



Policy and Procedure Manual

Staff and Educator

Revised: July 2023

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General Information

OFFICE LOCATIONS:

TECHS North
GGHSON Building – 302
MSC - 41004
210 N. Rick Francis
El Paso, TX 79905

TECHS South
PLFSOM Medical Sciences Building I – 3301
MSC - 21003
5001 El Paso Dr
El Paso, TX 79905

OFFICE HOURS: 08:00 – 17:00 Monday-Friday
(Closed on institutional holidays)

OFFICE PHONE: 915-215-6130

CONTACT INFORMATION:

Executive Director
Scott Crawford, MD – scott.crawford@ttuhsc.edu

Business Manager
[Joe Castañeda – jose.castaneda@ttuhsc.edu](mailto:jose.castaneda@ttuhsc.edu)

Director – Research
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Senior Director – Administration
Eddie Luevano – eduardo.luevano@ttuhsc.edu
Director – Education
Brian Wilson – brian.wilson@ttuhsc.edu

WEB PAGE: <https://el Paso.ttuhsc.edu/TECHS/>

TRAINING AND EDUCATIONAL CENTER FOR HEALTHCARE SIMULATION (TECHS)

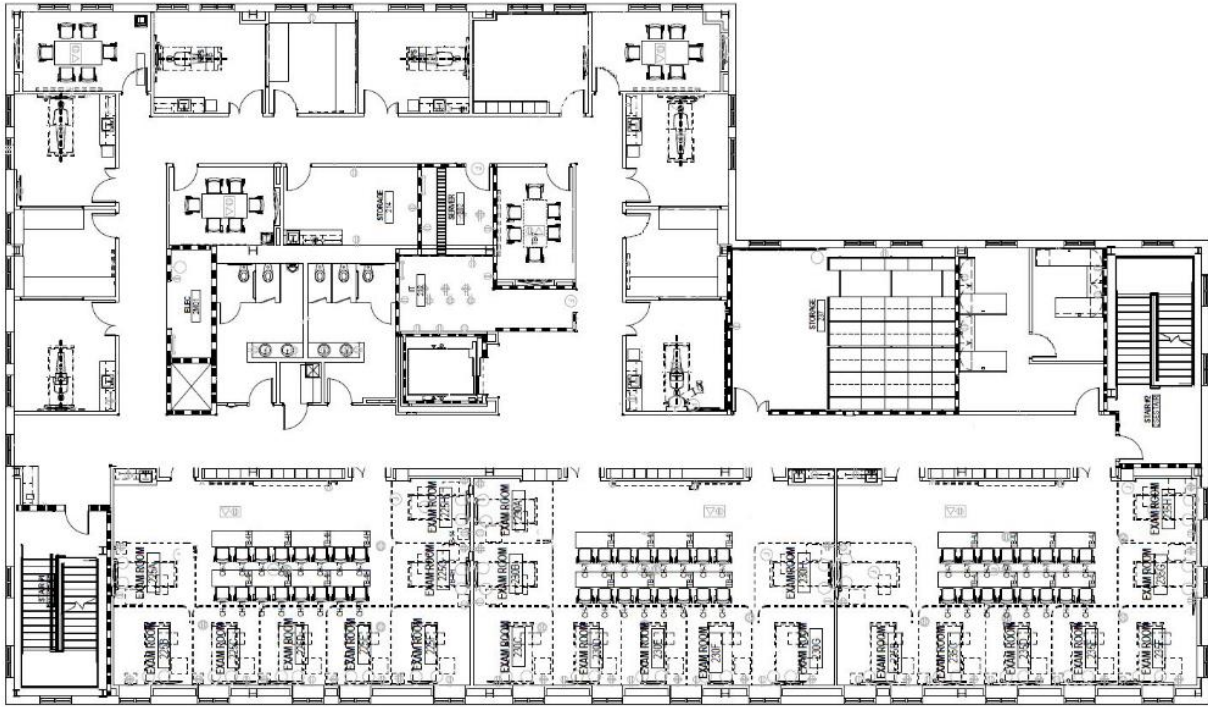
Mission

To provide collaborative interprofessional training to the TTUHSC El Paso campus and community using best practices in education and advanced technology for students and healthcare providers to improve the quality of healthcare delivered and promote safe patient care practices.

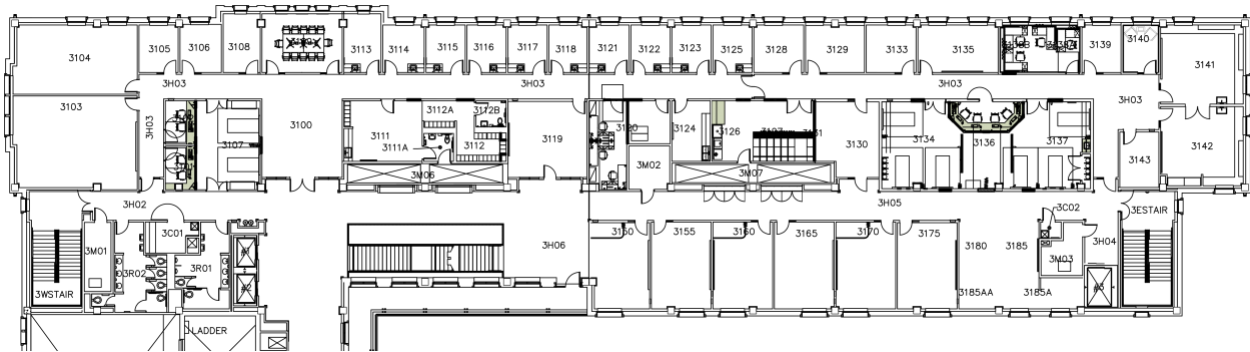
Vision

Improve the quality of interprofessional learning, teaching, research, and delivery of health care through innovative, simulation-based education to enhance the quality and outcomes of patient care in the El Paso community and beyond.

TECHS Floor plans



TECHS North – School of Nursing Building (2nd Floor)



TECHS South – Medical Education Building (3rd Floor)

Orientation Session for Students/Residents

Before starting their training at TECHS, learners must attend an orientation session during which students will be introduced to all TECHS staff members, SP representatives and/or course directors with whom they will be working. An orientation video is shown during this orientation that goes over the function, layout, and expectations of learners while attending simulation sessions at TECHS. As general principles, all learners are expected to complete any assigned pre-simulation activities including reviewing any assigned articles, textbook chapters, videos, and complete any knowledge tests or other preparatory work prior to coming to their sessions. Additionally, as a part of the introductory curriculum for the medical, nursing, and dental school students, school specific expectations and policies are shared with each group of students by their course directors that will teach courses using the simulation center.

School specific policies may include:

- Attendance
- Electronic device Use
- Dress code

General Policies for TECHS are on page 17

Each learner will be asked to sign a consent form “Consent and Release to Use Image or Information” and be expected to follow the policies in this manual. An electronic copy of the TECHS Policy and Procedures Manual is provided to each student through their respective schools and is available on the TECHS website.

Learners are encouraged to have a tour of TECHS to become familiar with the capabilities and identify where specific educational activities will be conducted.

Orientation Session for Instructors/Educators

1. All faculty educators/instructors must do the following before using simulation rooms at TECHS:
 - a. Review the TECHS Policy and Procedures Manual
 - b. Sign-into the computer system with TTUHSC credentials
 - c. Complete a scheduling request form (for specifics on scheduling, please refer to the TECHS Scheduling Policy (page 14)
 - d. Review use of microphones, voice modulator, headsets, and mute buttons, if using immersive simulation rooms
 - e. Contact the Standardized Patient Manager to review scripting, case details, and to schedule training if using SPs
 - f. Sign Consent and Release to Use Image or Information form

An electronic copy of the TECHS Policy and Procedures Manual will be provided to each Instructor/Educator through the TECHS website.

2. Simulation Run-through and Orientation:

Instructors/educators should contact TECHS at least four weeks in advance of the activity to schedule an orientation. A run-through of the session should be conducted at least two weeks before the scheduled activity. The run-through session will include:

- a. A review of the simulation center orientation and a tour of TECHS
- b. Introduction to the Simulation Center Specialist(s) who will be supporting the activity
- c. Review of case/curriculum outline
- d. Review room staging
- e. Review of manikin staging
- f. Review of supply requirements for the session (medications, syringes, defibrillator, ultrasound machine, laryngoscope, surgical tools etc.)
- g. Review the outline of the plans for prebriefing, debriefing, and overall educational strategy
- h. Verifying function and existence of technology assistance devices (presentations, radiographs, cognitive aids, handouts, videos, etc.)
- b. Review principles of conducting effective simulation and debriefing

Debriefing

Debriefing, in the context of clinical simulation, is a conversation supported by a facilitator or device with an individual or a group of participants to review performance during a simulation activity such as an encounter with a standardized patient, an interaction with a virtual reality device, or a manikin simulator. The conversation is to explore, analyze, and synthesize the learners' actions and thought processes, emotional states, and other information to improve performance in future real situations. During the conversation, feedback can also be provided on the participants' performance. Positive and negative aspects of the completed simulation should be discussed, and reflective thinking encouraged. High participant engagement is a hallmark of strong debriefings because it leads to deeper levels of learning and increases the likelihood of transfer to the clinical setting. Significant learning can occur when deep insight is made explicit through reflection during debriefing (Driefuerst, 2009).

TECHS encourages the concepts of debriefing as outlined in the Standards of Best Practice: Simulation, from the International Nursing Association for Clinical Simulation and Learning (INACSL). <https://www.inacsl.org/healthcare-simulation-standards>. Educators are allowed to utilize any debriefing technique appropriate to the delivery of their educational objectives and content. TECHS encourages educators who are new to debriefing to use a structured debriefing format such as PEARLS to help guide them (<https://debrief2learn.org/pearls-debriefing-tool/>).

A detailed description on principles of debriefing and a template for debriefing is provided in Appendix B – Debriefing (page 41)Appendix B – Debriefing.

Terminology

Simulation uses a complex and unique set of words to describe roles and educational ideas. The Healthcare Simulation Dictionary is a useful reference for understanding this vocabulary. <https://www.ssih.org/dictionary>

Course Director Responsibilities

Course directors are expected to be role models who reflect and emphasize professionalism in their teaching, knowledge of science, clinical care of patients, and modes of communication with patients and colleagues. Course directors will help provide materials or resources for learning, such as:

- Quizzes that will assess knowledge of the material that was studied and reviewed prior to coming to a medical skills course.
- Develop case scenarios that will be used to train standardized patients to help students communicate effectively both orally and in medical note writing.
- Exam room guides to help facilitate students through a first-time patient interaction and peer guides for those observing and giving feedback to their peers.
- Objective Structured Clinical Examination (OSCE) case material which clearly describes the expected history taking skills, physical examination technique, communication skills and professional demeanor expected during sessions with standardized patients.
- Debriefing material for faculty to help facilitate the simulation activities.
- Contacting and scheduling any clinical faculty needed to support the activity and provide the required training to either evaluate students in summative assessments or provide consistent instruction in formative activities.
- All assessment materials or multiple-choice question quizzes that will be used to assess acquisition of knowledge at the completion of an activity.
- Forwarding feedback and evaluation information from evaluations of simulation sessions (if not collected by TECHS QR feedback system)
- Attending Standardized Patient training to ensure there is adequate training and understanding of the case to be portrayed.

For every scheduled event:

1. Event organizers are responsible for bringing consumables for their event, e.g., gauze, syringes, etc. Per client request, TECHS may order the materials and charge the client for consumables.
2. All events must be supervised by a faculty member from the scheduling department.
3. All events must have staff support available for technical oversight from TECHS.
4. If any simulator part gets damaged during an event due to improper use, the replacement parts are paid for by the client.
5. Some training procedures involve required replacement of parts for normal wear and tear (such as, but not limited to, practicing C-sections, central line placement, spinal tap, etc.); for such procedures the replacement parts will be paid for by the client.
6. Payment for products used is due one week following scheduled event. (Prices are subject to change.)

Procedure for Requesting a Clinical Simulation Session

The state-of-the-art equipment at TECHS is available to Texas Tech and non-Texas Tech customers for a service-fee. We offer a wide variety of educational training and programs to improve clinical skills through the use of our standardized patients, manikins, immersive simulation rooms, medical skill task trainers, and realistic virtual reality training devices. A clinical simulation request form is available on the TECHS website or here (https://elpasottuhsc.co1.qualtrics.com/jfe/form/SV_3wr7J1IbtakUPB3).

The following information will be needed to submit a request:

- Department/Group name(s):

- Contact name:
- Contact email:
- Contact phone:

- Alternative Contact name:
- Alternative Contact email:
- Alternative Contact phone:

- Educational faculty name:

- Subject to be taught (title):
- Date if the course been run at the before

- Educational Objective(s):
 - 1.
 - 2.
 - 3.

- Level/type of learner to participate
 - Pre-medical
 - MS1
 - MS2
 - MS3
 - MS4
 - D1
 - D2
 - D3
 - D4
 - Nursing Student
 - Resident
 - TTUHSC Faculty
 - Community student
 - Community in Practice

- Number of learners per session:

- Number of sessions per day:

- Is this part of multi-session activity (ex. rotations between rooms)?
 - How many rotations are planned in a session block?

- Number of days requested:

- Date(s) or (month) requested:

- Anticipated equipment needed from TECHS (such as):
 - (Manikin)
 - (Task Trainer)
 - (Standardized patient)
 - (Mixed/Virtual reality simulator)
 - (Simulation Staff Member)

- What Consumable supplies will be required:

- Preferred Location:
 - TECHS North (SON 2nd Floor)
 - TECHS South (MEB 3rd Floor)

- Anticipated Personnel Need (such as):
 - Simulation Technology Specialist
 - Educator/Facilitator/Debrief assistance
 - Curriculum review
 - Case Design

- Level of Personnel Support anticipated:
 - Set-up only (ex. Room setup according to educational plan only)
 - Intermittent support (ex. Supply restock/room changeover)
 - Constant (ex. Operation of manikin or facilitation)

- Type of Room:
 - Exam Room
 - Task trainer room
 - Hospital/ED room
 - Surgical Room
 - Ward hospital room
 - Didactic (lecture space)
 - Apartment/home setting
 - Hallway Space
 - Debrief/Table exercise room
 - In-Situ/Off-campus request

- Is this a research project?

- Are animal derived biologic materials planned for use?

- Will video recording of the session(s) be needed?

The simulation center will supply basic PPE: isolation gowns, face shields, and nitrile gloves as needed for the session.

Standard patient care equipment will be available as part of the session and room use: simple IV start kits, some simulated medication vials, airway and oxygen devices.

All specialty tools and equipment that are not available from the simulation center will be the responsibility of the Department(s)/Client planning the activity. The simulation center can assist with purchase of equipment, but an eight weeks lead time is required for processing due to the chance of backorder and shipment delays. Any requested purchases over \$15,000 will require a ten-week lead time for approvals from Purchasing Department. All purchases will require a signed order form to verifying the correct equipment is being ordered with a FOAP before a purchase can be initiated.

Requests will be routed to director of administration for initial review through the ElPasoTECHS@ttuhsc.edu email account by completing the online request form.

- All simulation activity requests should be submitted at least six weeks prior to implementation.
- A curriculum review with a simulation specialist must occur at least four weeks prior to implementation.
- A simulation run-through must be performed at least two weeks prior to the scheduled activity. Staff and educators will review the written case and sign-off on the equipment and implementation plan.
- No activities requiring personnel or equipment will be allowed if the above timeline is not met.
- With a minimum of two-days lead time, equipment may be checked out for use on campus, but no staff or room scheduling can be accommodated.
- Last minute supply needs or session requirements will be addressed as feasible by staff but are not guaranteed (please be sure to anticipate all aspects of case delivery during the run-through at least two weeks in advance).
- All requests will be accommodated based on availability and are subject to adjustment.
- The final scheduling and assignment of the time, the room, equipment, and personnel availability will be confirmed by director of administration or technical operations prior to the next scheduling period opening (ex. three months, or six months before the scheduled activity).

For questions please contact the Senior Director of administration or technical operations.

TECHS Scheduling Policy

I. Purpose

This simulation center scheduling policy is to ensure there is appropriate requesting and equitable utilization of simulation, space, equipment, and personnel. The guidelines for this policy are based on the TTUHSC Board of Regents system rules for building utilization ([OP 08.07](#)), and the TTUHSC El Paso classroom scheduling policy ([HSCEP OP 61.23](#)). The simulation space of the Training and Educational Center for Healthcare Simulation (TECHS) is classified as classroom lab space by facilities management and the scheduling and use of this space is under the administration of the TECHS directors of administration and technical operations who will be the ‘coordinators’ for classroom laboratory and class laboratory support spaces in TECHS North (2nd floor SON) and TECHS South (3rd floor MEB).

II. Policy Statement

The directors of TECHS will work with the TTUHSC School of Medicine, School of Nursing, and School of Dental Medicine, and other campus or regional educators to ensure timely and appropriate scheduling for all student and non-student learner activities.

Scheduling Priority will be considered in the following order:

- 1st Graded activities or testing for students
- 2nd General curricular offerings for students
- 3rd Testing activities for Graduate Medical Education (GME)
- 4rd Curricular offerings for GME programs
- 5th Student organizations or non-curricular offerings for campus users including Continuing Medical Education courses for faculty
- 6th Educational activities for non-TTUHSC El Paso learners
- 7th All other activities

Scheduling criteria will be opened using the following time scale:

- TTUHSC El Paso for credit classes, one year in advance
- TTUHSC El Paso classes not for credit, six months in advance
- All other activities three months in advance
- No learning activities can be scheduled with less than one month’s notice (special consideration may be given to remedial courses)

*Activities with the same learner type are subject to modification until the next learner group scheduling period is opened.

*Simulation scenario review meetings (“run-through”) will be held at least two weeks in advance at which time the equipment requests and objectives will be reviewed for alignment. This will allow confirmation of planned room set-up, equipment, and personnel requests.

*Standardized patients will not be trained more than two weeks in advance of an activity to avoid confusion or training decline.

*Changes that are made, or equipment that is requested within three days of a scheduled scenario may not be accommodated.

If a conflict should arise, the groups will be contacted by TECHS director to plan a mutually agreeable solution.

*In the case that a conflict may not be resolved following this discussion, a group of three Steering Committee members with no relation to the involved groups will be convened to review and recommend a solution; and as a final resolution the conflict will be resolved by the Vice President for Academic Affairs.

Specialty equipment needs or unique logistical requirements will be considered on a case-by-case basis.

Tours should be scheduled by completing the TECHS Tour Request Form at: (https://elpasottuhsc.co1.qualtrics.com/jfe/form/SV_daQ5wbrxOF7QiNf). No tours will be allowed in areas with graded activities or testing scheduled. For more details see **Error! Reference source not found.** on page 22.

Simulation space will be made available to all TTUHSC campus groups as available and as supported by student fees, or other financial/in-kind support. Learner groups must provide their own educator for activities. Some faculty instruction and debriefing assistance may be available separately, but will be related to general medical care and will not be discipline specific. Specialty consumable supplies must be provided by individual learner groups. Otherwise, regular consumable supplies will be supported through student fees, or department purchase as appropriate. TECHS may be able to supply some equipment such as standard personal protective equipment (PPE) without additional fees assessed. If a department or group would like to have TECHS assist with purchasing of supplies for sessions, a detailed equipment list (ex. Including part numbers and vendor/product website) must be submitted to the Business Manager a minimum of eight weeks in advance of the activity. The purchases for the requesting department or group by TECHS will be made using a FOAP that belongs to the requesting department.

Simulation offerings or equipment with a per-use subscription fee must be supported by the program utilizing the service.

Sessions canceled with less than one calendar month notice will be assessed a \$50.00 fee, cancellations with less than one-week (five working days) notice prior to the event will be assessed a \$100.00 fee. Cancellation charge is due to space utilization that may have been used for other groups (A FOAP will be required on the request form before scheduling is to be completed). This FOAP will be charged in the case of cancellations within the allotted time. Consideration will be given to cancellations that are beyond the control of the department or group.

TECHS will hold scheduling groups accountable for SP payments if cancellation occurs with less than 24-hours notice.

With a minimum of 48-hours lead time, equipment may be checked out for use on campus but no staff or TECHS supported scheduling can be accommodated.

Utilization exceeding capacity or regularly scheduled activities above full utilization as defined by class lab facilities planning guidelines may be subject to administrative review. This review will be with TECHS director, campus administration, and the relevant department or group.

III. Procedure

TECHS Educational Session Scheduling Procedure

Scheduling requests for curriculum activities can be submitted via the online TECHS Simulation Session Request form (https://elpasottuhsc.co1.qualtrics.com/jfe/form/SV_3wr7J1IbtakUPB3). The use of a multi-activity [Scheduling Template](#) such as the one available from the TECHS website (https://elpaso.ttuhs.edu/TECHS/_documents/Scheduling_Template.docx), is another option to describe large multi-session courses. This completed form should be emailed to ElPasoTECHS@ttuhsc.edu.

Email acknowledgment of submission receipt will be provided within two-business days. The final scheduling and assignment of the time, the room, equipment, and personnel availability will be confirmed by director of administration or technical operations prior to the next scheduling period opening (ex. three months, or six months before the scheduled activity). The activity will then be scheduled in the TECHS scheduling system. The schedule will contain the name of the activity, the room number, the curriculum contact, and the curriculum objectives of the activity. The activity will be scheduled in the most appropriate room for the planned activity using the TECHS Scheduling Policy and room capacities to guide recommendations.

The smallest available room needed to meet the educational objectives and physical/logistical requirements of the learning session should be planned.

Once physical availability has been confirmed, the Senior Director of administration or technical operations will reach out to the simulation activity contact to schedule a run through and review logistical and technical needs. A simulation run through must be conducted a minimum of two weeks in advance of any immersive simulation activities and one week in advance of any task training activities.

TECHS General Policies, Procedures, and Guidelines

Access

I. Purpose

Access to the simulation areas at TECHS is restricted to TECHS staff, and course directors/faculty who have regularly scheduled sessions.

TECHS can be accessed via Proximity Badge activation and/or key. The purposes of this process is to:

1. Limit access of TECHS to unauthorized persons
2. Protect the safety of all persons who utilize TECHS
3. Ensure protection for TECHS properties against theft or damage

II. Policy statement

TECHS Executive Director can authorize access to TECHS by coordinating with building managers and campus police department. TECHS directors will have 24/7 access via proximity badge. Course directors, faculty instructor, SPs and TECHS staff will have access to the facility during working hours. All other faculty/instructors are required to contact one of the TECHS directors for access.

III. Procedure

1. Faculty/instructors/educators who have regularly scheduled sessions at TECHS can contact the TECHS Executive Director to request access to TECHS via ID badge-activation.
2. Learners are not permitted to be left in TECHS unsupervised. The scheduled faculty member/instructor/educator must be available throughout the teaching session.
3. All faculty/instructors/educators using TECHS are required to follow the procedures to ensure the safety and security of TECHS, learners, and staff.
4. Learners and/or faculty/instructors/educators are accountable for any damage to equipment they are using while at TECHS.

Confidentiality and HIPAA

To preserve the realism of the clinical scenarios used at TECHS and to provide an equitable and excellent learning experience for each learner, all participants at TECHS are required to keep the simulation activities and case materials confidential. Learners must treat standardized patient (SP), role play partner(s), simulator manikin or partial task equipment like a real patient. All participants at TECHS are expected to uphold all requirements of the Health Insurance Portability and Accountability Act (HIPAA) and any other federal, state laws, and TTUHSC rules and regulations of confidentiality. Any violations must be reported to a TECHS director or course director. Many activities at TECHS are video-recorded and/or photographed for learning, training or debriefing purposes. The videos are stored on the TECHS server; and students can view or request a copy of his or her performance. Requests for review should be submitted to TECHS director and the applicable course director. TECHS protects the confidentiality of its employees, faculty, learners, and standardized patients. Any use of the video outside of the learning purpose is strictly prohibited (see Video Recording for more information about video record retention).

Virtual Session Confidentiality

If virtual sessions are planned, only institutionally approved conferencing software (ex. Webex or Zoom) should be used. Individual session scheduling with a unique link is the preferred method for scheduling. If open personal room scheduling is planned, a moderator, such as a program coordinator, must be present to review in-room attendance and expel any non-authorized participants. The use of approved conferencing software will ensure that login information is in compliance with TTUHSC El Paso IT security requirements and will give notice to participants of planned session recording. The same rules of confidentiality apply to virtual sessions with neither learners, faculty, or staff sharing case materials or actions beyond the designed context of the case.

Students with Disabilities

All requests for accommodation of students with disabilities (e.g., extra time and/or separate room for exams of standardized patients, use of special supplies (e.g. different size of gloves), reduced caseload, prolonged access to simulators, etc.) are evaluated on a case-by-case basis. The director of Disability Support Services will communicate the specific needs for students with disabilities for a specific course with course director/co-director and work with him/her on anticipating appropriate accommodations. The course director/co-director will provide timely information regarding the accommodations to the director of TECHS for the purpose of purchasing items and/or modifying services. The director of Disability Support Services will communicate to the student regarding the period of time that it can take for purchasing supplies (potentially eight weeks) and work on any temporary accommodations that can be put into place until then. Learning activities or events for students with disabilities organized at TECHS must be supervised by a faculty member from the scheduling department. In addition, the Director of TECHS and the course director/co-director will refer any student who discloses a disability or would like accommodations to the Office of Student Services at 915-215-4370 or Office of

Disability Support Services at 915-215-4370.
(<https://el Paso.ttuhscc.edu/opp/documents/51/op5104.pdf>)

Terminology

Use of healthcare simulation terms at TECHS shall follow the definitions within the Healthcare Simulation Dictionary 2nd Edition. (<https://www.ssih.org/Portals/48/Dictionary/Dictionaryv2.0.pdf>)

Fiction Contract

During orientation all learners will be introduced to the simulation fiction contract. This term will be used to describe the limitations of creating an artificial healthcare environment. TECHS faculty and staff acknowledge that we can only approximate human patient interactions, human physiology, and interactions with equipment (human factors) in a simulation environment. Learners agree to participate in simulation activities as though they were real healthcare interactions and activities understanding that some aspects of care will be fictionalized. TECHS will strive to provide the most-realistic educational experience possible and learners agree to provide feedback on how to improve cases and realism.

Practicing Examinations and Procedures

TECHS has numerous tools to support experiential learning. These tools include task trainers, manikins, virtual reality trainers, and standardized patients. In some activities multiple modalities may be combined to enhance the training experience. Learners should not practice invasive examinations or skills on each other.

On some occasions, learners may be allowed to demonstrate basic non-invasive skills or examination techniques on each other. This may include skills such as otoscopic or ophthalmoscopic examinations, blood pressure measurements, simple auscultation, or ultrasound examinations. Examinations that require removal of clothing or exposure of the chest and abdomen are discouraged. If a learner is uncomfortable with any portion of a proposed activity they are encouraged to notify the course director or any member of the TECHS staff immediately.

Mask use and Personal Protective Equipment

TTUHSC El Paso has reduced the requirements for mask use on campus. Mask use at TECHS will similarly not be enforced unless this is a requirement by TTUHSC El Paso Clinics (refer to [clinic policy](#) for guidance). Mask use is still expected should any individual have symptoms of a respiratory infection or was exposed to a known COVID infected person and was not wearing a face covering or mask at that time within the past 10 days. Notification of COVID exposures is still requested through the TTUHSC El Paso hotline (915) 215-SICK (7425).

Examination of areas on the head and neck are an important part of the physical exam that must be mastered by healthcare practitioners. This portion of the examination has been limited in emphasis during the pandemic years, but is again allowed as part of the routine physical examination. This may include palpation (touching) of the side of the neck and head to train lymph node and thyroid evaluation. Similarly, use of an otoscope/ophthalmoscope to look in the eyes, ears, or mouth is a skill that requires some development of technique that is best learned by routine practice. We have implemented several

tools to allow virtual training of the eye and ear examination, but brief examination of the eye, ear, and mouth may be requested as part of the routine physical examination. Glove use in clinical environments is expected by care providers if there is the potential to encounter blood and body fluids, including contact with mucous membranes and non-intact skin. This practice will be encouraged in the simulated setting as well.

Educators should describe what components of the physical examination are expected in their curricular planning, and this information will be shared as part of the role expectation with standardized patients (SPs). The ultimate decision of what portion of the examination an SP allows will remain with them.

Session Feedback

Session feedback will be sought for all courses offered through TECHS. The course director for a simulation activity may obtain feedback as part of their larger course or curriculum evaluation if they agree to share this feedback with the TECHS directors to allow for continued quality improvement. If a course director does not have a system or plan for collecting learner feedback, TECHS staff will provide a QR code survey link for display at the conclusion of the simulation activity to automate the feedback collection from learners about their educational experience at TECHS.

The TECHS Session Survey is available through this link:

https://elpasottuhsc.co1.qualtrics.com/jfe/form/SV_8u0DmCPZhQPc9ka



The information from these feedback mechanisms will be reviewed monthly during the TECHS staff meeting. Identified deficiencies will be noted on the simulation case outline/planning document to assist in improving future delivery of that simulation.

TECHS will work with the Office of Institution Research and Effectiveness (OIRE) to ensure surveys are designed to collect necessary data without duplicating existing evaluation processes.

Simulation Research

TECHS Research Mission:

To critically assess the effectiveness of the education and/or tools used to deliver healthcare simulation with the goal of sharing this information to improve the quality of continued training and educational opportunities offered both at TECHS and globally.

If research is planned to be conducted at TECHS, the PI should contact the Director of Research for approval. TECHS must be listed on the IRB application within [Iris](#) as a secondary research site.

Information to include in this notice should contain:

- Principal Investigator (PI) of the study
- Title of the research project
- IRB approval/submission number

When scheduling a session at TECHS using the online schedule request form, a selection will be available to indicate if research is planned. If this option is selected, the Director of Research will be notified and will reach out to you for additional information and to offer assistance with your research planning.

TECHS will follow all institutional and governmental requirements for research and research training requirements. Additional resources for campus research are available here:

Office of Research - <https://el Paso.ttuhs.c.edu/research/>

Office of Sponsored Projects - <https://el Paso.ttuhs.c.edu/research/osp/default.aspx>

Plans to submit for extramural funding should direct a notice of intent through the Office of Sponsored Projects in the [CAYUSE](#) system a minimum of 30 days before application deadlines.

Disclosure of a novel device or invention can be made through the TTUHSC El Paso Office of Research Commercialization here -

<https://www.depts.ttu.edu/research/commercialization/inventors/submitdisclosure.php>

Code of Ethics

All staff and educators who utilize TECHS are expected to abide by the Healthcare Simulationist Code of Ethics (<https://www.ssih.org/Portals/48/SSH-CodeOfEthics.pdf>). This document has been adopted by the Steering Committee as a guide for how staff and educators will conduct themselves when providing simulation-based education. This adoption had been registered with the Society for Simulation in Healthcare. This document is included in Appendix A – Code of Ethics.

Safety, Injuries, Emergencies, Closure

I. Purpose

Injuries and emergencies can happen even in a simulation environment. The policies here will provide guidance for staff and users of the simulation center if an actual injury or emergency is encountered.

II. Policy

Infection Control

All learners and instructors who participate in clinical simulation sessions with standardized patients and manikin simulators must take all standard precautions and transmission specific precautions such as airborne, droplet and/or contact. If any learner, faculty or staff member develops sign or symptom of a potential infectious/contagious medical condition such as red eyes, cold or influenza symptoms, they must inform the course director or supervisor and refrain from participating in the simulation session. Hand washing and sanitizer must be used before conducting examination of the SP. Gloves will be worn according to expected real clinical guidelines with all SP, manikin or task trainer interactions.

Latex Warning

Although TECHS doesn't use latex gloves, it's not a latex-free facility. Therefore, learners and instructors need to recognize that some equipment or materials at TECHS may contain latex. Individuals with known sensitivity to latex need to alert either their course director or any member of TECHS; and refer to the publications on latex allergy precaution and prevention.

Incidents and Emergencies

TECHS staff members are encouraged to obtain basic life support training for both adult and pediatric patients. If an incident occurs, staff must safely secure the patient, call for help and 911, recognize signs of acute airway obstruction or cardiac arrest, and administer CPR. An Automated External Defibrillator (AED) is stored near the elevator of both TECHS North and TECHS South. For injuries, staff should follow guidelines for reporting employee injuries according to ([OP 70.13](#)) or non-employee injuries according to ([OP 75.14](#)).

Basic First-Aid kits are available in the administrative offices of both sites.

Worker's Compensation forms for TTUHSC El Paso can be found here:

<https://www.texastech.edu/offices/risk-management/workers-compensation.php>

All completed forms should be emailed to ELPHRBenefitsAdmin@ttuhsc.edu

If non-emergent medical care is needed, employees should find an in-network provider here:

<https://www.careworks.com/>

- Select find a provider
- Select CareWorks TX HCN as the network
- Search by Name/Address/Region

Supervisor/Department Admin. MUST complete & sign:

- First Report of Injury/Illness Accident
- Supervisor's Investigation of Employee's Accident/Incident

Employee MUST complete & sign:

- CareWorks Worker's Compensation Network Acknowledgement
 - SORM Employee's Report of Injury (SORM 29)
 - SORM Authorization for Release of Information (SORM 16)
 - SORM Witness Statement (SORM 74) (*only if applicable*)
 - SORM Employee's Election Regarding Utilization of Sick and Annual Leave (SORM 80) – Select Election 1, Election 2 *or* Monthly TIB Election.
- **If choosing Election 1, please also circle A, B, or C.****

Sharps and Needles Stick Injuries

Sharps disposal is scheduled quarterly and is coordinated with TTUHSC El Paso Safety Services. If additional service is needed or other hazardous materials need to be disposed of, contact (915) 215-4820.

All sharps are to be handled safely and disposed properly according to the CDC guidelines. In general, most needle sticks that occurred in clinical simulation centers were between the operator and the simulator. However, in the event of a needle stick or a sharp object related injury, the injured individual must notify immediately their faculty/staff instructor or a member of the TECHS staff. The faculty/instructor, or supervisor of the individual who was stuck will fill out the online incident report. If this individual is unavailable immediately, the Unit Safety Officer (USO) for TECHS can assist with completing this report. This report is valid for both students and employees.

Online incident report link for TTUHSC El Paso (please provide as much detail as possible):

<https://ecampus.elpaso.ttuhs.edu/occurrencereport>

If the injury is related to biologic material with the possibility for highly infectious agents such as HIV or HBV, the institutional procedure for “Needlestick Injuries/Exposures To Body Fluids, Care & Follow Up” will be followed (<https://elpaso.ttuhs.edu/opp/documents/EP-7/ep-7-03.pdf>).

For employees, a Workers Report of Injury form must be completed:

<https://elpaso.ttuhs.edu/opp/documents/70/op7013a.pdf> (supervisor)

<https://elpaso.ttuhs.edu/opp/documents/70/op7013b.pdf> (for employee)

Security and Fire Safety

Doors at TECHS are locked, except during standard business hours 8am-5pm Monday-Friday; and only authorized individuals have access to the simulation center. TECHS employees or course coordinators will inform all learners and instructors of the locations of the emergency exits during the Simulation Orientation. In case of a fire, all persons must evacuate the building according to the instructions and directions of the Emergency Warning System and the TECHS Unit Safety Officers. Fire extinguishers are located throughout the hallway.

Campus/Center Closure and Inclement Weather Policy

In the event of a local incident or regional weather event that would prevent safe and normal attendance to courses offered at either TECHS North or TECHS South, the director of TECHS may declare a cancellation or delayed start to courses.

For weather related closures, the TECHS director will follow the information and guidance of the TTUHSC El Paso president. All courses, will follow the guidance for educational programs, even if an offered course has no TTUHSC El Paso students.

If a cancellation or delay is issued, the Executive Director of TECHS will notify each director by phone to discuss a revised scheduling plan. If a campus closure or delayed start is announced by the TTUHSC El Paso President, and the Executive Director for TECHS is not reachable, any of the directors for TECHS, may begin the process of alerting affected staff, and course directors. Course cancellations or delays will be reported to the course director listed on the course scheduling form, via email, as soon as the decision for delay or cancellation is finalized. This communication will also include instructions on when and where to meet to review how to modify or adjust the previous course plan to ensure learning opportunities are maintained as much as possible.

It will be the responsibility of the course director/faculty listed on the session scheduling form to notify any learners of cancellations.

Technology and Data Storage

I. Purpose

TECHS faculty and staff, TTUHSC El Paso educators, and learners rely on technology for the delivery of educational content, operation of equipment, documentation of learner performance, and storage of material to support simulation activities. Technology allows access to and the ability to share information easily, with individuals both on and off campus. The policies in this section describe the resources and systems at TECHS any their regulations for use to support the educational mission of the simulation center.

II. Policies

Social Media

Rationale:

Medical education and simulation education have a large amount of material presented through channels of free-open access medical education (FOAMed). Adding this type of technology presence will allow TECHS to promote activities within the center, connect to other groups around the world, and share the expertise and experience of TECHS educators, staff, and learners. Simulation currently produces and shares information through social media and professional societies and websites, such as: HealthySimulation.com, the Society for Simulation in Healthcare (SSH), the Gathering of Healthcare Simulation Technology Specialists (SimGHOSTS), the International Nursing Association for Clinical Simulation and Learning (INACSL), and the Association for Standardized Patient Educators (ASPE). Contributors to these organizations and other similar simulation sites through blogs, videos, and social media experiences enhances the knowledge of educators and operators for simulation-based education centers around the world. TECHS strives to be active in sharing the expertise of its staff through Twitter, YouTube and other outlets. This presence should follow the guiding principles of sharing evidence and experience-based best practice regarding the use, delivery, and innovation of simulation-based education. This presence should also serve the goal of enhancing the public and professional image of TECHS as a leader in simulation-based education. Having a social media presence for the center will allow interaction with other campuses through real-time conference learning and live content sharing of activities.

TECHS has two social media outlets approved through the Office of Institutional Advancement. A YouTube account under the name “TECHS El Paso” and a Twitter account under the name “@TTUHSCEPTECHS”. Both accounts are administered and linked to the external email account ttuhsceelpasotechs@gmail.com. The account login and access are controlled by the TECHS Executive Director and Senior Director of administration. The login information for the accounts is also provided to the managing director of marketing and communications at the TTUHSC El Paso Office of Institutional Advancement.

YouTube: <https://www.youtube.com/channel/UCImzpAIsP3VzuCIJHm352SA>

Twitter: <https://twitter.com/TTUHSCEPTECHS>

To keep the material presented appropriate to simulation and medical education and practice, the following procedures will be followed:

- Administration of the account should be internally limited to the directors of TECHS.
- The account can also be viewed and managed by the Texas Tech University Health Sciences Center El Paso Office of Institutional Advancement. Login credentials will be changed if anyone with access leaves the institution or department within one business day. Should the login credentials be changed, the information for account administration will be forwarded to managing director of marketing and communications within two business days.
- Posting of material to on any TECHS platform that is viewable to the public must be under the direction of either the Executive Director of TECHS or one of the TECHS directors.
- All posts must be approved by a minimum of two TECHS staff; or at the discretion of the Office of Institutional Advancement per their protocol and directive.
- Posts must relate to:
 - Medical education
 - Current medical practice
 - Simulation techniques
 - Educational innovation
 - Research
 - Opportunities or events on the TTUHSC El Paso campus
 - Faculty/staff highlights or achievements
- Any deviation from these above topics must be approved through the Office of Institutional Advancement or TECHS director prior to posting.

To comply with standard regulations and protocols, posts must not include any religious or political viewpoints. No copyrighted information shall be posted that is not specifically owned by the department or without specific written approval for reproduction of this information. All posts must be HIPAA compliant to include any identifying information for a patient either directly given or implied through the information provided. This account will receive periodic review every 6 months by the TECHS director and can be terminated at the discretion of the director of TECHS or by the Office of Institutional Advancement.

While individuals will sign a consent form acknowledging the use of video and photographic recording of activities within TECHS, specific consent will be sought for the planned usage of identifiable images of individuals prior to use on social media or marketing materials.

Network and Cloud Storage

Rationale:

With the necessity to use electronic documents, media and case files, TECHS staff, course directors, and educators providing instruction at TECHS must follow the following guidelines.

TECHS Staff

TECHS staff must obtain training and have active login access to “Box.” Box is the approved and IT supported network file sharing program for the TTUHSC El Paso campus. Collaborative documents should be saved in the “collaboration” folder of the staff member who created the file and share access to the file with other staff in the center or on the campus who will need access to the material it contains. When requesting review or edits from other staff on a shared file in Box, it is best-practice to send a link to the file, rather than attaching the file to an email to prevent duplication or the creation of separate versions of material.

Once a final version has been created, or if collaboration is no longer needed, the file may be moved to the employee’s “non-collaboration” folder in Box. Once a file is placed in this location, links and shared access cannot be generated.

Internal shared documents for reference about simulation equipment will be stored on the shared Network drive “T”. The access to this shared drive is available by mapping the drive.

In order to store, access, and display files for simulation cases, all approved curriculum materials should be stored on ‘Box’ for easy access in the immersive simulation rooms or to allow remote (virtual) delivery.

TECHS Educators

Course directors and educators who will be teaching at TECHS are expected to share curriculum files that will be needed to operate and run their planned simulation cases with the technical operations staff in time for the simulation run-through. This material can be shared via email or Box link, but will be stored on the TECHS shared ‘Box’ folder to ensure availability of electronic documentation and media during the simulation session.

Video Recording

TECHS uses the video recording system and electronic documentation system LearnSim provided by CAE Healthcare. This system is capable of providing audio and video recording, live streaming, retention, and replay of sessions. Not all sessions are routinely recorded. If this is an expectation of the learning activity, the reason for recording must be described before approval. Common rationale for recording is for review and confirmation of performance during graded sessions, to allow learners to review and reflect upon performance and communication skills, or to assist with debriefing and case discussion. Recording to assist with research and review is also allowed if part of an approved research protocol. Retention of recording will be in accordance with the reason for recording and the specific learner type.

Video recording of students that is performed as a requested component of academic course related simulations will be classified as “Student Coursework” under 15.2.029 according to the Texas State University Records Retention Schedule (<https://www.tsl.texas.gov/sites/default/files/public/tslac/slrn/pubs/URRS%202019-12.pdf>). The retention duration shall be one year past the student’s academic record is closed (AC+1).

Non-graded activities that are not part of academic course work (i.e. formative training for residents, students, or other learners) will be retained for 30-days unless separately requested and approved.

Data Center

TTUHSC El Paso datacenter houses about 400 servers hosting different mission critical applications and roles with a 90% server virtualization ratio. Our datacenter is protected by dual power sources, redundant cooling, offsite backups and network streams fully backed up in order to our support clinical, research, and academic missions.

TECHS Continuing Quality Improvement

TTUHSC El Paso has selected Interprofessional Education (IPE) for its Quality Enhancement Plan (QEP). The primary purpose of Interprofessional Education is to prepare graduates to be leaders in the dynamic health care environment by promoting the knowledge, skills, behaviors, and attitudes required to provide high-quality, safe, individualized care for patients as members of an interprofessional team.

Implementation of the Interprofessional Education (IPE) initiative will focus on four areas:

1. Create an administrative infrastructure to support interprofessional education.
2. Provide faculty development opportunities to support the development and implementation of IPE pedagogies and modalities.
3. Establish a culture of interprofessional education by developing a common foundational IPE learning experience for all students, and supporting integration of additional IPE learning opportunities into existing curricula.
4. Provide the technical expertise and infrastructure necessary to facilitate interconnectivity among individuals even when they are in different geographic locations and/or time zones. In supporting the implementation of the institutional QEP, TECHS will particularly emphasize its role in the last three focus areas; and will develop a specific continuous quality improvement (CQI) program in 5 areas:
 1. Program development and implementation
 2. Learners' feedback & program evaluation
 3. Operation and resources
 4. Training and development
 5. Research

CQI is not an abstract theoretical exercise but a hands-on endeavor by employees who care about their work and strive to improve themselves and their productivity every day. The decisions about what needs to be improved, the possible methods to improve it, and the steps to take for better outcome are all made by each and every member of TECHS and based on observation, feedback, evidence-based literature, and research.

Core Concepts of TECHS CQI

- Quality is defined as meeting and/or exceeding the expectations of TECHS customers.
- Success is achieved through meeting the needs of those we serve.
- Most problems are found in processes, not in people. TECHS CQI does not seek to blame, but rather to improve processes.
- It is possible to achieve continual improvement through small, incremental changes using the scientific method.
- Continuous improvement is most effective when it becomes a natural part of the way everyday work is done.

Consent and Release to Use Image or Information

All users of the simulation center will complete the online consent form to describe their wishes about the use of images or videos taken inside of the center.

https://elpasottuhsc.co1.qualtrics.com/jfe/form/SV_6mPKBQDEWqIIS8J

The information from this form is displayed below.

_____ or my authorized legal representative, hereby give consent for Texas Tech University Health Sciences Center (TTUHSC) employees, students or agents to take and use information about me (including my medical history, if applicable, my name or image or likeness including, but not limited to, photographs, videotaped images, audio recordings, digital (collectively “Images”), or my data or presentation for the purposes checked below.

I AGREE TO USES DESIGNATED BELOW:

(Not including uses for patient treatment or payment.)

	My Name		My Image(s)		My information		My Data or Presentation	
	Yes	No	Yes	No	Yes	No	Yes	No
For educational purposes within TTUHSC								
For educational purposes outside TTUHSC								
For TTUHSC marketing or publicity. (This includes news and social media such as interviews, Facebook, websites, Twitter, YouTube, etc.)								
For publication in journals or on the internet								
Other purpose(s)								

I understand that TTUHSC and its regents, employees, agents, and personnel, acting on behalf of TTUHSC, shall not be held responsible for any use of my name, information and/or Image(s), including any use whatsoever by any outside user or third parties, and I hereby release and hold harmless TTUHSC and its regents, employees, agents and personnel, acting on its behalf, from any and all liability for damages of whatever kind, character or nature which may at any time result from this Consent and Release authorizing use or dissemination in accordance with the above.

I understand that TTUHSC will own the Image(s) of me for the purposes stated above. I do hereby knowingly and voluntarily waive any and all other rights, compensation, royalties, or payment of any kind or character in connection with the use of my name, likeness and/or image(s) as authorized above.

This Consent and Release can be revoked or withdrawn at any time, but such withdrawal or revocation must be in writing and sent to the TTUHSC Institutional Privacy Officer and/or local campus Regional Privacy Offices. Any withdrawal of consent does not affect any information user or disclosed prior to receipt of the written notice of withdrawal.

By signing below. I represent that I have read and understand this “Consent and Release to Use Image or Information” and that is binding on my heirs, executors and personal representative. I am 18 years of age or older.

Signature of Person Named Above Or Signature and Print Name of Authorized Legal Representative

Employee Onboarding process

New TECHS staff will need to get specific access to electronic resources as well as physical key and badge access authorization as part of the process to join the TECHS team. The following items should be completed as part of the new employee process.

- ID Badge from the TTUHSC El Paso Police Department with access to both TN and TS
- Contact Facilities for key to TN and TS
- eRaider setup (contact IT)
- Map Network Drives (contact IT)
- Login to office and simulator PCs
- Add TECHS email signature to outlook
- Printer Access to shared multi-function devices at both TN and TS
 - Map Scanner Access to network drive
 - TN Printer user number (78945)
- Office telephone number and voicemail
 - Customer Support - CustomerSupport.comSvc@ttu.edu
 - TTUHSC VoIP Service – <http://www.texastech.edu/it/commSvs/VoIP>
- Add Photo and name to TECHS website (through [Sysaid](#))
- Box training (through [Sysaid](#))
- Webex (<https://ttuhscep.webex.com>)
- Hours tracking and leave report system (<https://portal.texastech.edu/web/elp/Employee>)
- LearnSim access (<https://learnsim.elpaso.ttuhs.edu>)

Standardized Patients (SP)

Standardized patients are employees of Texas Tech University HSC El Paso. TECHS has trained and developed directives for the standardized patients. Faculty instructors and learners of all levels should be familiar with TECHS policies and procedures related to working with standardized patients in simulated clinical scenarios such as objectives structured clinical examinations (OSCEs). For details about this unique aspect of the TECHS simulation program Please refer to SP Manual.

<https://elpaso.ttuhs.edu/TECHS/Standardized-Patient-Policy-Procedure.aspx>

Standardized patients are able to provide realistic and reproducible representations of patients and disease processes. Educators are encouraged to use these individuals to enhance education during simulation activities.

Consent for Pediatric Patient

TECHS Standardized Patient Program

PARENTAL DISCLOSURE FOR PEDIATRIC PARTICIPATION IN SIMULATION

Please read the statement below carefully. Your signature indicates that you as the Standardized Patient-parent of a minor who may participate in pediatric case simulations, have been informed about these aspects of the standardized patient program and the participation of children in pediatric simulation events.

The function of a Standardized Patient (SP) is to simulate medical scenarios or cases with learners (students) for teaching and/or assessment activities. SPs are instructed, trained and supervised by TECHS staff/faculty. During the scenario or case, the SP should expect to be interviewed, counseled and/or physically examined by the learners (students).

In cases or scenarios where a child is required to portray a pediatric patient, the adult SP-parent or legal guardian of the minor, will be asked to enter an examination room with the child. During the encounter with the medical student, the parent will be asked all medical history questions. The parent may allow for medical student to check for normal range of motion, and/or check for reflexes of the arms and/or legs. Measurement of the head circumference, height and weight may be taken of the child. If an infant is used, the top of the head may be examined, this is called the fontanel examination. During the case or scenario, the parent/guardian will be physically present with their child. If at any point the needs of child require to stop the simulation, they may exit the room and terminate the case/scenario. Cases/scenarios are typically 4 rounds (group of students) lasting 25 minutes each, with breaks in between each case/scenario. All simulations will be recorded for medical education purposes. The recordings will be kept for approximately 5 years, in the TECHS center for use of medical faculty and students for educational purposes. I agree that my child has a cooperative disposition and will be able to participate in a pediatric patient simulation, and will be under my care and supervision throughout the entire case/scenario. I assume complete responsibility for the physical and mental welfare of my child throughout his/her participation in simulation, and I will be responsible to oversee his/her behavior and physiological needs. I maintain full parental/legal guardian responsibilities for my child while on the Texas Tech premises. I agree to hold Texas Tech HSC, Paul L. Foster SOM and TECHS Center free of any liability related to my child's participation in pediatric simulation.

Child's Name

_____(yrs/mo)
Child's Age

Expected Date(s) for child's participation in simulation:

1. _____
2. _____
3. _____
4. _____

Name of parent or legal guardian

Signature

Date

Inventory Handling of Medical, Simulation, and Training Equipment and Medical Equipment Management Plan

I. Purpose

This management plan describes the framework to manage simulation and medical equipment risks and continuously improve program performance. The scope and objectives of this plan are consistent with the TECHS values, vision, and mission to provide quality service to learners, TECHS staff, TTUHSC El Paso faculty, and the community.

II. Rationale

The following objectives will ensure the physical safety of learners, visitors, and staff and prevent the loss of property:

1. Effectively manage simulation and medical equipment risks by using best industry practices
2. Optimize resources by using efficient simulation and medical equipment processes and lifecycle management of equipment
3. Improve staff performance through effective equipment education and training
4. Improve staff and learners' satisfaction by providing a safe physical environment

III. Scope

This management plan applies to all TECHS owned and contracted simulation medical equipment used for training purposes.

IV. Responsibilities

1. Under training and guidance of the TECHS Executive Director, the directors are responsible for developing, implementing, and monitoring this plan.
2. All medical and simulation equipment users must be trained and competent in the capabilities, limitations, safe operation, and emergency procedures for the equipment that they use.

V. Medical equipment elements of performance

This management plan is based on a framework to plan, teach, implement, respond, monitor, and improve. It addresses the essential process for making sure that all simulation and medical equipment used at TECHS is safe and functional.

1. There must be appropriate separation of simulation and actual patient care materials (equipment, supplies, etc.) Actual patient care supplies, equipment and medications are not permissible in TECHS. All simulated medications should be clearly labeled "simulated" and "not for patient care". Simulated medications may be purchased through a vendor or created at TECHS. All simulation equipment is for non-clinical use only. Equipment such as ultrasound machines and defibrillators must be clearly labeled "For educational purposes only". In purchase agreements for this equipment, it is specified that they are used for educational purposes only, and that real patient care use is prohibited.
2. Risk assessment
 - a. The medical equipment risk assessment process focuses on the impact of a particular type of equipment based on four criteria: function, physical risks associated with its use, maintenance requirements, and incident history.

- b. Both proactive risk assessments (e.g., internal performance improvement data; staff, learners, and faculty; environmental monitoring; results of failure mode and effects reviews; professional literature reviews; emergency exercise after action reports; preventive maintenance.) and reactive risk assessments (incident investigations, medical equipment failure investigations, root cause analyses, etc.) are used to identify trends for which corrective action is needed.
 - c. The risk assessment process is also used to manage “gray areas” that do not have a clear resolution.
- 3. Risk management process
 - a. Director(s) and administration works with the simulation specialists to exchange information and educate each other on any risks associated with equipment.
 - b. All simulation-medical equipment risks are evaluated, tracked, and abated on a worst-first basis. Interim measures are implemented when hazards cannot be immediately abated to manage risk and minimize potential harm to learners, staff, and visitors.
- 4. Medical equipment inventory

the following criteria used to create and evaluate the medical equipment inventory:

 - a. Equipment category (full body simulator, A/V, task trainer, virtual reality, computer-based, etc.)
 - b. Maintenance requirements (high/low maintenance requirement)
 - c. Equipment cost
 - d. Warranty
 - e. Frequency of use

The inventory is documented in the Property Management System database.
- 5. Preventive maintenance intervals
 - a. Inspecting, testing, and maintenance intervals are based on function, physical risks, maintenance requirements, incident history, and the manufacturer’s recommendations.
 - i. Technical inspections are conducted prior to use.
 - ii. Safety inspections are conducted annually for equipment where there is no learner contact, semiannually where there is learner contact, and after repairs or modifications have been made to the equipment’s electrical or electronic circuitry.
 - iii. Preventive maintenance checks and services (PMCS) are performed according to the equipment manufacturer’s recommendation.
 - iv. Calibration/verification/certification checks are performed according to the equipment manufacturer’s recommendation.
 - b. Director of technical operations may adjust maintenance schedules for equipment when technical manuals, manufacturer’s literature, or past maintenance experience indicate the need for more or less frequent intervals.
- 6. Safe Medical Devices Act of 1990
 - a. Users are required to immediately notify TECHS staff of all incidents where medical equipment fails during use and results in serious injury.

- b. Users are also required to secure the involved equipment until it can be investigated.
 - c. The TECHS directors are responsible for assembling a team to investigate such incidents. The team may consist of the TTUHSC Unit Safety Officer, a member of the TECHS staff who is familiar with the operation and use of the equipment, and a certified medical equipment repairer.
7. In the event of failure:
- a. Ensure safety of all learners, faculty and staff
 - b. Provide emergency clinical intervention
 - c. Identifying the locations of spare equipment for use when equipment fails
 - d. Reporting simulation-medical equipment failures, user errors
 - e. Evaluate the failure and perform or obtain repair services
8. Initial Inspections
TECHS staff completes a technical inspection (TI) on all new medical equipment, regardless of ownership, before acceptance and issue to the user. The purpose of the TI is to make sure that the equipment meets contract specifications, that it is safe for use, whether to include the equipment on the inventory, and to decide the preventive maintenance strategies and intervals.
9. Operation-critical equipment
- a. Simulation and medical equipment that are critical for the TECHS operation (ex. servers, control room PCs, learner PCs, Learning Space, A/V equipment) including frequent use simulators will receive the highest priority to ensure that 100 percent of this type of equipment is located and appropriate inspections and maintenance is performed on schedule.
 - b. All repairs are prioritized and performed in a timely manner to assure the continuation of training service. In the event of equipment failure, backup devices are available for most critical devices.
10. Operation non-critical equipment
The expected on-time maintenance completion rate these types of equipment is at or better than 90 percent.
11. Annual refresher education and training
Administration will provide equipment and technical support for the training of the TECHS staff on implementing the simulation-medical equipment maintenance program which may include:
- a. Training equipment users
 - b. Verify the capabilities, limitations, and special applications of simulation medical equipment that they operate
 - c. Develop operating and safety procedures
 - d. Develop emergency procedures in the event of equipment failure
 - e. Develop reporting procedures for equipment failures, and
 - f. Develop schedule for equipment maintenance
12. Information collection and evaluation system
- a. Reporting and investigating simulation-medical equipment incidents, problems, failures, and use errors.
 - i. In the event that a device fails, the user shall immediately notify TECHS staff so they can replace and tag the defective equipment.

- ii. Senior Director of technical operations will suggest corrective actions to prevent recurrence.
- b. Annual evaluation
 - i. The directors keep the equipment management plan current by reviewing the plan annually and making modifications based on changes to policies, regulations, use, and standards.
 - ii. The annual evaluation includes an assessment of the plan:
 - a) Scope: Based on the current locations and services offered, the scope of the plan is expanded, reduced or maintained at its present scope (buildings, equipment, people, operations, services).
 - b) Objectives: An annual assessment is made to determine if the objectives are current.
 - c) Performance: An acceptable level of performance is determined by the achievements related to the simulation/medical equipment processes necessary for maintaining a successful operation of TECHS.
 - d) Effectiveness: An acceptable level of effectiveness is determined by attaining success in meeting objectives and producing a satisfactory level of performance.
 - iii. Once the TECHS director approves the annual review, the results are submitted to the Steering Committee for review and approval.
 - iv. The annual review is used as an opportunity to develop or modify programs, plans, and policies; identify and implement additional or more effective controls; and enhance TECHS staff development programs.

Appendix A – Code of Ethics

I. Integrity

- Healthcare Simulationists shall maintain the highest standards of integrity including honesty, truthfulness, fairness, and judgment in all matters affecting their duties. They shall:
- Respect and cultivate an ethical organizational environment.
- Provide, as appropriate, disclosure of simulation activity design assumptions, limitations, alterations, and problems.
- Be explicit and unequivocal about the applicability of specific simulation activities and methods according to the available evidence.
- Work to eliminate unnecessary harm to humans, animals, and the environment.
- Honor privacy rights of individuals and organizations, and uphold the confidentiality of data and outcomes as appropriate.
- Respect and acknowledge all intellectual and property rights and give due credit where appropriate.

II. Transparency

- Healthcare Simulationists shall perform all healthcare simulation activities in a manner that promotes transparency and clarity in the design, communication, and decision-making processes. They shall:
- Adhere to accepted standards in the documentation, analysis, design, development, implementation, and evaluation of simulation activities.
- Disclose any activities that may involve real or perceived conflicts of interest.
- Be explicit about the nature and purpose of the simulation activity, including research activities.
- Restrict simulation activities involving deception, ensuring that deception is minimized to the extent possible and does not involve the concealment of risk or intent to harm or punish.

III. Mutual Respect

- Healthcare Simulationists shall respect the rights, dignity, and worth of all. They shall practice empathy and compassion to support beneficence and non-maleficence towards all involved in simulation activities. They shall:
- Honor the knowledge, skills, values, and vulnerability of learners and colleagues.
- Listen to others' points of view, seeking to understand them.
- Exhibit humane behavior, honor diversity, and foster inclusion, avoiding prejudicial treatment.
- Maximize safety and minimize physical and psychological risk.

IV. Professionalism

- Healthcare Simulationists shall conduct themselves in a manner that upholds the professional standards inherent in healthcare simulation. They shall:
- Demonstrate professional competence and attitudes.
- Exhibit continuous personal and professional development.

- Encourage and develop colleagues and new entrants to the healthcare simulation profession.
- Cultivate opportunities for the advancement of the healthcare simulation profession.

V. **Accountability**

- Healthcare Simulationists shall be accountable for their decisions and actions in fulfilling their duties and responsibilities. They shall:
 - Continuously seek, reflect on, and incorporate feedback.
 - Submit themselves to professional review as required.
 - Be role models of ethical behavior.
 - Exhibit professional conduct that is a credit to the healthcare simulation community, employer, and self.
 - Identify and notify relevant parties of unsafe, unethical, or unprofessional behaviors.
 - Design and use simulations in a way that wisely uses available resources.
 - Maintain vigilance regarding not only desired outcomes, but also potential unintended consequences of the simulation activity.

VI. **Results Orientation**

- Healthcare Simulationists shall serve to support activities that enhance the quality of the profession and healthcare systems. Outcomes are inclusive of all parts of the process of healthcare simulation and are not exclusive to a final product. They shall:
 - Assure the reliable and credible use of healthcare simulation, in line with acknowledged standards of practice.
 - Engage in continuous quality improvement.
 - Create and measure impact across the range of achievable outcomes, including the practice of simulation, human performance, systems improvement, and direct patient results.
 - Incorporate and embed the Code of Ethics throughout healthcare simulation and organizational culture.
 - Use the Code of Ethics to inform ethical practices in relevant fields.
 - Advance public knowledge about healthcare simulation by promoting access and sharing knowledge and experience.

Appendix B – Debriefing

The Society for Simulation in Healthcare Dictionary defines debriefing for simulation as “A formal, collaborative, reflective process within the simulation learning activity ⁱ.” This process is why simulation is believed to work so well as an educational tool. When conducted properly, a facilitator is able to help learners critically assess their actions, understand why they performed the way they did, when they did, and be able to take their knowledge outside of its original context and apply concepts in new and unique situations. The facilitator assists the learner to develop this new knowledge through guided reflection, and this process is distinct from classical teaching through a lecture. While transfer of direct knowledge can and still must occur, it is referred to as feedback and should be constructive and kept to a minimum in this setting. Based on the Standards of Best PracticeTM for simulation published in 2021 by the International Nursing Association of Clinical Simulation and Learning (INACSL), this topic has been named “The Debriefing Process” and includes all aspects of debriefing, feedback and guided reflection.ⁱⁱ

Debriefing is a complex process, and to perform it correctly takes practice, patience and an open mind. One concept that is difficult to understand is that what the learners experience is never wrong. Their actions can be incorrect based on their interpretation of information, or their assumptions may be falsely supported, but each individual’s perceptions cannot be incorrect because that is how they experienced the situation. This is why the setting for debriefing becomes important. Learners may feel exposed or placed under scrutiny during simulation, but it is their ability to candidly share their thoughts and rationale for their actions that will help them find areas for improvement. They must feel psychologically safe and supported in order to participate fully in these sessions. It is therefore important to explain the expectations of the simulation experience and the plan for debriefing in advance. This will help to set the stage for a learning environment where it is safe to make mistakes, show deficiencies and be able to identify and fill these gaps. Individuals will be more likely to share their thoughts if they do not feel that there will be negative consequences for not knowing, and have time to process and understand

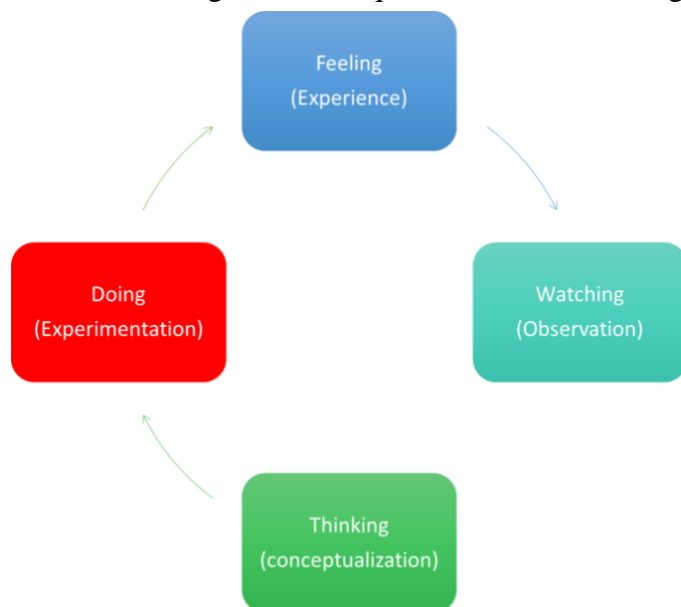


Figure 1 – Kolb Learning Theory

what information they used to determine their course of action. This may not be immediately clear to either the learner or the facilitator, and careful probing can bring to light what led to the outcome, whether positive or negative.

Because perceptions cannot be wrong, but inconsistencies in reproducing the physiology of human disease in a simulated environment are inevitable, introducing the concept of the “Fiction Contract” should be put forth up front. This is the explicit acknowledgement of the limitations of the simulated environment, while still asking learners to immerse themselves into this world with the same care and tact as they would in a

real clinical setting. In return you can offer your best efforts to make the simulation as close to lifelike as feasible. With this contract established, the facilitator and learner can engage in the simulation on common ground.

The learning theory on which simulation is based is from a textbook by David Kolb originally published in 1984. In it, Kolb reviews many models of learning and summarizes finally that “Learning is the process whereby knowledge is created through the transformation of experienceⁱⁱⁱ.” This statement emphasizes that knowledge is created; it is not a fixed entity to be transferred. This process is depicted in Figure 1. The graphic outlines how your experiences shape your understanding and conceptualization through perception, while the ability to go from watching to doing reflects your processing of learning. Each quadrant is interconnected, and a masterful facilitator can help guide you from one stage to the next. Experimentation and experience occurs during the simulation activity, while debriefing is in the realm of observation and conceptualization.

A facilitator’s debriefing abilities can and should be reviewed to assist with development of this skill. The DASH (Debriefing Assessment for Simulation in Healthcare) is one such tool that can help. This is a six category assessment that can be used to assess how the facilitator performs in the following areas^{iv}:

- Establishes an engaging learning environment
- Maintains an engaging learning environment
- Structures the debriefing in an organized way
- Provokes engaging discussion
- Identifies and explores performance gaps
- Helps trainees achieve or sustain good future performance

It is recommended that a grader be familiar with the grading form and its instructions prior to use. An online version is available here (<https://harvardmedsim.org/debriefing-assessment-simulation-healthcare.php>).

A masterful debriefer serves as a guide to the learners that helps them understand why they performed the way they did and how their background, knowledge and case perspectives can improve future performance. Debriefing is different from lecturing or teaching. While factual knowledge deficits can and should be addressed during this time as well, this “feedback” has a different structure and function than debriefing.

There are many debriefing styles and each has features that may be useful to assist with the process of self-discovery and adaptation. Most debriefing styles begin with a chance for learners to share and vent about the experience. This can serve as an opportunity to let emotions that were building up during a case be released. It also allows learners to separate themselves from the case and take a retrospective, if not introspective, view of their actions and the team’s actions. Listening to responses during this open-ended query about “How did the case go?” or “What did

you think about that?” can give great insight into the general sense of the learners’ experiences, if it was not already clear. Perspectives shared during this time can often be used to help start a conversation and should be used in addition to the planned discussion from the case observation.

One tool that can help bring all learners into the debriefing discussion early and initiate active participation is a model of shared storytelling. In this method everyone is encouraged to share a single piece of information about a case. This serves as an icebreaker and supports the viewpoint of every person in the room, an especially powerful feature for interprofessional education (IPE) simulations where learners from different specialties may feel intimidated to speak out. The introductory query is phrased in this style - “Once upon a time there was a patient who...” - and then each individual is encouraged to share one detail or insight to paint a full picture from these individual descriptions. When the case is shared in this manner, it may help both the facilitator and the other learners identify what every individual experienced during the case, even if it was different from their own interpretation or understanding, this often leads to greater discussions during the remainder of the debriefing session.

One of the simplest debriefing methods is Plus Delta. In this method, learners review their performance and identify things that went well and things they would change. The positives are added to the “plus” side of a chart, and the items to change go on the “delta” side. This method is easy for those new to the concept of debriefing and helps reinforce the idea that a discussion of why things went well, to help reinforce positive actions, is just as important as trying to correct negative behaviors.

A second important technique is the use of advocacy inquiry in a method called “Debriefing with Good Judgment.”^v This technique focuses on asking questions in a manner that supports decisions while encouraging deeper discussion about the motives behind each action. In this technique, an observation might be brought forward without judgment and then supported by a comment about its context.

Example:

“You said that circulation was the most important aspect of care in this case.” (advocacy)

“I liked that you obtained IV access early.” (advocacy)

These are both advocacy statements. Then there is inquiry as to why this action happened in this context.

Example:

“What other methods can be used for cardiovascular support...” (inquiry)

The goal of the debriefer is to help the learner move between internal “frames” about perceptions, knowledge, feelings and assumptions and guide them to a change in behavior based on the exploration of these frames. A frame is a specific mindset or reason for interpreting an experience in a particular way. Helping the learner understand how and why they viewed the scenario in the manner they did will help them to move forward in the learning process and externalize experience beyond the specific scenario encountered.

Structured debriefing methods that give a script and help to guide the discussion through the use of a standardized format can help novice facilitators even though the experience may change with each case. One of the most widely used examples of this is the Gather, Analyse, Summarize format. This was popularized with the Pediatric Advanced Life Support (PALS) and Advanced Cardiac Life Support (ACLS) curriculum in 2011 that encouraged using this scripting method for debriefing the scenarios from these two courses. Specific training and information is available from the [American Heart Association](#) website.

The final method that will be described is the scripted debriefing method described by Walter Eppich and Adam Cheng: Promoting Excellence and Reflective Learning in Simulation (PEARLS).^{vi} This script highlights many of the previously discussed features but was built to be flexible. The introduction script describes the goals, expectations and timeframe of the debrief. Then an open-ended reaction phase allows the learners to vent and share thoughts on the case. A brief overview of the case is allowed in the description to ensure all learners have a shared understanding of the case to be reviewed. Then the script breaks into one of three strategies and can flow seamlessly between these three options to allow appropriate coverage of all debriefing points. The three options are the Plus Delta described previously that encourages learner self reflection, advocacy-inquiry in a guided performance review, and finally an option for brief, directed feedback to teach critical points.

The PEARLS script is a good summary review of best practice guidelines for organizing debriefing and it incorporates three of the most commonly utilized debriefing tools: Plus Delta, advocacy-inquiry, and direct feedback. Knowing when these tools should be incorporated will improve the quality of a debrief, and having a better knowledge of debriefing techniques will improve the structure, culture and support of the activity.

One of the difficulties encountered by those trying to conduct debriefing is that few have received formal training. In an evaluation of nursing simulation programs in 2014^{vii}, only 31% of schools used a specific model for debriefing, only half of facilitators had ever received training and only about 1 in 5 had ever been given feedback on their debriefing technique. This is where the simulation technology specialist may be best suited to assist. Every vantage point is a valid one for participating in the debrief because every observation can help give insight into behaviors and reactions. In addition, the person in the control booth may be uniquely suited to critique and provide guidance to the facilitator on how to improve their debriefing technique because they know both the case specifics and have observed the learner performance.

Each simulation experience may feel intimidating to review because so many things can occur in a short session. Addressing everything from subtle body language to procedural technique and medical knowledge should be addressed. Having time to review everything and provide guidance may seem overwhelming. This is an area where I believe the simulation technology specialist may be of assistance. An extra set of eyes is always useful and behavioral interpretation is not something that requires content knowledge. The primary individual facilitating the debrief should be a content expert to ensure that factual knowledge and best practice guidelines are followed. Even so this, individual should use external literature, guidelines and protocols to support the expected care or behavior being addressed. These external references should be incorporated by the facilitator into the case debriefing to support the case being reviewed.

In order to provide a systematic evaluation of the debriefing abilities of your faculty members, suggest reviewing their debriefing with the Debriefing Assessment for Simulation in Healthcare (DASH). This tool focuses on six aspects of debriefing:

- Establishes an engaging learning environment
- Maintains an engaging learning environment
- Structures the debriefing in an organized way
- Provokes engaging discussion
- Identifies and explores performance gaps
- Helps trainees achieve or sustain good future performance

The DASH tool provides a scoring system and information on what facilitators should strive for in each of these categories. This set of tools can be found [here](#).

The only way to get better at debriefing is to practice; but reviewing the methods used by others and a careful reflection of your own sessions can help. Multiple debriefing methods may be appropriate for any given scenario, but some may be better suited than others depending on the learner type, experience, or knowledge/behavior to be addressed. Becoming adept at using a single method is a good place to start, but with increasing expertise transitions between methods can improve the quality of the debriefing. Using the expertise and observations of every person in the simulation will help to give a more complete perspective. I use simulation technology specialists, standardized patients and embedded participants to assist with debriefing discussions regularly and support and encourage this practice.

ⁱ Lioce L., ed *Healthcare Simulation Dictionary 2nd ed.* 2020

ⁱⁱ Decker, S., Alinier, G., Crawford, S. B., Gordon, R. M., Jenkins, D., & Wilson, C. (2021). Healthcare Simulation Standards of Best Practice™ The Debriefing Process. *Clinical Simulation in Nursing*, 58, 27-32.

ⁱⁱⁱ Kolb D. *Experiential Learning: Experience as the Source of Learning and Development*. 1984; Vol 1 Englewood Cliffs. In: NJ Prentice-Hall

^{iv} Brett-Fleegler M, Rudolph J, Eppich W, et al. Debriefing assessment for simulation in healthcare: development and psychometric properties. *Simulation in Healthcare*. 2012;7(5):288-294

^v Rudolph, J. W., Simon, R., Rivard, P., Dufresne, R. L., & Raemer, D. B. (2007). Debriefing with good judgment: combining rigorous feedback with genuine inquiry. *Anesthesiology clinics*, 25(2), 361-376.

^{vi} Eppich, W., & Cheng, A. (2015). Promoting Excellence and Reflective Learning in Simulation (PEARLS): development and rationale for a blended approach to health care simulation debriefing. *Simulation in Healthcare*, 10(2), 106-115.

^{vii} Fey, M. K. (2014). *Debriefing practices in nursing education programs in the United States* (Doctoral dissertation).