Certified Healthcare Simulation Operations Specialist Examination
Blueprint, 2024 Version

Examination Blueprint

The content of the CHSOS examination is based on the blueprint. This blueprint was completed as a result of the international Practice Analysis of healthcare simulation operations that occurred between November 2022 and July 2023. The results of this Practice Analysis are contained in this document that describes the knowledge, skills, and abilities (KSAs) that are expected of an individual functioning in this role.

As candidates for the CHSOS prepare to take the examination, the following should be considered on how to use the examination blueprint:

- This document includes the high-level examination blueprint which shows the domains and the percentage of the exam for each domain, and also the detailed examination blueprint which lists the KSAs within each domain.
- Every question on the examination must map back to at least one of the KSAs included in the detailed examination blueprint. Any items that cannot map back to at least one KSA will not be on the examination.
- The KSAs listed represent the breadth of work in the healthcare simulation operations specialist role around the world. Individual job descriptions may have significant variance, both in breadth and in depth of function as required by an individual simulation program.
- The KSAs, and thus the examinations, are written at the two-year competency level.
- The verb for each KSA has been carefully chosen using published verbiage in Bloom's Taxonomy. This should indicate to the candidate the expected level of function for each individual KSA, and thus the scope of knowledge that could be expected on the exam.
- Questions on the examinations are typically written at the application and/or analysis level. Very few questions are simple recall level questions (e.g. definitions).
- If a KSA element contains an "e.g.," the items listed are intended as examples and are not an exhaustive list of what may be tested.

Certified Healthcare Simulation Operations Specialist High-Level Examination Blueprint

Domain	Weight
I: Concepts in Healthcare as Applied to Simulation	10%
II: Simulation Technology Operations	35%
III: Healthcare Simulation Practices, Principles, and Procedures	25%
IV: Professional Role: Behavior, Capabilities, and Leadership	15%
V: Concepts in Instructional Design as Applied to Simulation	15%

Certified Healthcare Simulation Operations Specialist Detailed Examination Blueprint

DOMAIN I: CONCEPTS IN HEALTHCARE AS APPLIED TO SIMULATION (10%)
- A. Identify the presentation of general medical conditions, injuries, and diseases
- B. Recognize main anatomical and physiological systems
- C. Identify common medication administration practices
- D. Distinguish among healthcare equipment, supplies, and environments
- E. Recognize the roles of healthcare professionals

DOMAIN II: SIMULATION TECHNOLOGY OPERATIONS (35%)
- A. Functional knowledge and capabilities
  1. Apply functional knowledge and terminology of networks and hardware
  2. Apply functional knowledge and terminology for the utilization of A/V equipment
  3. Apply functional knowledge and terminology for the utilization of software and education systems (e.g, Learning Management Systems (LMS), video conferencing)
  4. Collaborate with stakeholders to manage technology systems' security (e.g., physical, network, data)
  5. Differentiate among the capabilities of simulation modalities (e.g., manikin, AR/VR, distance/remote, hybrid)
  6. Differentiate among the functionalities of equipment used in simulation
     a. Healthcare equipment
     b. Simulation-specific equipment
  7. Apply strategies for data management (e.g., storage, retrieval, file types)
  8. Apply knowledge required to function in different simulation spaces (e.g., equipment limitations, connectivity, air supply)
  9. Apply knowledge of cable connectivity and applications (e.g., ports, inputs/outputs, adapters, dongles)
  10. Apply knowledge of wireless connectivity and applications
- B. Simulation Technology configuration, set up and operation
  1. Determine AV equipment for use in the activity
  2. Recommend healthcare equipment for use in the activity
  3. Recommend simulation-specific equipment for use in the activity
- C. Problem solving, corrective action, and maintenance

1. Apply processes and procedures to identify technical problems/errors and initiate corrective action
2. Apply processes and procedures to create policy and perform preventive/regular maintenance

DOMAIN III: HEALTHCARE SIMULATION PRACTICES, PRINCIPLES, PROCEDURES (25%)
A. Manage documentation related to simulation and healthcare equipment (e.g., maintenance agreements, and warranties)
B. Collaborate with stakeholders on program sustainability and/or growth (e.g., strategic plan, simulator purchases)
C. Facilitate equipment training (e.g., simulators, computers)
D. Utilize resources effectively and efficiently (e.g., feasible use of equipment, inventory management)
E. Manage safe and recommended use of simulation and healthcare equipment and environment (e.g., storage of manakins, clearing IV lines, disinfection procedures)
F. Collaborate with stakeholders to coordinate schedule requests, supply needs, and participant feedback
G. Utilize safe practices for the removal of potentially hazardous materials and supplies
H. Collaborate with stakeholders to collect and review utilization data
I. Utilize principles of realism as it applies to simulation activities
J. Recognize how modifying aspects of a simulation activity impacts reliability and validity
K. Recognize opportunities for managing risks in simulation
L. Implement moulage principles for application and removal
M. Provide orientation for stakeholders to simulation principles, equipment, and spaces
N. Support the public relations activities of the simulation program (e.g., tours, community outreach)

DOMAIN IV: PROFESSIONAL ROLE: BEHAVIOR, CAPABILITIES, AND LEADERSHIP (15%)
A. Recognize opportunities to advocate for simulation (e.g., presentations, community involvement, outreach, institutional structure)
B. Facilitate collaboration and teamwork (e.g., closed-loop communication, role clarity, conflict resolution)
C. Cultivate respectful relationships with participants, faculty, staff, and the community (e.g., cultural responsiveness, hierarchy)
D. Recognize legal and ethical principles as they apply to simulation (e.g., participant confidentiality, integrity, mutual respect)
E. Distinguish among the roles of personnel involved in simulation (e.g., educator, facilitator, operations specialist)
F. Determine opportunities for professional development (e.g., conferences, webinars)
G. Assess innovations and integrate into simulation and technology practices

H. Recognize opportunities to support diversity, equity, and inclusion in simulation (e.g., simulator skin tone, religious considerations, gender identity)
I. Recognize credible resources (e.g., peer-reviewed journals, product manuals)
J. Contribute to research opportunities (e.g., data collection, evidence-based practices)
K. Create a psychologically and physically safe environment (e.g., non-threatening, encouraging discussion, infection control)

DOMAIN V: CONCEPTS IN INSTRUCTIONAL DESIGN AS APPLIED TO SIMULATION (15%)
A. Recognize principles of instructional design
B. Recognize the need to collaborate with Subject Matter Experts
C. Collaborate in the following instructional design elements for simulation activities
   1. Needs assessment
   2. Goals, objectives, and outcomes
   3. Assessment and evaluation methods
   4. Reliability and validity
   5. Logistics (e.g., location, resources)
   6. Equipment and supplies
   7. Scenario design
   8. Prebriefing/briefing, debriefing, and feedback
   9. Pilot testing and modifications
   10. Set-up
   11. Evaluation and modification
D. Recognize elements, benefits, and limitations of interprofessional/interdisciplinary education
E. Recognize elements, benefits, and limitations of distance/remote simulation
F. Recognize elements, benefits, and limitations of simulation modalities (e.g., manikin , AR/VR/XR, screen-based simulation)