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# ***Submission to the Sustainable Health Review: Simulation-Based Learning for Health***

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## **Introduction**

This paper describes how engagement with the WA Simulation in Healthcare Alliance, the peak body for simulation-based learning in Western Australia will help WA Health to:

- Put patients first, whilst driving efficiencies and change through utilisation of an evidence-based, best practice care pathway that encompasses the latest simulation-based learning techniques and technologies.
- Address gaps in service provision to deliver training for healthcare professionals in the most appropriate ways and maximise health outcomes and value to the public.
- Help to reduce duplication and to deliver integrated and coordinated care; with safety and quality considered, and best value for money due to economies of scale.
- Attract high calibre trainees to WA health services through the provision of quality training experiences utilising simulation; health services and patients will benefit.

## **Background**

Simulation-based learning has been widely utilised throughout the world to address training for healthcare, enabling health professionals to practice for rare occurrences and emergencies, learn new techniques and accumulate the massed practice needed to become competent with a procedure, and learn to work together as an inter-professional team to ensure best outcomes for patients.

There has been considerable interest in utilisation of simulation-based learning methodologies to assist with the training of sufficient healthcare professionals to manage the anticipated demand on health services that is associated with an aging population, and the demands on the Australian healthcare system. Health Workforce Australia (HWA), now absorbed by the Commonwealth Department of Health, oversaw the rollout of millions of dollars of additional funding to support infrastructure purchases for simulation-based training. This has been supported by education and training to upskill the workforce of educators leading the training of students and postgraduate professionals.

In Western Australia, simulation-based learning is embedded in the curricula for nursing, medical and allied health training, and is utilised in mandatory training and upskilling in the area health services. It has a significant role to play in helping to deliver a safe, highly trained and effective workforce for the West Australian public.

Simulation-based education and training is recognised as a valuable component of health curricula, albeit with variation amongst the accrediting bodies as to the extent that simulation can supplement, complement or replace clinical experience (COAG, 2017). A recent independent review of accreditation systems in Australia made the following draft recommendation:

*“Accreditation authorities should, within an outcome-based approach to accreditation standards and assessment processes, encourage innovative use of technological and pedagogical advances such as simulation-based education and training in the delivery of programs of study” (COAG, 2017, p.73).*

## Leveraging Existing Systems

Western Australia has been a national leader in collaborative practice for simulation-based learning, with the WA Immersive-and Simulation-Based Learning (ISL) Committee active from 2011-2016, with representation from public, private health, non-government organisations and the education sector. Members have worked together to identify and address the issues around simulation-based learning, and to fairly distribute Commonwealth funding from Health Workforce Australia (HWA). The ISL Committee utilised HWA funding to purchase equipment, support the establishment of maintenance systems and provide seed funding for research, positioning WA at the forefront of simulation-based learning for Australia.

The ISL Committee previously received support by WA Health, however wound down its operations in late 2016. To ensure that the excellent communication, cooperation and collaboration that had been established were not lost, a new group, the WA Simulation in Healthcare Alliance (WASHA) was incorporated in 2017. This group has representation from stakeholders across healthcare, education and research and works to deliver on three fronts: advocacy, communication and research.


Leveraging the existing systems and infrastructure and investing further into simulation-based learning to maximise its efficacy will arguably be one of the most effective and efficient ways of ensuring patient safety and quality of care, as well as providing the necessary education and training for the growing number of health professionals training in the system. There is a growing body of evidence to support this, and Western Australia is leading the way with its cohesive approach to simulation-based learning. WASHA is keen to work with WA Health to ensure that optimal simulation-based learning opportunities continue, to ensure safety and quality are maintained in the system.

Ensuring that the collaboration and cooperation in the WA Health system continues will ensure that there is maximal leverage from the infrastructure investment of HWA of several million dollars in 2012-13.

## Putting Patients First

Patients in the WA Healthcare system need to feel assured that their safety and optimal care is the responsibility of all health professionals and support staff. Similar to the training underpinning air safety, practice for coping with emergency situations should regularly occur, be mandatory training for all staff, and should occur as quarantined time, outside of normal activities.

In the past, the medical training model has emphasised a ‘see one, do one, teach one’ approach. With the increased numbers of students coming through the system, this is no longer a viable means of training. Simulation-based learning, which facilitates increased numbers of students, massed practice, and ‘set-and-redo’ for errors, supports the shift to a new learning paradigm, minimising risk



*Simulation-based learning supports a shift to a new learning paradigm, allowing trainees to develop their skills in a safe and supportive environment, minimising risk to patients.*

to patients while allowing trainees the opportunity to develop their skills in a safe and supportive environment. Simulation-based learning has a particular emphasis on team training and development of team skills, fostering effective communication. This is an essential component of safety and quality in healthcare as communication breakdowns are still found to account for up to 80% of sentinel events in root cause analyses.

Training for emergencies and for rare events is ideally suited to simulation-based learning methodologies, where healthcare professionals can learn the sequences they need to follow in the event of an emergency situation occurring.

## Gaps in Service Provision

WA's current systems risk duplication of services; the equipment involved in 'high-fidelity' simulation training is expensive, and care should be taken to ensure that there are sufficient services to meet the training needs of the WA Health workforce, providing sufficient opportunities for staff to meet their mandatory training competencies without over-servicing or waste. There is the potential to realise economies of scale with improved coordination and communication around training, something that the WASHA is positioned to help facilitate, as communication and advocacy are two of the three pillars of its remit.



*The importance of delivering the public's expectations of safe, high quality healthcare and maintaining the public's faith in the WA healthcare system cannot be overemphasised or undervalued.*

## Integrated and Coordinated Care

Mandatory training, such as Surgical Education Training (SET) for trainee surgeons, attendance and participation at the Effective Management of Anaesthetic Crises (EMAC) course for anaesthetics trainees and anaesthetists, Advanced Life Support (ALS-1 and ALS-2) training for nursing, medical and other health professionals, would ideally be delivered with sufficient services to meet demand. The WASHA group can act as a conduit, facilitating information and communication about this training.

## Driving Safety and Quality in the WA Health System

Training for rare events is something pioneered by the aviation industry. Travellers fly secure in the knowledge that in the event of something unexpected occurring during their flight, the crew have been trained to handle emergencies, with passenger safety and outcomes at the forefront of their training. The cost of this training is built into the cost of operations, as passengers vote with their feet, and will choose to fly with an airline with a good safety record over a less expensive alternative.

For healthcare, it has traditionally been difficult to quantify in financial terms the savings realised by *avoiding* adverse incidents. However, the importance of delivering the public's expectations of safe, high quality healthcare and maintaining public faith in the WA healthcare system cannot be overemphasised or undervalued. Adverse healthcare events with catastrophic consequences, particularly those that are demonstrated to have been avoidable, weaken the public's faith in the health system, and may also result in expensive litigation to the system. Ensuring that the healthcare workforce have received sufficient and appropriate training in the delivery of services is an important part of the role of simulation-based healthcare, and could be built into the allocation


of Activity Based Funding (ABF) for Teaching, Training and Research (TTR).

Technology supporting simulation-based learning has ensured that the experiences of learners are close approximations of actual patient care, while also offering the learner the opportunity to re-take a scenario, and provide the learner with immediate feedback and improve their performance.

WASHA has, and continues to, support and facilitate research opportunities and training in the WA healthcare system. Providing a growing and maturing research and evidence base for simulation-based learning, and ensuring that optimal communication is maintained between service providers and education as well as strong and effective linkages with WA Health as the system provider will ensure that WA maintains a safe, highly trained, empowered and effective health workforce.

## Key Enablers

Ensuring that WA continues to have a sufficient supply of health practitioners to meet its future needs will require support from simulation-based learning. The need to avoid duplication of services and increased partnerships across sectors requires a coordinated approach to service delivery, and WASHA is ideally placed to help facilitate this, with its communication channels well established, and a large and growing membership of practitioners receiving communiques from the Alliance.



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Competitive research funding could potentially be linked with the WASHA networks, to ensure that simulation-based learning is underpinned by empirical evidence. WASHA is forming a network of research mentors to assist with the growth and development of the next generation of researchers, and to add to the existing evidence supporting simulation-based learning for health practitioners.

## Summary and Recommendations

The WA Simulation in Healthcare Alliance is ideally placed to continue to work with WA Health as the system provider in developing and delivering safe, high quality simulation-based learning to the existing and pre-vocational health workforce.

We recommend that WA Health engages with WASHA to ensure that simulation-based learning for the WA health workforce continues to be delivered in order to ensure WA has a safe, highly trained and empowered health workforce:

- **Recommendation 1**
  - Regular communication occurs between WA Health and WASHA to ensure that there is optimal alignment between healthcare delivery and research, education and training. This should occur on at least a quarterly basis.
- **Recommendation 2**
  - WA Health engages with WASHA to ensure appropriate research funding opportunities are made available for simulation-based learning to add to the empirical evidence for simulation as a training modality.
- **Recommendation 3**

- That the Teaching, Training and Research (TTR) allocation of Activity Based Funding for WA include quarantined funding for simulation-based learning.
- **Recommendation 4**
  - WA Health works with WASHA to ensure efficiencies are realised in simulation-based learning via resource and training funding allocation, promotion of opportunities, dissemination of knowledge and collaborations between providers.
- **Recommendation 5**
  - That WASHA continues to engage with the wider simulation community to optimise communication to the various entities involved with simulation-based learning to ensure that information is disseminated widely and is cascaded throughout organisations.
- **Recommendation 6**
  - That WA Health considers reinstating the Centralised Maintenance Unit that was established at Sir Charles Gairdner Hospital (Biomedical Engineering Department) which established for WA Health a register of simulation equipment with a value of > \$5k, and provided a schedule of depreciation. This service should ideally be made available to simulation training providers external to WA Health as a fee-for-service.

#### References

COAG Health Council. (2017). Independent Review of Accreditation Systems within the National

Registration and Accreditation Scheme for health professions: draft report. Retrieved from:

[http://www.coaghealthcouncil.gov.au/Portals/0/Accreditation%20Review%20Draft%20Report\\_U.pdf](http://www.coaghealthcouncil.gov.au/Portals/0/Accreditation%20Review%20Draft%20Report_U.pdf)