Quality Framework for Simulation Programs in Australian Health Care Settings

(a.k.a. **The QualSim Framework**)

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1 Executive Summary

The rapid expansion of simulation in Australia, including provision of simulation equipment and training through government investments in the sector, has created significant additional capacity within Australia's simulation sector. This expansion has created a large simulation community, with an ever-increasing appetite for support to create and deliver the highest possible quality programs.

Critical to further development of simulation within the Australian healthcare sector is the need to consider frameworks supporting the delivery of high quality simulation programs. Here our Draft Quality Framework is proposed. The Draft Quality Framework is one step on a longer *journey* towards establishing and maintaining an Australian Quality Framework for Simulation in Health (covering Programs, Personnel and Centres). This document – a Draft Quality Framework for Simulation Programs – recognises the range and maturity of simulation programs already on offer in the Australian health simulation sector. As a starting point, it is intended for all providers of simulation in health, across the range of simulation contexts, modes and modalities. It is not targeted to specific stakeholder groups (such as type of simulation program or provider) nor does it intend to exclude any simulation in health program or provider.

It is expected the development of a Quality Framework for Simulation Programs will:

- Contribute to the reduction of clinical risk and the improvement of patient safety outcomes.
- Support assessment, research and education agendas relevant to simulation in health.
- Play a role in alleviating the burden on health service staff for delivering clinical education.
- Provide a case for a greater role of simulation in the education and training for health professionals.

This document forms part of a wider Simulation Learning Environment (SLE) Quality Frameworks Project. It is intended to underpin consistency and excellence in the delivery of simulation programs across Australia and forms part of a comprehensive strategy aimed at enhancing the capacity and quality of simulation-based education and training within the health sector. Simulation programs, in turn, also support a wider goal of creating a flexible and sustainable health workforce.

This framework is relevant to all those who deliver, procure and fund the provision of simulation-based education and training in health disciplines. This includes directors, coordinators, learners and deliverers of education and training, as well as senior managers and administrators.

The Draft Quality Framework provides guidance in relation to eight standards that have been identified as necessary to support a high quality simulation program. The framework is not intended to be prescriptive and acknowledges that many effective models of simulation programs exist, and that discipline-specific requirements should also be accommodated where relevant.

In creating the Draft Quality Framework five major assumptions have been made:

1. Stakeholders will use the Draft Quality Framework.
2. Learning via simulation is an essential component of training health professionals.
3. The Draft Quality Framework will be used to support the enhancement of standards created and enforced by professional and regulatory bodies.
4. Many different modes and models of simulation exist and are appropriate for use.
5. Simulation programs are offered by entities that meet other regulatory requirements.

In consultation with the Healthcare Simulation Standards Advisory Group (HCSSAG) and a review of relevant simulation or clinical education quality frameworks in use in Australia and internationally, the following eight standards have been identified as necessary to support a high quality simulation program in Australia. As could be expected, the standards are complementary, often overlapping and interrelated. The standards (listed below) each have one or more *statements* designed to assist achievement of the major standard and the goal of creating a quality simulation program.

Draft Quality Framework standards

1. A Structured Program
2. Educationally Sound
3. Clear Learning Objectives and Outcomes
4. Appropriate Resources, Infrastructure and Governance
5. Qualified Personnel
6. Based in Reality
7. Safe
8. Evaluated

Although this framework applies to simulation programs (likely *program owners*), all stakeholders in the health education system have a role to play in implementing and maintaining quality simulation programs.

To ensure the sustainability of the quality framework, those making use of it will need to note the increasing evidence to suggest skill-based errors can be easily and economically reduced through greater use of quality simulation. In this context, this Draft Quality Framework can be seen as a risk management strategy, addressing some of the more serious (and costly) risks that health services face in times when litigation based on skill and systems errors is increasing. Thus, this Draft Quality Framework and its future iterations need to be seen as part of the continuous cycle of healthcare improvement.

To support the implementation and use of the Draft Quality Framework a small number of indicators have been included here. As stakeholders implement the framework they will need to provide feedback on the indicators including suggesting areas for improvement or new measures that are necessary.

Added to this, the Draft Quality Framework suggests the development of support tools – resources that can be used to achieve the standards listed here and/or help collect and report against the indicators (and thus track progress towards achievement). As with the indicators, further work is required to create a comprehensive list of support tools and (more importantly) provide them in an accessible format.

2 Preamble

This document forms part of a wider SLE Quality Frameworks Project (the Project). **The primary objective of this document is to describe a Draft Quality Framework** that can be used to support simulation programs in Australia. The Draft Quality Framework is part of Phase 2 of the project. It is intended to underpin consistency and excellence in the delivery of simulation programs across Australia and forms part of a comprehensive strategy initiated by the former Health Workforce Australia (HWA) aimed at enhancing the capacity and quality of simulation-based education and training within the health sector. Simulation programs, in turn, also support a wider goal of creating a flexible and sustainable health workforce.

The Draft Quality Framework has been developed based on consultation with the Australian simulation in healthcare community, with specific guidance from the Healthcare Simulation Standards Advisory Group (HCSSAG) and referral to a number of existing quality frameworks[1-4]. The Victorian Best Practice Clinical Learning Environment Framework[1] has been cited frequently as it has a number of elements relevant to simulation, was developed using a consultative process and is currently in use across the Victorian health system.

The Draft Quality Framework is one step on a longer *journey* towards establishing and maintaining an Australian Quality Framework for Simulation in Health (covering Programs, Personnel and Centres). This document – a Draft Quality Framework for Simulation Programs – recognises the range and maturity of simulation programs already on offer in the Australian health simulation sector. As a starting point, it is intended for all providers of simulation in health, across the range of simulation contexts, modes and modalities. It is not targeted to specific stakeholder groups (such as type of simulation program or provider) nor does it intend to exclude any simulation in health program or provider.

It is anticipated that use of the framework will improve simulation programs by informing policies, practices and behaviours. However, the range of simulation contexts, modes and modalities, mean the Draft Quality Framework will differ in its relevance to the various *roles* relevant to simulation programs. It is noted that not all roles will exist for all programs. Simulation providers are therefore encouraged to determine relevant roles from the list below, given these roles can support the adoption and understanding of the framework:

- For Chief Executive Officers (whose organisation delivers or procures simulation programs), the Draft Quality Framework will assist in setting objectives for teaching staff, performance targets for the program and in negotiating arrangements with end-user organisations.
- For Program Directors, the framework will be useful in addressing teaching capability and quality of teaching.
- For individual educators and supervisors, the Draft Quality Framework will guide self-assessment of their contribution to simulation-based education and training. It will provide a structure to operate within and highlight areas for development.
- For learners, the Draft Quality Framework will assist in shaping their expectations of simulation-based education and training.

To assist in applying the Draft Quality Framework, indicators need to be further reviewed and developed to facilitate the tracking of performance of a simulation program over time. Similarly, a range of tools is required to support achievement of the standards and/or measurement of the indicators.

High quality simulations will become (if not already) a necessary component of clinical education and training. This Draft Quality Framework will assist Australia to achieve a high quality health simulation sector and contribute to the recognition of simulation programs as an extension of health professional education and training.

2.1 Why simulation and why now?

In November 2008, the Council of Australian Governments (COAG) formally recognised the need for a range of health workforce reforms and set out Commonwealth investment (under the National Partnership Agreement on Hospital and Health Workforce Reform). The range of workforce reforms included reforming the clinical training system for Australia's future health professionals. Specifically, the agenda noted the need for:

- Efficient and effective clinical training pathways that keep pace with progress in education techniques (including simulation).
- Changes to the work that health professionals will undertake (that is, changes to scopes of practice).
- Changes to the locations in which they will practice (including aged care, community and private practice, for example).

The former HWA has stated that Australia is facing a growing demand for healthcare, with concurrent shortages in some health professions, combined with a clinical training system that is fragmented and facing difficulty meeting the growing demands.

In response to these issues, HWA led a national clinical training reform agenda through four main programs of work, one of which included the adoption of **simulation as an education technique to increase clinical training capacity** (including clinical training efficiency and effectiveness). It was noted that simulation may provide a realistic and flexible alternative to traditional clinical training methods and may be able to reduce the strain on clinical training providers. The Simulated Learning Environments (SLE) program* aimed to *increase the capacity of the health system through the adoption of simulation education techniques to enable efficient and effective clinical training that can be sustainably delivered into the future*.

The rapid expansion of simulation in Australia, including provision of simulation equipment and training through the former HWA's investments in the sector, has created significant additional capacity within Australia's simulation sector. This expansion has created a large simulation community, with an ever-increasing appetite for support to create and deliver the highest possible quality programs.

For further development of simulation within the Australian healthcare sector is the need to consider frameworks supporting the delivery of high quality simulation programs. Specifically, the development of a Quality Framework for Simulation Programs will:

- Contribute to the reduction of clinical risk and the improvement of patient safety outcomes.
- Support assessment, research and education agendas relevant to simulation in health.
- Play a role in alleviating the burden on health service staff for delivering clinical education.
- Provide a case for a greater role of simulation in the education and training for health professionals.

2.2 Balancing the growth of regulation and administrative compliance

With the creation of any quality framework, there is a requirement for measurement of achievement or reporting on performance, i.e. regulation or compliance. However, the COAG Best Practice Regulation Guide (2007)[5] suggests that there should be an initial presumption against new or increased regulation. Given that simulation, for the most part, is unregulated by the government, any activity beyond the creation of standards, indicators and support tools and the associated compliance burden (e.g. accreditation) will need to be weighed up against the benefits of this regulation, such as improved education outcomes for learners and the quality of healthcare services.

* From 7 August 2014, HWA's work program, including the Simulated Learning Environments Program transferred to the Commonwealth Department of Health

The intended outcomes of a regulatory system or regime for simulation programs will therefore need to be clearly defined and measured to ensure it is efficient and effective. These outcomes could include improved quality, reproducibility and use of simulation as an education technique, along with improvements to patient care and patient outcomes.

The creation of a Draft Quality Framework attempts to appropriately balance regulation and compliance by providing guiding standards, indicators and tools to support their use or achievement, without the need to formally report on their use. At this point it is pertinent to note the Discussion Paper drafted during Phase 1 of this project, (informed by stakeholder consultations) recommended that *any progress towards accreditation and certification should be considered in the context of the COAG Best Practice Regulation Guide and the impact within the sector, of any new or increased regulation*.

3 Using the framework

In keeping with the COAG recommendations on regulation[†] this document assumes that the Draft Quality Framework will be self-administered. That is, this document or its application is not intended to create a new regulatory regime. Importantly, subsequent phases of the SLE Quality Frameworks Project (of which this document is one outcome) should include an evaluation component to determine the impact of the Draft Quality Framework on simulation providers (and clinical education and training more broadly) including what, if any, changes have occurred to health training, practice and outcomes.

This framework is relevant to all those who deliver, procure and fund the provision of simulation-based education and training in health disciplines. As discussed earlier, this includes directors, coordinators, learners and deliverers of education and training, as well as senior managers and administrators.

The Draft Quality Framework provides guidance in relation to eight standards that have been identified as necessary to support a high quality simulation program. The framework is not intended to be prescriptive and acknowledges that many effective models of simulation programs exist, and that discipline-specific requirements should also be accommodated where relevant. Instead, the Draft Quality Framework presents a set of objectives and encourages simulation programs to explore the most effective and appropriate mechanisms to achieve them. In the future, the framework would also benefit from an information exchange function, to allow all simulation programs to promote successful quality-related strategies for use by others. In addition, this version of the framework provides a guide on indicators to support monitoring of the impact of the framework, along with a number of support tools to assist with its implementation and/or data collection.

However, these indicators and support tools are only in the early stages of consideration. Indeed, it is expected that future iterations of the framework will include a greater focus on indicators and associated support tools. This increased detail will facilitate improved data collection and therefore better understanding of the framework, its impact and how it could be improved.

[†] Best Practice Regulation Guide (2007), Council Of Australian Governments http://www.coag.gov.au/sites/default/files/COAG_best_practice_guide_2007.pdf, accessed 2 Dec 2013

4 Scope

The focus of this Draft Quality Framework is on simulation programs offered in the context of health education – covering all learner levels, all health disciplines and all simulation settings as well as train-the-trainer programs relevant to simulation. It does not specifically include or exclude simulation centres, education providers or health service providers; rather it applies to simulation programs (see Section 4.1, Terminology (page 10) for the definition of a "simulation program").

Importantly, the Draft Quality Framework is informed by key recommendations of the *Phase 1 Discussion Paper* (summarised below):

- There is a presumption against new or increased regulation (i.e. there is a preference for self-administration and self-assessment).
- Performance against the Draft Quality Framework should not be formally assessed by a third party (i.e. we are not accrediting or certifying programs via this Draft Quality Framework).
- Notwithstanding above, to the extent necessary to prevent duplication of effort, the sector should progress towards mutual recognition of self-assessment outcomes.
- Initially, the Draft Quality Framework should cover the range of simulation modes, settings, uses and learner types. Pending a review, the Draft Quality Framework could then be enhanced to allow for specialisation, that recognises expertise in simulation modes, settings, uses and/or learner types.
- If reports on performance against the Draft Quality Framework are developed, they should be aggregated to provide benchmarks (non-identifiable), with support to make comparisons against demographically matched peers in order to identify areas for improvement.
- The Draft Quality Framework should include tools to support achievement, assessment and benchmarking (if required).
- The Draft Quality Framework (and subsequently the Quality Framework) should be regularly reviewed and updated, with the review period noted as new versions are released.
- The Healthcare Simulation Standards Advisory Group (or similar) should be established with the responsibility for overseeing and advising the development of the Draft Quality Framework (and subsequently the Quality Framework).
- There is no fee to make use of the Draft Quality Framework.
- Should the project progress to formal accreditation/certification against the Quality Framework; a self-funding model will need to be developed to ensure consistency with other national regulatory processes.

4.1 Terminology

Wherever possible, we have taken the definitions provided in the Australian Society of Simulation in Health (ASSH) data dictionary[‡]. For ease, we have provided some relevant definitions below:

- **Simulation** – A technique that uses a situation or environment created to allow persons to experience a representation of a real event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions. Simulation is the application of a simulator to training and/or assessment.
- **Healthcare Simulation** – Simulation is an educational technique that replaces or amplifies real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner.
- **Simulation Program** – Learning and training sessions or approved curricula carried out within or in relation to SLE activities.
- **Simulation Centre** – Entity with dedicated infrastructure and personnel where simulation courses are conducted. A centre may support several Simulation Programs.

[‡] Data dictionary (2012), SimNET, http://www.simnet.net.au/resources.html, accessed 2 Dec 2013

- **Simulation Educator** – The Simulation Educator/Instructor's main responsibility is to conduct and instruct on simulation-based training. The role may also encompass curriculum design, development, implementation and evaluation of scenarios and courses.

In Phase 1 of the Project there was, at times, stakeholder confusion regarding the terms "simulation centre" and "simulation program". As can be seen from the list of definitions above, these are considered different. **This project – and the Draft Quality Framework specifically – relates to simulation programs.** It should also be noted that a simulation program could be a small or large part of a wider educational activity that might be described as a course, subject or unit. Indeed, a simulation program could be a course, subject or unit.

The terms *education* and *training* are often used interchangeably, although *education* is usually used in relation to structured courses, while *training* is usually less structured activity that occurs post-qualification. In this Draft Quality Framework, use of either term covers all possible meanings of both terms.

The NHET-Sim[6] Program is also referred to in this document. NHET-Sim is a free nationwide training program for healthcare professionals aimed at improving clinical training capacity and consists of workshops and e-learning modules on simulation-based education. NHET-Sim is funded by the Australian Government. The project, being undertaken in partnership with Monash University, offers a free training program for healthcare educators and clinicians from all health professions. The curriculum has been developed and reviewed by leaders in the simulation field across Australia and internationally.

Finally, the document refers to SimNET[7] – a website aimed at connecting the Australian simulation in health community. SimNET is funded by the Australian Government and houses a wide range of simulation resources for the health sector. SimNET currently hosts information regarding this *Quality Frameworks for Simulation Programs project*, and could, into the future, host the final framework and its associated tools.

4.2 Assumptions

In creating the Draft Quality Framework we have made five major assumptions.

Assumption 1: Stakeholders will use the Draft Quality Framework.

In order for the Draft Quality Framework to be successful (i.e. improve the quality of simulation-based education and training) it will need to be used by stakeholders. At this point, stakeholders are encouraged to use the Draft Quality Framework because it will improve their program. They will not be directly assessed against the Framework, nor will they be asked to report against the Draft Quality Framework. We are assuming such an approach will result in an uptake rate that allows an assessment of the Draft Quality Framework's value to the sector.

Assumption 2: Learning via simulation is an essential component of training health professionals.

Simulation-based education and training provides a realistic environment for health professional training. It is learner centred and takes place in a setting that can control and account for risk factors and other variables. Thus, it is able to provide a myriad of learning experiences in a safe environment. In the absence of simulation, we might find ourselves with learners under-prepared for clinical learning environments, clinical practice and/or with limited exposure to, or experience in, high-risk but low frequency events.

Therefore, the starting position for this Draft Quality Framework is that simulation-based education and training is an essential activity that helps create healthcare practitioners who are competent in

their field and who can contribute to the healthcare system. That is, learning via simulation helps ensure participants:

- Complete their training and join the workforce.
- Have the necessary knowledge (and skills) to perform at the level their profession demands.
- Can contribute to areas of workforce need.

Assumption 3: The Draft Quality Framework will be used to support the enhancement of standards created and enforced by professional and regulatory bodies.

This Draft Quality Framework is not intended to obviate the need for compliance with existing standards relevant to simulation-based education and training. It is expected that at the time of (self) assessment against the Draft Quality Framework, any conflict between this Draft Quality Framework and existing enforceable standards would always be resolved in favour of the existing enforceable standards. However, this Draft Quality Framework should be used to inform the development and review of simulation components of existing professional standards. Indeed, in the event of a conflict between this Draft Quality Framework and any other standard, both documents should be reviewed and a revision made to ensure they no longer conflict. In that way, this document should be viewed as a dynamic document that is kept up-to-date through regular review and constant comparison to existing enforceable standards.

Assumption 4: Many different modes and models of simulation exist and are appropriate for use.

In developing this Draft Quality Framework, it assumed that program developers are best placed to determine the simulation model and mode most appropriate to their situational needs (including resource constraints). It is also noted that various models and modes of simulation are more effective for some disciplines or situations than for others, with few models likely to work equally well across all contexts. Furthermore, simulation trends may shift over time and new models will be continually trialled and evaluated.

Therefore, this Draft Quality Framework is intended to work across the simulation continuum and allow the most effective model to be employed on a situation-by-situation basis.

Assumption 5: Simulation programs are offered by entities that meet other regulatory requirements.

Simulation programs are often developed and delivered by education providers (e.g. universities, TAFEs, colleges) and health services. All of these entities have multiple regulatory frameworks with which they need to comply. Most (if not all) of these frameworks cover features such as governance, management, ethics and working with vulnerable participants/participant groups. Thus, we have assumed simulation programs are developed and offered in the context of compliance with existing regulatory requirements obviating the need for a similar section within this framework.

5 Standards Comprising a Quality Simulation Program

In consultation with the HCSSAG and a review of relevant simulation or clinical education quality frameworks [1-4] in use in Australia and internationally, the following eight standards have been identified as necessary to support a high quality simulation program in Australia:

1. A Structured Program
2. Educationally Sound
3. Clear Learning Objectives and Outcomes
4. Appropriate Resources, Infrastructure and Governance
5. Qualified Personnel
6. Based in Reality
7. Safe
8. Evaluated

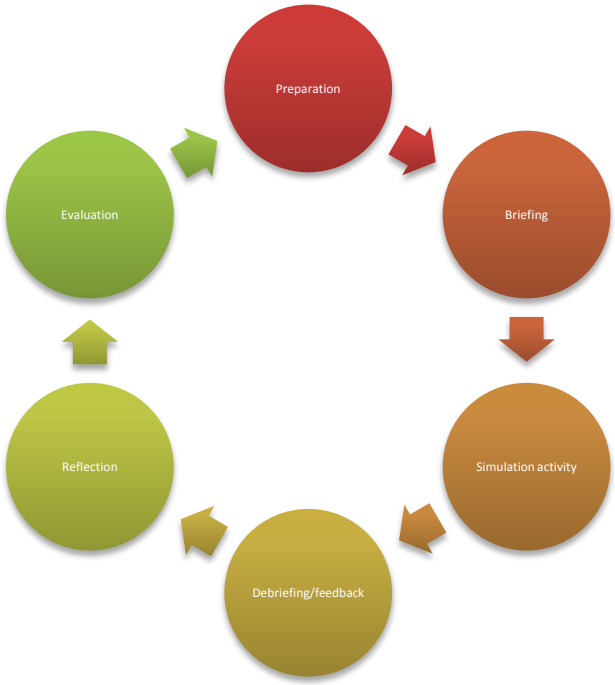
As could be expected, the standards are complementary, often overlapping and interrelated. The sections below describe the standard and include *statements* that provide further guidance within each standard. These statements precede the text that describes them.

5.1 A Structured Program

Statement 1.1 The design and conduct of simulation programs follows a recognised structure

Structure is essential to ensuring a program is effective (that is, achieves its objectives)[6, 8]. An effective simulation program follows a *plan-do-review* implementation model. Several such versions of this model exist for simulation[9]. The NHET-Sim program[6] proposes that simulation has six phases (Figure 1).

Figure 1: Simulation phases[10]



- **Preparation** and **briefing** – are the *planning* phases and help ensure the simulation runs as the educator intends it to.
- **Simulation activity** – the *do* phase, where much of the knowledge is exchanged between participants and the simulation educator.
- **Debriefing/feedback**, **Reflection** and **Evaluation** – are the *review* phases. For learners, debriefing/feedback is important for establishing the lessons learnt and reflection helps internalise these messages. For facilitators, evaluation is about identifying what improvements could be made and may involve self-reflection as well as feedback from peers or participants.

Note that here a deliberate reference is made to the **structure at the level of the simulation program** and **not necessarily the simulation activity**. This distinction is made to allow simulation activities to address complex or difficult problems and/or those that arise unexpectedly. Further, there are some instances where a simulation activity may appear (to the learners) to be unstructured in order for the activity to best reflect reality. This standard is not intended to prevent such occurrences.

5.2 Educationally Sound

A coherent view of how learning occurs is essential to the development of high quality simulation-based education and training programs[8]. A coherent view of how learning occurs is more than *what we think works* and is based on *what we know works*.

Statement 2.1 Programs are based on and improved by available evidence.

Quality simulation programs will include appropriate references to the best available evidence covering content, mode and method. For example, multiple methods of facilitation are used in simulation, such as complete or partial facilitator prompting. Quality simulation programs will use a specific method due to its relationship with the learning objectives of the program and not the preferences of the educator[2].

It is worth noting that the use of evidence is not intended to limit innovation or experimentation. Indeed, evidence is not limited to outcomes of systemic reviews, and could include individual research papers, reports and (in some cases) knowledge and experience of practitioners delivering the program or simulation activity. The important point is the use and noting of evidence in the creation and refinement of simulation programs[9].

Simulation programs are specifically encouraged to innovate and appropriate redesign of simulation through evaluation will be part of this process (see Section 5.8, Evaluated page 21)[9].

Statement 2.2 Simulation events are matched to learning objectives.

High quality instructional design means using the right equipment and the right technique. Simulation mode covers use of actors versus real patients, part-task-trainers versus whole-body mannequins, on-line exercise versus role-play etc. Choice of simulation mode may be more pragmatic (than choice of method). This is driven by the large cost differential across different simulation modes. However, this does not mean one option is better than another because it is more expensive. Indeed, with the health system increasingly resource constrained and the perception that simulation is expensive[6], it is important the most cost effective mode is selected to meet the learning objectives.

Statement 2.3 Programs contribute to the simulation-based education and training evidence base.

Building on the need to use evidence, simulation educators, program coordinators and others involved in the development and conduct of simulation programs have a responsibility to collect, document and report their data in order to build the evidence base. For some programs, building the

evidence may be limited to internal quality improvement[9] (e.g. collating educator or learner feedback surveys and refining the program based on findings). For other programs building the evidence base will extend to publication in peer-reviewed journals. Regardless, this need is reinforced by the NHET-Sim program, which notes "*studies of the effectiveness and appropriate deployment of different simulation modalities need to be better designed and more investigations are needed*"[11].

5.3 Clear Learning Objectives and Outcomes

Learning objectives and their achievement (i.e. learning outcomes) are essential to a successful and high quality simulation program. To ensure objectives (and outcomes) are evident to learners they must be clearly articulated[8].

Statement 3.1 Learning objectives are clearly stated and easy to identify within program materials.

A statement of objectives in the simulation program guide and an announcement at the start of the simulation session will help ensure the learning objectives are obvious and clear to participants.

The learning objectives will help the program select the most appropriate scenario, fidelity, educator, support and environment for the simulation[3, 4]. Designing a simulation program where the learning objectives are clear will make it easy to provide learning opportunities that are appropriate to the participant and (importantly) to help the learner achieve their intended learning outcomes.

Statement 3.2 Learning objectives are linked to learning outcomes.

In some instances, it may be beneficial to work backwards from the learning outcome by asking questions such as "*what do I want the learner to be able to do/know/value following the simulation".* In many cases, learning objectives will be clarified through understanding participant (learner) needs including their *level* and/or *experience*.

Regardless, there should be a clear link between the learning outcomes and the learning objectives.

Statement 3.3 Learning outcomes are related to relevant professional and industry and requirements.

Learning objectives can themselves be developed based on knowledge and an understanding of the relevant industry or professional requirements of the learner cohort (this includes local health services requirements)[9]. These requirements could be identified within professional, industry and/or health service standards or guidelines.

Statement 3.4 Learning needs analyses are used to establish learning objectives and outcomes.

Learning needs could be identified differently in different situations. For example, within a simulation program offered as professional development to qualified practitioners, learning needs could be established via a detailed learning needs analysis conducted in advance of the session. Whereas a simulation delivered in the context of a larger course (e.g. a Bachelor of Nursing) learning needs may be established via knowledge of the year-level and topic of interest, with a brief needs analysis conducted verbally prior to initiating the simulation.

Understanding learner needs will also help ensure (particularly for professional entry learners) the continuity of learning experiences – where each simulation-based learning experience complements the last and clearly connects to the next. This is more than scaffolded learning as it takes into account the tools and techniques used in the teaching and learning process[1].

5.4 Appropriate Resources, Infrastructure and Governance

The necessary resources, infrastructure and governance for a simulation program will vary with the participant group and their associated learning objectives[8]. Furthermore, the depth and breadth of simulation resources, infrastructure and governance means there are multiple combinations and permutations that will meet requirements and individual programs are best placed to make these decisions[3].

As noted earlier, many entities offering simulation programs will need to comply with existing regulation and standards. In most (if not all) cases these standards will include reference to governance and management. The view of this Draft Quality Framework is that good governance is transferrable into simulation. Therefore, we will not spend a large amount of time describing good governance.

Statement 4.1 Resources and infrastructure are fit for purpose and their selection is based on appropriate professional judgements.

Of course, simulation programs will need to have resources and infrastructure that are fit-for-purpose and available when required[1, 4]. In some cases, this might mean having a backup plan when the first choice solution is not available, in other cases it will mean ensuring multiples exist to guarantee what is needed is available[8]. In all cases, there is an expectation that professional judgement will be used to determine what the best resource is[9].

Within simulation, *resources* cover the range of *equipment* that might be used in a simulation, including simulated patients. However, resources also include patient histories, part-task-trainers or props that provide added realism. Particular attention should be paid to selecting resources that are fit-for-purpose, meet the learning objectives and are within budget[2].

Statement 4.2 The risks of using simulation resources outside a simulation are understood and accounted for.

Due to the nature of simulation it is also important that resources are not used outside the simulation. This is particularly true for resources that may look, feel or act real when they are not and represent a danger to patients if used in a real setting. Examples include:

- mock hospital stationary (including blank or completed histories)
- drug vials filled with water (or other non-drug) making their way to the clinical environment;
- theft of real drugs from the simulation program;
- re-use of *one-use only* equipment within the simulation environment to save money;
- equipment may have been modified and not operate outside the sim (e.g. defibrillator); and
- non-sterile equipment making their way to the clinical environment.

Ensuring resources are used for their intended purpose (and not outside the simulation) requires an understanding of the resource and the risk its use could pose to patients.

Of course, there may be instances where the simulation does not use resources that pose a risk if used outside the simulation. In which case, this Statement may not be applicable.

Statement 4.3 Organisational governance, processes and procedures take into account simulation-specific requirements.

Notwithstanding that governance (and associated processes and procedures) is well covered by other standards, there are some cases where simulation-specific governance and/or processes and procedures are required to ensure the safety of patients, healthcare workers and simulation participants is maintained. Indeed the list covered as part of Statement 4.3 will likely need simulation-specific governance and/or processes and procedures.

Therefore, there is a requirement for programs to understand the relevant organisational governance, processes and procedures to ensure they take into account the simulation-specific risks. This may necessitate a review of organisation-level documentation such as strategic plans, mission and vision as well as location of program-specific documentation.

Statement 4.4 The program has appropriate numbers of personnel to achieve its educational and operational mission

Simulation educators, technicians, simulated patients and other personnel are resources in this context and it is important they exist in sufficient numbers. This will ensure simulation personnel are not given too much responsibility to be effective in their role or responsive to program participants. It will also ensure the smooth flow of operations. As with qualifications (see below) each program manager will need to determine what *appropriate numbers* means and thoroughly understand the basis for their decision.

Statement 4.5 There is a defined, transparent, equitable and timely process for booking resources and infrastructure.

Infrastructure covers a large range of things including larger pieces of physical infrastructure, such as rooms or buildings. In some cases it might be quite specialised (e.g. a mock ward) in other cases it might be relatively generic (e.g. a meeting room). Regardless, together with resources, there should be defined, transparent and equitable processes for booking resources that allows timely access and use across simulation programs[1, 4, 9].

5.5 Qualified Personnel

For a simulation to be high quality, it needs high quality personnel[8]. This covers all aspects of simulation, including the educators, the technicians and the subject-matter-experts. However, not all simulation programs will have all personnel types and it is important programs recognise and address their requirements.

Statement 5.1 Programs make appropriate use of personnel qualified in the relevant health domain(s).

Generally speaking, simulation programs will require personnel with qualifications in at least two domains[8]. First, they need a person qualified in the health domain covered by the program. This does not mean doctors must teach doctors, or that nurses must teach nurses. It does mean a person with a qualification in the health topic covered by the simulation (e.g. communication, medication management, life-support etc.) has been involved in the development (and perhaps even delivery) of the simulation program[9].

Statement 5.2 Programs make appropriate use of personnel qualified in the delivery of simulation-based education.

Second, simulation programs require personnel qualified as educators – more specifically simulation-based education. It is the simulation expertise of a simulation educator (not their health expertise) that gives simulation its *power*. The simulation-qualified educator will guide and support participants to understand and achieve their (learning) objectives. In addition, the educators should engage participants and adjust the simulation to meet the learning objectives based on the participant's actions or lack thereof. The educator leads the participants in identifying the positive actions and those actions that could have been changed to promote better patient and/or practitioner outcomes.

In addition to educators, simulation programs require personnel with appropriate technical expertise[8, 9]. Technical expertise may come in different forms, including knowledge of IT (on-line or

high-tech simulations), knowledge of mechanics (part-task-trainers), and ability to act (simulated patients or healthcare practitioners).

Statement 5.3 Programs make appropriate use of personnel qualified in the technical aspects of the simulation.

Different simulation programs may have different interpretations of what it means to have personnel qualified in these domains. Some programs will require their personnel to hold formal qualifications. Other programs will place more emphasis on demonstrated experience; and others still may choose to split the requirements across two or more people (i.e. the use of a subject-matter-expert and/or a simulation educator and/or a simulation technician and/or simulated patient). It is up to each simulation program (and their respective *owner*) to determine what it means to be qualified for their program, recognising the importance of the simulation-qualified educator to the success of the program[3].

Statement 5.4 Programs document and enforce what *appropriate use of qualified personnel* means to their simulation.

This means noting down (e.g. in a manual, guide or position description) the requirements of the educator/technician or other simulation role. Beyond specific qualifications, people involved in simulation education should have confidence, be reflective, flexible and good at handling problems. Importantly, they should be committed to the (education) requirements of their profession (and health broadly), have the capacity to work interprofessionally and be a good role model for learners[1].

Statement 5.5 Programs value their personnel.

Program owners must show they value their personnel. This is particularly important given staff involved in simulation may be participating as volunteers. Showing personnel they are valued does not have to involve monetary reward. Indeed, it could be in the form of further training and development or taking the time to specifically (personally) congratulate them on a good outcome. Program owners must also ensure personnel are prepared and sufficiently resourced to fulfil their role[1].

5.6 Based in Reality

The ASSH Data Dictionary defines healthcare simulation as *an educational technique that replaces or amplifies real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner*[12].

Statement 6.1 Simulation programs reference the highest possible standards of healthcare

All simulation programs should be based in reality[8] and make reference to the relevant quality standards (e.g. the National Safety and Quality Health Service Standards through to local health service standards). That is not to say every simulation program needs to be entirely faithful to real life, but it must:

- be real enough to achieve the intended learning outcome (i.e. matched to educational need);
- not result in negative learning (i.e. where the wrong thing is learned or practised);
- link to relevant national and state guidelines[9];
- link to the workplace (including local guidelines); and
- link to practice.

It is important that any simulation references the highest possible practice of healthcare[8]. As with simulation itself, provision of healthcare can be resource constrained and what is high quality practice in one setting might not be possible (or even high quality) in another. Thus, in order for a simulation program to reflect real world healthcare an understanding of what takes place is

required. This could be achieved through review of or reference to documented policies and procedures that guide healthcare provision and associated administration.

It is also noted that simulation may be used to exemplify or model poor behaviour (e.g. as part of root cause analysis or to achieve a learning objective). In these cases, the simulation itself may not be based on the highest possible practice of healthcare. However, the highest possible practice of healthcare will be referenced within the *debrief* (see Section 5.1 A Structured Program, page 13) to highlight or identify the areas within the simulation that were not at the highest standard.

Educators and program designers will need to strike a balance between highly realistic programs and cost of delivery. Each program and educator will need to determine, for itself, what the right balance is. However, all personnel need to be mindful that opportunities for negative learning are not established in the pursuit of low-cost alternatives, shortcuts or other considerations. That is, simulation programs should not result in learners with healthcare techniques that are incompatible with the healthcare environment (e.g. poor aseptic technique).

Statement 6.2 Professional behaviour and standards are expected throughout the simulation.

It is important simulation programs model appropriate professional behaviour[2, 8]. Although somewhat obvious, professional standards are not always enforced in training activities. That means participants wear clothes and safety gear as would be required of the real-life situation; they should refer to each other as they would in the healthcare environment, adopt the appropriate professional demeanour and act with professional integrity (including maintaining relevant privacy and confidentiality requirements).

Statement 6.3 Simulations reflect real life, are linked to practice, linked to the workplace and take into account the patient experience.

Another important facet relevant to realism is ensuring the simulation reflects the patient experience[8]. This is most easily achieved through *expert* (i.e. patient) review of the simulation as they reflect on their own (presumably recent) experience of the same or a similar situation. Program staff should avoid the temptation to think *we are all patients* and therefore able to provide the necessary *patient expertise.*

This approach (to use real patients with recent experiences) brings with it some risks, including the expert *re-living* negative aspects of their encounter. However, these risks can be mediated through appropriate briefing with the reviewer as well as use of patient representative groups. Not all simulations will need such a review (e.g. simulations only involving healthcare practitioners or those where patients are unconscious such as surgery). Such considerations may also require people with specific experiences taking on particular roles within a role-play (e.g. surgical nurses playing the role of a surgeon).

Statement 6.4 Simulation is used to model real life and thus provide opportunities to identify and improve current practices.

Beyond reflecting real-life, simulation activities that model current practices provide opportunities to identify areas for improvement within real-life. Once improvements are identified, simulation can be used to help embed improved/altered practices that better respond to current/changing healthcare needs. In this manner, simulation can help services respond to changes in the real world[9].

5.7 Safe

Within simulation programs there are multiple facets of safety[8]. Some relate to the education components of simulation and others relate to simulation as an education tool. As such, this

standard necessarily overlaps with many of the other standards already articulated in this Draft Quality Framework.

Statement 7.1 The psychological, physical and environmental safety of participants (including but not limited to learners, simulated patients, educators and technicians) is appropriately managed throughout the simulation program.

Broadly speaking there are three aspects to safety within simulation[8]:

- psychological;
- physical; and
- environmental.

Psychological safety (and other safety) is a somewhat relative term. Unlike many other forms of education (e.g. lectures, tutorials or case-based learning) simulation will make learners or educators feel nervous, anxious and even *unsafe* – as might occur in real life. However, at all times simulation activities need to be conducted in a non-judgemental environment where learners actively participate, ask questions, take chances and make mistakes[1]. In some respects, this could also be described as *emotional* and *professional* safety and these facets of safety need to be understood and managed before, during and after the simulation.

The low learner to educator ratio in a simulation (compared to other learning activities such as lectures) may more readily identify people having difficulty comprehending a skill, idea or concept. This creates a risk to the learner as perhaps being negatively *labelled* by their peers. In such instances, educators have a duty to use the opportunity to assist and support development of the individual and the group as a whole.

Physical safety refers to the contemporary view of occupational health and safety applied to the simulation program and space it takes place within. It ensures appropriate plans and processes are in place that help identify and remove threats to physical safety including (but not limited to) aggressive behaviour, trip hazards, spills, handing toxic, waste or bodily fluids and working with sharps or needles. Similarly to governance, it is expected the majority of aspects of physical safety within a simulation program will be addressed by adhering to existing quality frameworks.

Statement 7.2 The confidential nature of participation in the simulation program is maintained.

The achievement of emotional and professional safety will likely be manifest through professional integrity[2, 3]. In the context of an educational activity this means maintaining the confidential nature of the interaction. This starts with the performance (positive or negative) of participants, extends to their experiences, and also includes scenario content (so future participants cannot pre-empt the activity). Maintaining the confidential nature of the interaction is particularly important for simulation programs as many activities are digitally recorded (video and/or audio). This makes storage, transfer and distribution particularly easy.

Thus, provision of a safe environment will also need to include appropriate data handling[4, 8] (further, this is an example of an activity that will require a simulation-specific response under Statement 4.3). For participants, this means not making or distributing copies provided to them in confidence. For simulation programs, this means having a clear data handling policy that is articulated to participants at the time of enrolment and at appropriate key points during the simulation[2]. More importantly, the simulation program must be able to demonstrate to its participants adherence to its data handling policy[8].

Statement 7.3 The simulation program considers and accounts for risks that might impact the learner, educator and patient safety.

Environmental safety puts the simulation program into the context of the healthcare environment it might be taking place in. Indeed, many simulation programs are offered *on-site* (i.e. at a health service) and there is potential for simulation-specific resources to be transferred to the real healthcare environment and negatively impact the safety and quality of care for patients. As noted in Standard 4 (Appropriate Resources, Infrastructure and Governance) this is a safety risk to both patients and participants in the simulation program and governance processes and procedures need to be in place to mitigate these safety risks. This risk is further heightened in the case of simulation programs taking place within a real hospital ward (sometimes referred to as *in-situ* simulation). This is another example of an activity that will require a simulation-specific response under Statement 4.3.

5.8 Evaluated

Evaluation is an essential part of quality improvement. Evaluation refers to the review and improvement of the simulation program, the facility involved in delivering the program and the participants undertaking it[8].

Statement 8.1 All aspects of the simulation program are part of a quality improvement process that includes evaluation.

Evaluation includes the debriefing and reflection of components listed in Figure 1 (here we will use *evaluate* to include meanings of evaluate, debrief and reflect in a simulation context). Although it could also apply to use of the simulation program as an evaluation of skills, in this instance it does not.

As noted in Standard 1 (A Structured Program), evaluation focuses on what could be done differently to improve next time. The answer will be different for learners, educators and the wider simulation program[3].

Statement 8.2 Learners are supported to reflect on (evaluate) their learning within the simulation program.

Evaluation for learners will be about reviewing the learning experience and associated improvements or changes to their knowledge, attitude or skills. Improvements could include changes to critical thinking and reasoning, enhanced skills (motor, communication) or increased knowledge of a particular clinical condition, situation or scenario.

It is said that learning requires integrating experience with reflection[2]. Reflection requires conscious consideration of actions – their meaning and their implication. However, reflection may not come naturally (automatically) for all people. Thus, it is essential learners are supported or guided through the reflection process by the simulation educator. In this regard, the skills of the educator directly impact the quality of learning. Evaluation without guidance could result in the learner missing errors, focusing only on failure, or becoming fixated with small (somewhat unimportant) details[2]. In this context, evaluation could be considered part of Standard 3 (Clear Learning Objectives and Outcomes), and is included here to reiterate the requirement for appropriately conducted evaluation within simulation programs.

Most importantly, however, learners report that the debriefing session is an essential component of learning through simulation. They enjoy reflecting on their own performance and those of their peers in a safe environment.

It should be highlighted that evaluation must cover positive and negative aspects – not just the negative. A good evaluation processes will encourage and facilitate commendation, comment and

criticism equally. It will focus on behaviours, rather than personalities or personal observations and will be conducted/delivered at an appropriate time[1].

Statement 8.3 Program personnel are supported to reflect on (evaluate) their performances within the simulation.

Evaluation, for educators, will focus on the simulation program. It will cover the simulation content, methodology and mode, the planning and debriefing. Evaluation from the perspective of an educator should include periodic review by learners and peers (educators observing the simulation). Review by learners should cover changes to self-confidence and satisfaction with the simulation experience, along with their perception of the learning objectives having been met. Review by peers should also cover perception of the learning objectives having been met as well as a focus on the simulation and educational methodology and mode.

Statement 8.4 Evaluation outcomes are reported and acted upon.

Regardless of how often or when feedback is requested from learners or peers, program managers should act on the feedback received and (where possible) report the changes back to the source of the feedback[1].

Beyond evaluation for quality improvement purposes, simulation programs are encouraged to take part in evaluation for research purposes. It is noted that Statement 2.3 specifically covers contribution to the evidence base, and that need is re-iterated here.

6 Responsibilities

Although this framework applies to simulation programs (likely *program owners*), all stakeholders in the health education system have a role to play in implementing and maintaining quality simulation programs.

6.1 Simulation Programs

The primary responsibility of simulation programs is to consider (and then implement) the Draft Quality Framework. However, simulation programs can further improve overall simulation-based education and training by working with their peers to communicate good ideas and share experiences and resources. One mechanism to achieve this is to ensure key simulation educators are visible and connected (e.g. via the SimNET website, within education networks and at simulation forums). It is important for simulation programs to use peer influence to encourage each other in the development of high quality simulation-based education.

6.2 Learners

Learners have a major responsibility to prepare for the simulation. This includes undertaking adequate levels of education, basic training and pre-simulation reading/briefings. They have a responsibility to act professionally within and after the simulation, as well as encouraging others to do the same.

6.3 Participant Organisations

The depth and breadth of simulation means learners and simulation programs may belong to health services (in all their guises), universities, TAFEs and other RTOs. Whatever sector (health or education), or category (public, private or non-government) these organisations belong to they must support the learners and the simulation program. These organisations influence the system in many ways and should recognise their role in:

- Integrating the Draft Quality Framework within current standards/accreditation activities.
- Preparing learners for simulation programs.
- Funding or significantly supporting simulation programs.
- Identifying the best activities and resources to fund and support.
- Matching program to learner and vice-versa.
- Providing information about relevant learning objectives, assessment and curriculum content.
- Developing the skills of educators.
- Creating (interprofessional) learning opportunities.
- Fostering peer support (for learners and programs).
- Quality improvement, including developing the evidence base.

6.4 Government

As a significant funder of health and education services and the entities to which these services are accountable, governments have a major role to play in achieving high quality simulation programs. As simulation is a component of wider educational initiatives, the focus for governments will be on education and the use of the best methodology to achieve an educational outcome that is matched to both the healthcare needs of the population and available funding. For those instances where simulation is the best methodology (and therefore a simulation program is required), governments have a responsibility to:

- Ensure regulatory arrangements allow the use of simulation.
- Resolve policy conflicts that discourage the use of simulation as an educational tool.
- Ensure new policies include adequate consideration of impacts on simulation.
- Consider simulation in any new health service planning (including building plans).
- Grow, evaluate and build supporting evidence for, the adoption of simulation.

7 Sustainability

This Draft Quality Framework is a start on a path towards articulating and achieving high quality simulation-based education and training within Australia. It is part of a wider quality enhancement process aimed at improving the delivery of healthcare by addressing issues of clinical training and should be used to guide and develop simulation programs across Australia.

As a Draft Quality Framework, it necessarily needs further review and development. The current status of the indicators and support tools will necessitate more detailed review of those sections as part of early reviews. In the first instance, this will ensure progress towards this document (or iterations thereof) becoming *the* Quality Framework for Simulation Programs in Australia. In the longer term, reviews should focus equally on all three parts of the Framework – Standards, Indicators and Support Tools – to ensure its long-term relevance and usefulness to the sector.

Responsibility for sustainability also rests with individuals, and the simulation programs they interact with (as learners, educators and/or managers) to further develop and implement the Draft Quality Framework. These people will need to become advocates of the Draft Quality Framework, providing support and leadership within the emerging paradigm, to ensure its continued development and refinement. This will be particularly important in order to secure the financial resources required to further develop and implement a Quality Framework of value to the sector (including enhancing the indicators and support tools – only briefly considered within this document).

To this end it is noted there is increasing evidence to suggest skill-based errors can be easily and economically reduced through greater use of quality simulation[2, 13, 14]. In this context, this Draft Quality Framework can be seen as a risk management strategy, addressing some of the more serious (and costly) risks that health services face in times when litigation based on skill and systems errors is increasing[2, 15]. Thus, this Draft Quality Framework and its future iterations need to be seen as part of the continuous cycle of healthcare improvement, thus ensuring long-term sustainability in the absence or presence of an *owner.*

8 Indicators

The following section lists preliminary indicators relating to each framework element referred to in Section 5 (Standards Comprising a Quality Simulation Program, page 13). These indicators are intended as a starting point to stimulate discussion and subsequently guide and track the ongoing improvement of simulation programs within Australia. Once agreed, they should be used by organisations to improve the quality of their simulation programs and other frameworks that impact simulation programs. It is intended much of the data for these indicators will be drawn from information or documents already available, although some new information may have to be collected. Some indicators apply to more than one of the standards, however they are only shown in the table against the first standard to which they apply.

Although the indicators have been created with direct reference to the standards, they have not been developed using a systematic process (such as program logic mapping). Prior to embarking on implementation and use of these indicators, it is recommended a more detailed review of the standards is conducted. This review should result in the creation of a program logic map (or similar), upon which a complete cache of indicators can be created, with the aim of creating a detailed *indicator specification* document that notes (amongst other things) how the data for the indicator will be collected, where it can be found and how it should be reported.

Table 1: Draft Quality Framework preliminary indicators

Framework Standards and Statements	Potential Indicator of Achievement of the Standard and / or Statement	Potential Data Source (likely location of evidence of having *Fully Met* the Standard and / or Statement)
Standard 1 – A structured program		
The design and conduct of simulation programs follows a recognised structure	The elements of *plan*, *do*, *review* are evident in the program design and conduct	Simulation program guide Organisation process documentation
	Guides exist for the creation of simulation programs	Organisation process documentation
	The elements of *preparation*, *briefing*, *simulation* activity, *debriefing*, *reflection* and *evaluation* are evident in the program design and conduct	Simulation program guide Organisation process documentation
	Learning objectives are achieved	Learner survey Educator review of learners
	Learning needs are met	Learner survey and educator review and evaluation
Standard 2 – Educationally sound		
Programs are based on and improved by available evidence. Simulation events are matched to learning objectives. Programs contribute to the simulation-based education and training evidence base.	Evidence is referred to within program documentation	Program learning materials
	Data exists on program activities (including the views of learners and educators)	Participant responses to research activities Participant outcomes measured against learning objectives
	Simulation program owners have a (pro) research policy	Simulation program owner policy bank

Framework Standards and Statements	Potential Indicator of Achievement of the Standard and / or Statement	Potential Data Source (likely location of evidence of having *Fully Met* the Standard and / or Statement)
Standard 3 – Clear learning objectives and outcomes		
Learning objectives are clearly stated and easy to identify within program materials. Learning objectives are linked to learning outcomes. Learning outcomes are related to relevant professional and industry and requirements. Learning needs analyses are used to establish learning objectives and outcomes.	Learning objectives are evident	Simulation program guide
	Learners undergo a learning needs analysis	Learner review prior to undertaking the simulation program
	There is evidence the simulation scenario, fidelity, educator, support and environment are matched to the learning objectives	Simulation program guide Simulation program plan
	Learners report their learning experiences have continuity	Learner survey Educator review and evaluation
Standard 4 – Appropriate resources, infrastructure and governance		
Resources and infrastructure are fit for purpose and their selection is based on appropriate professional judgements. The risks of using simulation resources outside a simulation are understood and accounted for. Organisational governance, processes and procedures take into account simulation-specific requirements. There is a defined, transparent, equitable and timely process for booking resources and infrastructure.	The facility use and/or design takes into account simulation-specific risks	Floor plan, design guidelines, Simulation program documentation
	The program has a risk management plan	Simulation program documentation
	Resources and infrastructure are appropriate for the simulation program	Simulation program documentation
	Resources and infrastructure are available	Asset register
	Alternate Resources and infrastructure are available when required	Asset register Asset booking process
	There is an identifiable resource booking process	Resource booking process
Standard 5 – Qualified personnel		
Programs make appropriate use of personnel qualified in the relevant health domain(s). Programs make appropriate use of personnel qualified in the delivery of simulation-based education. Programs make appropriate use of personnel qualified in the technical aspects of the simulation. Programs document and enforce what *appropriate use of qualified personnel* means to their simulation.	Simulation technicians have demonstrated expertise in the relevant technical areas	Technician qualifications Technician experience
	Simulation educators have demonstrated expertise in the relevant health domain	Educator qualifications Educator experience
	Simulation educators have demonstrated expertise as educators	Educator qualifications Educator experience
	Relevant professional qualities are evident	Peer review

Framework Standards and Statements	Potential Indicator of Achievement of the Standard and / or Statement	Potential Data Source (likely location of evidence of having *Fully Met* the Standard and / or Statement)
Standard 6 – Based in reality		
Simulation programs reference the highest possible standards of healthcare Professional behaviour and standards are expected throughout the simulation. Simulations reflect real life, are linked to practice, linked to the workplace and take into account the patient experience. Simulation is used to model real life and thus provide opportunities to identify and improve current practices.	Clinical, professional or health service guidelines are referred to	Simulation program plan
	Participants (including educators) are provided with clear instructions on what constitutes professional behaviour within the simulation	Simulation program policies
	Patients are consulted about the simulation program	Patient or patient group *endorsement* of the program
	Simulation models real-life	Simulation program plan
Standard 7 – Safe		
The psychological, physical and environmental safety of participants (including but not limited to learners, simulated patients, educators and technicians) is appropriately managed throughout the simulation program. The confidential nature of participation in the simulation program is maintained. The simulation program considers and accounts for risks	OHS&E compliance certificate	Simulation program owner compliance certificate
	Learners report they feel safe	Learner survey
	Educators report they feel safe	Educator survey
	Learners report the simulation is conducted in a professional manner	Learner survey
	Educators report the simulation is conducted in a professional manner	Educator survey
	The program has a risk management plan	Simulation program polices
	An approved data handling policy exists	Simulation program owner policies and procedures
Standard 8 – Evaluated		
All aspects of the simulation program are part of a quality improvement process that includes evaluation. Learners are supported to reflect on (evaluate) their learning within the simulation program. Program personnel are supported to reflect on (evaluate) their performances within the simulation.	Educators reflect on their performance following the simulation program	Simulation program policy or procedure Peer review document
	The simulation program has a debriefing component	Simulation program guide
	The simulation program has a reflection component	
	The simulation program has an evaluation component	
	Educators are asked to review the simulation program	Simulation program policy or procedure Peer review document

Framework Standards and Statements	Potential Indicator of Achievement of the Standard and / or Statement	Potential Data Source (likely location of evidence of having *Fully Met* the Standard and / or Statement)
Evaluation outcomes are reported and acted upon.	Learners are asked to review the simulation program	Learner survey
	Evaluation outcomes influence future practice	Evaluation report (including recommendations) Update simulation program Updated real-life policy/procedure

9 Support Tools

There are two types of support tools. The first will support simulation programs to achieve the standard. They might take the form of draft policies, procedures or forms relevant to the standards and/or indicators. They could be structures or processes that align directly with one or more standards (e.g. a template that supports consideration of all six phases of a simulation program). The second type of support tool will assist simulation programs to collect data for or report against the indicators. These types of tools could be surveys (learner or educator), a spreadsheet to store all of the collected data or a framework that guides programs through the process of assessment and review.

This section lists tools that fall into both categories. However, it is beyond the scope of this document (and this phase of the project) to develop these support tools. As such, the following section notes where the listed items could be found, or a starting point for further development.

9.1 Tools for achievement

A significant amount of work has already been put into the development of resources (tools) that can support simulation programs (as well as centres and educators). These have been curated and collated for different purposes; such as the NHET-Sim program, the simulation in health directory (part of the SimNET website), the state-based initiatives such as the clinical training networks (CTNs), and simulation alliances (such as the Victorian Simulation Alliance).

The resources cover the range of requirements for simulation from position descriptions for various roles within a simulation facility (including people involved in the delivery of simulation programs), to guides for the development of a simulation program as well as scenarios and patient histories. Therefore, the challenge will not be in the creation of resources, or even their identification. Rather, it will be in bringing them together in a coherent way that links them to the Draft Quality Framework and specific standards within it.

Thus, the starting point for the development of *tools for achievement* should be the identification of resources that currently exist and allocating each to one or more standard. In Section 8 (Indicators, page 25), we noted the need for a more detailed consideration of potential indicators using program logic mapping. The same process can also be used to align tools with achievement of a specific standard(s) or part thereof.

9.2 Tools for assessment

We have already noted the preference for a quality framework with the least impost on the simulation sector. As such, it could be argued that tools supporting assessment are completely unnecessary – they will just create more work. Alternatively, they could be viewed as highly required – reducing the barriers to implementing the Draft Quality Framework and thus increasing the opportunity for the Draft Quality Framework to positively impact the sector.

Building on the use of program logic mapping for creating indicators and identifying tools for achievement the map can also be used to support assessment. It can be used to provide a structure around which simulation programs can build their implementation of the Draft Quality Framework. The tool supporting assessment would combine the framework standards, with the indicators clearly marked throughout and tools for achievement referenced.

From a design perspective, the simplest version of this tool for assessment would be paper-based. At its most complex, it would be entirely electronic and web-based, providing direct links to resources, collating data and providing reports. Although it could be considered that such an IT system would be difficult or complex to develop, such assessment tools already exist.

Developed by Darcy Associates for the Victorian Best Practice Clinical Learning Environment Framework (BPCLE), the *BPCLE Tool* integrates the Best Practice Clinical Learning Environment Framework, the associated program logic map, indicators and support tools in one location. It provides summary reports of the respondent as well as aggregated (de-identified reports) for appropriately demographically match peers.

The BPCLE Tool is aimed at *organisational self-assessment*. That is, key members of an organisation collectively complete the tool and determine their own compliance with individual indicators (and therefore the Best Practice Clinical Learning Environment Framework). None of the answers or open responses are able to be reviewed externally (that is, only the organisation responding within the assessment framework, can view their responses).

As part of their deliberations, the HCSSAG were provided with a demonstration of the BPCLE Tool and the framework behind it. Most (if not all) members felt the BPCLE Tool would be a suitable starting point for development of a *tool for assessment* within the Draft Quality Framework for Simulation Programs. There are also a number of other web-based tools capable of providing IT infrastructure to support understanding and achievement of quality frameworks.

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