Shoulder dystocia
- Uterine rupture
- Vaginal breech

Neonatal

- Vaginal birth – meconium liquor
- Pregnancy induced hypertension – decelerations on CTG – ventilation support
- Healthy term infant – equipment and initial assessment check
- Term newborn apnoeic 20 hours post birth
- Placental abruption – persistent fetal bradycardia

Further information about these scenarios and the accompanying paperwork is available in Teaching Room 1. This information must not be removed from the Teaching room. Please consider intellectual property laws with the use of this paperwork.

5.11.1 Scenario planning tips



- Example scenario templates are available to assist in planning session/s. (Appendix F)
- It is recommended that the following process is used in planning sessions:

5.11.2 Debrief tips

Debriefing is an integral step in the SBE process. Session/s that are video recorded offer an effective start to the debriefing process.

Information and guidance for implementing effective debriefing strategies are available online.

- [Debriefing Assessment for Simulation in Healthcare \(DASH\)](#)
- [The London Handbook for Debriefing](#)

Example prompts that may be used to facilitate debrief include:

Reaction Phase (Experience and Impact)

Participants are given time to **vent**
Encourage to share experiences and views

- What were your impressions of the simulation experience?

Acknowledge, support and encourage discussion of **emotions**

- How did you feel?
- How did you feel about the team's performance?

Analysis Phase (Recollection)

Major events are **deconstructed**:

- What happened?
- What was done well?
- What could have been better?

Discuss - roles

- equipment
- identification of problem
- communication (timing, information)

Promote **reflection** by:

- Use of video playback being used to prompt discussion and reflection
- Fostering self-reflection

Consolidation Phase

(Integration and Closure)

Application of learning

- Relevance
- What has been learned
- Transfer to clinical settings
- What if anything would you change / do differently? (own practice/work environment)
- Revisit emotions
- Lessons learnt
- New goals

Debrief tool modified from: Gum LF, Greenhill J and Dix K. 2012. Sim TRACT™: A Reflective Conceptual Framework for Simulation Debriefing. Journal of transformative education 9(1) 21-4.

6. Resources

- WA Health Simulation Training Strategy. Department of Health Western Australia. May 2011.
- Clinical Simulation Support Unit (CSSU) – coordinating simulation learning and resources for Western Australia. (<http://www.health.wa.gov.au/simulationlearning/home/>)
- Nhet – Sim. Designed for anyone who currently or intends to use simulation as an educational method to support the development of healthcare students and professionals. <http://www.nhet-sim.edu.au/>
- SimNET. Online portal for simulation education and training resources. <http://www.simnet.net.au/>

7. Appendix A: DNAMER Simulation Application Form

To apply for the use of the DNAMER Simulation Room/s please fill out the following details and email to: Janice.Butt@health.wa.gov.au

Once received you will be notified within 48 hours of your booking details.

Name:	
Details of alternative contact:	
Department:	
Contact phone:	
Email address:	
Instructors/instructors names:	

Title of activity:	
Activity outcomes:	
Simulation equipment required:	
Date(s) required:	
Time(s) required:	
Estimated duration of the activity:	
Participant disciplines: <i>(RMO's, midwives, etc.)</i>	

Number of participants:	
--------------------------------	--

Technical support required: (restrictions apply- discuss with HOD)	Yes <input type="checkbox"/> No <input type="checkbox"/>
DNAMER representative required:	Yes <input type="checkbox"/> No <input type="checkbox"/>
Other comments:	

I acknowledge that I have read the WNHS Simulation toolkit

Signature:

Date:

8. Appendix B: Simulation Confidentiality Agreement and Consent to Video

Simulation facility standards

- Full uniform (inclusive of appropriate closed in footwear) to be worn when attending sessions
- Strictly no eating or drinking in the facility
- Mobile phones and pagers to be turned off or placed on silent/vibrate at all times
- Bags and personal effects are not to be taken into the Demonstration/Simulation Room
- Treat the area as you would a clinical environment; keep noise to a minimum. There may be more than one group using the facility at the same time, some of whom may be undertaking formal assessment
- Treat the manikins as you would a patient with respect
- Adhere to hand hygiene guidelines and use PPE as appropriate to the skills
- Follow health and safety policies for disposal of sharps and managing needle stick injuries

Confidentiality

I agree to maintain confidentiality in respect to the views, actions and performance of participants, instructors and observers. I also agree not to discuss the content of the scenarios following the simulation session/s. Any breach of this contract will be reported to the DNAMER Head of Department and could result in disciplinary action.

Video recording and photography

Simulation sessions may be recorded for the purposes of debriefing, feedback, internal review and/or quality improvement. These recordings are only viewable on DNAMER computers. All recordings will be deleted following the simulation session unless we obtain written permission to utilise the recording for another purpose such as research or teaching. Should any photography be taken during the session written permission prior to the session is required.

I agree to abide by the simulation room guidelines, maintain confidentiality and consent to video recording of the simulation session.

Print name:

Email address:

Contact number:

Employee number:

Signature:

Date:

9. Appendix C: DNAMER Equipment Fault/Malfunction Form

To submit a notification of faults/malfunctions of equipment identified during any activities using the DNAMER Simulation Room/s please fill out the following details and email to: Janice.Butt@health.wa.gov.au

Name:	
Details of alternative contact:	
Department:	
Contact phone:	
Email address:	

Title of activity:	
Date identified:	
Type of equipment:	

Please describe the fault/malfunction:

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Signature:

Date:

10. Appendix D: Sim Mom Equipment Checklist

Please complete this equipment checklist no more than 24 hours prior to the use of equipment in the DNAMER Simulation Room/s. A DNAMER representative will complete the post session checklist.

If a fault/malfunction is identified please complete the DNAMER Equipment Fault/Malfunction Form.

It is the responsibility of the session organisers to bring equipment not available in the demonstration room. The demonstration room has a limited number of consumables, it is the responsibility of the session organisers to replace any consumables used. Stock lists are available to assist with restocking.

Please note: Alternative arrangements may need to be arranged if the fault cannot be rectified in time for the booked activity.

Ensure you are familiar with the operating instructions of the simulation equipment.

Return completed form to the DNAMER Secretary.

Name:	
Details of alternative contact:	
Department:	
Contact phone:	
Email address:	

Title of activity:	
Date:	

General				
Item	Pre-check	Post-check	Additional comments	N/A
	✓	✓		✓
Walkie talkies: 2x headsets, 2 charging stands - functioning Charging = solid red light Charged = green light				
Demo room				
Linen				
Stock				
Other:				
Equipment	Pre-check	Post-check	Additional comments	N/A
	✓	✓		✓
Computers				
SimMom laptop				
SimMom software				
Video server connected				
SimViewer software				
Camera views (+monitors)				
Audio functioning				
Projector display				
Sound functioning				
AV touchscreens x3				
Manikin				
SimMom overall clean and intact				

Compressor				
Vital sim (Sim Mom coughs to identify functionality)				
Connected to software (green icon)				
Breathing				
Voice functions				
Eclampsia setting				
ELO functioning (touch enabled)				

Additional comments:

DNAMER equipment fault notification required:	Yes	No
Pre- check signature:	Date:	
Print name:		
Post check signature:	Date:	
Print name:		

11. Appendix E: SimNewB Equipment Checklist

Please complete this equipment checklist no more than 24 hours prior to the use of equipment in the DNAMER Simulation Room/s. A DNAMER representative will complete the post session checklist.

If a fault/malfunction is identified please complete the DNAMER Equipment Fault/Malfunction Form.

It is the responsibility of the session organisers to bring equipment not available in the demonstration room. The demonstration room has a limited number of consumables, it is the responsibility of the session organisers to replace any consumables used. Stock lists are available to assist with restocking.

Please note: Alternative arrangements may need to be arranged if the fault cannot be rectified in time for the booked activity.

Ensure you are familiar with the operating instructions of the simulation equipment.

Return completed form to the DNAMER Secretary.

Name:	
Details of alternative contact:	
Department:	
Contact phone:	
Email address:	

Title of activity:	
Date:	

General				
Item	Pre-check	Post-check	Additional comments	N/A
	✓	✓		✓
Walkie talkies: 2x headsets, 2 charging stands - functioning Charging = solid red light Charged = green light				
Demo room				
Linen				
Stock				
Other:				
Equipment	Pre-check	Post-check	Additional comments	N/A
	✓	✓		✓
Computers				
SimNewb laptop				
SimNewb software				
Video server connected				
SimViewer software				
Camera views (+monitors)				
Audio functioning				
Projector display				
Sound functioning				
AV touchscreens x3				
Manikin				
SimNewb overall clean and intact				

Compressor				
Vital sim				
Connected to software (green icon)				
Breathing and Pulses (palpable/audible pulses, heart sounds, cyanosis)				
Voice and Movement Functions (crying, grunting, seizures, normal movement)				
ELO functioning				

Additional comments:

DNAMER equipment fault notification required:	Yes	No
Pre- check signature:	Date:	
Print name:		
Post check signature:	Date:	
Print name:		

12. Appendix F: Scenario Template

Date		Time	
Approximate scenario time		Debrief time	
Location			
Target group			
Pre-requisite knowledge			
Cognitive skills		Psychomotor skills	
Brief summary of the scenario			

Learning outcomes

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Participants - roles

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Instructors - roles

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Patient background information

Initial scenario setting

Initial monitor set –up

Equipment/props to be available	
Documentation required	
Medications required	
Required management events	Manikin actions/triggers

Scenario closure details
Debrief guide
Other details/comments



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