Suggested Evidence of Performance
at the CHSOS® and CHSOS-A Levels for the
Certification Standards and Elements

This tool has been prepared for the CHSOS-A applicant. The purpose of this document is to help the applicant understand the expected level of performance for each of the Standards at both levels of certification. The applicant should review the expected performance through the suggested evidence to determine which standards they demonstrate each Standard at the CHSOS-A level.

NOTE: the suggested evidence is not mandatory, nor is the volume indicative of how much should be done. The examples given are for the purposes of describing the types of activities and level of performance that is considered what a CHSOS-A would demonstrate for each standard. The applicant does not need to demonstrate advanced performance of all standards.
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PROFESSIONAL VALUES & CAPABILITIES

Advancing the field of simulation operations through professional development, service, advocacy, and collaboration

STANDARD	CHSOS® SUGGESTED EVIDENCE	CHSOS-A SUGGESTED EVIDENCE
Integrity and Motivation - Insights into Professional Practice		
Demonstrates an awareness of and adherence to the Healthcare Simulationist Code of Ethics	• Identifies and demonstrates knowledge of and adherence to legal issues and ethical standards in design and implementation of activities in the simulation environment in adherence to the Healthcare Simulationist Code of Ethics	• Incorporates and embeds the Code of Ethics throughout healthcare simulation and organizational culture • Maintains vigilance regarding not only desired outcomes, but also potential unintended consequences of simulation activities
Demonstrates an appropriate level of self-awareness and professional behavior	• Understands limitations in expertise and is willing to seek appropriate content expertise and work as part of interprofessional team in design and delivery of simulation programming	
Demonstrates ability to critically self-reflect	• Describes instances of feedback and associated reflections and any changes in response to the feedback. May be reflected in personal statements or self-reflection papers	• Engages in frequent self-reflection and uses it creatively to develop new insights and strategies in simulation operations and technology
Demonstrate a commitment to knowledge acquisition/growth	• Determines and engages in own continuing professional education and development by attending webinars, seminars, meetings, and/or conferences related to simulation education or instruction • Document courses taken for advancement of knowledge in specific areas relevant to simulation operations/technology specialist domains ie; online courses, self-study	• Demonstrates continuous professional development as evidenced by assessing self, achieving success by reassessing goals, developing action plans and achieving success
Accountability		
Demonstrates a commitment to the overall outcomes of the	• Understands the overall outcomes and rationale for each curriculum/program	• Appraises, designs, and recommends strategic development and design, and leads program operations

curriculum or simulation program		
Leadership		
Demonstrates leadership capabilities

Recognize opportunities for professional development (e.g. conferences, webinars) | • Assumes leadership roles in local course operations and delivery
• Effectively delivers local activities
• Effectively engages with learners
• Supports and develops others
• Prioritizes learner needs in content delivery
• Attends conferences, webinars or courses to advance knowledge of simulation operations | • Assumes leadership roles in course operations and delivery, conferences, or simulation at the state, multi-state/province, national/international level
• Delivers workshops and presentations at state, multi-state/province, national or international level
• Actively participates in simulation initiatives in a national/international organization
• Is recognized as a mentor for other simulation professionals at the state, regional, national/international level |
| **Teamwork** | | |
| Utilize effective communication strategies | • Communicates effectively with learners and peers
• Fosters an environment that appropriately engages participation from learners and faculty | • Maintains a climate that fosters active communications through practice and advocacy |
| Demonstrates team-working capabilities | • Builds and maintains professional relationships
• Collaborates in the operations and delivery of simulation activities
• Works collaboratively with colleagues
• Employs authority and assertiveness appropriately | • Engages in building interprofessional collaborations between departments/organizations (etc.)
• Is recognized in influencing simulation-based networks at the state, multi-state, national, international level (e.g. alliances, consortiums |

SCHOLARSHIP-SPIRIT OF INQUIRY
Systematic acquisition, integration/development, and dissemination of knowledge

STANDARD	CHSOS® SUGGESTED EVIDENCE	CHSOS-A SUGGESTED EVIDENCE
Builds new knowledge		
Demonstrates a commitment to individual continuing professional education and development	• Obtains continuing education credits pertaining to simulation operations yearly • Discovers updates in simulation literature as evidenced by: joining list serves, commenting on postings, journal clubs, and performing literature searches	• Presents at conferences and webinars • Participates in conference planning • Publishes simulation-related items in peer-reviewed forums • Produces and/or performs novel work within established field • Demonstrates continuous professional development as evidenced by assessing self, achieving success by reassessing goals, finding mentors, taking the lead, influencing others and strategic thinking
Demonstrates appropriate knowledge of simulation-based education	• Has knowledge of the basic concepts behind several simulation modalities (For example: Standardized and Simulated Patients, mannequins, immersive simulation, task trainers, virtual reality, computer-based instruction, etc.) • Understands the strengths and limitations of current simulation methods and technologies • Suggest strategies for the implementation of tools as appropriate for curriculum need	• Illustrates a high-level insight into the underpinning of tools and techniques used in simulation-based education, including the technical operation and interaction of devices • Provides guidance on the development of new models and applied uses • Engages in peer review of simulation processes (e.g. presentation/abstract review, manuscript review, review of simulation for publication, grant reviews) • Advises in the advantages and limits in using simulation technologies in various contexts
Demonstrates contributions to advancing the field of stimulation-based education and/or simulation operations	• Supports the development and dissemination of abstracts, presentations, papers and curricula locally or regionally	• Provides a list of scholarly activities in last three years (projects, inventions, papers, posters, new curricula developed) to which the individual personally contributed • Demonstrate the impact of the activities that the individual supported and or led

Interprets and Applies new knowledge		
Demonstrates the ability to analyze and critically interpret evidence, tools, and new practices relevant to simulation technology and operations	• Analyzes routine outcomes data from simulation programs and incorporates findings into future operational program development • Establishes relationships with vendors and industry representatives to report advances and tools that are relevant to delivered education and curricula	• Prepares reports and analyzes tools and systems used in healthcare simulation to guide operational decision • Disseminates information and findings for internal or external publication • Publishes on new areas in simulation education, operations, and/or technology • Develops new models or concepts of simulation-based practice either individually or in collaboration with colleagues; shares in a peer-reviewed format (poster, presentation, publication) • Evaluates new ideas in simulation methodology; shares in a peer-reviewed format (poster, presentation, publication) • Creates infrastructure and background knowledge that is generalizable to support future studies
Demonstrates the ability to integrate new tools in simulation operations and technology through design, creation, and innovation	• Design or adapt simulated medical instrumentation, equipment, and procedures to solve a problem or achieve a specified outcome • Describes or demonstrates an application of evidence-based educational principles into a simulation exercise • Describes a current research finding that has been integrated into their personal simulation operations practice	• Synthesizes new knowledge in the improvement or enhancement of simulation activities • Links and assembles new educational theory or frameworks into learning activities • Designs and develops new educational activities that address new learning needs • Demonstrates new activities as educationally effective (May submit outcome data from their program or simulation-based educational activity as evidence) • Translates knowledge and concepts from other fields into relevant and new simulation-based applications • Adapts simulation tools and techniques to enhance function • Obtain patents and licenses for innovations

Advances operations and technology practices in the field of simulation		
Demonstrates involvement in advancing technology and operations practices for simulation	• Participates in developing and testing technology used in healthcare simulation	• Originates creative and innovative applications of new knowledge that advances simulation concepts and methods beyond the local level • Solve complex technical problems by reviewing related information, then developing, implementing, and evaluating solutions

Simulation and Technology - Methods and Applications

Uses advanced knowledge of simulation techniques and technology to evaluate, integrate, design, and implement a diverse set of solutions to enhance simulation outcomes

STANDARD	CHSOS® SUGGESTED EVIDENCE	CHSOS-A SUGGESTED EVIDENCE
A/V Systems		
Demonstrate the ability to effectively utilize A/V tools to enhance simulation experiences	- Configure, setup, and operate A/V technology - Educate on appropriate use and operation - Assess the needs of the educator to match objectives and the appropriate A/V setup - Apply knowledge of video capture and broadcast systems to support educational design of educational cases (Web, VR, 3D, Analog, Digital) - Differentiate connectors and signal types used for A/V connections - Configure and format images, video, and media to support simulated educational experience	- Design troubleshoot and maintain A/V systems - Manage and integrate cameras, microphones, speaker systems and other auxiliary equipment (with A/V input/output) - Advocate for appropriate use of A/V technologies and systems to enhance education - Apply knowledge of acoustic principles to capture, record, and deliver high-quality sound for specific simulation spaces - Record and edit videos to support educational delivery
IT Systems		
Demonstrate the ability to utilize software and application components to enhance simulation experience	- Utilize web-based (browser-based) applications and information systems - Use office and presentation programs to enhance educational delivery, and program operations - Organize and maintain files and folders according to center policy	- Customize programming and use of systems and software to enhance program operations (may involve databases or programming languages) - Integrate applications and/or systems for enhanced function - Design storage policies and processes for effective records retention
Demonstrate the ability to utilize computer and network infrastructure to support healthcare simulation	- Demonstrates functional awareness of the technological infrastructure and its components and how they interoperate for healthcare simulation - Demonstrate knowledge of wired and wireless connectivity and applications (e.g. routers, broadcasters) - Apply functional knowledge and terminology for the utilization of network hardware	- Plan and develop technological infrastructure for healthcare simulation - Maintain and evaluate security policies and enforcement (group policies, user rights and access, etc.) - Advocate for maintenance and upgrades alone or in tandem with institutional IT systems while sustaining simulation system requirements and function

	• Adhere to security principles and standards for physical tools and data	

<table>
<tr><td colspan="3">Healthcare systems and practices</td></tr>
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Demonstrate knowledge to support specific healthcare professional education through inter- and intra-professional simulation activities	• Participate in the delivery of intra-professional and/or inter-professional simulation activities • Distinguish among healthcare equipment, supplies, and environments • Demonstrate knowledge of various healthcare professions and practices	• Actively assist with coordination of operations in intra-professional and/or inter-professional simulation activities • Evaluate and utilize tools and spaces to meet fidelity needs • Collaborate with diverse specialties to implement required curriculum or initiatives
Demonstrate knowledge of medical terminology and practices as it relates to healthcare education and simulation	• Identify the presentation of general medical conditions, injuries, and diseases • Recognize basic anatomical and physiological systems • Identify general healthcare procedures • Identify common medication administration practices	• Applies physiology concepts to ensure realistic scenario progression • Apply healthcare concepts to portray specific or rare medical conditions, injuries, and diseases • Identify profession specific healthcare procedures

<table>
<tr><td colspan="3">Simulation activity design and technical implementation (staging and SP focus)</td></tr>
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Demonstrate knowledge in the development of technical design and staging of a simulation activity	• Creates and maintains an active scenario library, system, or database • Coordinates scenario design, cues, and timing with educator/facilitator to ensure reproducible delivery • Leads staging and simulation activity design/piloting/implementation process • Demonstrate knowledge of technical and theatrical elements to enhance the simulation experience • Demonstrates knowledge of simulator preparation, function, and operation	• Write technical staging and deployment instructions to ensure reliable simulation activity setup • Establish policies and procedures in creating, validating, revising, and archiving scenarios • Enhance scenarios with new innovations • Provide expert consultation to instructors and facilitators on simulation activity design/piloting/implementation process • Integrates tools and concepts to advance simulation-based educational delivery

Design and create moulage and environmental stimuli to support simulation activity realism	• Implement moulage principles and apply various materials for different settings and modalities used in simulation • Match equipment and physical environment cues to meet the needs of the learning objectives for each learner type and level	• Create new applications, ideas, or products including artistic contributions towards moulage, model making, staging, and costuming • Design or adapt simulated medical instrumentation, equipment, and procedures to obtain specified functional performance
Develop and train individuals to support realistic standardized patient interactions	• Understand the technique and process for role training and rehearsal • Maintain current knowledge of SP methodologies and best practices	• Collaborate with standardized patient(s) and/or embedded participant(s) to develop new ideas, innovations, and/or techniques • Advocate for the integration of SP methodology into the curriculum where appropriate. • Leads standardized patient recruitment, development, and training
Educational Principles		
Demonstrate knowledge in the development of a curriculum thru principles of instructional design	• Collaborate in the instructional design elements for simulation activities • Advise on appropriate use of simulation specific environmental fidelity • Recognize when to include subject matter experts • Execute simulation sessions that support planned objectives	• Utilize instructional design elements to modify and enhance simulation activities • Integrate available resources and observations to enhance learning • Manage systems for collection of data in assessment and evaluation • Plan and implement the use of video and audio for formative and summative evaluation, as well as educational scholarship
Demonstrate the importance of educational performance improvement based on curricular needs	• Participate in process to improve simulation education • Implement improvement plans determined for specific simulation activities • Present solutions to meet curricular needs assessments	• Evaluate educational processes to ensure enhancement of activities • Guide the after-action review of scenario design and delivery • Collaborate with educators to reassess and enhance the design and delivery of simulation sessions based on identified needs

Demonstrates the ability to maintain a safe learning environment	• Support a safe and effective learning environment for learners • Recognize the concepts of managing risks • Provide orientation for stakeholders to simulation principles, equipment, and spaces • Communicate and practice safe/recommended use of simulation equipment and environment	• Establishes and maintains an organizational climate that fosters the development of a safe learning environment through practice, staff development, and advocacy • Participates in after-action planning with staff following a latent or active threat to the safe learning environment
Simulation Technologies		
Demonstrate the ability to operate and maintain simulation technologies	• Demonstrate proper operation of wearable simulator simulation technology, simulation equipment, and/or simulation environment to standardized patients and/or embedded participants • Demonstrate knowledge of virtual and/or augmented simulation environment • Understand the diversity of available tools and hybrid uses	• Demonstrates advanced knowledge of simulator programming, operation, and troubleshooting • Generate innovative approaches for technology improvement and integration • Demonstrate advanced knowledge to create and operate a virtual and/or augmented reality simulation environment
Demonstrate a systematic approach to simulation equipment purchase and maintenance	• Perform preventive maintenance with third-party vendors • Performs regular functionality checks to identify potential repair issues • Documents all maintenance and repair performed on all simulation equipment • Perform pre-purchase review of needs, capabilities, and anticipated use for new equipment	• Evaluate and recommend simulation technology for purchase to enhance simulation delivery • Prepares a redundancy action plan/model (replacing a dysfunctional equipment with an equivalent equipment to lessen disruption with a simulation activity) • Provide innovative solutions and in-depth repairs to maintain equipment function • Analyze the impact of warranties, service agreements, and other technical support services • Calculate short- and long-term costs for healthcare/simulation equipment maintenance and use

SIMULATION CENTER MANAGEMENT AND OPERATIONS

Provide management and continuous improvement and implementation of systems and processes to enhance the overall function and operation of simulation programs

STANDARD	CHSOS® SUGGESTED EVIDENCE	CHSOS-A SUGGESTED EVIDENCE
Policies/SOP		
Demonstrates a commitment to align program to standards of best practice	• Demonstrate adherence to and support of policies and procedures to enhance educational delivery • Support the demonstration of metrics and activities in alignment with Standards of best practice and/or accreditation • Ensure center and staff compliance with local and national rules and regulations for workplace safety (Example: OSHA, MSDS standards, etc.)	• Develop policies and procedures to govern the operation of a simulation program • Ensure program alignment with national/international standards of best practice • Support adherence to safe healthcare delivery practices such as (Example: Joint Commission and National Patient Safety Goals)
Data/resource management		
Demonstrates appropriate resource management principles and concepts	• Supports resources though regular maintenance and adherence to policies related to resource utilization and program operations • Provides feedback to program leaders about utilization of technology, equipment, and supplies	• Understands and applies vendor recommendations to management of technology and equipment • Develops appropriate operating procedures for center resources • Suggests programmatic changes and improvements to enhance efficiency and cost containment

Demonstrates effective resource management and utilization	• Adheres to guidelines set for safe practices (sim program, equipment vendor).
	• Adhere to and understand guidelines related to data acquisition and storage of information (including HIPPA and FERPA regulations)
	• Collaborates on equipment maintenance guidelines
		• Develops guidelines for safe practice in the simulation center
		• Design and manage systems and resources for maintenance of program operations
		   ▪ Scheduling
		   ▪ Inventory
		   ▪ Utilization
		   ▪ Educational cases and materials
		   ▪ Media

Develop and support human resource and capital	• Support staff role development and advancement • Support scheduling and efficient use of staff time • Contribute to a positive work environment an understand risks of burn-out	• Training individuals to perform expected programmatic roles (onboarding) • Design applicable job descriptions • Outline a tiered approach to roles and advancement • Lead and advocate for professional development activities for staff
Simulation Center Administration		
Supports alignment of program operations to the strategic plan/mission/ and vision	• Support the role of the simulation program and its mission in regional healthcare education and healthcare delivery • Understand the needs of the stakeholders and the roles required for delivery of simulation-based education • Support short and long terms goals of the simulation program • Understands the value proposition of simulation-based education • Understands and participates in programs that support the program's mission and strategic plan • Collaborate with leadership to support policy program sustainability and/or growth (e.g. strategic plan, simulator purchase, technology services)	• Devise long-term goals for the simulation program and steps to accomplish those goals • Describes the value proposition of simulation-based education specific to the program mission and strategic plan • Provide leadership and management of simulation center administration • Support integration of simulation program with regional educational and healthcare systems • Participates in business plan development, budgeting and financial management of the program • Actively participate in program sustainability and/or operational growth initiatives (e.g. strategic plan, simulator purchases, technology services, and programs)
Participates in consistent quality improvement (QI) of the simulation program	• Reports on simulation program activities to leadership • Participates in program review and identifies areas of need or improvement • Collect data for use in QI processes and review • Recognize concepts that impact simulation (e.g. human factors, patient safety, modeling)	• Report on simulation program activities to stakeholders • Performs strategic planning • Interpret information from collected QI systems to enact meaningful change in programmatic operations • Identify metrics relevant to the simulation program and assess attainment or adherence to those goals

Supporting References:

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