

## JRC-CVT Statement on the use of Simulation in CAAHEP Accredited CVT Programs

June 15, 2020

JRC-CVT recognizes the advancements in simulation technology and thus the importance of simulation as an adjunct to student hands-on training that at one time could only be acquired during the time spent in the clinical site. The **Standards and Guidelines for the Accreditation of Educational Programs in Cardiovascular Technology** do not identify either a specific number of clinical hours or a specific number of clinical procedures required in the program's curriculum. Thus, JRC-CVT does not preclude the use of simulation technology as an essential component of the program's curriculum design. Additionally, there are neither minimum clinical hours nor minimum competencies required for graduates of CAAHEP-accredited programs to sit for the credentialing examinations.

It is the responsibility of each program to determine the number of hours required for students to develop psychomotor skills and ultimately to demonstrate achievement of terminal learning objectives (final clinical competencies). The program determines how many of these hours are allocated to laboratory sessions and how many are allocated to clinical practice. The use of simulation technology in the program's comprehensive curriculum design does not, in and of itself, alter the total number of hours dedicated to developing and demonstrating psychomotor learning objectives. The program may discover, however, that some hours previously assigned to the clinical site can be shifted to the program's laboratory where simulation can be used to develop skills, including those skills that are part of formative competency assessments, before performing the procedure on a patient in the clinical setting.

According to the Society for Simulation in Healthcare (<https://www.ssih.org/>) "simulation is the imitation or representation of one act or system by another." Simulated clinical experiences allow the student to develop skills in a low-risk setting while providing safe opportunities for remediation and improvement. Simulated clinical experiences can also provide a consistent environment for high-stakes activities such as competency demonstration (e.g., each student is tested in the same setting, under the same circumstances).

Patient safety and outcomes can be enhanced through the effective use of simulation in healthcare education<sup>1,2</sup> As described by Durham and Alden, the incorporation of simulation in a curriculum can reduce errors, enhance the students' critical thinking and decision-making ability, strengthen communication skills, and teach students how to work in teams.

---

<sup>1</sup> Kohn LT, Corrigan JM, Donaldson MS, editors. *To err is human: building a safer health system*. A report of the Committee on Quality of Health Care in America, Institute of Medicine. Washington, DC: National Academy Press; 2000

<sup>2</sup> Durham CF, Alden KR. *Enhancing Patient Safety in Nursing Education Through Patient Simulation*. In: Hughes RG, editor. *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Rockville (MD): Agency for Healthcare Research and Quality (US); 2008 Apr. Chapter 51. Available from <https://ncbi.nlm.nih.gov/books/NBK2628/>

JRC-CVT is **not** encouraging the elimination of clinical time since that is an integral part of the students' education. However, the literature supports the use of simulation in nursing and allied health education, and the JRC-CVT believes that the use of simulation can be beneficial during the current time of reduced clinical access by students. While simulation can be used for skill development and formative assessments, the final clinical competency, or learning objective, must be completed on a patient in the clinical setting and documented either by an appropriately credentialed clinical preceptor or program faculty with the appropriate credentials. JRC-CVT supports the use of simulation for skill development; however, simulation is not a substitute for documenting clinical competency.

JRC-CVT expects that each program will document, through the use of completed student evaluation forms, that each student achieved the program's goals and learning outcomes, including terminal clinical competencies that are required to be assessed in a clinical setting with a patient who is receiving care.