ASPIRE Simulation Application: Guidelines for Submitters

This booklet provides detailed guidance on how to complete the simulation application form. This includes:
- **Descriptions of the types of evidence that should be included as supporting documentation**
- **Examples of good practice taken from previously successful applications**
- **A glossary of key terms**

Please read this document carefully and refer to the background paper on simulation, *ASPIRE Recognition of Excellence in Simulation in Healthcare in a Medical, Dental and Veterinary School – An Introduction* before completing the application form.

Excellence in Simulation – The Criteria
For an institution to be regarded as achieving excellence in simulation-based education in an institution there must be evidence that assures it is well-designed (embedded in appropriate educational theory), and integrated into the curriculum, uses it as an adjunct to patient or health systems care training and/or assessment experiences, and provides for outcome driven measures that are continuously evaluated for quality and improvement. Four spheres of simulation-based education excellence can be recognised:

- *Organizational framework (Curricular institutionalization)*
- *Training resources and educational use*
- *Faculty and support personnel expertise*
- *Innovation and scholarship*

For each of the four spheres of simulation-based education, more detailed criteria are described.

The Application Form
The Application form contains 4 sections:

Section A	Submitter Information
Section B	Response Relating to Criteria
Section C	Summary
Section D	Additional Information / Supporting Documentation
Section E	Certification Signatures by Lead Submitter and Dean of Institution

Each of these sections must be completed in full.

General Guidance

Responses
Responses to each criterion need to be specific and provide the evidence necessary to support the statement. Examples should be given where simulation-based education has had an impact.

It is recognised that cultural, social and other issues are likely to have an influence on the use and integration of simulation in an institution and that how simulation is used will vary from institution to institution. Excellence may be found in institutions with limited access to resources just as much as in wealthier institutions. The way in which institutions demonstrate cost effectiveness and context appropriateness will be taken into account by the panel when reviewing individual submissions.

Language
With the exception of the appendices, all documentation should be in English. Where the appendices are in another language the supporting commentary must be in English.

Glossary
A glossary of the key terms used in criteria as indicators of simulation-based education excellence are included at the end of this booklet. Please refer to these terms in filling in the application form.

Word limits
The expected word limit for each section is clearly stated within the form. It is important that these word limits are adhered to, and that the number of words used is indicated in the box provided.

Missing information
If a criterion or sub-category is considered not to be applicable to the institution it should be stated on the form and appropriate justification provided.

Appendices
Where additional evidence is provided in the appendices, it must be made clear how the evidence demonstrates that the criteria have been met by the institution.

The appropriate section of the appendix should be identified and cross-referenced to Section B in the application form, making clear how the evidence is relevant.

All appendices should be numbered and listed in **Section D** of the form as **Supporting Documentation.**

Commentary to appendices
Each piece of supporting documentation included as an appendix must be accompanied by a short commentary in English to explain the relevance of the document and how it supports the institution's statement. It should be clearly indicated which criterion or criteria are supported by the evidence in the appendix. The commentary should be no more than 300 words and summarise the key points from the appendix, including how the appendix provides evidence to support the statements in the submission document.

Please note: Evidence in an appendix that is not accompanied by a short commentary will not be examined.

Specific Guidance

Section A – Submitter Information

Key features of the institution's programme
It is important that the key information regarding the institution's programme are summarized here. This would normally include:

- The dates the University and school were established.
- The programme length.
- The curriculum type, distinctive features and any significant changes that have taken place.
- Entry routes into the institution, for example, high-school entry; graduate entry and any other routes available.
- Learner numbers – overall and per year, including any significant changes that have taken place.

As a guide for reviewers it would be a valuable addition to include as an appendix an outline of the institution's curriculum to provide a background context to the evidence that will be supplied in subsequent sections.

For example, one institution included with its submission, tables to demonstrate the subjects, hours, teaching method and credits for each semester and year of study.

Accreditation status
Please include here details of the accreditation status of the institution. This should include: date of first accreditation, current accreditation dates, accrediting agency and any conditions. It is essential that a copy of the accreditation letter is appended to the application. This should be marked as "Appendix One" and listed in **Section D** of the application form

Section B – Response Relating to Criteria

This is the main part of your submission. Please ensure that you address the various criteria listed. Try and avoid repetition, referring to earlier sections where necessary.

If some criteria do not apply to your programme, please indicate this and explain the reasons why.

When you respond to the ASPIRE criteria, you must provide evidence of attaining the criteria and include specific examples to support your submission. Refer to innovations, sustainability and, where appropriate, the uptake of your efforts by other health professions programmes.

In the main text refer to the relevant sections of supporting documentation included as an appendix and the associated commentaries.

If a link to a website is useful, please indicate the specific section of the website that is to be considered.

For each piece of evidence included as an appendix to support your claim, attach a commentary in English (maximum 300 words) detailing how excellence is demonstrated. The evidence may be in a language other than English.

All appendices including web links should be numbered and included in **Section D** of this form.

Please remember that we are looking to recognise and reward excellence, and the evidence provided by you has to be convincing.

Criterion 1 – Organizational Framework (Curricular institutionalization): The institution's simulation-based education program has clear goals that are aligned with its organizational priorities and objectives, is systematically designed and serves the educational mission of the institution.

1.1. The institution's program has clear goals, is aligned with school priorities and objectives, and/or influences organizational culture.

Please provide a narrative description of the institution's simulation-based education program goals, how the program facilitates targeted priorities of the institution (and national, international) and/or if not aligned with institutional priorities then how it works to improve the educational climate. Appropriate web links or supporting documentation should be provided.

Example – Providing evidence about how the simulation-based education program fulfills requirement, milestones as stated in regional, national or international accreditation / licensing bodies – Royal College of Canada CANMEDS[1], Association of American Medical Colleges Entrustable Professional Activities[2], Accreditation Council on Graduate Medical Education milestones[3], the Scottish Doctor[4]. Providing evidence demonstrating how simulation has been integrated into a patient safety/quality care culture at the institution.

1.2 The institution's program uses a systematic curriculum development model that is informed by a theoretical framework and best practices to design and implement simulation-based education.

Please provide a narrative description of the curriculum development model, theoretical framework and evidence used to design simulation-based education. Provide an example(s) of how the model was applied to design and/or implement a horizontally and/or vertically integrated training program.

Example - Kern's curriculum model[5], ADDIE model[6]

1.3 The institution's program focuses on improving educational practice.

Please provide a narrative description of how the program addresses the overall aim to improve educational practice.

Examples – show how a gap was identified (learner/faculty questionnaire, curriculum review, quality control process) and how the simulation program addresses this gap. Demonstrate how simulation was used to train faculty to provide improved feedback to learners.

Criterion 2 – Training Resources and Educational Use: The institution's simulation-based education program incorporates appropriate simulation methodologies that meet its institution's needs. In addition, it includes having the necessary physical space and support resources for simulation-based training. It also encompasses evidence-based justification and application of the associated curricula, learning strategies and outcome measures.

2.1. The institution's program uses a systematic process to align simulation technologies and methodologies with the its defined training needs.

Please provide a narrative description of the process used to align its simulation training resources (space, equipment, simulation device(s), support technology) and methodologies (individual, team-based, immersive) to its defined training needs.

Examples – providing a blueprint or template that shows how outcomes are aligned with resources, learning methods, assessment instruments.

2.2. The institution's simulation program is grounded in best-evidence practice for education and training.

Please provide a narrative description of demonstrating that simulation training activities are grounded in best practices or proven conceptual frameworks for education. Provide an example of how the framework was applied to guiding simulation activities (scenario development, practice sessions).

Examples – simulation grounded in Kolb's Theory of Experiential Learning[7], BEME principles of effective learning[8], principles of deliberate practice[9], mastery learning[10].

2.3 The institution uses a rigorous and standardized process for developing and implementing outcome measures that assesses the outcome of and assessment (of learning – summative assessment).

Please provide a narrative description of how the program develops and/or uses outcomes measures with evidence for their construct validity. Provide an example describing a rigorous process for demonstrating validity evidence when using an assessment instrument for trainees.

Examples – use Downing[11]/Messick[12] criteria for construct validity evidence (content, internal structure, response process, relationship to other variables, consequences). Describe various standard setting exercises or methods used for (high stakes) assessments.

2.4 The institution incorporates evidence-based feedback and debriefing methods[13] into its simulation learning activities (formative assessment).

Please provide a narrative description of how the program uses structured (best evidence) feedback and debriefing methods (it has either developed or adopted) as part of the simulation-based learning process. Provide specific example(s) of feedback and/or debriefing techniques that are used in simulation activity or program.

Examples – Describe the debriefing models used to guide debriefing process (including debriefing the debriefer or co-debriefing sessions.

2.5 The institution uses a continuous and systematic process of quality assurance and improvement of its simulation program.

Please provide a narrative description of the formal process used to evaluate the simulation program including identifying the model / framework used (these can be national or international standards / criteria). Provide an example (in the form of a summary table or executive summary) of such a process used for one or more of the simulation programs.

Examples – Kirkpatrick framework[14] to measure overall outcomes of the institution's program.

Criterion 3 – Faculty and Support Personnel Expertise: The institution ensures that its faculty and support personnel have demonstrated expertise in simulation-based education. This not only includes professionals trained in the best evidence use of simulation-based medical education, but also includes individuals involved in the operation, management, and administration of simulation-based training, and researchers dedicated to advancing the field.

3.1. The institution's simulation program expects its faculty, administrative staff, and technical personnel to have expertise in simulation-based education, and supports their development by providing resources needed to achieve their goals and sustain their activities.

Please provide a narrative description of the recruitment, selection and preparation of simulation faculty and staff for their role and how they are supported by the institution to advance their own scholarly and professional development, including keeping up-to-date with developments in the field. Describe formal training that faculty

must undergo for using simulation for training and/or assessment; (workshops, courses (face-to-face, online), seminars, certificate, diploma, degree).

Examples - describe the formal training faculty receive as part of a required expectation for simulation – e.g. local, regional, national, international courses and/or workshops, online courses, certificate, diploma, masters, fellowship training.

3.2. The institution's simulation program has faculty with expertise in carrying out simulation-based educational research and supports their development by providing resources needed to achieve their goals and sustain their activity.

Please provide a narrative description of the recruitment, selection and preparation faculty to carry out simulation-based health care research and how they are supported by the institution to advance their own scholarly and professional development. Describe formal training that faculty must undergo for using simulation for research purposes.

Examples – describe selection process for recruiting / identifying individuals who carry out research / scholarly projects and the training they received that has a specific context to simulation.

Criterion 4 – Innovation and Scholarship: The institution promotes innovation, impact and scholarship in simulation-based healthcare education.

4.1. The institution promotes innovation in simulation-based education

Please provide a narrative description of educational innovations employed in faculty development with reference to evaluation reports and/or publications describing innovations and associated scholarship (if available).

Examples – new courses, simulation scenarios, simulation device(s), applications, workshop materials, protocols – weblinks to demonstrate how they have been disseminated and adopted outside local institution.

4.2. The institution's faculty (and where appropriate their learners) conduct research related to simulation-based education.

Please provide list of scholarly presentations and/or publications related to simulation-based education in the past five years.

Example – list of publications, presentations at regional, national, international meetings

4.3. The faculty advance simulation-based education nationally and internationally.

Please provide list of awards, invitations to speak and consultations (e.g. to assist other institutions with simulation-based healthcare education) by faculty to advance simulation-based educational practices, leadership and scholarship locally, nationally and internationally in the past five years.

Example – summarize evidence of external recognition of the institution's simulation program and its faculty, through invited presentations, workshops, committees, task forces, consultation work.

Section C - Summary of Justification for Recognition of Excellence in Simulation

In this section it is important to summarise your institution's interpretation of simulation-based education and the reasons why your institution should be recognised as excellent with regard to simulation.

It should read as a stand-alone statement, highlighting the key features within your institution which stand out as demonstrating excellence in simulation. It should also highlight how excellence is achieved in relation to the four spheres of simulation as described in **Section B**, referring to any innovative approaches adopted.

Do not repeat the general information about the school provided in Section A.

Section D – Additional Information / Supporting Documentation

You may wish to attach additional information relating to the submission or support for the submission from a range of stakeholders, for example, health authorities, those concerned with post-graduate education or the local community.

Appendices should be numbered.

Appendix 1 should be the accreditation letter.

Appendix 2 can be an acknowledgement and list of all who contributed to the preparation of the submission.

Other appendices with supporting evidence may be submitted in a language other than English.

Each appendix, with evidence to support the submission, must be accompanied by a commentary in English (maximum 300 words) that summarises the content of the material provided and how it contributes as evidence to support the case for excellence in simulation.

Where confidential material, for example, relating to finances is included in an appendix, this should be clearly stated at the top of the appendix and noted in the letter accompanying the submission.

Section E - Certification Signatures by Lead Submitter and Dean of Institution

The application should be signed and dated by the lead submitter and the Dean of the Institution that confirms information contained in the application is an accurate reflection of the use and integration of simulation at the institution.

References

1. The CanMEDS 2015 Framework. http://canmeds.royalcollege.ca/en/framework.

2. The Core Entrustable Professional Activities for Entering Residency. https://www.aamc.org/initiatives/coreepas.

3. ACGME Milestones. http://www.acgme.org/What-We-Do/Accreditation/Milestones/Overview.

4. The Scottish Doctor. http://www.scottishdoctor.org.

5. Kern DE, Hughes MT, Chen BY. Curriculum Development for Medical Education: A Six-Step Approach. 3rd Edition. Johns Hopkins University Press, 2015.

6. Morrison GR. Designing Effective Instruction, 6th Edition. John Wiley & Sons, 2010.

7. Kolb DA. Experiential learning: Experience as the source of learning and development (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall. 1984.

8. Issenberg SB, McGaghie WC, Petrusa ER, Lee Gordon D, Scalese RJ. Features and uses of high-fidelity medical simulations that lead to effective learning: a BEME systematic review. Med Teach 2005;27:10–28.

9. Ericsson KA. Deliberate practice and the acquisition and maintenance of expert performance in medicine and related domains. Acad Med 2004;79 (10 Suppl): 70–81.

10. Guskey TR. Lessons of mastery learning. Educ Leader 2010;68 (2):52–7.

11. Downing SM. Validity: on meaningful interpretation of assessment data. Med Educ. 2003;37(9):830-7.

12. Messick S. Standards of Validity and the Validity of Standards in Performance Assessment. Educational Measurement: Issues and Practice 1995;14(4):5-8.

13. Fanning RM, Gaba DM. The role of debriefing in simulation-based learning. Simul Healthc. 2007;2(2):115-25.

14. Kirkpatrick D. Evaluating Training Programs. San Francisco, CA: Berrett-Kohler 1998.

Glossary terms

Institution mission and vision	The **institution mission** is a public statement of an institution's founding purpose and major organisational commitments; that is, what the institution does and why it does it. **The institution vision** is a public statement of an institution's high-level ideals, core values and long-term objectives, the goals for the future to fulfil the mission of the institution.
Accreditation process	An **accreditation process** is a self-regulatory process by which governmental, non-governmental, voluntary associations or other statutory bodies grant formal recognition to educational programmes or institutions that meet stated criteria of educational quality. Educational programmes or institutions are measured against certain standards by a review of written information, self-studies, site visits to the educational programme, and thoughtful consideration of the findings by a review committee.
Simulation	**Simulation** in healthcare education is a "technique, not a technology that replaces or amplifies real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner."
Faculty	**Faculty** as a term can be used to refer to an organisational division in a university (e.g. Faculty of Medicine) or the academic staff. In the context of this application faculty refers to academic staff.
Active learning	**Active learning** is an approach that places responsibility of learning on the learner. Learners may be required to participate in activities, apply their knowledge, seek solutions to problems, and to reflect on their experience.
Learning resources	**Learning resources** are materials used for the purposes of teaching and learning. They can take a variety of formats, both written and visual, including summaries, papers, instructions, diagrams, and videos.
Self-assessment	**Self-assessment** is the process of evaluating one's own achievements, strengths, weaknesses, development, performance and competencies.