

# INTER AMERICAN CLINICAL SIMULATION CENTER MANUAL



INTER AMERICAN UNIVERSITY OF PUERTO RICO  
GUAYAMA CAMPUS  
INTER HUMACAO UNIVERSITY CENTER

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## **Mission**

The Nursing Program has as its mission the formation of nurses able to offer competent, sensible, effective, safe, and quality nursing care to the client person, family and community.

The Program aims to produce graduates prepared to:

1. Provide care with autonomy and with interdisciplinary collaboration and sensitivity to ethical-legal and cultural values and directed to the achievement of the best results for the client.
2. Coordinate care by applying leadership and management skills that lead to the highest quality care with the minimum of cost.
3. Assume a commitment as a member of the discipline in harmony with the standards of the practice.

The Bachelor of Science in Nursing Program is designed to develop the skills that allow the student to:

### ***Knowledge***

- Demonstrate integrated theoretical and practical knowledge in providing safe and effective nursing care to individuals, families and communities.
- Know the use of nursing interventions to prevent disease, and to promote, protect, maintain and restore health.
- Know critical thinking skills to make clinical judgments and to use research findings for the continuous improvement of the nursing practice

### ***Abilities***

- Use assessment and therapeutic interventions skills when providing nursing care in diverse scenarios so they can improve the expected health care results.
- Apply communication skills, collaboration, critical thinking and the use of technology as a provider, care coordinator and as a future member of the profession.

- Act as leaders and care managers.

### *Attitudes*

- Apply humanistic care in the nursing practice to promote protection, optimization and the preservation of human dignity.

## **Introduction**

The Inter American Clinical Simulation Center (CSCI by its acronym in Spanish) is an ideal and safe space that promote the learning, practice, development and evaluation of nursing skills and other related disciplines through clinical simulation in a controlled environment similar to that of the agencies dedicated to health care. The purpose of this manual is to provide a guidance and guidance tool for CSCI users.

## **General Description**

The CSCI is located on the first level of the facilities of the University Center INTER Humacao and reproduces, on a smaller scale, the setup of a clinic. The service hours are Monday through Friday from 8:00 am to 12:00 pm and from 1:00 pm to 5:00 pm; the use outside these hours must be previously authorized by the administration. It is divided into several areas: Nursing Station, Assessment Area, Treatment Area, Medication Room, a Ward of Regular Rooms (4), Isolation Room (1), Surgical Preparation Area, Delivery Room, Nursery, Pediatric Room and a Debriefing Room. Each area is fully equipped in a realistic manner to its counterpart in the real scenario. It has 14 human simulators of medium fidelity in various stages of development (6 neonates, 3 pediatric, 3 adults, 2 elderly) and 2 high fidelity simulators: Hal ® S3201 and Victoria ® S2200, both from Gaumard. Each high-fidelity simulator includes its computer as a monitor. In addition, the CSCI has 16 task trainers for a wide variety of procedures such as blood sampling, urinary catheter placement, ulcer care, among others.

The use of the facilities, equipment or material of the CSCI is exclusive and priority of the faculty and students of the Nursing Program of the University Center INTER Humacao. To use the facilities, equipment or materials of the CSCI, you must request it with a minimum of 3

working days in advance of the use, filling out the corresponding loan sheet, either physically or through email and must be delivered as soon as it is finished. Whoever requests a loan will be responsible for any damage or loss. Others outside the program must request authorization in writing to the Associate Director of INTER Humacao, with a minimum of 15 working days in advance and must accept the limitations established by CSCI staff.

All CSCI users must have the highest level of professionalism, integrity, ethics, objectivity and mutual respect in their behaviors and interactions while using the facilities. The CSCI administration reserves the right to suspend the privileges to the facilitator and/or student because of misconduct or misbehavior at any time.

## **Simulation Based Training**

### ***What is Simulation?***

The simulation in nursing education is a teaching strategy that reflects real-life situations and complements clinical education. The environment and realistic equipment, high-fidelity mannequins and standardized patients are used to recreate the clinical environment to provide nursing students with a controlled and risk-free environment to learn, develop and demonstrate psychomotor skills, teamwork, communication and critical thinking. The use of simulation allows students to learn by doing and reflecting on their experience, providing the opportunity to participate in a variety of complex cases that in rare cases can be found in a real practice scenario. High fidelity simulation provides a dynamic alternative to evaluate the acquisition of skills. The advantages of the simulation are:

- Realistic situations of the client can be reproduced, with controlled variables.
- You can create specific and unique situations for patients.
- The errors can be corrected and discussed immediately.
- It can allow a consistent and comparable experience for all students.

- It provides a maximum amount of active learning time.
- Allows experimentation and creativity.
- Promotes self-evaluation.
- Allows instant feedback.
- Decision making can be promoted effectively.
- It allows practicing a wide variety of interventions thanks to anatomically realistic models.
- Training experiences highly realistic simulation for the practice of teamwork, leadership and communication skills.

The minimum expectations for the simulations include but not limited to:

- Initiation of the patient-nurse relationship with the introduction of the self to the "patient".
- Use of standard procedures for patient identification.
- Use of universal and standard precautions of safety before, during and after all simulation experiences.
- Demonstration of initial primary assessment and data collection skills.

***And then what? Start the " Debriefing "***

" Debriefing " translated into Spanish is interrogatory, a term that does not fully capture what is for the simulation experience. It is a process of examining both the actions and the meanings of the actions during a simulation experience. It is undoubtedly the most important component of a simulation experience. It focuses on the student and uses reflection to promote learning. The debriefing session is not for lecturing. The instructor's role is to guide students through the reflective process of debriefing in a structured way. The objective is to reflect and

make sense of the experience, improve understanding and clinical reasoning, and relate learning to future experiences (Dreifuerst, 2015).

## **Security**

Safety is always the first priority in the CSCI. Each participant can be physically and psychologically involved in the simulation environment. This policy seeks to prevent risks to students and sets the action in case an event occurs.

**Physical security** - Most of the medical equipment used in the simulation is functional, for example, defibrillators. Students should follow basic safety precautions in a hospital or clinic according to regulatory bodies (Ex, OSHA, FDA). In the event that a participant does not take the necessary precautions to avoid physical harm to any participant or CSCI staff, the privilege of use will be suspended. In the event that a participant results physically injured, shall be notified immediately to the CSCI staff and measures taken appropriate to the situation and following the policy of the University. In relation to events of a different nature that could compromise the physical safety of users of CSCI, for example, in case of fire or earthquake, the user must follow measures outlined in the *Handbook of Prevention and Safety* University Center INTER Humacao.

**Psychological security** -The simulations are often developed to create an environment that emulates the psychological pressure of actual patient care scenarios. This stressful environment or the nature of the situation can affect a student psychologically. If the staff of the CSCI determines that the scenario may compromise the psychological safety of any participant, the simulation ceases immediately. In the event that psychological security is compromised, the personnel and the course facilitator will act and provide that person(s) with information and reference services student or employed by the institution's procedure.

## **Participation, Confidentiality and Recording**

During all simulation, videos, audio and/or photos of the events will be recorded. All CSCI users (students, faculty and observers) must sign the *consent* form of **Participation, confidentiality and recording** before participating in any simulation (see Appendix).

The objective of the Inter-American Clinical Simulation Center is to train individuals to improve their performance and critical judgment in complex medical situations and in the general professional environment of healthcare. The scenarios are designed in a way that will increase the probability of failures and errors in the performance of the interventions. Failure to maintain confidentiality may result in unjustified and unfair defamation of the character of any participant and may cause irreparable harm to instructors and participants, as well as impair the effectiveness of simulation-based training.

Due to these possible problems, all the personnel, users, faculty, as active participants or observers:

1. Will maintain confidentiality with respect to any of performance seen in real time or recording.
2. Is acceptable to discuss in general terms the technical and behavioral skills acquired and maintained during training and in the center.
3. Will maintain strict confidentiality regarding specific scenarios to which they were exposed.

***Refusal to sign Consent*** - Any participant who refuses to sign the ***Consent for participation, confidentiality and recording*** cannot participate or observe in real time or recording any simulation. As decided by the course instructor and the availability of the CSCI, an additional individual session with the participant can be scheduled.

The reproduction of these resources is limited to the Debriefing room, located on the first floor, on the outskirts of the CSCI. It is strictly prohibited to record videos or audios, copy or publish, the total or partial content of these reproductions, without prior authorization. Violators of this restriction are subject to applicable sanctions and suspension of CSCI privileges. All personnel, users or faculty that see the reproduction of a simulation must remain professionals at all times and not comment on the participants of the simulation experience.

The student may use the reproduction for the one-on-one student discussion when it is used for the evaluation and evaluation of the students. Also, the faculty may request the reproduction of video in circumstances outside of the class that the simulation experience was carried out. (Ex. facilitator development, presentations, conferences, etc.). For this purpose, you must request authorization in writing to the University and participating students for their reproduction of the class in which it was made.

## **Allergies**

Whenever possible, products and equipment acquired for CSCI are latex-free. However, some essential products and mannequins contain latex and therefore laboratories are not completely free of it. People with latex sensitivity are responsible for notifying instructors of the anticipated risk of latex exposure and the faculty should ask their students if they have any sensitivity to latex. We advise anyone with an allergy to latex wear gloves and/or mask when working with the equipment. If someone experiences breathing difficulties while working with mannequins, proper emergency procedures must be followed.

## **Open Laboratory**

"Open Labs" are the time when the CSCI is programmed as "open" for student use. During these periods of time, students are welcome to use labs to practice skills or refresh the material. All students attending an open laboratory must register.

Open laboratories are scheduled when the CSCI is not in use for classes and staff are available to assist students. Schedules will be announced in the bulletins as usual. The creation of groups is recommended so that they will practice certain skills. Do so and notify in advance so that the staff prepares the necessary supplies and equipment with time. The faculty can send students to the Open Lab to remedy the skills.

## **Rules of the Inter-American Clinical Simulation Center**

### *Purpose*

This is promulgated in order to establish the rules of application and general validity regarding the behavior, use and control of the resources of the Inter-American Clinical Simulation Center (CSCI) , in such a way that it allows the adequate and effective functioning for education.

### **Article I : USE OF THE CSCI TO COMPLETE THE NURSING SKILLS LABORATORY OF COURSES**

1. The weekly assistance to the CSCI to complete the Nursing Skills Laboratory, it is compulsory for all students enrolled, per practice course and the Pharmacology course. It will be registered at the beginning of each laboratory, on a sheet provided for it. The signature is what it shows the assistance. If you do not sign, even if it has been presented, it will count as an absence.
2. The assistance to the Laboratory and execution of the procedures within it are part of the methodology of evaluation of the course. The student will be evaluated for their personal and professional performance within the laboratory, as well as their attendance and for each procedure that is carried out in their course. The teacher of the course, is the one who awards the grade, based on the attendance and execution report that will be delivered, once all the skills of a course have been completed .
3. It is the responsibility of each student to attend promptly and complete the skills related to their course. According to those established in the NURSING PROGRAM RULES, the absence of students will not be justified unless they present immediate written evidence of: Hospitalization, Legal appointment, Close family death (parents, siblings, children) or infectious disease. In case of a justified absence, it will be the student's responsibility to schedule another time to cover skills as soon as possible, according to the possibilities and availability of staff CSCI.

## Article II: **GENERAL RULES TO BE OBSERVED WITHIN THE CSCI**

1. All users of the CSCI must register before use, must remain in the areas assigned to their work group and under no circumstances interrupt another group in their sessions of use, simulation or " debriefing ". For safety reasons, all users must notify the Lab Technician when abandon the area.
2. The CSCI is a hospital model, where the student and professors will maintain a professional behavior and physical appearance, as required of a nursing professional in a work-hospital environment. To use the facilities of the CSCI, you must comply with the following :
  - a. Clothing:
    - i. Students – **Complete** scrub uniform, hunter green color. You can use a white long sleeve shirt without designs, under the scrub.
    - ii. Faculty - White coat.
  - b. **Closed** shoes (not "cros").
  - c. Official identification of the University, **visible** .
  - d. Appearance:
    - i. Females - up do hair, moderate makeup, appropriate jewelry/accessories (single pair of ear lobe earrings [no piercings], band, watch [no necklaces or bracelets] ), short nails (1/8 inch) and preferably no enamel or with a thin coat of transparent or translucent enamel, in such a way as to distinguish if there is dirt under the surface. The enamel should be changed frequently, it should not be cracked; The cracks are a place for the deposit of microorganisms. (**As established by Administrative Order # 284 of the Department of Health , see Appendix**) .

- ii. Males - hair, beard and mustache trimmed, no earrings or piercings, short and clean nails (**As established by Administrative Order # 284 of the Department of Health, see Appendix**).
- 3. In the CSCI is **PROHIBITED, NOT ALLOWED**:
  - a. SMOKE
  - b. FOOD / DRINKS / GUM
  - c. THE USE OF CELLULAR PHONES, SMART WATCHES, OR OTHER ELECTRONIC DEVICES that can make INTERFERENCES WITH THE HIGH FIDELITY SIMULATORS.
  - d. COMPANION
  - e. INAPPROPRIATE VOICE TONE / VOCABULARY
  - f. DEPARTURES RESULTING IN CONSTANT INTERRUPTION
- 4. Every CSCI visitor's belongings will be left in the designated lockers area. It will be provided to each user a padlock with assigned key and after the end of the use, user must return the padlock and key to its place. Users are responsible for the replacement of lost keys. The lockers can't be used to store dangerous or illegal materials and can be reviewed to ensure safety. In addition, it is forbidden to identify / label, paste stickers or other damage (vandalism) to lockers. In case there are not enough lockers available, they can be shared, if both parties agree. Inter-American University of Puerto Rico, nor any of its employees are responsible for belongings left in lockers.
- 5. The CSCI is not responsible for any loss or damage to personal property at the facility, including any room or elsewhere. You can report any lost or found items in the Laboratory Technician's Office.
- 6. The CSCI simulators are simulated patients and will be treated as such. It is forbidden to change names, give them nicknames, treat them in a disrespectful or mocking manner. You

should keep universal precautions for infection control and safety measures, just as you would with a real patient.

7. As the CSCI is a hospital model, the confidentiality and privacy of patients and simulated events will be maintained, as required by the HIPAA Act. This helps us all have the benefit of learning and demonstrate professionalism in our interventions. All users must complete the *Consent of participation, confidentiality and recording*.
8. The students will maintain a professional, respectful and attentive attitude at all times in the CSCI. Keep quiet and calm while the instructor is explaining or demonstrating a skill and carry your comments and questions orderly.
9. In the CSCI there are fragile and expensive equipment, as well as sharp objects, which must be handled with care and caution. It is the responsibility of the student and/or faculty:
  - a. Relocate equipment and/or materials after completion of a skill.
  - b. Dispose of properly any "contaminated" material and/or sharp objects in the containers provided for this purpose:
    - i. Red litter bin - "contaminated" material
    - ii. Sharp Container - needles, syringes with needle.
  - c. Immediately report any loss or defect observed in the equipment or material.
  - d. Use equipment (such as: night table, food tables, bed, wheelchair, crutches, etc.) only for educational purposes.
  - e. Keep the laboratory clean and organized, as an example: chairs to their places, wrapping of materials to the trash, etc.
10. It is forbidden to use pens in rooms or with anatomical models, as they stain the synthetic skin of the simulators. Use pencil for documentation in these areas.

11. The CSCI equipment and materials are available to students and faculty who wish to use it in a demonstration class, outside of it. They must be requested in advance, filling out the corresponding loan sheet and must be delivered as soon as the activity finish. Whoever requests a loan, will be responsible for any damage or loss.

## Definition of concepts

- a. **Simulation** - An activity or experience that closely mimics a clinical situation in a controlled, safe and educational environment. The simulation provides the opportunity to develop and improve patient safety, clinical reasoning, clinical skills and teamwork through leadership, communication, monitoring the situation, and finds mutual support for future clinical application.
- b. **Simulation center** - A physical structure that offers courses or simulation based on a simulation program.
- c. **Standardized patient** - A person who has been trained to act as a patient to simulate a set of symptoms or problems. They will present the historical, physical emotional characteristic of a disease and as well as an hypothetical personality during the interaction with the participants of a simulation .
- d. **Task trainer** – A simulator of a particular anatomical region to train specific tasks.  
Ex. Arm for venipuncture.
- e. **Low fidelity simulator** – A physical model with low degree of realism and functionality that are capable for passive visualization of a specific function or procedure, but have no ability to react automatically or have a previous response .
- f. **Medium fidelity simulator** - Physical models with a certain degree of realism and functionality in a limited number of physiological functions and procedures under body or human structure.
- g. **High Fidelity Simulator** - A physical model with a high degree of realism and functionality that simulate a human and are capable for a variety of functions and procedures, which can automatically change in response to drug injection, oxygenation ng or other factors.

- h. **Virtual patient** – Interactive and computerized patient simulating various diseases and conditions. This allows professional health care for the development of clinical skills.

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## Appendix