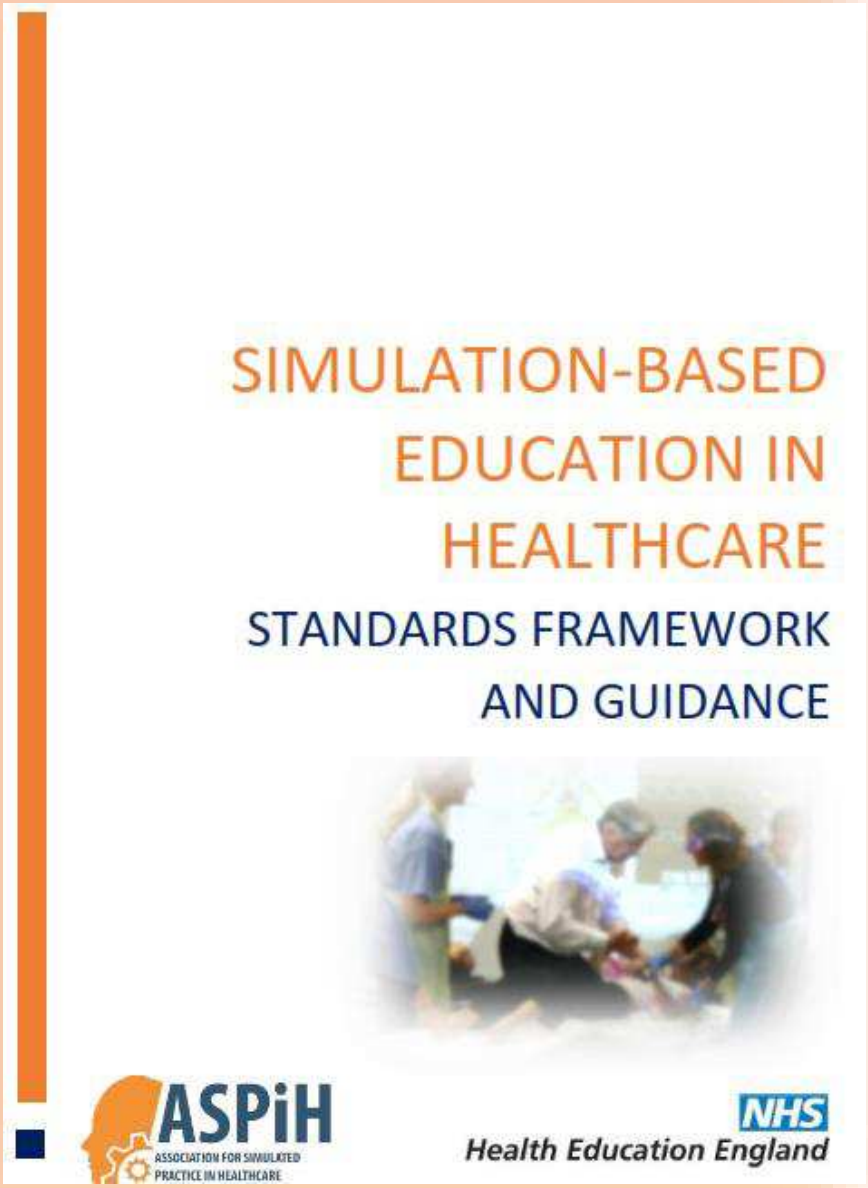


2016 CONSULTATION REPORT

ASPiH
ASSOCIATION FOR SIMULATED
PRACTICE IN HEALTHCARE

NHS
Health Education England

CONTENTS

SUMMARY AND BACKGROUND

EXECUTIVE SUMMARY

This document summarises the methodology, data and interpretation used to develop the Association for Simulated Practice in Healthcare (ASPiH) Standards Framework for Simulation-based Education. The primary aim of the consultation summarised here was to obtain input from a wide range of educationalists and professionals engaged in the field of simulation-based education, experts in undergraduate and postgraduate curricula and those with expertise in human factors and ergonomics. The organisations and individuals who engaged were provided with relevant information and feedback requirements. Over 40 pilot sites responded directly to an evaluation document, 80 responded via an online questionnaire and several focus group meetings gave further feedback. An ASPIH Project Team reviewed all responses and used a consensus approach to ensure the final version of the standards reflected the majority view from these sources. A rating matrix was used to analyse responses as objectively as possible and this, alongside mapping to published evidence and a detailed review by the project team, shaped the final document.

Our multi-disciplinary Association membership has enabled us to integrate views from across the healthcare spectrum. The Standards are based on published evidence and several existing quality assurance processes currently in use across the UK and internationally (including to the International Association for Clinical Simulation and Learning (INACSL), the General Medical Council (GMC), the Nursing and Midwifery Council (NMC), General Pharmaceutical Council (GPhC) and the Health and Care Professions Council (HCPC).

This report supports the Standards Framework and Guidance 2016 available from www.aspih.org.uk

BACKGROUND

In 2012/13 ASPiH conducted a National Simulation Development Project [1], supported by HEE and the Higher Education Academy (HEA) to map the resources and implementation of simulation-based education (SBE) and technology-enhanced learning (TEL) across the United Kingdom. One of the key issues identified in this report was the need for national guidance related to quality indicators and SBE Standards of practice that would be relevant and of value to the increasing number and breadth of institutions, departments and individuals designing and delivering SBE.

ASPiH produced a Draft Standards document in 2015 based on evidence in the literature and a review of existing standards and guidance. This document underwent a preliminary consultation with a panel of experts and 2015 conference attendees, providing valuable feedback and a clear indication that a second consultation with the SBE community was necessary.

FUNDING

In 2016 and 2017 HEE provided funding for the development of the Standards Framework, this consultation and the adoption phase of the standards project. This included support for the ASPiH Standards Project Team *(Appendix 1)*, and support from the HEE Simulation Operations Group.

ACKNOWLEDGEMENTS

We would like to formally thank all those who contributed to the development of the Standards Framework, both formally and informally. We have included a list of pilot sites in the Appendices but many other colleagues took the time to provide input via the online process, via individual discussions or email. We appreciate the positive and supportive spirit in which all feedback was provided.

METHODOLOGY

AIMS

To produce standards for Simulation-Based Education with associated guidance based upon evidence and a broad consultation with all stakeholders active in SBE across the whole of the UK and Ireland, and launching a national (UK) Standards Framework for SBE by the end of 2016. To allow a wider response and validation of the feedback received during the first Consultation process in 2015 on the Draft Standards for SBE document containing 77 Standards and associated Guidance.

FEEDBACK METHODOLOGIES

For the widest reach amongst stakeholders, four approaches were used to gain feedback on the Draft Standards:

- Completion of a short questionnaire as an individual or on behalf of an organisation, either online or as a paper response.
- Recruitment of pilot sites to review the Draft Standards and complete a more lengthy and detailed evaluation form.
- Engagement, via telephone contact or presentations/exhibitions/forums, with the widest possible range of organisations that are using or managing simulated practice, including the medical Royal Colleges and Nursing and Midwifery Council. A list of Colleges contacted is included in *Appendix 7*.
- Engagement at meetings and conferences, conducting specific focus groups where possible. One such group was convened at the CAE Nursing conference in 2016; attendees are listed in *Appendix 6*.

AWARENESS AND ENGAGEMENT

The opening of the online survey was promoted via the ASPiH website and social media. A specific twitter hashtag was created *#ASPiHStandards2016* – the launch tweet made 1590 impressions with 104 interacting with the tweet. A dedicated features section was set up on the website landing page to track progress and associated events, together with a specific standards page with further information, documents to download and the link to the online survey.

An information brochure/flyer was printed and circulated and it was used as promotional material at events and meetings throughout the consultation period, a page from this brochure is included as *Appendix 2*. It was important that the consultation be recognised as an open consultation, so the brochure/marketing materials

reflected this by requesting interested parties to '*communicate that you would like to be involved as soon as possible if you have not been contacted through the Project Team by 30th June 2016'.*

Any opportunity for promotion of the consultation and enlisting of participants was highlighted by the ASPiH Executive committee, at meetings they attended and by inclusion in all interactions with relevant stakeholders.

PILOT SITES

On a purely logistical basis, the 13 HEE localities and Scotland, Ireland and Wales were divided up between the two project managers with the aim of engaging with organisations/sites active in SBE, in all its forms and settings, to act as pilot sites. In addition, the aim was to get a good geographic spread. The two project managers contacted all sites and worked with them to ensure they were supported in providing appropriate and timely feedback.

The information provided to pilot sites was much more detailed than that of the online survey, giving the opportunity for free text responses to each of the standards within the themes via a written report.

RECRUITMENT OF PILOT SITES

The original intention had been to recruit one pilot site per region and conduct a face-to-face 'interview-style' evaluation of the Draft Standards. However, it quickly became apparent that, as awareness of the Draft Standards and the consultation process increased, many more sites were expressing an interest in participating. To include all interested parties and still collect feedback within the given time frame, an electronic version of the evaluation document was created, with sites being supported by the project managers via email or telephone as required. The only prerequisite to being a pilot site was to be active in some form of simulation-based education in the UK.

To recruit pilot sites, all ASPiH Institutional members were contacted, along with any known local simulation networks, HEE Simulation Leads or equivalent for Wales, Scotland and Ireland. Any sites which found out about the consultation by word of mouth and approached the team were also included.

PILOT SITE FEEDBACK

Each pilot site was given electronic copies of the Evaluation form and the Draft Standards document, together with instructions and the time frame for completion. The Evaluation form asked for information about the pilot site to contextualise responses and enable a check to be made that a wide variety of sites had been represented. The pilot sites were asked to familiarise themselves with the Draft Standards document before completing the Evaluation form, which included broader questions about the document and more detailed questions about each individual standard. Sites were encouraged to involve any number of individuals involved in the SBE and provide a collective response.

SURVEY

An online questionnaire was developed (*Appendix 4*) and respondents were encouraged to have read and be familiar with the standards documentation prior to completing this survey. A summary of each of the standards was linked to the relevant question.

Each of the questions required a response using a five-point Likert scale (Strongly agree – Agree – Undecided – Disagree – Strongly disagree) with a comments text box to support or explain the response.

COMMENTS ON METHODOLOGIES

1. The consultation period was limited to a 5-month period and conducted over the summer holiday period, followed by a busy September start-of-term period, therefore making it impossible for some sites to participate.
2. No patients or simulated patients completed the online survey - unless they were concealed within the anonymous respondents.
3. Not all sites use certain applications of simulation such as In-situ, Assessment and Simulated Patients, therefore not all pilot sites provided feedback on these sections of the document.
4. Demographic information was requested from respondents to the online survey. Demographic information about individuals and organisations who responded to the consultation in other ways (e.g. attending an event, personal conversation) was not collected.
5. The results are a combination of feedback from the online survey and pilot sites. Inevitably this means we cannot represent individual views or comments in this document.

COLLATION AND ANALYSIS

This was a two-stage process:

Stage 1 was to analyse the feedback received from the pilot sites and online survey; the responses were grouped by question and by standards theme. This feedback was shared among the Standards Project Team in the form of a spreadsheet that combined all the responses to the survey and questionnaire.

Stage 2 was for the Standards Project Team to review the Stage 1 outcomes, discuss the feedback, in detail and agree what would be included in the final document via discussion and subjective analysis.

LIMITATIONS

There are inevitable limitations to conducting a survey of this type with limited resources. It was a major challenge to design, manage and disseminate the evaluation and survey tools and to engage with a community of practice that spans all areas of healthcare, including under-graduate and post-graduate education, and involves a wide range of disciplines. The analysis, conclusions and next steps outlined below were arrived at in a logical and, as far as possible, objective manner and do represent a significant body of opinion, but there are sectors and organisations that will have been missed in this process.

RESULTS

There is some duplication between pilot sites and online respondents, for example, one person responded to the online survey twice; once as an individual and once representing their institution. The number of these was small and we do not believe created any significant bias in the overall feedback.

RESPONDENT DEMOGRAPHICS

There were 82 responses recorded on the online survey (Fig.1). 42 of these were from NHS Trusts and HEIs identifying themselves as medical/dental educators, nurse educators, skills and simulation technicians and industry representatives. Other roles stated included directors, midwives and Allied Health Professionals (AHPs) plus multi-professional educators. 15 responded on behalf of their organisation (red), with 40 as individuals (blue) and 27 remaining anonymous. *A full list is included in Appendix 5.*

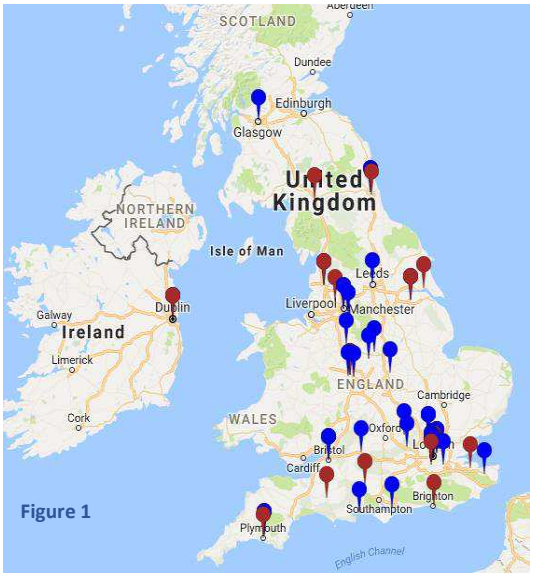


Figure 1

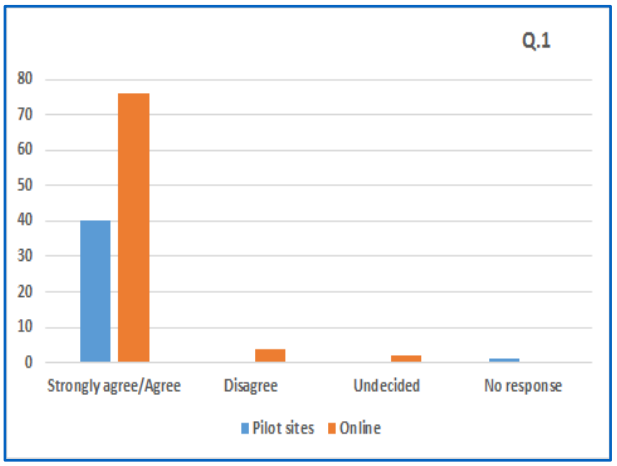
41 organisations came forward as pilot sites. (Fig.2) These included 16 universities and colleges (blue) and 25 trusts, centres (red). A total of 154 simulation faculty/personnel from NHS Trusts and HEIs were identified in the pilot site profiles. They included a range of professions, roles and specialities: Professors, Directors, managers and coordinators of centres/skills facilities, heads of school, course directors, programme and academic leads, associate deans, business managers, clinical/simulation fellows, core faculty, simulation and human factor leads, resuscitation faculty, learning and development personnel, medics - grades from F1 to consultant, nursing, midwifery and the Allied Health Professions (AHPs).

Figure 2

A full list of pilot sites and the staff that engaged with the process is included I *Appendix 3*. 14 of the 26 colleges, councils and other bodies contacted responded through either email or direct telephone discussions/communication. See *Appendix 7* for a complete list.

ONLINE CONSULTATION

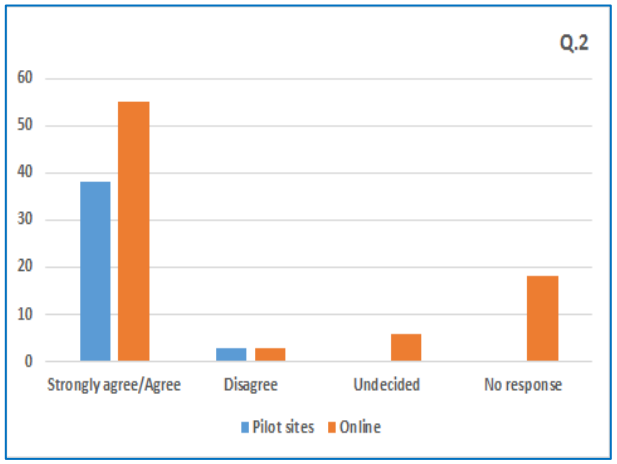
The responses to the questions in the consultation were as follows:



Question 1:

Do you agree that standards are important for the effective design and delivery of SBE?

By combining the 'strongly agree' and 'agree' responses to Question 1, 94% plus of respondents strongly agreed or agreed with the importance of standards for SBE.



Question 2:

Do you agree with the overall layout and section headings in the standards document?

By combining the 'strongly agree' and 'agree' responses to Question 2, over 76% strongly agreed or agreed with the overall layout and section headings in the standards document.

Question 3: Please let us know if you have any thoughts on how the evidence could be collected and/or validated (i.e. on-line, peer-review, self-evaluation, face to face audit)

The responses supported the strategy of providing both direct feedback from pilot sites and online questionnaire input.

RESPONSES FROM COLLEGES AND COUNCILS

Organisations were at various stages of adoption of simulation and in setting up committees or leads to drive the use of simulated practice. All respondents supported the introduction of standards and several (e.g. the College of Paramedics) circulated them across all their contacts for comment. A list of the organisations approached and those who responded is included in *Appendix 7.*

The Royal College of Ophthalmologists has developed an integrated training programme where the supplier of their key virtual reality simulator sends installation data on every system sold to the college. This allows the college to link the provision of simulation into a blended learning programme with e-learning, training events/lectures and local practice.

Many colleges are still looking to an advocate or early adopter to drive their support for simulation and all the individuals we spoke to were finding that time and resource constraints in other areas were having a detrimental effect on the pace of adoption.

RESPONSES TO THE PILOT SITE CONSULTATION

THEME 1 - FACULTY

DRAFT STANDARDS FIRST CONSULTATION

1. Educators should have undergone introductory training to SBE, including exposure and orientation in the principles of adult learning theory and underpinning educational theories/pedagogy relevant to the spectrum of simulation.
2. Educators should ensure that educational content adheres to best practice standards in education.
3. Educators should ensure that a safe learning environment is maintained for learners and encourages self-reflection on learning.
4. Educators must identify pertinent elements of the simulation to discuss and relate to the objectives.
5. Educators should engage with the SP faculty (if present) to enable and incorporate their feedback.
6. Educators should act as a role model to learners and promote professional behaviour and integrity.
7. Educators should engage in continuing professional development with regular evaluation of performance by both participants and fellow faculty.

1. In principle, respondents felt that faculty should have some formal education on the pedagogic principles of SBE but there was no real consensus on what form it would take i.e. the level, detail or length of course. Some respondents shared what their organisation's minimum requirements for faculty were, for example, PGCert, faculty development courses. Although a proportion raised concern about the standards being too prescriptive and the recommended courses and/or resources being difficult to access or attain, some welcomed relevant guidance. The time and release aspect for faculty training was an ongoing concern.

Throughout Theme 1, there was reference to a lack of consistency in language and terminology regarding faculty, educators, trainees and the use of the word learners. A need for a revised glossary or terminology section was identified to address clarity, accuracy and definition of terms used in the standards document.

There was widespread acknowledgement that faculty delivering SBE should have some exposure to training and education to enable them to deliver their role. Respondents identified a need for *"guidance for novice faculty"* and for the standards to suggest what *"courses for SBE or HF would be considered appropriate."*

"there is a paucity of courses and training offering teaching in the educational theory underpinning SBE and practice."

A proportion highlighted the need to cross reference the ASPiH Standards to pertinent standards established by other professional bodies e.g. GMC, AOME and NMC.

"exposure to a variety of learning/teaching contexts including but not limited to SBL is highly advantageous"

2. Although most agreed with the principle, there was some differing interpretation over the "*best practice standards in education"* that were referred to and needed further clarification – "*what it meant and how, or if, it related to professional body standards?"* i.e. GMC, AOME, NMC.

3. There was no doubt that creation of a safe learning environment is imperative in SBE and some respondents gave examples of how they routinely achieve this in practice. However, respondents wanted more detail and description of what constitutes a safe learning environment and how it potentially impacts on raising concerns about performance.

4. The wording caused some alarm with a proportion of respondents. Their concern centred on the use of the word 'must', its context and the variables regarding differing groups of participants. There was an identified risk that their input on relevance may be key or even *'trump'* faculty objectives.

5. This was felt to be partially duplicated in the specific SP section but a recurrent theme was that SPs should have undergone training in debriefing and faculty should have undergone some training in using SPs in simulation. An interesting comment was made as to the sources of SPs i.e. professional actors, real patients and/or students.

'behaviour of faculty members has a profound effect on students"

6. The majority strongly agreed that faculty act as role models for learners and need to demonstrate professional behaviour and integrity.

7. There was consensus that faculty should be engaging in continuing professional development and regular evaluation of performance by both participants and fellow faculty. Methods suggested included: internal and external courses; eLearning; events and conferences; peer review using simple feedback forms; informal or formal peer observation; recording of debrief for self-reflection; behaviour and performance assessment by external faculty members. The importance of linking any evaluation of performance to the revalidation process was emphasised.

ADDITIONAL STANDARDS RELEVANT TO DEBRIEFING

DRAFT STANDARDS FIRST CONSULTATION

1. Educators should be competent in the process of debriefing;
2. Debriefing should be conducted in an environment that is safe, positive and non-threatening
3. Duration and timing of debriefing is crucial but should be flexible enough to allow progression through the phases of debriefing (e.g. reaction, analysis and summary)
4. The facilitator must identify pertinent elements of the simulation to discuss and relate to the objectives
5. Facilitators should engage with the SP (if present) to access, enable and incorporate their feedback
6. Facilitators, SPs and technological support personnel should engage in an additional debrief after the session without learner presence, to reflect, develop self-awareness.

The majority felt that the subject of debriefing warranted inclusion in the Faculty section and felt that it did not need to be classed as *Additional standards,* especially as some elements were already covered in parts of the Faculty section.

1.The majority agreed with the principle of the educator and the skills required for effective debriefing but expressed concern about the use of the word "competent", some preferring the use of "proficient", recognising that it is a skill that faculty should learn. Some questions were raised about a need for a standardised method/model of debriefing and how debriefing could be measured.

There appeared to be an assumption that all members of the faculty would have professional registration and a relevant Code of Conduct. It was also recognised that not all faculty need to be involved in the debrief and that it may not be practical to hold a formal debrief session after a specific simulated training session as part of a course.

2. Most agreed that debriefing should be conducted in an environment that is safe, positive and non-threatening, whether or not that 'space' was a separate room due to constraints of the facility, faculty and time. However, judging the environment as safe could be very subjective and difficult to define as it would be "*subject to the student's individual perspective."* What was considered important was that the learner felt safe to share their feelings, that there was trust, respect and honesty and the environment was "*conducive to reflection."*

3. It was noted that debriefing In-Situ simulation and the privacy required was more difficult to achieve as it would be very dependent upon the clinical area and its activity. There was consensus regarding the duration and timing of debriefing – that is should happen as soon as possible after and take double the amount of time of the scenario i.e. a ratio of 2:1. was considered the norm. There were concerns not only about how this could be measured to achieve the Standard but also about the challenges faced by organisations and it was felt there should be a degree of flexibility due to such constraints on time and room bookings. Also, duration and timing in some of the literature has been found to be debatable.

Some respondents queried the phases/model of de-briefing mentioned e.g. reaction, analysis and summary and also if a recognised and recommended model should be appropriately referenced.

4. Interesting comments were made regarding pertinent elements and objectives, most feeling that they were the same. However, there were suggestions regarding the differing methods available to identify these, for example, the learner themselves, faculty member, debriefing software and/or video feedback.

5. Simulated patients (SP) should be included in the above and most agreed about their valuable input but highlighted that it needed to be "*within boundaries and support and training available for SPs to engage in this process."*

6. An additional debrief for facilitators, SPs and technological support personnel post-session, although considered best practice and actively encouraged by most respondents, was viewed as not always feasible on every occasion due to time, other commitments or expense, especially if using external SP faculty. It was suggested that it should be a routine part of formal programme evaluation.

TECHNOLOGICAL SUPPORT PERSONNEL

DRAFT STANDARDS FIRST CONSULTATION

1. There must be an appreciation of the knowledge and skills that technological support personnel bring and their contribution to the development of facilities and faculty, support for SBE programmes and facilitating new training methods
2. A realistic technical needs analysis should be undertaken to ensure that the workforce delivering the differing types of skills training have the necessary capabilities for safe and effective patient care
3. Technological support personnel should receive training that is *'fit for purpose.'*
4. The development of technological support personnel should be planned in consideration of advancing technology, strategic direction and education needs of facility/organisation, with financial support put in place.
5. Technological support personnel who are likely to be responsible for integrating or operating equipment should be involved in the procurement process.

In the 2015 Draft Standards for SBE, this section was included in the Resources theme. Early feedback confirmed that the technological support personnel section was more appropriately placed under the Faculty theme. Hence it was moved to this section in the 2nd Consultation document.

The section prompted considerable differences in responses; not only due to the extremes and variances of the role and job specification of technical personnel working in both NHS Trusts and HEIs, but also from those facilities that do not have a dedicated person and more often utilise the skills of an educator to facilitate the delivery of SBE, i.e. a dual/split role.

1. There was disagreement over the term appreciation used to acknowledge the skills that technological support personnel bring. However, a demarcation of the specialism and expertise of the role was welcomed, including some valid comments.

"without the technological support the standard of delivery of simulated exercises would decrease"

2. The phrases "technical needs analysis" and "safe and effective patient care" were found to be confusing and inappropriate for many. A few interpreted the first phrase as a need for more clarity between what activities a facility/faculty plans to deliver, and the technical needs associated with these activities. It was also noted that, if technical staff are delivering training in any form, they should have the necessary skills and knowledge to do so.

".....their consultation and support is crucial to delivery"

3. Most respondents also disliked the use of the phrase "fit for purpose" due to its ambiguous interpretation and the diversity of centre and individual training requirements. Most agreed that provision, opportunity and availability of training for simulation technicians is currently very limited and relies heavily on industry and self-directed learning. Some respondents considered that it was important to have the skills to undertake the work but also to provide a clear career pathway. A more standardised approach would be preferred with adequate support for development of a training pathway/matrix with a qualification and career pathway that includes competencies and/or performance descriptors.

4. Development of technological support personnel produced mixed responses, with the suggestion that it "*appears to sit awkwardly in this section as it is a management standard and not the actual technician/technologist's role."*

'they have a valuable insight into the possibilities/limitations of the equipment'

A significant number of responses focused on the financial aspect of employing and supporting technicians as being unrealistic and too directive, especially '*given the constraints of fiscal control'* and the demands that frequently affect departments and facilities. Nevertheless, there was a reminder that high-level management engagement and agreement of simulation and learning strategies frequently results in relevant funding and support for the personnel involved.

5. A majority agreed on technological support personnel being involved in the procurement process of equipment and being given the opportunity for "*researching the best technological solutions for training"'* but one sensed that most felt it to be more of a senior technician's role. Quite a few respondents recommended early input by technicians in equipment purchases which included recognition of the educational objectives and the importance of research, trialling and "*road-testing."*

Interestingly, the subject of procurement also gave recognition to the importance of the role that technicians and technological personnel have in the design and planning of new scenarios and courses.

THEME 2 - ACTIVITY

PROGRAMME

DRAFT STANDARDS FIRST CONSULTATION

1. Simulation based educational programmes should be developed in alignment with formal curriculum mapping or learning/training needs analysis undertaken in clinical or educational practice. The patient perspective must be considered and demonstrated within educational planning.
2. A learning needs assessment of all stakeholders must be used to develop the learning objectives.
3. A faculty member with expertise in simulation based education must oversee the simulation programme design and ensures that it is regularly peer reviewed, kept up to date and relevant to the organisation goals, clinical needs and curriculum that it is mapped to.
4. Training in silos should be avoided and every effort to incorporate inter-professional education into simulation programmes should be made.
5. Regular evaluation of programmes and faculty must be undertaken to ensure that content and relevance is maintained.
6. Higher levels of Kirkpatrick's evaluation should be achieved through assessment of skills, knowledge or behaviours in the clinical setting before and after an educational intervention using validated metrics.

1. Respondents felt that the incorporation of the human factors approach in SBE programmes needed more deliberation. A proportion suggested that it would be useful to see “programme “defined.

There was general agreement that SBE programmes should be developed to align with curriculum and/or training needs. However, it was also specified that *“simulation practice and training resulting from Serious Incident Reporting Systems/DATEX”* and those reflecting national and international events, such as Ebola and more local issues, should also be addressed in SBE programmes. There was agreement that the development of *“generic and standard scenarios would assist on a national level”* and examples provided were SBE programmes for Core Medical Training (CMT), medical and nursing undergraduates, Acute Care Common Stem (ACCS) and Foundation Programmes, Entrustable Professional Activities (EPAs) for Anaesthesia and the General Internal Medicine (GIM) Registrar Ready Course.

The majority agreed that the patient perspective was sometimes **“***hard to capture”* and perhaps guidance, if not as a Standard, could be made available on *“the minimum requirements and how these can be met/sustained”* within educational programme planning.

2. Many agreed that a learning needs assessment of all stakeholders to develop learning objectives was important, but some felt that it was far too specific and did *"not exactly match reality of programme review”* and could even prevent engagement with simulation.

It was felt that stakeholders in this context needed defining to avoid duplication with earlier standards, especially if the definition included professional bodies, learners and patients.

3. There was consensus that training in silos was to be avoided and that inter-professional SBE was considered best practice. However, despite good intent, most respondents felt that in reality this was not always appropriate

or achievable and that in some instances "*there will always be profession specific education that must be taught in specific professional grouping.*"

6. Repeated concern was expressed regarding the achievement of the higher levels of Kirkpatrick's evaluation through SBE. The consensus was that it is difficult to evidence and particularly labour intensive to collect data post-course/programme.

'It can be difficult to close the loop in any audit system or attribute simulation as the only contributing factor'

PROCEDURAL SKILLS

DRAFT STANDARDS FIRST CONSULTATION

1. The fidelity of the simulator in procedures must be dictated by the objectives of the session taught.
2. The equipment used to perform the procedure should be identical (or as close as possible) to the equipment used in real clinical practice.
3. Equipment must be able to produce reproducible experiences- providing the same experience to multiple learners within predefined limits of variance.
4. Variations of the simulator experience from clinical practice must be explained to the candidates in the pre-brief period.
5. Testing of all simulators and equipment should be undertaken prior to every course to ensure that they are in good working order.
6. Dedicated personnel should be responsible for the maintenance and record of equipment.
7. Clear and specific objectives for a procedural skills course or activity should be set prior to delivery.
8. A formal evaluation by the candidates at the end of each session should be undertaken and fed back to improve the activity.
9. Standards for achieving mastery learning should be pre-agreed prior to the course delivery if appropriate.
10. Validated tools must be used to demonstrate achievement of mastery learning if required.
11. Higher levels of Kirkpatrick evaluation should be undertaken to demonstrate transfer to clinical environment and impact on patient safety.
12. The facilitators of procedural simulation courses should be experts in the procedure taught and have specific simulation training by a simulation mentor prior to their independent ability to facilitate a course in procedural simulation.

1. There was considerable dispute over the use of the word "fidelity" in this section and some disagreed with this terminology altogether, "*it is the fidelity of the **simulation**, not the simulator*", "*technical complexity may*

vary, fidelity should not" were some of the comments. A comment was made regarding the relevance of fidelity to the level of the learner and the skills they need to acquire, suggesting that "*at the basic level of psychomotor skill learning, fidelity and anatomy are often a distraction to basic skill acquisition."*

2. The conflicting views continued with references to the equipment needing to be "identical" to that used in clinical practice, as it was felt that this was costly and unachievable especially for external, regional and national courses. It was suggested that using the word *"similar"* would be preferable. Clarification was sought as to whether "equipment" includes the simulator, the clinical equipment and the consumables.

3. The phrase "predefined limits of variance" was viewed as being confusing and too complex by the majority, with concerns over its measurement and compliance. The most important aspects of reproducing or replicating experiences through appropriate equipment provision were "*availability", "equity of access* "and "*reliability."*

4. Using the pre-brief period to inform learners of "variations from clinical practice*"* was felt to be the norm by most and it was suggested that this could be included within an "*orientation vide"* and/or an *"introductory talk."* There was mention of a "*Simulation Fiction Contract"* being used and that this could be signposted.

5./6. These were felt relevant to procedural skills provision, but it was felt they would be better placed in the Technical personnel section. However, it was noted that the responsibility for equipment in some facilities is a dual or split role and performed by other members of faculty or administration. Therefore, it was suggested that *"*dedicated personnel" could be replaced with "*an individual should be appointed to"* and in these instances, the *"use of checklists"*, having a "*dry-run"* and having "*backup plans and systems"* in place were recommended in facilities where there were no dedicated technicians.

7./8. Most respondents agreed in principle with the need for clear and specific objective**s** and evaluation**,** however consistency of language continued to be an issue in the feedback with objectives/outcomes and candidates/attendees/learners.

Some respondents provided examples of their methods of evaluation e.g. *"online completion, evaluation forms, simple SWOT discussion."* However, the ideal was suggested as "*a universal feedback template available deanery wide or nationally to facilitate the peer review process."*

'not a rigid structure but an overall outline to improve data collection/analysis deanery

9./10. The terms *"*mastery learning" and "validated tools" gave rise to considerable discussion. Questions were raised for which learners and when mastery learning is relevant. Some felt it was not applicable in undergraduate education whilst others viewed it as appropriate to ***any*** learner. It was suggested that the learner may "*achieve mastery within SBE"* as an agreed standard. Others felt that "*learning or performance outcomes"* should be agreed prior to course delivery. It was also noted that there was no standard or guidance related to *"self-directed learning and cooperative learning."* Numerous examples and recommendations of "*validated tools* and *metrics"* were provided.

11. Adherence to the higher levels of Kirkpatrick evaluation was considered too specific for a standards framework. It was suggested that using "*strong evidence of transfer to practice"* as an alternative would be more acceptable and achievable. Some respondents gave excellent examples including "*demonstrating a direct improvement by using Trust level audit data and management and patient outcomes"* for acute kidney injury (AKI) sepsis and pneumonia.

'to ensure learning and safety and clinical accuracy and relevance'

12. The use of the term "expert" here was contentious. The majority felt that credibility and experience were more important and appropriate for procedural skills training where faculty members were working together.

ASSESSMENT

DRAFT STANDARDS FIRST CONSULTATION

1. The assessment must be based on the intended learning outcomes of the exercise, with clarity regarding the knowledge, skills and attitudes and appropriately tailored to professional curricula to be evaluated.
2. The assessment activities must be targeted at the level of experience and ability of the learner.
3. Facilitation of effective performance assessment within simulation must rely on robust, realistic, and specific learning objectives.
4. Psychological safety of the participant must be taken into account and must be appropriately supported.

Not all pilot sites use simulation in assessment and therefore there were fewer comments for these sections than for other sections. However, respondents were in general agreement with the assessment standards and there was acknowledgement that formative assessment can be highly effective in simulation.

1. Respondents highlighted that, throughout the feedback process, the learners' understanding of the exercise was considered crucial. Comments emphasised the need for the learning outcomes of the assessment to be aligned with curricula and that the choice of skills to be assessed should be guided by curricula information, competency guidelines and the limitations of the chosen simulation methods.

"It provides ongoing feedback for learners as they progress toward the development of knowledge and skills."

2. There was general agreement that the assessment activities must be targeted at the level of experience of the learner but that "expected" could be added to level of experience and the intended level of competence/proficiency. Curriculum mapping was thought to help this, as well as simple information gathering prior to the activity, via a questionnaire, for example. However, a point was made to be mindful that there may be a number of people with a variety of different knowledge and skills.

3. This was felt to be too verbose and other terms such as "*smart*"' could be used to describe what good learning objectives entail. Concerns were expressed too about the lack of definition of "effective performance assessment" in this standard.

4. There was universal and strongly worded agreement with the need for learners to feel safe, both psychologically and physically, during assessment in a simulation environment. Comments were made about a good introduction and debrief with learners being essential and for faculty to be trained specifically on how to be supportive. The importance of setting expectations at the outset was emphasised and a point made about care being needed around data management and storage of data and videos.

ADDITIONAL STANDARDS (TO THOSE ABOVE) FOR SUMMATIVE ASSESSMENT

DRAFT STANDARDS FIRST CONSULTATION

1. Participants must have prior experience and familiarity with simulation prior to summative evaluation.
2. Summative minimum expected performance standards should be agreed and explicitly shared between participants and trainers, taking into consideration relevant curricula and regulatory body standards.
3. Summative assessment should be based on evaluation tools previously tested with similar populations for validity and reliability.
4. Assessors must be appropriately trained in rating to ensure that there is good inter-rater reliability and accuracy of scoring.
5. Under-performance should be identified as early as possible to facilitate appropriate investigation and intervention to ensure that underperformers are managed effectively and successfully.
6. Educators have a responsibility of patient safety and must raise concerns regarding participant performance within educational settings, including SBE interventions.

1. The majority of respondents agreed that it is good practice to ensure learners have prior experience of simulation but that it is difficult to standardise '*prior experience*'. There was some discussion about how this is currently done, from a pre-course questionnaire through to routinely preceding all summative assessments with formative assessments using the same simulation tools, the use of e-learning and videos to orientate learners.

"Formative session must precede summative assessment in order to prepare the student adequately, de-sensitise and reduce emotional stress associated with the assessment"

2. Not everyone uses simulation for summative assessments, but where it is used there was full agreement with the need for the expected performance standards to be shared between learners and trainers. The point was made that not only the minimum requirement but the full assessment criteria should be explicit to learners.

3. There was general agreement that the evaluation tools used in summative assessment should be tested and validated. However, there was recognition for a lack of evidence to support the use of such simulation tools. It was suggested that the collation of data across many organisations would be useful in providing adequate numbers for guidance on which tools would be considered suitable, particularly for measuring certain aspects of human factors.

It was also highlighted that assessment tools are harder to employ for cognitive skills and invariably the assessment relates to accurate diagnosis rather than the process that led to this point.

4. It was pointed out that "appropriately trained" assessors is not defined. There was general agreement that summative assessors should be trained to ensure minimal inter-assessor variability. However, given the high-stakes nature of this type of assessment, the question was asked as to whether these assessors should have specific experience/training in SBE or whether it was acceptable for an assessor to drop into a simulation assessment that has been designed by those with experience in SBE.

"…. need to assess under-performance across a range of teaching modalities to reflect the individual learning style; they may not shine' in simulation."

Most respondents commented on the evidence they would provide to demonstrate assessor training with variability noted between HEIs and Trusts.

5. The draft standard around under performance provoked responses mentioning that it was not clear whether this referred to the assessors or the learners. Several responses made the point that the identification and management of underperformers applies more to formative than summative assessment. It was also felt that this standard came across as very negative and highlighted the importance of contextualising simulation as being one of several tools used to assess learning.

"If this is a summative assessment, the learner should be allowed to complete the assessment without intervention…"

6. There was full agreement amongst respondents that concerns about learner performance must be raised, but more than one respondent remarked that the standard in question does not specify to whom the concern should be raised. The responses show a wide variation in the degrees to which this is recognised within the different pilot site organisations and the availability of policies detailing procedure. In addition, there were many comments on ensuring the learner is fully briefed as to how any concerns will be dealt with and supported in advance of the simulation activity.

IN-SITU SIMULATION (ISS)

DRAFT STANDARDS FIRST CONSULTATION

Additional standards for the use of in-situ simulation:

1. A formal educational needs analysis should be conducted to identify the needs of the learners, the team, other stakeholders and the organisation within which the in-situ exercise will be held.
2. Every ISS exercise must have clearly defined learning objectives that achieve individual, team, unit level and/or organisational competencies.
3. Local processes and procedures should be carefully reviewed in order to deliver ISS activity authentically.
4. Close collaboration should be established between the ISS training team and the parent unit where the ISS activity is to take place to ensure maximum gain from the activity with minimal disruption to the day to day clinical work of the parent unit.
5. Faculty delivering the ISS activity must be proficient in SBE and have the required expertise on a given topic (Refer to standards on faculty development above).
6. Adequate time must be factored in to the planning for the session to allow setup and disbanding of equipment and personnel.
7. A multidisciplinary approach to evaluating team interactions must be undertaken with a focus on human factors approach to evaluate impact of latent errors and to identify remedial steps to overcome such errors.
8. Latent errors identified during ISS must be discussed in the debriefing after the session to capture learning and identify preventative strategies.
9. Latent errors should be graded using appropriate systems such as the NPSA risk matrix to quantify the threat to patient safety. The risks must be notified to the organisation and recommendations should be drawn to avert these errors in the future.
10. Educators must evaluate ISS activity by using appropriate measurement tools, which demonstrate not only improvement of knowledge but also transfer of learning to clinical environment.
11. Constant re-evaluation of the ISS services should be employed in order to ensure smooth delivery.

ISS is not carried out in all organisations (or at all in most HEIs) so feedback was limited to around 50% of the pilot sites. As for other sections, comments were received highlighting the inconsistent terminology used such as “ISS faculty/training team", the "ISS participants/attendees/learners", the ISS course/event/exercise /services/activity. In addition, some duplication between standards was noted.

1. There was general agreement for a formal educational needs analysis for all stakeholders relating to the ISS exercise but some reservations were expressed about achievability; specifically, regarding faculty support and supportive framework. It was also thought that this applied to all courses not just ISS.

2./3. Having clearly defined learning objectives was considered essential but there was a question as to the exact meaning of “organisational competencies” as well as there being a lack of specificity when referring to ‘local processes’.

There was agreement that ISS should be delivered "authentically" but several comments highlighted the importance of safety of all within the vicinity as well; it was pointed out that the clinical needs always took priority over the ISS activity and highlighting that for *"re-clarification of 'go ahead' should be sought from ISS lead."*

4. Respondents reported that, due to the nature of ISS, faculty from the parent unit often conduct ISS when quiet and least disruptive. This can lead to difficulties in monitoring ISS activity when the in-situ activity is led by the "parent unit" not the simulation centre.

5. General agreement was expressed in relation to the faculty delivering the ISS activity being proficient in SBE as well as having subject expertise. It was suggested that the involvement of a local specialist and ward area specialists would enable in-depth knowledge of local processes and procedures to be considered as well as specialist knowledge. Ensuring that all staff involved in the in-situ simulation are clearly identifiable was also thought to be a good idea.

6. There was complete agreement on the need for adequate time to be factored into planning ISS activities, with comments emphasising that this should involve risk assessments being conducted prior to the activity, including infection control and ensuring all simulation equipment is removed at the end of the session. There were many good examples of current practice, such as a checklist being used to record all simulation equipment (clinical and non-clinical) taken into clinical areas, and its removal at the end of the session, and avoiding the sharing of essential clinical equipment. The need to include contingency planning was pointed out, should scenarios overrun or be delayed.

7. A point was raised about how the multi-disciplinary team (MDT) approach to human factors is not directly related to impact of latent errors and subsequent actions, so that terminology needs to be reviewed. Team interactions and latent errors were not deemed to be HF terms.

8. There was strong agreement that latent errors identified during ISS should be discussed in the debriefing, graded and acted upon. However, the issue of responsibility was raised and should lie with the simulation centre and what lies with the parent unit/local department governance structure. In the feedback, it was strongly felt that the role of simulation centre is to report findings, the area should then grade this risk and decide an approach best for that area with the onus of responsibility for resulting actions being on the local team.

9. Suggestions were made that notifying the organisation of risks associated with latent errors should be done using local processes or reporting systems.

10. The aim of all simulation activities is for the learning to impact patient safety but several comments made the point that, whilst desirable, it is VERY difficult to show translation of learning to clinical environment. The question as to which appropriate measurement tools could be used to evaluate ISS activity was also asked.

11. There was agreement with the need for constant re-evaluation of ISS services, although concerns were raised about its achievability and comments made that it would be helpful to quantify "constant". That said, feedback implied that in trying to define 'constant', a balance needs to be struck between clearly guiding and being too prescriptive. However, it was suggested a recommendation might be helpful such as once a year or twice a year.

THEME 3: RESOURCES

SIMULATION FACILITIES AND TECHNOLOGY

DRAFT STANDARDS FIRST CONSULTATION

1. An appropriate variety and level of simulation modalities e.g. simulated patients, part task trainers, virtual reality simulation equipment and high fidelity mannequins should be incorporated into simulation programmes to achieve appropriate realism of the learning environment.

There was a majority agreement with appropriate variety and level of simulation modalities. However, some felt the examples given were too high fidelity and did not take into account other methods e.g. hybrid simulation, using props, etc. Some challenged the appropriate realism of the learning environment.

It was suggested that this Standard was more relevant as guidance, thus allowing a more flexible approach to delivery of simulation, especially with such huge variation in the simulation technology and facilities available.

"this is not about realism but making sure that it is appropriate for the learning outcomes. Achieving realism is the overall aim of simulation"

Whereas the majority agreed that educators and trainers should receive training on the simulation equipment, some disagreed with using the term **"**competent*",* as it is open to interpretation. A further question was raised about and how it would be measured asking the question whether this should be "*by the manufacturer or an assessor?"* There were concerns that if not assessed or recorded then "*how you can prevent 'incompetent' personnel using equipment'* and it was suggested that "*being proficient in the care and operation of all manikins"* was more suitable wording.

Several respondents provided evidence of formal equipment training sessions i.e. Introduction to Simulation Courses or Train the Trainer on the Technology, some already incorporating them into their faculty development days. It was suggested that this standard was more appropriate to the faculty section. If it was to be used as guidance, then responses consistently highlighted the need for specific training on equipment to be made more readily available to faculty.

DRAFT STANDARDS FIRST CONSULTATION

1. The facility must have well defined aims and objectives relevant for all healthcare groups and should be pertinent to the needs of the organisation within which the facility is situated or attached to.
2. The facility must have a clear strategic plan which addresses wider organisational and stakeholders needs. The strategy should address how simulation is supported across the organisation and identify standards for faculty development, programme creation and regular review of courses and programmes.
3. A designated individual must oversee the strategic delivery of SBE programmes and ensure that appropriate maintenance of simulation equipment is undertaken.
4. A designated individual must ensure that ongoing simulation technology procurement continues to be appropriate to learning needs.
5. Key stakeholders must be involved in centre management and governance.
6. In-situ simulations should complement simulation centre based SBE programmes, where possible.

ADDITIONAL STANDARDS WHERE A SIMULATION CENTRE EXISTS AT AN INSTITUTE

Some of the respondents to the online survey felt that this section needed more content and "*further technological input in terms of established and emerging technologies.*" However, more importantly, this section had prompted thoughts of "*making more efficient use of resources across sim providers.*"

1./2. The simulation facility's aims and objectives, whether in the form of a mission statement or strategic plan, were felt to be key to supporting and delivering the needs of an organisation, including the importance of providing an annual report to the Trust board/Dean of Faculty on footfall, numbers trained, etc. Some felt the differences between HEIs and Trust facilities needed to be better understood and clarification. This also applied to the wider stakeholders/organisations would be and how much involvement was required. "C*entre management*" was not deemed a requirement but better communication and engagement could be encouraged.

3. Many respondents disputed that a designated individual would oversee the strategic delivery of SBE programmes and ensure maintenance of simulation equipment, it was felt that this was two roles - Strategic and Operational and the standard either needed to be separated or amalgamated with another theme or standard. It was suggested that these roles could be more of a team approach, even decided "*on a day to day basis.*"

4. Similar thoughts were expressed regarding who the designated individual would be to ensure ongoing simulation technology procurement was appropriate to learning needs, as this was more than one person's responsibility, suggestions included a "*technician, facilitator, budget holder or finance person with academic involvement.*"

Most viewed this section as overlapping and/or duplicated in either the Management, leadership and development, the Technical Personnel or in-situ sections of the standards.

ADDITIONAL STANDARDS WHERE A SIMULATED PATIENT PROGRAMME EXISTS

DRAFT STANDARDS FIRST CONSULTATION

1. A simulated patient programme, with robust infrastructure should be accessible, with SPs engaging with learners and users.
2. A designated individual must ensure that appropriate and ongoing training and review of SPs occurs.
3. An individual with technological expertise must provide guidance and instructional support for the simulation programme.
4. A regular review of all SBE programmes should be undertaken to ensure that ongoing SP recruitment continues to be appropriate to learning and clinical need.
5. Training must be provided to educators and trainers to engage with simulated patients.

A general lack of responses to this section could suggest that the inclusion and governance of SPs in simulation-based education does not require a standalone standards section, especially if the whole of the standards framework document is interpreted as applicable to SPs. General comments included:

This section needs further input from the experts on using Simulated Patients (SPs). Despite the recognition of the value of using SPs with relevant and appropriate training, there was also mentioned, on several occasions, the financial limitations that faced most organisations.

A proportion of online respondents were undecided as to the need for additional standards where a SP programme exists. One expressed concern regarding the impact that simulated patients can have on learners.

"too much of a distraction to candidates and it has blocked the learning objectives set for the candidate"

There was evidence in the feedback that not only is there a need for clarity around the use of SPs but there is also a suggestion of an imbalance of SP provision countrywide. While there were excellent examples of regional best practice and resources and mention of an SP Common Framework there was heavy reliance on medical schools for the provision of SPs and a general concern over accessible, quality training for SPs. Again, concern was expressed not only about the financial implications but that additional support structures should be in place for the SPs.

Some thoughts were around what we mean by "simulated patient programme" and it was suggested that this should be changed to "*short course/unit/module."* There seems to be an assumption from respondents that faculty know how to engage with SPs, whereas evidence shows that faculty should be taught how to engage with SPs through relevant training.

MANAGEMENT, LEADERSHIP AND DEVELOPMENT

DRAFT STANDARDS FIRST CONSULTATION

1. A designated lead with organisational influence and accountability must manage the simulation activity.
2. There must be a clear vision and mission statement to demonstrate aims and objectives of the facility.
3. There must be a clear alignment to the wider organisational and stakeholders' needs, acting as a quality and risk management resource for organisations to help achieve the goals of improved patient safety and care quality.
4. The simulation lead must ensure a supportive environment for the delivery of multi-professional SBE programmes, oversee appropriate and responsive programme design, develop and retain faculty and sustain SBE programmes.
5. There should be a clear strategy which identifies standards for faculty development, programme creation and regular review of courses and programmes.
6. Appropriate management and administrative staff should be available and trained to support the delivery of simulation activities.

1. There was agreement with the first standard in this section that there should be a designated lead managing the simulation activity. However, the consensus opinion was to recognise that this is not always one person and there is a need to separate organisational lead, faculty and operations roles and make them more explicit. The word "influence" was considered weak regarding this lead having "organisational influence".

2. A clear vision and mission statement for a simulation facility was considered essential by respondents. There were suggestions to change the wording from "facility" to "s*ervice"* or at least that "facility" needed further definition.

3. Most respondents agreed with aligning simulation activities with wider stakeholder needs although several comments suggested the need for definition of the wider stakeholder group and questioned whether this does or should include industry. An important point was made re explicitness and not getting lost in an organisation's educational strategy and it was suggested the wording could be more concise.

4. Feedback suggested it is too prescriptive and specific. Comments were that it should be focused on being supportive and aligned to mission and organisation objectives. It was pointed out that there is a massive undertaking within this standard and it represented more of a team effort, rather than just the simulation lead. There was a suggestion to split what was being said here between other standards.

Further feedback emphasised that in an HEI, an SBE lead will not manage SBE activities on individual health care programmes. Furthermore, programme and the unit teams are responsible for activities with the SBE lead, if indeed an HEI has one, providing advice/guidance. Resource constraints mean that individual professional programmes cannot always provide MDT simulation activities beyond computer simulation, roleplays or paper/video vignettes.

5. Respondents agreed on the need for a strategy document to be written and, where already written, for it to be formally recognised. However, there were concerns over the practical application of this document and some things were identified as missing in the draft standard, such as research. In particular, such a document needs

to be *"achievable for groups at different developmental stages"* and respondents suggested that "*guidance would be really helpful for groups starting out without feeling overwhelmed by expectations."*

Whilst there is a need to include a faculty development plan in such a strategy document it was felt it needs to be more general than the wording implied. Other respondents noted that the standard re strategy is duplicated elsewhere in the document. The recurrent theme of clarification of terms was raised once more in this section, particularly regarding the same term meaning different things to simulation centres than it does to HEIs.

6. The suggestion in the standards that appropriate management and administrative staff should be available and trained to support the delivery of simulation activities was considered by respondents as fine 'in an ideal world', but funding difficulties and varied job roles mean these are the responsibilities of a team. General opinion is summed up as it being *"Hard to achieve in the current economic climate"* with the suggestion to *"Possibly merge with one of the other standards around training and staff development."*

CONCLUSIONS AND DISCUSSION

CONSOLIDATION

A key outcome of the feedback during the consultation process was to drive a streamlining of the standards document and produce a version that was easier to read, less repetitive and more inclusive of the wider simulation community. Accordingly, a decision was made to reduce the number of standards using the feedback received from the survey and pilot sites as a guide.

It was important to use a transparent and consistent method to evaluate the standards as they stood and consider which of them should remain in the final document. Rather than choose arbitrarily which standards should be removed or amalgamated, a weighting system was used where each standard statement was given a value on a three-point scale for evidence and for importance. *Evidence* was the extent to which the statement was supported by published evidence. *Importance* reflected the extent to which respondents had been positive in their comments.

Where there was good evidence and at least medium importance (*Appendix 8*), the standard was retained for the final version. Likewise, where there was medium evidence but high importance, a standard was retained. For those standards where there was less robust evidence, but the respondents had indicated high importance, decisions on how to develop the document were made by the project team. These decisions considered specific comments made by respondents, input from ASPiH executive committee members and the considerable experience of the project team.

The number of standards was reduced from the original 77 to 21 and these now appear in the final version of the standards document. In addition to the reduction of the number of standards between the draft 2015 document and the 2016 Standards Framework document, there were additional changes made based on the feedback received.

Rather than detail every single response, the narrative provides key trends and common themes. Where a single comment or suggestion was seen, the project team made a decision to either ignore due to it being incongruous with all other comments or, if it was regarded as a potentially significant insight, to capture and include it in further discussions on how the framework might develop in the future.

Some respondents provided feedback in a different context to what was expected, for example, how they would achieve the standards, strategies and procedures already in place that demonstrated attainment. Such responses were not discounted but used to add to the body of evidence that most of the standards would be achievable. Respondents provided numerous examples of how their current practice was already aligned to the standards, suggesting that the Framework was already an applicable tool for the simulation community.

The key changes made will be discussed under the three headings of faculty development, activity and resources.

FACULTY DEVELOPMENT

The differing interpretation of "best practice standards in education "generated a variety of responses. Most agreed with the principle, but it was clear from the feedback received that it was not specific enough to be achievable. This mixed feedback affected its *Importance* rating and thus it was not retained as a standard. The relevant section in the guidance was appropriately cross referenced to the quality assurance and standards frameworks published by the GMC, NMC, HCPC, AoME and HEA.

The statement "pertinent elements of the simulation must be discussed" attracted several interesting responses. Some highlighted the recurrent use of the word "must" in the draft document and its appropriateness. This was considered by the project team and felt to be a valid point. As a result, all the standards in the 2016 document were changed to statements that describe what an educator or institution meeting the standards *would* do, rather than dictating what they *must* do.

The other interesting feedback to the previous statement focused on whether it was essential that educators link pertinent elements of the simulation to the learning objectives at all. After much discussion, we felt that this did not exclude the possibility of focusing on points raised by participants, but that it was indeed important to make sure that predefined learning objectives were met and hence this remains in our final standard on this topic.

The points made regarding the SP standard in the faculty section were addressed by removing this duplication and stating in the guidance that "Simulated patient involvement… should be supported with the same considerations as other faculty."

The consensus around evaluation and continuing professional development of faculty was reflected by these statements being retained as standards for the final document.

Feedback questioning whether it was necessary to have "additional standards" relevant to debriefing was considered valid and so the debriefing standard was merged into the wider faculty section.

Although there was evidence of an accepted norm in debriefing to aim for duration of 2:1 with the simulation, respondents rightly pointed out that this was inflexible and too difficult to evidence to be a standard. Accordingly, it was retained only in the guidance section.

The need to provide immediate post-course debriefing for faculty was considered important by our respondents, but other comments pointed out its inflexibility and potential inappropriateness as a standard. As such, it was retained solely as guidance.

In response to comments about lack of consistency of terminology, the team addressed the problem by revising the terminology used throughout the standards and guidance and greatly expanding the glossary section.

The role of Technological Support Personnel has evolved and through the feedback process there was recognition for the need to consider specific standards relating to this group. Alongside the consultation process, there arose a new development and opportunity for professional registration for simulation technicians and technologists with the Science Council. All of this contributed to the decision to separate the Technological Support Personnel section from Faculty and create a new Theme 2 -Technical Personnel. It is hoped that the future professional body and member organisation status for ASPiH with the Science Council will be instrumental in the training, recognition, registration and continual professional development provision for simulation technicians and technologists. This important milestone and its implications required incorporation into the standards.

ACTIVITY

In the activity section, respondents suggested rewording negative standards and guidance statements to positive ones. We felt this to be a very good suggestion and applied it throughout the document. For example, "training in silos should be avoided" was reworded to "inter-professional training should be encouraged." By changing the wording in this way, we also considered feedback that had pointed out that there will "*always be cases of professional-specific education that must be taught in specific professional groupings*."

Throughout the activity section, respondents from pilot sites provided evidence of how they were achieving the standards already. This demonstrated that many of the standards were feasible and could be evidenced. This is reflected in the number of these standards that were rated as high importance, and the proportion of the activity standards that were retained.

Feedback regarding "a learning needs assessment of all stakeholders" was that it was too specific. This was reflected in its importance rating and thus it was discarded as a standard but kept as guidance.

Multiple respondents expressed concern at the idea of needing to aim for higher levels of Kirkpatrick's evaluation in SBE as a standard. While we believe that it is important that SBE should seek to design research to look for patient-oriented outcomes, we acknowledge that this is aspirational at present.

Comments relating to the procedural skills standards made the point that some were too specific to be standards and that others were equally applicable to other sections. Accordingly, none of the procedural standards achieved high enough importance to be retained as standards. However, the standards statements were incorporated into the guidance sections.

We received conflicting feedback about the need for the equipment used in simulation to be identical to that used in clinical practice. Disagreement resulted in a lower importance level and this statement being incorporated into guidance only, along with the qualifier "where possible."

The phrase "predefined limits of variance" caused confusion among respondents and as a result received a lower level of importance as a statement.

Although there was agreement with the idea that "variations from clinical practice" should be explained to the learners, it was felt by some to be too obvious to be a standard. Concern was also raised over how it would be evidenced.

The standards relating to testing and maintenance were moved to the Technical Personnel section but were kept as guidance only as several respondents pointed out the presence of dual roles in some centres.

The disagreement relating to the appropriateness of mastery learning to all participants was reflected in its lower importance rating and subsequent incorporation into guidance.

The importance of psychological safety for learners during assessment had universal agreement from respondents, rating the standard as having high importance and resulting in its inclusion as a standard.

Disagreement over what makes assessment faculty "appropriately trained" resulted in the standard that mentioned it being rated with low importance and therefore not being included in the final standards.

The statement about faculty having "a responsibility of patient safety and must raise concerns regarding participant performance…" was met with general agreement but certain respondents asked to whom these concerns should be raised. It was pointed out that this depended on the professional background of those involved and was covered by existing professional regulators' guidance.

RESOURCES

We removed two standards from the 2015 version, one relating to the variety of simulation modalities that can be used to deliver simulation, acknowledging that to be inclusive it was important to not produce a standard that would limit modalities. The other related to issue of competence of faculty in the use of the equipment. Competence of faculty is a contentious topic and, while it needs to be addressed, this may be an important issue to be explored by future bodies of accreditation, should faculty choose to apply for accreditation.

Some responses to the statement relating to an individual overseeing "strategic delivery of SBE and ensure maintenance of simulation equipment…" highlighted that this was usually two roles, not one. Further feedback suggested that elements of this standard were replicated in other themes and duplicated standards should be removed.

The statements relating to SP programmes generated mixed feedback, resulting in most of them not being allocated high importance. This showed a wide variation in practice across the country and only one of these statements was retained as a standard.

NEXT STEPS

2017 PLANS

The Standards Framework developed from this consultation process was launched at the ASPiH Annual Conference in November 2016. Feedback on the final document produced from this process has been mostly positive.

A key benefit of investing in a project team that could drive the consultation process was to ensure the widest possible feedback was obtained and thus ensure that the framework was generic and potentially applicable to ALL areas where SBE is delivered. As the use of SBE is increasing across new areas such as social care and mental health, the Framework will need further development and it is anticipated that modification and additions will be required in the future. ASPiH will continue to co-ordinate these developments and other plans include:

- The project team, in partnership with HEE, will continue to make the healthcare community aware of these standards via a co-ordinated communication strategy. This will include informing key organisations such as regulators, commissioners and patient groups of how the implementation of the framework is driving better use of simulation resources and improved patient outcomes.

- ASPiH will pilot a self-accreditation process in 2017, aimed at gathering information about the utility and compliance with the standards. This process should not only highlight new practices, technologies or applications of SBE not covered in the current document but also ensure it strikes the right balance between being generic and broadly applicable and being strong enough to drive better practice.
- Gathering information and further feedback, especially about how this National Framework links to and compliments local standards where they already exist.

UNANSWERED QUESTIONS

The consultation process identified several key questions that needed answering for the simulation community. These ranged from the attributes of a good train the trainer programme for simulation educators or those teaching human factors through how would one create validated assessment tools to what a good simulated patient programme would look like.

Furthermore, there were calls to define an “expert” and “competence” with relevance to the various facets of SBE. While the standards extol the importance of avoiding training in silos and encouraging team-based training, there is no published guidance on how to achieve this. Similarly, there is a paucity of research on the effectiveness of SBE in improving patient outcomes and hence the standards recommend aiming for higher levels of evaluation in training, but there is insufficient guidance on how to do so. There is potential for a series of projects that could be launched under the auspices of a national body such as ASPiH to draw together experts to address such unanswered questions.

The standards project has been successful in combining best practice, published evidence and feedback from the simulation community to create a framework of standards to improve the quality of SBE provided to our learners. We hope these standards will become an aspirational tool to further enhance the work of simulation educators the world over to improve the knowledge of healthcare providers and improve the care we provide for patients.

CONSULTATION REPORT AUTHORS:

Dr Makani Purva — *Hull Institute of Learning and Simulation Hull Royal Infirmary. ASPiH President*

Jane Nicklin — *Standards Project Manager, North. ASPiH Executive Member*

Susie Howes — *Standards Project Manager, South. ASPiH Executive Member*

Andy Anderson — *ASPiH Chief Executive Officer. ASPiH Executive Member*

Andrew Blackmore — *Hull Institute of Learning and Simulation, Hull Royal Infirmary. Clinical Advisor*

APPENDICES

APPENDIX 1 – STANDARDS PROJECT MANAGEMENT TEAM

Chair	Dr Makani Purva, Hull Institute of Learning and Simulation, Hull Royal Infirmary
Advisors	Professor Bryn Baxendale, Trent Simulation Centre, Queens Medical Centre Nottingham
Team Leader	Andy Anderson, Chief Executive Officer ASPiH
Project Manager, Northern Region East Midlands, North East, North West, West Midlands, Yorkshire and the Humber, Scotland and Ireland	Jane Nicklin, ASPiH Executive member
Project Manager, Southern Region East of England, Kent, Surrey and Sussex, Wessex, Thames Valley, South West, Wales, London West, South, North, East and Central	Susie Howes, ASPiH Executive member
Clinical Advisor	Andrew Blackmore, Hull Institute of Learning and Simulation, Hull Royal Infirmary

APPENDIX 2 – CONSULTATION PAMPHLET

We want your input

Ways to get involved

- PILOT SITES
- ONLINE QUESTIONNAIRE
- FORUMS AND LOCAL MEETINGS
- EMAIL US
- CALL US
- ASK US TO VISIT

Project Team

AUTHORISED REPRESENTATIVE
Andy Anderson
andy.anderson@aspih.org.uk

CONSULTANT PROJECT MANAGER - SOUTH
Susie Howes
Susie.howes@aspih.org.uk

CONSULTANT PROJECT MANAGER- NORTH
Jane Nicklin
Jane.nicklin@simsupport.me.uk

CHAIR OF STANDARDS AND QUALITY ASSURANCE COMMITTEE
Makani Purva
Makani.purva@hey.nhs.uk

Introduction

Simulation based education (SBE) has matured into a formally recognised teaching method embedded in the majority of all healthcare training programmes. It is therefore important that standards of delivery of SBE are defined and described in a document that can be readily applied in different organisational contexts. These standards will also enable education providers and commissioners to focus on designing and delivering high quality SBE to benefit patient care in clinical practice.

The Association for Simulated Practice in Healthcare (ASPiH) has created these draft SBE standards to combine relevant best practice and published evidence in simulation based education for all healthcare professionals with consideration of a number of existing quality assurance processes currently in use across the UK and around the world.

The formation of the ASPiH SBE Standards Committee, the Standards and Quality Assurance Special Interest Group (SIG) and a *'lively'* Round Table discussion at ASPiH Brighton 2015 have already contributed to the structure and content of the draft standards.

What is the 2nd consultation about?

ASPiH has taken the lead role in drafting the national quality standards for SBE standards in Healthcare in the UK. As a result of constructive feedback from the 1st round of consultations in the latter part of 2015, Health Education England (HEE) has provided funding for a 6-month programme of work on behalf of ASPiH members and our strategic national partners in healthcare education. This is to facilitate a wider 2nd round of consultation across the 13 HEE localities and Scotland, Ireland and Wales, working towards the development of a national (UK) standards framework for SBE

National SBE Standards Project Objective

To produce Standards for SBE based upon the widest possible consultation with all stakeholders, with a launch and adoption at the ASPiH Annual Conference 2016.

THE CONSULTATION CLOSES 30TH SEPTEMBER 2016

APPENDIX 3 - PILOT SITE RESPONDENTS

EVALUATION DOCUMENTATION RESPONDERS

NORTHERN TERRITORIES PLUS SCOTLAND & IRELAND

Responsible person	Organisation	Facility/Place	Key Personnel
Dara Byrne	SIMWEST @ GUH and NUI Galway	SIMWEST @ GUH and NUI Galway	Dara Byrne Dr O Mongan, Dr S Dempsey Ms B Reid McDermott Mr D Janda
Stuart Hamilton	Royal Wolverhampton Hospitals NHS Trust	SimWard	Stuart Hamilton Dr Reg Morse
Mike Dickinson	Blackpool Teaching Hospitals NHS Foundation Trust	Simulation & Clinical Skills Unit	Mike Dickinson et al
Jerry Morse	University of Aberdeen	Clinical Skills Centre	Jerry Morse
Debbie Suggitt	Stockport NHS Foundation Trust	Medical Simulation	Dr David Baxter Debbie Suggitt Jeanette Baxter
Mike Morrow	Northern Ireland Medical and Dental Training Agency	NIMDTA	Mike Morrow Sara Lawson
Karen Reynolds	University of Birmingham	Interactive Studies Unit (ISU)	Karen Reynolds Professor John Skelton Dr Connie Wiskin
Vicky Garrod	Northampton General Hospital NHS Trust	Northampton Sim Faculty	Vicky Garrod Dr Hames Core Faculty and lead for faculty training
Natalie Dodge	Staffordshire University	Clinical skills/simulation labs	Natalie Dodge Karen Sirdefield Clare Martin-Jones Tracy Turner Stephanie Jones

Caroline Cocking	Derby Teaching Hospitals NHS Foundation Trust	Resuscitation and Clinical Skills Department	Caroline Cocking Jenny Baker Peter Cull, Emergency Department Consultant and Simulation and Human Factors Lead Stephanie Gillam, Senior Educator Resuscitation and Clinical Skills David Jones, Resuscitation and Clinical Skills Manager
Mike Smith	University Hospital of South Manchester	Simulation &Human Factors Centre	Mike Smith Simulation Manager Dr Strang Associate Dean Simulation
Rebecca Johnson	North Tees and Hartlepool NHS Foundation Trust	University Hospital of North Tees	Rebecca Johnson (Resuscitation / Simulation Officer) Neil Bayliss (Orthopaedics) Kate Williamson (EM) Dionne Richardson (Education, Learning & Development) Sophie Wilcox (Medicine) Laurence Whittaker (Geriatric Medicine) Syd Pinkney (Resuscitation Services) Keith Robinson (EM) Jonathan Ogden (EM) Sarah Hodgson (Education, Learning & Development)
Dr Marian Traynor	School of Nursing and Midwifery	Queens University Belfast	Dr Karen McCutcheon: Academic Lead for Practice Ms Billiejoan Rice: Simulation coordinator Dr Marian Traynor Director of Education
Mark Fores	Trent Simulation and Clinical Skills Centre	Nottingham University Hospitals NHS Trust	Mark Fores - Professional Practice Educator Professor Bryn Baxendale - Director Giulia Miles - Centre Manager Nick Woodier - Senior Fellow Mark Kane - Senior Technician and the TSCSC Team
Suzanne Gough	Manchester Metropolitan University	Faculty of Health, Psychology and Social Care (HPSC)	Mrs Suzanne Gough Mrs Leah Greene Mr Phillip Chandler
Dr. Crina Burlacu	College of Anaesthetists in Ireland	College of Anaesthetists Simulation Training Centre	Ms. Louise Kelly – CAST Centre Manager Dr Josephine Boland – CAI Director of Medical Education Dr Catherine Armstrong - CAI Director of Training Dr Eilis Condon – CAI Deputy Director of Training

Michael Moneypenny	NHS Forth Valley	Scottish Centre for Simulation & Clinical Human Factors	Michael Moneypenny - Centre Director Scott Rudnicki-Bayne - Simulation Technician David Williams - Simulation Technician
Claire Calladine	Gateshead NHS Foundation Trust (QE Gateshead)	Clinical Skills Centre, Queen Elizabeth Hospital	Claire Calladine – Faculty/technical David Walker – Technical/administrative Peter Christie – Faculty Ami Jackson – Faculty Pauline Simpson – Faculty Yvonne Tamburro – Faculty Jason Crawford – Faculty/ tech Andrew King – Faculty Heidi Stelling - Faculty Fraser Brown - Faculty Keelan McLaughin - Faculty Kate Howgego - Faculty Jonny Hacky - Faculty Eric Spink - Faculty
Donna Major	Hull and East Yorkshire Hospitals NHS Trust	Hull Institute of Learning and Simulation	Donna Major – Clinical Skills Manager Charlotte Precious – Medical Education Manager Dr Dave Wright – Deputy Director of Simulation Chris Gay - Senior Technician

EVALUATION DOCUMENTATION RESPONDENTS:

SOUTHERN TERRITORIES, INCLUDING WALES

Responsible person	Organisation	Facility/Place	Key Personnel
Mick Harper	University of Portsmouth, The School of Health Sciences and Social Work	The Centre for Simulation in Health and Care (CSH&C)	Dr Mick Harper (Lead for Technology-enhanced Learning) Miss Lucy Bailey (Technical Manager), Mr Jack Roster (Technical Manager), Mr Sam Tarrant (Technician), Dr Chris Markham (Head of School), Dr Penny Joyce (Associate Head Education), Mrs Kirsten Farrell-Savage (External Promotion and Liaison Lead)
Nick Gosling	St George's University NHS Foundation Trust	Simulation Unit, Education and Development Dept.	Mr Nick Gosling, Huon Snelgrove, Greg McAnulty, Chris Broom, Andrew Sykes
Gary Francis	London South Bank University	School of Health and Social Care	Gary Francis, School Lead for Practice Skills Learning & Simulation
Kate O'Loughlin	UCL Partners, Royal Free Hospital	Paediatric Department	Kate O'Loughlin, Paediatric Simulation Fellow
Uzma Faruqi	East Surrey Hospital	Simulation Suite	Uzma Faruqi, Dr Michael Wilde
Rosie Warren	University of Oxford	OxSTaR	Rosie Warren, Centre Manager, Dr Helen Higham, Dr Paul Greig, Alan Inglis, Wendy Washbourn
Clare Cann	Centre for Medical Education, Cardiff University	Simulation Centre, Cochrane Building	Clare Cann, Lecturer in Medical Education / Simulation Skills Lead
Wesley Scott-Smith	Brighton & Sussex Medical School	Sussex Simulation Hub (Falmer Campus)	Dr W Scott-Smith, Course Lead
Darren Best	South Central Ambulance Service NHS Trust	Simbulance	Darren Best, Education Manager (Simulation & Human Factors)

Alex Saunders	Frimley Health NHS Foundation Trust	QuEST Simulation Service	Alex Saunders - Lead Simulation Practitioner Sarah Kwok, Lead Simulation Consultant (Wexham Park), Udesh Naidoo, Lead Simulation Consultant (Frimley Park), Paul Wilder, Simulation Technologist (Frimley Park), Rob Cheeseman, Simulation Practitioner (Cross Site)
Sarah Wilding	University Hospital Southampton	Skills for Practice	Sarah Wilding, Liz Shewry, Simon Holliday, John Vear
Clare Hawker	Cardiff University	School of Healthcare Sciences, College of Biomedical and Life Sciences	Clare Hawker, Lecturer in Adult Nursing & Academic Lead for Simulation in consultation with School of Healthcare Sciences Developing Innovation and Simulation in Teaching (DIST) group with representation from each field of Nursing, Physiotherapy, Occupational therapy, Radiotherapy, Operating Department and Midwifery and the Simulation Technology Manager present
Jacqueline England	University of Bedfordshire	Simulation Centre, Skills Lab	Jacqueline England, Senior Lecturer, Interprofessional Learning and Simulation Lead
Zaina Jabur	King's College, London	Maudsley Simulation	Dr Zaina Jabur - Lead for Curriculum Development, Sean Cross, MD, Sandra Parish, RMN - Senior nurse tutor, Brian Hanna, RMN - Senior nurse tutor, Lorena Valdearenas, MD James Pathan, Kiran Virk, Gareth Evans, Dimeji Odebode, BA
Andrew Douds	Health Education East of England	CMT Simulation facility	AC Douds, CMT Simulation Lead Ian Barton, HEE EofE Simulation Lead
Clare French	Oxford Brookes University	Health and Life Sciences	Ann Ewans, Rozz MacDonald, Judy Roche, Barry Ricketts
Val Dimmock	Homerton University Hospital NHS Foundation Trust	Homerton Simulation and Clinical Skills Centre	Val Dimmock, Simulation and Clinical Skills Lead Specialist
Elizabeth Berragan	University West of England	Simulation and skills suites and learning spaces for UG and PG education and training	Liz Berragan, Associate Professor in Nursing and Midwifery

Lucy Miller	North Devon District Hospital	North Devon Simulation Suite	Dr Lucy Miller, BM MRCP FRCA Consultant in Anaesthesia and Persistent Pain Lead Dr G Rousseau, Dr N Hollister
Colette Laws-Chapman	Guys & St Thomas NHS Foundation Trust	Simulation Centre	Colette Laws-Chapman, Deputy Director of Simulation at Guys & St Thomas', Beth Thomas, Lucy Brock – Clinical Educators in simulation, Jade Zhao, Jacqui Le Geyt – Sim Fellows

APPENDIX 4 - ON-LINE SURVEY QUESTIONNAIRE

The questionnaire provides a summary of each of the main themes, but we recommend that prior to accessing the questionnaire, respondents read and are familiar with the content in this document and the respective questions below.

General principle of the SBE standards

1. Do you agree that standards are important for the effective design and delivery of SBE?

The structure of the SBE standards document

2. Do you agree with the overall layout and section headings in the standards document?

THEME 1 Faculty

3. Do you agree with the standards and guidance relating to the Faculty development section of the standards document?

THEME 2 Activity

4. Do you agree with the standards and guidance relating to the programme section of the standards document?

5. Do you agree with the standards and guidance relating to the procedural skills section of the standards document?

6. Do you agree with the standards and guidance relating to the assessment section of the standards document?

7. Do you agree with the standards and guidance relating to the in-situ section of the standards document?

THEME 3: Resources

8. Do you agree with the standards and guidance relating to where a simulation centre exists in an institution?

9. Do you agree with the standards and guidance relating to where a simulated patient programme exists?

10. Do you agree with the standards and guidance relating to the technological support personnel section of the standards document?

11. Do you agree with the standards and guidance relating to the management, leadership and development section of the standards document?

Each of the questions above requires a response using a five-point Likert scaled response with a comments section to support or explain your response –				
Strongly agree	Agree	Undecided	Disagree	Strongly disagree

APPENDIX 5 - ONLINE SURVEY RESPONDENTS

82 in total, 15 responses on behalf of their organisation, 40 as Individuals, 27 anonymous

Name	Organisation	Response
Ann Sunderland	Leeds Beckett University	Individual
Kevin Stirling	Laerdal Medical	Individual
Laura Theodossy	Royal Marsden Hospital, CCU	Individual
Suzanne Gough	Manchester Metropolitan University	Individual
Phillip Chandler	Manchester Met Uni	Individual
Hassan Al-Omari	Health Education England - North West London	Individual
Mark Pimblett	Lancashire Simulation Centre	Individual
Annette Rickard	Plymouth Hospitals NHS Trust	Individual
Dimitrios Siassakos	Royal College of Obstetricians and Gynaecologists	Individual
Alan Platt	Northumbria University	Individual
Julia Lilley	Neonatal Unit Derriford Hospital	Individual
Kate O'Loughlin	UCL Partners	Individual
Richard Morse	Wolverhampton NHS Trust and HEE West Midlands	Individual
Clare Sullivan	RCSI	Individual
Rosalyn Joy	Bournemouth University	Individual
Richard Sargent	Buckinghamshire Healthcare NHS Trust	Individual
Gayle Mackie	Glasgow Caledonian University	Individual
Lydia Lofton	Royal Brompton Hospital	Individual
Ken Street	University of Portsmouth	Individual
John Talbot	University of Hertfordshire	Individual
Vivien Perry	Northumbria University	Individual
Chandrika Balachandar	Walsall Healthcare NHS Trust	Individual
Andrew McIndoe	Bristol Medical Simulation Centre	Individual
Andrew Sykes	St Georges Hospital NHS Trust	Individual
Ian Barrison	University of Hertfordshire	Individual
Sharon Mascarenhas	Khalaf Ahmad AlHabtoor Medical Simulation Center MBRU	Individual
Darren Middleton	Burton Hospitals Foundation Trust	Individual
Liam Wilson	North Lincs and Goole	Individual
Natalie Dodge	Staffordshire University	Individual
Caroline Cocking	Derby Teaching Hospitals NHS Foundation Trust	Individual
Despoina Liotiri	GAPS	Individual
Val Dimmock	Homerton University Hospital	Individual

Sini John	Homerton Hospital	Individual
Rozz McDonald	Oxford Brookes University	Individual
M Aldridge	University of Wolverhampton	Individual
Chris Attoe	Maudsley Simulation, SLaM	Individual
Sharon Edwards	Buckinghamshire New University	Individual
Vishal Dhokia	University Hospitals Leicester	Individual
Barry Featherstone	East Kent University Hospitals NHS Foundation Trus	Individual
Amit Mishra	BSUH	Individual
Debbie Suggitt	Stockport NHS FT	Individual plus David Baxter and Jeanette Baxter
Amit Mishra	Brighton and Sussex University Hospitals NHS Trust	Organisation
Colette Laws-Chapman	Simulation at Guys & St Thomas NHS FT	Organisation
DONNA MAJOR	Hull Institute of Learning and Simulation	Organisation
Jacky Hanson	Simulation Centre LTHTR	Organisation
Tariq Shahab	Adam Rouilly	Organisation
Tom Gale	Plymouth University Peninsula Schools of Medicine and Dentistry	Organisation
Professor James Murray	Royal College of Surgeons Ireland (RCSI)	Organisation
Jess Wadsworth	Epsom and St Helier NHS Trust	Organisation
Tom Davidson	University of Cumbria	Organisation
Liam Wilson	Northern Lincolnshire and Goole NHS Foundation Trust	Organisation
David Walker	QE Gateshead	Organisation
Fiona Carter	South West Surgical Training Network	Organisation
S Hamilton	Royal Wolverhampton	Organisation
Steven Bland	Defence CBRN Centre	Organisation
H Higginson	University of Bolton	Organisation

APPENDIX 6 - CAE WORKSHOP ATTENDEES

Teresa Gore	President of The International Nursing Association for Clinical Simulation and Learning (INACSL)
Laura Burnett	Kettering General Hospital
Caroline Cocking	Derby Teaching Hospital NHS Trust
Jenny Baker	Derby Teaching Hospital NHS Trust
Julie Blythe	Leeds Beckett University
Ann Sunderland	Leeds Beckett University
Adrian Openshaw	Salford Royal NHS Foundation Trust
Andy Martin	Leeds Beckett University
Hatice Tunc	Nottingham University
Karen Sirdefield	Staffordshire University
Clare Martin-Jones	Staffordshire University
Steph Jones	Staffordshire University
Jo Dunn	Worcester University
Claire French	Oxford Brookes University
Indy Hair	University of West of London
Selina Bristow	East and North Hertfordshire NHS Trust

APPENDIX 7 - COLLEGES AND COUNCILS CONTACTED

Telephone contact/discussions were held with:

College of Emergency Medicine

Royal College of Pathologists

College of Paramedics

NHS Education Scotland

Royal College of Obstetricians and Gynaecologists

Royal College of Ophthalmologists

Royal College of Paediatrics and Child Health

Royal College of Anaesthetists

Royal College of General Practitioners

NHS Education Scotland

Academy of Medical Royal Colleges

Royal College of Physicians of London/JRCPTB

NMC (Local representative)

Royal College of Physicians in Ireland

Other organisations sent Information:

Royal College of Surgeons of England

Faculty of Occupational Medicine

Faculty of Public Health

Faculty of Pharmaceutical Medicine

Royal College of Radiologists

Royal College of Physicians of Edinburgh

Royal College of Physicians and Surgeons of Glasgow

Royal College of Psychiatrists

Royal College of Surgeons of Edinburgh

College of Anaesthetists in Ireland

Royal College of Nursing

Royal College of Dentists

Faculty of Medical Leadership and Management

APPENDIX 8 – ANALYSIS MATRIX AND METHOD

Evidence/importance matrix showing which statements were retained as standards following the second consultation.

Low evidence was defined as statements that had either no evidence or opinion from one source. Medium evidence was defined as opinion from multiple sources or based on existing guidance. High evidence was defined as high quality published, peer reviewed evidence to back up the statement.

Low importance statements were deemed to have been eliminated during the first consultation, so none of the statements from the second iteration were marked as low. High importance statements were defined as those for which feedback had been supportive of the standard in 80% of cases or more. The remaining statements which did not meet the criteria for high importance were marked as medium.

It was decided that statements that had either high importance and medium evidence or high evidence and medium importance should be retained. Statements that were of high importance according to our feedback but did not have a strong evidence base were looked at on an individual basis and from these statements a further four were chosen to be retained.