SESAM
IMPROVED HEALTHCARE THROUGH SIMULATION
SOCIETY FOR SIMULATION IN EUROPE

SESAM Accreditation of Simulation Based Educational Institutions – Principles

This accreditation program is based upon the experience and expertise of the international multidisciplinary and inter-professional community of practice. It takes into account the broad variety of simulation modalities and the context of their usage.

Under the term Educational Institution (hereafter “Institution”) are integrated all facilities, that provide educational sessions and exercise events for healthcare providers from all disciplines and professions. These can be simulation centers with dedicated space, mobile units that function completely ‘out-of-the box’, mannequin-based facilities or departments relying on standardized patient (SP) methodology.

> Definition of simulation (by David Gaba, 2004):
>
> "Simulation is a technique, not a technology, to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner."

By seeking accreditation an institution can demonstrate its quality as judged and validated by an independent body, internationally recognized as opinion leader in the domain of simulation based education in healthcare. The use of the “Accredited by SESAM” Logo is a quality marker which will allow the institution to stand out and further underline its high quality standards.

The accreditation forms and the questions therein should be regarded as a support for the development of the institution. There are no correct or wrong answers, as every institution may

be different in its approach to simulation-based education. As quality of simulation-based education emerges from experience, it might be less advisable to apply for accreditation if your institution has just started its activity in simulation-based education.

Overview

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Introduction

Founded in Copenhagen/Denmark in August 1994, the Society in Europe for Simulation Applied to Medicine" (known hereafter and registered as "SESAM") is the oldest established organization combining all efforts of the community of professionals in simulation-based medical education.

The society's mission is to encourage and support the use of simulation in healthcare for the purpose of training, research and patient safety by:

- Development and application of simulation in education, research and quality management in medicine and healthcare.
- Advancement of individual, inter-professional and multidisciplinary clinical education
- Facilitation, exchange and improvement of the simulation technology and knowledge throughout Europe.
- Establishment of combined research facilities.

SESAM is an independent scientific society, not affiliated to any medical or other specialty. Members have a wide and varied background within healthcare and medical education, but all with an interest and passion in medical simulation and combining efforts to reduce errors in patient care.

SESAM accreditation of institutions recognizes high quality learning opportunities in simulation based healthcare education. Specifically, this accreditation program confirms the appropriateness and robustness of the underlying core values and educational principles under which the simulation based programs are conducted.

These accredited institutions offer simulation based medical education based upon the high professional standards of SESAM. Specifically, they demonstrate the capability to provide simulation based healthcare education in a consistent and reliable way, implementing predefined programs defined and provided by trained simulation instructors.

The purpose of this document is to provide guidance for the interpretation of these professional standards in relation to simulation institutions and simulation based healthcare education programs.

Accreditation of an institution provides an independent validation of its quality judged, as stated above, against SESAM'S Professional Standards. An accredited institution can state that it is "Accredited *by SESAM" (full accreditation) or "Endorsed by SESAM" (provisional accreditation)* and use the SESAM logo on course materials and institution information media as long as it fulfils and maintains the requirements of SESAM accreditation.

Thus, an institution displaying SESAM accreditation guarantees to its learners, to its possible partners or financing authorities a highly professional working style, in full concordance with SESAM standards.

Theoretical foundation

Professional standards

SESAM professional standards are divided into the core values governing essential fields of SESAM accredited educational activities and five scopes defining specific aspects of the standards.

Core values

C1. Promotion of patient safety and quality improvement in healthcare practice

C2. Activities based on robust educational principles

C3. Offering high quality learning opportunities

C4. Ensuring psychological safety.

C5. Demonstration of high professionalism in all activities

Scopes

S1. Designing and planning

S2. Teaching and supporting

S3. Debriefing for learners and feedback to learners

S4. Educational management and leadership

S5. Evidence based practice and research

Core values

C1. Promotion of patient safety and quality improvement in healthcare

Narrative: Describe how your training programs address and handle patient safety issues. Describe how you create, rise and maintain focus on patient safety and quality improvement in health care within your institution. Some examples may be (list is not meant to cover all possible options):

- Clinical skills are trained first in simulation
- Principle “train as you work” is applied
- Critical incident reporting systems (CIRS) and other risk assessment tools are installed and working, regular reports are given to the institution
- When you train in-situ, written reports are provided to the trained institution
- You take part in patient safety promotion campaigns
- You provide theoretical information on human error and patient safety to all personnel of your institution

Please do not provide general statements on patient safety only, but describe your own specific measures and actions on this topic.

Requisites: Simulation in the medical field is a teaching method aimed at improving, among others, the learner’s awareness on human performance limitations and thus contributing to improve patient safety. Also, by teaching and rehearsing certain maneuvers and skills, both technical and non-technical, the healthcare providing process is constantly improved.
The documents and descriptions provided must clearly state how these values are upheld and lived by in the applying institution.

C2. Activities based on robust educational principles

Narrative: Describe the educational principles underlying your curricula. Some examples may be (list is not meant to cover all possible options):

- Describe the link between your daily activity and the educational targets you pursue
- Examples of adapting to different learning styles and reasoning behind this choice
- References supporting your proceedings as a way of defining why things are done a specific way

Requisites: Every educational activity, and as such simulation-based education in healthcare, has to follow predefined, sound educational principles. The choice of the concrete educational method is not predefined by the professional standards. However, a sound scientific base for the chosen method has to be demonstrated by the descriptions provided.

C3. Offering high quality learning opportunities

Narrative: Describe how you assure that educational goals offer learning opportunities that are relevant to the clinical work of the learners. Describe how you assure that the Simulation Based Educational Activities offered are adapted to the aims and capabilities of the learners.

Some examples may be (list is not meant to cover all possible options):

- Describe how your educational activities reflect awareness of adult education principles
- Describe how you assess the background of the learners and their specific context (e.g. visit them in their working environment)
- Describe how you ensure respect for the needs of the learners

Please do not provide any Wikipedia quotes, but describe your own approach.

Requisites: Evidence based knowledge and experience are key components of designing specific learning opportunities. For effective learning a program must neither over- nor underchallenge the learners. Appropriately selected educational methods have to be combined for a specific learner group.

C4. Ensuring psychological safety.

Narrative: Describe how you create and maintain psychological safety and acknowledge the inherent diversity for all persons involved in the learning process, such as learners, educators, standardized patients, technicians or others (if applicable – visitors, administrative staff, etc.). This includes, but is not necessarily limited to, discretion, an initial statement regarding the psychological safety policy in the institution and an appropriate, learner-friendly atmosphere. Describe how you assure the distinction of trainings and assessments.

Requisites: Psychological safety is a paramount condition for effective learning and the basis for any learning process - this applies not only to the learners, but also to all other persons involved in all conceivable learning encounters. Also, psychological safety of the learning environment is not limited to documents and statements at the beginning of a training, but comprises a learner-friendly atmosphere as well. Documents provided should demonstrate how these values are upheld and applied. Written statements and policies on confidentiality should be provided, but also descriptions of concrete measures (ground plans with comments, description of catering during courses, etc).
Some examples may be (list is not meant to cover all possible options):

- Describe how trainees, SP's and educators are informed on the confidentiality rules around the training sessions.
- Provide documents for written consent of learners (if available).
- Describe policies for storage of documents, pictures and audio/video recordings preserving confidentiality long term.

C5. Demonstration of high professionalism

Narrative: Describe how your institution is active within a coherent professional framework relevant to simulation in health care.

Describe how your institution complies with the relevant professional standards.

Optional, if applicable: Describe how you advocate for simulation in health care.

Describe how you encourage and sustain your educators to reflect upon their own role and professional identity.

Describe how you maintain long-term professional quality including faculty development.

Requisites: The educational activities of an institution consist of many interactions with learners, partners, customers and many others (if applicable – administrations, partner companies, media representatives, etc.). Every aspect of these interactions has to be governed by a high degree of professionalism. Furthermore, the institution has to comply to external professional standards and be a promoter of simulation-based learning in the field of health care. The documents provided must demonstrate how all these educational goals will be achieved and maintained over time.

Scopes

S1. Designing and planning

S1.1. Program is based on needs-analysis

Narrative: Describe how you assess the needs of the learners and adapt your programs accordingly.

Requisites: To ensure an adequate learning success, the educational offer should address the specific needs of the learners. A mechanism for assessing the needs of the learners and subsequently adaptation of programs and content has to be in place and functional in order to be able to do this. The documents provided should highlight how this goal is achieved. Questionnaires or market analysis tools might be possible options. Commercial course formats might as well be offered without a prior needs analysis.

S1.2. Methods chosen to support the learners in obtaining the learning objectives

Narrative: Not every institution will or needs to provide every simulation-based educational methodology listed here. The examples provided refer to the most common educational methodologies, but are meant by no means exhaustively.
Describe the specific modalities of simulation-based learning activities that the institution provides, defining how the institution can match the educational goals it set (coupling methodology, facilities and equipment with the curricula).
Describe why you are using specific educational methods.

Requisites: A simulation-based institution has to offer adequate simulation-based learning activities in different formats. The different formats have to take advantage of the best suitable technology available, such as:

- ✓ *For the training of technical skills, task trainers may be needed. Please describe how and why you use the specific task trainers listed in the questionnaire section.*
- ✓ *For specific training formats so-called low-fidelity manikins may be required. Please describe how and why you use the specific simulation manikins listed in the questionnaire section.*
- ✓ *For full scale simulation manikins with monitoring capability (different degrees of fidelity according to the purposes of the institution) are needed. Please describe how and why you use the specific simulation manikins listed in the questionnaire section.*
- ✓ *For Virtual Reality (VR) simulation space allowing for the IT equipment to be installed in an appropriate way is needed. Please describe how and why you use the specific VR equipment listed in the questionnaire section.*
- ✓ *For SP-based programs specifically prepared and educated SP's are needed, depending on the intended learners and learning goals. Please specify the methodology used, explain selection of trainers and trainees, their appointment and preparation for specific sessions (number of SP's, education, preceding instruction for scenarios).*
- ✓ *For any other type of simulation-based educational activity not listed here, please describe the educational activity in detail and specify the materials you are using.*
- ✓ *For simulation-based activities it may be useful to use AV-solutions to store and display videos from the scenarios for debriefing and enable live*

streaming for observers outside the scenario room. Where applicable, please explain why and how you are using audio-visual equipment.

The documents, detailed ground plans (not only the building's footprint), number and age/gender distribution of SP's, lists of simulators and other types of simulation equipment should demonstrate the strong correlation between the equipment used and the defined learning goals of the programs offered by the institution. A mere listing of used equipment with no relation to predefined learning goals and programs will be deemed insufficient.

- ✓ *Provide a list of simulation based education activities offered, indicating targeted learners and simulation modality chosen*

S1.3. Evaluation and continuous improvement of educational programs

Narrative: Describe the process of quality management in your institution.

Requisites: Every educational institution has to evaluate and continuously improve and adapt its curricula and educational activities. In order to be able to do this, a sound evaluation program has to be established.

Educational methods have to be defined based on the needs of the learners. The educational methods chosen directly influence the learning outcome and, in the end, the implementation to the professional practice of the learners. Ideally, all of these aspects are taken into consideration when evaluating and educational activity, but at least the first step, the adaptation of the educational methods and content to the needs of the learners, has to be evaluated.

The evaluation process has to take into account learners' feedback on the relevant learning objectives. Descriptions and documents provided should explain how evaluation is planned and performed, how the results are analyzed and how changes are implemented (e.g. using the PDCA-cycle) PDCA refers to

the “Plan-Do-Check-Act” cycle of quality management, stating that the institution has to permanently evaluate and, if necessary, adapt and reevaluate its programs.

If implementation of further steps (learning outcome, transfer to practice) has been discussed in your institution but is not yet implemented, please briefly describe the process and the state it currently is in.

S2. Teaching and supporting

S2.1. Allocation of qualified educators

Narrative: Describe qualification of the educators (medical, academic, educational and more). Elaborate on minimal standards imposed by the institution to ensure a baseline quality level of the educators (initial training and maintaining instructor skills).

Describe how you allocate specific educators to specific educational activities. Some examples may be (list is not meant to cover all possible options):

- The educator has to be in the same medical field as the educational activity taught
- Two or more educators are assigned to one educational activity, at least one of them covering the medical specialty, the other(s) covering team work aspects
- For educational activities focused on teamwork only, a specialized CRM instructor is assigned

Requisites: A simulation-based educational institution must provide an appropriate group of faculty (medical and educative competence). The documents provided should specify the number of faculty members and their qualifications, emphasizing especially the requisites on specific instructor courses and the medical requisites (such as simulation instructor, ATLS instructor, ERC instructor, CRM trainer etc).

A simulation-based educational institution must ensure the appropriateness of the assignment of faculty members to specific course formats. The documents and descriptions provided must elaborate on the criteria used to assign educators to certain course formats.

S2.2. Securing a physically appropriate learning environment and infrastructure

Narrative: Describe how the facilities and equipment are used for the simulation activities; demonstrate the ability to adapt the facilities and equipment for the purposes of the offered courses. This aspect refers to educational and technical spaces, like e.g. course or seminar rooms of variable size for different learner groups, skill labs, simulation and/or SP rooms adapted to their specific aim, etc. A more detailed description is given below.

Requisite: A simulation-based educational institution must offer appropriate physical space for the simulator and the scenario as well as for the debriefing.

- For a center based institution ground plans with room descriptions and surface area, as well as functional space descriptions should be provided.
- If the institution is operating mobile with fixed allocated rooms in-situ (e.g. emergency room, obstetrical ward, and others), spaces specifically designed for different types of educational programs should be described.
- In-situ working mobile units should describe their approach of room planning in external locations (e.g. foreign hospital, office, prehospital setting etc.). The description should also include the processes established to ensure an adequate environment (e.g. in advance study of ground plans, contacting administrative staff, etc.)

✓ *Provide maps or drawings of center or in-situ rooms (if applicable)*
✓ *Provide a listed differentiation between rooms with or without daylight (plenary, scenario, debriefing), if applicable*
✓ *Provide information on storage capabilities (if existent)*
✓ *Elaborate on your preparations to ensure adequate space conditions for mobile training sessions in target institutions or remote locations (examples, process descriptions like in advance study of ground plans, contacting administrative staff, etc.)*

S2.3. Securing adequate staffing

Narrative: Describe how you ensure adequate staffing for each and all educational activities.

Some examples may be (list is not meant to cover all possible options):

- Ratio of educators and learners
- Reasoning of this allocation
- Portion of active involvement of each learner in the educational activity

Requisites: Different educational activities require varying ratios of educators, learners and training material. This aspect has to be addressed in the planning phase of a specific educational activity. The documents provided should demonstrate how staff allocation adequate to the educational activity, the desired learning objectives and the learners is planned and ensured, taking into account the necessity of adequate resources (financial, human, time, equipment or space).

S3. Debriefing for learners and feedback to learners

S3.1. Educational and clinical relevant feedback or debriefing is provided

Narrative: Describe the debriefing and feedback methods used by the educators. Describe how you ensure that addressing performance gaps, whether during the debriefing or during skill training, is done adequately.
If applicable, describe how your trainers support self-reflection of learners during both normal feedback or during assessments.

Describe quality control measures you take to maintain high quality of the learning process.

Requisites: Feedback techniques employed must avoid inappropriate false reassurance or collusion. Appropriate organizational documents stating the necessary qualifications of instructors and assessors should be provided (e.g. job descriptions, institutional guidelines, quality management documents).
To maintain a professional attitude on all levels of activity and to ensure psychological safety, performance gaps shall always be addressed constructively. Quality management processes must be installed and functional in order to achieve this goal. The documents and descriptions provided should demonstrate how this process is realized.
To ensure an adequate learning, feedback and debriefings should be performed and provided in a way that supports and encourages self-reflection among the learners. If applicable, quality management processes must be installed and functional in order to achieve this goal. The documents and descriptions provided should demonstrate how this is realized.

S3.2. Feedback and debriefing are aligned to the predefined learning objectives of the educational activity.

Narrative: Describe how you ensure the alignment between feedback or debriefing and the predefined learning objectives as well as the overall coherence of all aspects of the educational activities.

Requisites: Debriefing and feedback should be aligned mainly along the predefined learning objectives of the educational activity. All aspects and stages of the educational activities should be coherent. Quality management processes must be installed and functional in order to achieve this goal. The documents and descriptions provided should demonstrate how this is realized.

Provide a description of all aspects and stages of the educational activities, including

- preparation
- actual educational activity
- debriefing/feedback
- (if applicable) practical implementation of the learnt content.

Describe how you maintain coherence with the learning goals along all these stages.

S4. Educational management and leadership

S4.1. Commitment to quality improvement and program / faculty development

Narrative: Describe the methods used to check the quality of the education provided, and how you ensure the professional development of the educators. Describe survey and quality markers for educational abilities and performance of your faculty. Describe how you ensure that the trainers in your institution maintain their skills and practice based on the current research developments in the relevant fields of education

Requisites: For all personnel working in the institution there must be offered training opportunities for further development of expertise, even for very specific working areas (i.e. technician, moulage specialist, etc). Simulation-based education in medicine is a rapidly developing and changing field. As such, it is crucial for an institution to provide education complying to evidence-based practice and current research standards. The documents and descriptions provided should emphasize the ways by which the institution ensures a proper and timely dissemination of current knowledge among its personnel. Describe survey and quality markers for competency of your faculty.

- ✓ *Internal education and training offers for personnel (list of courses)*
- ✓ *Funds enabling personnel to join educational events (if available)*
- ✓ *Scientific activities / presentations of institution personnel at local/national/international gatherings*
- ✓ *Scientific cooperations (working groups, national or international projects)*
- ✓ *Feedback mechanism on instructor's performance in place (by participants or own faculty i.e. DASH, examples)*
- ✓ *Workplace assessment (frequency)*
- ✓ *Tracking of continuing education of personnel (system)*

S4.2. Administrative structure

Narrative: Describe how simulation activity is organized from an administrative point of view. Describe the administrative structure of the institution, with regards to: full time staff, part time staff, volunteers, organigram (if available, otherwise short description of structure), managerial or organizational structure; describe managerial/secretarial roles (if established - CEO, director, secretary etc.); describe how programs are being constantly developed.

Requisites: Every institution should have a clearly defined role structure with job descriptions for each position. The documents and descriptions provided must specify the roles and structures within your institution. If there are no predefined roles or structures, a brief descriptions of process flow should be provided. Describe who is doing what and for whom, as well as how this supports the overall aim of the institution. An institution should constantly develop its programs and courses and assure quality control and management. Specify methods and structures used for quality management and describe, if applicable, methods and structures used for constant program development.

- ✓ *Organisational chart of your institution or appropriate description*
- ✓ *Processes in institution management*
- ✓ *Processes of organization of learning activities (formats participants, equipment, faculty)*
- ✓ *If applicable, systems for tracking of learner outcomes*
- ✓ *If possible and available, examples of adjustments made according to evaluation and feedback*

S4.3. Local and global commitment in education

Narrative: Describe the involvement of your institution or faculty in promoting and advancing simulation based educational activities on a local, regional, and if applicable, national and international level.

Requisites: The field of SBT is constantly advancing – this is achieved by the contribution of particularly committed institution, which seek to play a leader's role in this field. Whether this is happening at all, on a local basis only or if the institution is acting as a national or even international leader highly depends on the institution's structures and qualifications. If applicable, documents and descriptions provided must demonstrate the role played by the institution in various cooperation structures.

- ✓ *Campaigns, promotion and presentations on institution's activities (internally/externally/public)*
- ✓ *Participation in local, national and/or international working groups and societies (name, persons involved, functions fulfilled)*
- ✓ *List of educators and teachers acting as speakers at national and/or international level*
- ✓ *Describe memberships, positions and activities in scientific societies, including SESAM and other simulation societies.*

S5. Evidence based practice and research

S5.1. Commitment to advance the field of simulation-based medical education by means of research (if applicable)

Very good and advanced simulation trainings can be done without active involvement into research. However, to advance the field of SBT, SESAM strongly encourages educators and institutions to become involved into research. If applicable, documents provided should describe an institution's involvement in planned (step 1), actual (step 2) and/or completed (step 3) research projects.

Narrative Step 1: *Applicable to institutions currently starting to be involved in research. Describe if research projects are planned. If yes, give a resume of their kind and how they are run.*

Requisites Step 1: *On a basic level, an institution can provide valuable simulation-based medical education without active involvement in research activities. If an institution is involved in research or currently planning to do so, documents describing the type of research, the type of partnerships and, if applicable, grants obtained should be submitted.*

- ✓ Joined projects (project description, role played, personnel involved)
- ✓ Funds for programs (description)

Narrative Step 2: *Applicable to institutions actively involved in research.*
Describe your commitment to research. Describe research programs or projects you participate in. Describe, if applicable, domains in which the institution is opinion leader.

Requisites Step 2: *In order to advance the field of simulation based medical education, institutions have to be committed and active in the field of research. Documents provided should specify projects the institution is involved in, as well as scientific output (publications, impact points)*

- ✓ Research coordinator in place (name, job description)
- ✓ Main topic of scientific activities

- ✓ Publication list – if already available
- ✓ Study protocol (example)
- ✓ Student supervision (thesis, number) – if applicable

Narrative Step 3: *Applicable to institutions actively involved in research with completed projects.*
Describe your commitment to research. Describe, in addition to step 2, research programs or projects you completed. Describe, if applicable, domains in which the institution is opinion leader.

Requisites Step 3: *In order to advance the field of simulation based medical education, institutions have to be committed and active in the field of research. Documents provided should specify projects the institution is involved in, as well as scientific output (publications, impact points)*

- ✓ Main topic of scientific activities
- ✓ Publication list
- ✓ Study protocol (example)
- ✓ Student supervision (thesis, number) – if applicable

Final notes

This document reflects the current state of development of the SESAM accreditation program. It will be updated and adapted accordingly to any new development or enlargement of the accreditation scope.

Discussion or definition of course monetary value (*or business conduct* of an institution) lies beyond the purpose of this document. Whether courses are offered for free or a fee is charged is not relevant and will not be evaluated in the accreditation program. The only relevant criterion is course quality to be assured according to the SESAM Professional Standards for the Simulation Based Education in Healthcare.

The authors of this document disclosed their conflicts of interest to the SESAM EC prior of joining the working group. The disclosures can be viewed by request to the SESAM EC.