As a resource center, jointly supported by The University of New Mexico School of Medicine and the UNM Hospital, the BATCAVE follows the policies and procedures of the affiliated institutions. This document outlines the Center’s supplemental Policies and Procedures.

Basic and Advanced Training – Computer Assisted Video Experience

Version: 1.2.19
Authors: John Rask, MD and Lisa Trujillo, RN
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1. General Information
   a. LOCATION, CONTACTS, HOURS
      Location:
The UNM BATCAVE Simulation Education and Community Training Center is located in the basement of the Clinical and Translational Sciences Center (CTSC) building. The physical address is:
      2211 Lomas Blvd. NE
      Clinical and Translational Sciences Center, B-50
      Albuquerque, NM 87106

      Contacts:
      Reception/Registration
      Margaret Mares- 272-0494

      Center Manager-
      Lisa Trujillo- 272-3362

      Educational Specialists-
      Luke Esquibel/Loren DeJong- 272-0978

      Hours of Operation:
      Monday to Friday; 0730-1630

   b. OVERVIEW, MISSION, AND VISION

      Overview:
      The B.A.T.C.A.V.E. (Basic and Advanced Trauma, Computer Assisted Virtual Experience) Simulation Center is a nationally recognized simulation-based education facility jointly supported by the UNM School of Medicine, and the UNM Hospitals. BATCAVE users include nurses, physicians, residents, medical students, PA’s, nursing students, and hospital personnel.

      Our Mission:
      □ Deliver life support classes and competency-based education and assessment to all UNM health care providers and community members
      □ Support and facilitate simulation-based learning, assessment and research for the UNM Health System
      □ Provide outreach, education and service to the people of New Mexico
      □ To provide programs at the highest national standards
Our Vision:
To improve quality, safety, and learning through innovative multidisciplinary health care education.

Our Values:
Curiosity, Respect, Commitment, Honesty, Safe Learning Environment, Clinical Culture of Safety, Personal Development, Skills Advancement, Focus on Teamwork, Effective Communications, Efficiency, Fiscal Responsibility

c. DIRECTORS

Director of the BATCAVE:
Ensures that the Center is aligned with the mission and educational objectives of the UNM-HSC and meets the needs of the faculty and learners. S/he develops the BATCAVE strategic plan and budget and oversees their implementation in coordination with the Senior Associate Dean for Medical Education. S/he establishes and maintains standards and processes for educational program and faculty development and quality improvement. S/he forges partnerships within and external to UNM to increase utilization and ensures all simulation curriculum is developed in alliance with institutional risk reduction policies and aimed at improving patient safety. S/he serves as the primary administrative officer for BATCAVE HSC staff.

Administrative Co-director of the BATCAVE:
Facilitates coordination of BATCAVE activities with the needs of the UNMH. Also acts as the primary representative of the UNMH in developing the BATCAVE MOU and overseeing UNMH affiliated BATCAVE staff.

Center Manager
Oversees the day-to-day activities of the Center such as the schedule, staff, learners, and budget. Develops the strategic plan, capital equipment prioritization, and budget and oversees implementation in coordination with the Executive Director.
2. Batcave Location and Layout
The BATCAVE is located in the basement of the UNM HSC Clinical and Translational Sciences Center Building (see diagram- BATCAVE spaces are in blue). The facility occupies ~5800 sq. ft. and includes 2 lecture spaces (each accommodating 25 students), 5 high fidelity simulation labs with debriefing rooms and a number of breakout and partial task training spaces.
3. Batcave Governance

The BATCAVE (BC) is an educational resource facility dedicated to the support of simulation–based education and training. The primary charge of the center is to provide support for clinical education of UNMH resident and clinical nursing programs. UNM School of Medicine Students, PA Students, and other healthcare professions programs are also hosted there. Community outreach programs are supported as time and space permit.

The facility is run under a memorandum of understanding (MOU) between the UNM Health Sciences Center (HSC) and the UNM Hospital (UNMH) with shared administration through both HSC and UNMH. The MOU defines the relative financial responsibilities and commitments of each of the organizations. The MOU is revised, reviewed and agreed to by senior administration of both organizations annually for each fiscal year.

The BATCAVE Director is charged with management of the facility, oversight of all facility finances, strategic planning, submission of annual reports, integration of programs with all user groups, development of faculty policy and development guidelines, provision of simulation educator training, research project development and support, outreach and liaison support for HSC affiliated programs (e.g. IHSC, EMS Academy, Diversity Office) and simulation programs throughout the state as needed. Input and direction are provided by the Batcave Education and Research Oversight Committee (BEROC) and Strategic Advisory Group (SAG) as noted below.

Day-to-day activities are run by the Center Manager in coordination with the Director.

The faculty for the majority of programs come from the respective user groups – UNMH nursing, respiratory therapy, residency programs, and other UNM-HSC faculty.
UNM BATCAVE Organizational Chart

Chancellor Health Sciences and Dean of UNM SOM
Paul Roth, MD

Executive Vice Dean UNM School of Medicine
Martha McGrew, MD

Craig Timm, MD
Senior Associate Dean for Education

Executive Director, Nursing Education & Research UNMH
BATCAVE UH Administrative Director
Melissa Johnson, RN

CEO UNMH
Kathleen Becker, JD MPH

CNO UNMH
Sheena Ferguson, RN

Executive Director, Nursing Education & Research UNMH
BATCAVE UH Administrative Director
Melissa Johnson, RN

Director, UNM BATCAVE
John Rask, MD

BATCAVE Staff
Lisa Trujillo, RN – Simulation Educator, BATCAVE Center Manager
Luke Esquibel, EMT – Simulator Educator/Technician
Loren DeJong, EMT-P – Simulator Educator/Technician
Danny Delgado, RN – Simulator Educator, ACLS Coordinator
Margaret Mares – Admin Asst/Registrar
Garret Duke- BATCAVE Attendant
Brenda Sanchez – Program Tracking, Data Collection/Management and Webpage Maintenance

BATCAVE Strategic Advisory Group-
Timm, McGrew, Gates, Rask, Johnson, Trujillo, Chang, Becker, Ferguson, Crowell

BATCAVE Education and Research Oversight Committee
SOM Faculty
UNMH Staff
Batcave Committees and Processes

**BATCAVE Strategic Advisory Group**

**Composition**
- HSC BATCAVE Medical Director- John Rask MD (Chair)
- UNMH BATCAVE Administrative Co-Director- Melissa Johnson RN
- BATCAVE Manager- Lisa Trujillo RN, MSN
- UNMH Chief Nursing Officer- Sheena Ferguson RN
- UNMH Finance- Tracy Leete
- Senior Associate Dean for Education- Craig Timm, MD
- HSC Education Director of Finance- Kristen Gates
- UNM Health System Chief Quality Officer- Richard Crowell MD
- Executive Vice Dean – UNM SoM- Martha McGrew MD

**Ex Officio Members**
- Chancellor for Health Sciences and Dean, School of Medicine
- CEO, UNMH

**Committee Charge**
The committee will meet annually (at a minimum) to review the overall performance of the BATCAVE as an education and training resource center in its service to UNMH and the UNMHSC. The committee will review the detailed annual report and discuss and provide guidance in the areas of: development of strategic plans and policy focused on fiscal planning, governance, physical plant, and infrastructure. Elements of the American College of Surgeons and Society for Simulation in Healthcare accreditation guidelines may be used as benchmarks in addition to other parameters determined by the committee.

**BATCAVE Education and Research Oversight Committee**

**Composition**
- Medical Director- J Rask (Chair)
- UNMH Administrative Director/ Nursing Education – Melissa Johnson RN
- Nurse Manager- Lisa Trujillo
- Anesthesia Rep- Eli Torgeson
- Emergency Med Rep- Linda Hodes-Villamar
- Surgery Rep- Jorge Wernly / Rachel Danczyk-VA/Heidi Miller- SRMC
- Ob-Gyn- Naomi Swanson MD
- Peds/Neonatology- Anna Duran/?Kathryn Romero RN-neonatology,
- Respiratory- Bridget Ortega
- FP/PA- Byrch Williams
- Internal Med.- Jacob Imber
- OMED Director- Gary Smith
- Assessment- open
- SoM- open

**Committee Charges**
BEROC is charged with oversight and biennial review of all educational and research activities taking place in the BATCAVE. Particular attention will be given to curricular development and review, review of faculty development processes, development of research projects and guidance in acquisition of new simulation equipment. Criteria for curriculum development and evaluation and faculty development will be outlined. The assurance of educational quality assurance and improvement will be a major focus of the committee. In addition, they will provide a resource for the development of simulation education and patient safety research projects.

4. Simulation Educational Quality Maintenance and Improvement

At a minimum, it is expected that all user faculty will generate educational objectives for each course and assure that students are aware of them. Student feedback for each course will be obtained by all faculty, in order to allow routine evaluation and appraisal of both program elements and faculty performance. It is assumed that each department will have an internal process for peer review of their simulation educational activities.

BATCAVE Course Development and Review Process Recommendations

Each department/unit that presents educational programs in the UNM BATCAVE is expected to have a formal process in place for the development and ongoing evaluation of educational materials. Ideally this will be under the supervision of the departmental Education manager (e.g. Vice-Chair for Education, Residency Program Director, Director of Simulation Education, UNMH Director of Nursing Education, etc.). For ALS courses (ACLS, BLS, PALS, NALS, etc.), all programs will comply with the certifying organization.

The structure of the programs executed through the BATCAVE should contain these elements:

There is a process in place for identifying educational need areas (knowledge or performance gaps, new and developing areas of knowledge or practice, known or new quality processes, known or developing patient safety initiatives, etc.).

Written objectives are created for each program. These are available for the attendees.

An outline of the course dates/times needed, content, space, simulation equipment, center staff support, and AV support necessary for the program will be submitted to the BATCAVE before any course can be scheduled. (see BC Simulation Course template)

Simulation scenario development should conform with the standard features contained in templates such as the Duke simulation template.
A written feedback tool is available for each program that addresses the objectives for each program, feedback for instructor performance, and comments on suggestions for improvement. There should be a review process for each course that evaluates content, currency, and feedback from instructors and participants.

A summary report will be prepared annually by each user department/division and submitted for review by the BATCAVE Education and Research Oversight Committee (BEROC) and inclusion in the BATCAVE Annual report. Report content should include the name of the Education curriculum manager for the department, all instructors active in the BATCAVE, and a summary of the courses presented in the BATCAVE in the preceding year. A summary of the curriculum management process for the department should be provided and updated annually for review by the BEROC.

It is anticipated that the BEROC will review all curricula submitted and make a determination to: approve as is, approve with recommendations, or disapprove with recommendations.

The BEROC will develop policies on simulation educational quality improvement and oversee the educational quality improvement processes for all BATCAVE programs.

In alliance with the Center’s mission to improve education, patient safety and clinical outcomes through the use of medical simulation, the Center actively contributes to quality improvement initiatives identified by the Health System. These initiatives may stem from areas of vulnerability identified through patient complaints, and recent malpractice claims, among others. To contribute to the QI process, Center staff members participate in projects and assist in the development of simulation-based education to support proposed initiatives. It is hoped that the Center will serve as a site for projects identified by UNMH Risk Management and Patient Safety Committee. Both the UNMH Chief Executive Officer and the UNM-HSC Chief Quality Officer are contributing members of the BATCAVE Strategic Advisory Group (SAG).

In addition to contributing to Health System quality improvement initiatives, the BATCAVE staff, faculty, the SAG and the BEROC are continually looking for ways to improve and streamline internal Center processes. We feel that learner and instructor feedback provides the best means to identify areas of opportunity and potential improvement. To encourage this type of dialogue, the “BATCAVE participant feedback template” includes an open-ended question about how the learner’s session at the Center could be modified to better suit his/her needs. There is also a general Simulation Center email address to which visitors can submit comments. BEROC and annual SAG meetings are another means by which the Center
administrators can review and discuss current practices and receive feedback from key stakeholders.

All complaints and suggestions are taken seriously and are discussed in periodic operational meetings until a successful resolution is reached. Utilization of learner feedback has enabled the BATCAVE to identify ways to improve course planning, debriefing, student enrollment and access to course materials.

Finally, providing centralized access to current Center policies, schedule, and information is essential in the ongoing process to improve quality. For this reason, the Center website is routinely updated and reviewed to ensure all information is current.

5. Course Scheduling and Administration

a. Scheduling and Planning
   To schedule or plan a course in the BATCAVE, please contact the Center manager, Lisa Trujillo at 272-3362 or lmtrujillo@salud.unm.edu. All new courses or major course revisions should be developed in accord with the BATCAVE Course Development Process Recommendations (see Appendix and Section 4 above) and the course request should be accompanied by a BATCAVE Course Template (see Appendix) filled out by the course director or primary instructor. Once the SimulationIQ center management system has been implemented, further policies will be developed to optimize fairness and efficiency in center use and program scheduling.

   In general, courses for all faculty, students, and staff of the HSC, UNMH, and affiliated organization (ABQ-VAH, will be scheduled without any fees, other than course costs (e.g. ALS course fees). However, a fee for the use of center space, equipment, and staff time is assessed for any course offered for those outside the UNM affiliated community.

b. Cancellations
   If a course must be cancelled, please allow at least 2 weeks notice to allow for facility rescheduling. However, even last minute notice is preferable to none at all.

c. CME/CNE-
   All arrangements for continuing education credit must be made by the course director.

d. Tours and Use by Outside groups-
   Tours can be scheduled through the center manager. Due to the high volume of educational activity at the center, tours will be limited in size and length at the discretion of the manager. Demonstrations or community outreach activities may also be arranged. In some cases, parking permits may be available. Outside groups wishing to use BATCAVE equipment or facilities should contact the Center Director.
or the Manager to make arrangements. For any group that is generating fees from their educational offering via the use of the center, a center use fee will be required.

6. **Student Registration and Center Use Guidelines**

a. Students for all ALS courses must go to the BATCAVE and speak to the registrar. For questions regarding BATCAVE offerings, please call 272-5998. (see also Section 19). Course directors are expected to fill out a roster for each course with the names of all instructors and students.

b. Off Hours Use- Access may be granted under special circumstances for use of specific trainers in certain labs. Equipment may only be used by learners who have completed basic training on its use with their instructor, who then will notify the center staff as to their qualification for independent use.

All users are expected to conform to the UNM HSC Code of Conduct. Students are expected to conform to all user policies in this document.

7. **In Situ Simulations**

1. **Development, Planning, Scheduling**

   In-situ simulation is a very powerful tool for education, training, and evaluation of clinical care processes. However it comes with unique risks due to the potential for interference with clinical care and/or errors involving the escape of simulation supplies into the clinical care environment. The development processes must not only take into account the usual design processes but also need to address these types of risk. Additionally, the use of BATCAVE equipment for in-situ work requires careful scheduling and oversight to avoid loss of damage. The clinical unit educator, unit manager, and the BATCAVE director must clear all in situ simulation activities.

2. **Delivery**

   Any in situ simulations must be designed to avoid compromise of clinical care or patient safety. All staff and physicians in the area should be informed about simulation in situ training activities. All participants in simulations should be clearly identified and patients and family members/visitors should be made aware of the nature of the activities.

3. **Debriefing**

   It is expected that immediate debriefing and discussion will take place. Performance in teamwork and communication, and system gaps should be explored and written-up where deemed appropriate.
In the event of the discovery of patient safety or quality/risk issue during a simulation training process, a summary of the notable findings must be forwarded to the appropriate administrator for action. Video capture is acceptable, but must be done in such a way to protect patient confidentiality. All participants captured on audio, video or static images must have a consent signed for such a recording. (see Appx for A/V consent template)

4. Follow-up-
The unit running the in situ activity will be responsible for following up on any patient safety/quality concerns discovered during the session.

5. Oversight-
Any clinically important findings from in-situ programs must be written up, forwarded to the pertinent unit manager and the BATCAVE Director and will be presented to the SAG.

8. Qualifications and Professional Development for Instructors

General simulation instructor competencies fall into 6 realms:
- Administration
- Instruction
- Design
- Facilitation
- Evaluation
- Technology

a. Administration
The primary goal is to ensure smooth course operation. The instructor will:
- Provide a clear outline of the course of instruction.
- Provide clear objectives, expectations, and policies regarding performance measures and use of equipment.
- Post course materials (syllabus, assignments, discussion topics, etc.) in advance. Convey changes and updates in a responsive manner.
- Establish a communication system so that learners can address issues before courses and during independent work.

b. Instruction
The primary goal is to become familiar with one or more systematic instructional models and to become adept at leading activities within the structure of that model. The instructor will:
- Have a detailed understanding of the broader curriculum and learning objectives of the department/institution.
- Have a detailed understanding of the learning objectives for the specific course.
Adhere to appropriate learning and teaching principles, plan topics, materials, learner participation, and evaluations according to the instructional model.

Ensure that the model, its framework, instructional content and schedule are appropriate to the course needs.

c. Design
The primary goal is to become familiar with one or more systematic instructional models and to become adept at leading activities within the structure of that model. The instructor will:

- Plan activities that allow learners to attach personal meaning to content.
- Plan activities that allow learners new to become comfortable with simulation education (i.e. practice sessions for lessons and for equipment).
- Provide opportunities for every student to get hands-on practice and application.
- Balance course design and integration of simulation.
- Help learners assess their learning and attain personal learning goals.
- Provide a realistic environment, present multiple viewpoints.
- Facilitate simulations that support learning materials.

d. Facilitation
The primary goal is to provide social benefits and enhance learning. The instructor will:

- Establish communication rules, group decision-making norms, and simulation or classroom protocols.
- Provide compelling opportunities for discussion, negotiation, and debate.
- Contribute advanced content knowledge and insights, models desired, and methods of communication.
- Foster sharing of knowledge, questions, and expertise among learners.
- Acknowledge learner contributions to simulations, feedback, or discussion.
- Moderate disagreements and group problems.
- Accommodate students who come from different cultural, social, and learning environments.

e. Evaluation
The goal is to ensure that learners know how they will be evaluated and help learners meet course objectives. The instructor will:

- Provide learners with clear grading criteria. Use rubrics, grading criteria, or examples to help learners understand expectations.
- Determine students who are having difficulty with the material or undertaking simulation exercises and assist as necessary (on an individual-by-individual basis).
• Practice evaluation protocols and share the outcomes with students in a manner allowing them to track their progress. This will help students address problem areas.
• Provide feedback and help with remediation, as needed.

f. Technical
The primary goal is to ensure learners overcome barriers due to technical issues. The instructor will:
• Become proficient with all simulation equipment and technical systems used in the course prior to facilitating any activity, session, or lesson.
• Help learners troubleshoot technical systems.
• Refer problems to simulation facilities staff.
• Follow up to assure technical or equipment issue has been resolved.
• When finished, leave or prepare equipment and technical components in a clean, orderly fashion, ready for use.

Professional Development –

Simulation instructors are strongly encouraged to:
Attend a simulation instructor training course and maintain documentation of that course.

Visit the Sim. Center and work with the staff before each new program so as to become familiar with the available equipment and the programming process for simulation equipment pertinent to their area of interest.

Observe/co-instruct at least 2 simulation sessions before going on the schedule as an independent instructor.

Maintain a regular schedule of participation in simulation-based teaching and debriefing.

Assure that the simulation center has a list of all programs and participants for each of their courses.

Obtain regular program and instructor performance feedback.

Maintain documentation of their own, personal simulation educator skills development activities

Recommended reading-
Alinier G. Developing High-Fidelity Health Care Simulation Scenarios: A

**Formal Training:**
It is recommended that each simulation faculty member accomplish the following:

Attend the UNM Simulation Instructor course or another similar external course (Stanford, Wiser/Gordon, Center for Medical Simulation (CMS)-Boston, or specialty society simulation educator programs are recommended) within the first year of their work as an instructor using simulation for education.

Attend general or specialty-specific courses on simulation development, production, assessment, and debriefing. Attendance at Society for Simulation in Healthcare courses at the annual International Meeting on Simulation in Healthcare (IMSH) or specialty society simulation education meetings is strongly recommended.

If none of the above have been done and the faculty have some simulation instructor experience, a summary of that experience should be generated including: number of courses presented, content, and a summary of curriculum developed.

Personally develop all of the elements of a formal course for a simulation activity including: creation of a simulation scenario from start to finish – including objectives, handouts (journal articles where appropriate), a scenario with dialog prompts & programming instructions, references, and debriefing notes.
This is an important developmental exercise and is recommended for all instructors.

9. **Course Evaluations**

“BATCAVE participant feedback template”- see appendices
10. Evaluation of Simulation Instructors

It is highly recommended that all instructors:

Obtain and regularly review the formal feedback on their participation in simulation sessions from all participants. (see standard feedback template) Feedback materials should be reviewed not only for individual performance assessment but also for course content and process quality. Departmental educators are expected to review and evaluate all feedback materials on at least an annual basis.

Obtain feedback from the lead simulation faculty member(s) in their (or other) department(s) with focused guidance on specific performance gaps and areas for improvement. The use of the DASH system available at the CMS website: https://harvardmedsim.org/debriefing-assesment-simulation-healthcare.php is highly recommended.

11. Incorporation of Pre-briefing and Debriefing in Simulation

Scenario pre-briefing and debriefing are essential parts of simulation-based education in healthcare, and the BC encourages all instructors to incorporate this into their sessions. Setting the stage during a pre-brief for a simulation-based training, assessment or process improvement session is essential in order to achieve the best results for the participants. Effective post-session debriefing for formalized reflection on the learning process to foster development of clinical judgment and critical thinking is even more important. In order to promote session pre- and post-briefing, the following resources and tools are available for instructor use and guidance in the Appendix below:

The following are in development-
- “Orientation to the Simulation Environment” – in order to set the stage for a successful session.
- “Ground Rules for a Successful Simulation Experience” – reviews the essential ground roles of simulation.
- “Simulation Session Debriefing Worksheet”- includes the objectives of debriefing, how to introduce a debriefing session, and questions to start and close the session.

When scheduling their session, course instructors/faculty are advised to allow at least fifteen minutes for the pre-brief and twice as much time for the debrief as they do for the actual scenario.

The session pre- and post-brief is typically led by the course instructor/faculty member who has completed formal training in debriefing. The recorded session can be used to enhance the debriefing process. The Center Educational Specialist may also provide guidance throughout the session and later
suggestions to the instructor on how he/she might improve the session. All instructors are encouraged to attend the BC 2-half day course “Simulation Instructor Training Course” hosted by the Center. Instructors can contact the Center Director to develop a more formal debriefing program.

12. Standardized Patients

It is assumed that, from time-to-time, programs will wish to include standardized patients in their educational activities. The Standardized Patient Program (https://som.unm.edu/education/md/ume/standardized-patient.html) of the UNM School of Medicine should be contacted for all standardized patient activities. All standardized patient activities will be conducted under the policies and procedures established by that office.

13. Confidentiality Policy

Simulation-based training involves immersion of the participant in realistic clinical situations and medical environments. This training can involve the administration of simulated medications, therapies, procedures, and other treatments. During participation in such sessions, students observe the performance of peers managing medical events. In order to create a safe and constructive learning environment for the participants, strict confidentiality on both a clinical and interpersonal level throughout the exercise must be maintained. Participants must feel free to make errors without the risk of liability or employment repercussions. Instructors should discuss confidentiality and note that the session is a safe learning environment at the start of all sessions. Individual feedback provided publicly to each learner during the debriefing process must also remain confidential.

In some cases the training may take place on an actual hospital patient floor or other patient care setting, using certified medical equipment from that floor. This may be done for process improvement, education, or in an attempt to identify and resolve key systemic errors within that unit and ultimately improve patient care and safety. In that case, while the specific identities of individuals participating in the exercise will be protected to the best of the instructor’s ability, any key clinical issues (such as malfunctioning/missing equipment or staff confusion regarding care protocol, etc) which could potentially impact patient safety and care, must be reported to, and addressed by, the supervisor for that clinical area. The intent is not to penalize specific staff involved in the exercise, but to ensure all staff members in that area are aware of proper equipment use, medical procedures, etc and promote the ultimate goal of improved patient care.

Some simulation exercises are conducted to assess ability and knowledge. In this case the participant may be required to demonstrate some degree of competency in order to progress within his or her career or training pathway.
In this case, if simulation is utilized for the purpose of assessment, the results may not be confidential and may influence promotion or employment status. The purpose of the exercise, whether training, performance improvement or assessment should be made clear by the instructor.

1. General Policies-
   a. Health Records- it is the policy of the BATCAVE that no patient records or identifiable patient information may be used in any educational activity in the BATCAVE. UNM HSC HIPAA policy regarding the security of Protected Health Information (PHI) will be followed by all users, faculty and staff of the UNM BATCAVE. Any suspected data breaches involving PHI should be reported immediately to the Center Manager/Center Director and the UNM HSC HIPAA Security Officer.
   b. Student/Learner confidentiality- UNM HSC FERPA guidelines will dictate the management of all educational activities.
   c. Research- All research activities will be conducted in accordance with the policies of the UNM HSC Human Research Protection Program (https://hsc.unm.edu/research/hrpo/)

2. Use of Audio/Video (A/V) Recording-
   As the use of audio/video recording is a core methodology used in simulation education, it is assumed that all learners attending program in the Center consent to A/V capture of their activities at any time they are in the Center. It is assumed that recordings of the performances will be available to faculty for educational and program development purposes and will not be released to the public without express consent of those in the recording. Students may only be granted access to their own recordings, unless permission is granted by participants (e.g. participants in a simulation-based research study being reviewed by a student researcher under UNM HRPO informed consent guidelines). For specific courses in which a separate consent is deemed appropriate, the BC A/V Consent (see Appendix) should be used. In general, it is assumed that A/V recordings will not be retained unless they are part of a longitudinal assessment or research program. Retention of recordings will be reviewed annually by the BEROC. Access to recordings will be assigned by the Center staff according to UNM-HSC policy.

14. Psychological Safety

Psychological safety impacts the learners' ability to engage in simulated events and critical reflection. Engagement in these activities is essential in fostering changes in critical behaviors. In order to ensure psychological safety
for learners in the BATCAVE the faculty/facilitators will adhere to the following guidelines:

Provide a pre-brief prior to a complex scenario. The pre-brief will serve as an orientation session prior to the start of the simulation based learning experience in which instructions or preparatory information is given to the participants. During the pre-brief the facilitators will:

_ Review the ground rules of simulation
_ Refer to the “Basic Assumption” (see Appendix)
_ Instruct the participants not to discuss the simulation outside of the exercise
_ Instruct the participants to maintain confidentiality of the case
_ Acknowledge the artificial environment
_ Orient the participants to the simulator and the environment
_ Define a length of time for the entire exercise
_ Instruct the participants how to elicit additional resources if needed (e.g. phone and numbers to call)
_ Instruct the participants to practice within their professional scope
_ Verbalize mistakes are expected and this is our chance to improve our behaviors and ultimately our patients’ outcomes.
_ Review rules about respect and professional behavior

The facilitators will be expected to have attended a simulation facilitators’ course. A trained simulation educator will be involved in the debriefing to manage disruptive behaviors during the simulation or the debriefing. If a learner has obvious or expressed emotional distress because of an event that occurred during the simulation or if the simulation led them to a “real life” emotional frame, the facilitator will have a one-to-one discussion with the learner. If the problem may lead to an issue in the clinical setting the participant will be referred to their primary program for further support.

15. Universal Precautions, Personal Safety and Security

Center users should follow universal precautions against infectious disease while participating in clinical activities. Universal Precautions Guidelines can be provided upon request. Additionally, users should exercise their own discretion and good judgment regarding their participation in activities in the Center and the potential that may cause for spreading their illnesses. The following are a list of general precautions or ensure the personal safety and security of Center users.

_ Food and drinks are not permitted in the Simulation Team Training Rooms ("SimRooms"), Control Rooms, Task Trainer Rooms, or Breakout Rooms.
_ All sharps must be disposed of in an appropriately labeled sharps container.
_ The containers and bags marked “red bag waste” should only be used for
potentially infectious waste or animal by-products, not for regular trash. _Under no circumstances may sharps or supplies be removed from the Center.

_The medical and disposable equipment within the BATCAVE should never be used for clinical purposes. However it should be treated with the same safety precautions employed with actual clinical equipment.

_Hand washing or use of hand sanitizers shall be part of practice in the Center when at all possible based on the physical layout of the space.

_All injuries shall be report to Center faculty/instructors/staff. In an injury occurs with a needle or other sharp instrument, wash the wound thoroughly with soap and water as soon as possible. The student or staff member will be referred to Student Health or UNMH Employee.

_any damaged, or potentially dangerous equipment is to be reported to the Center staff. The staff shall attempt to correct the problem and if unsuccessful, the Center Manager will be notified.

16. Research Oversight, Grants, and Publications

As education, patient safety and patient care quality improvement are core missions of the HSC and UNMH, the BATCAVE is committed to the support of research into these areas. All independently funded projects will be expected to pay a fee for the use of the facility. Contact the center Director/Manager for details of the fee schedule. Regular evaluation and assessment of the Center’s research studies are a vital part of maintaining a productive and efficient research program. Since much of the training conducted at the Center is novel, there is an obligation to measure its effectiveness and impact on patient care, safety, staff knowledge and professional development. For that reason, well-designed and implemented research is an essential part of the Center’s mission. Any grants or research activities that require the use of the BATCAVE its resources and/or time from its faculty/staff should be coordinated with the Simulation Center Director. Any publication or presentations completed as a collaborative effort with the Simulation Center shall be conducted utilizing a team approach. All publications involving the use of the BATCAVE resources must acknowledge the BATCAVE and/or include participating Center staff and Director as contributing authors as appropriate.

The Center follows the procedures and policies for research as outlined by the UNM Human Research Protections Office. This includes:

The requirement of Institutional Review Board (IRB) Approval, whether for full, expedited or exempt status, for those studies that meet the definition of
human research.

The principal investigator (PI) on all IRB-submitted research protocols must be a full time UNM Faculty member.

Anyone involved in research much complete Human Subjects Protection training through Collaborative Institutional Training Initiative (CITI) or hold a current certification from NIH on Human Subjects Protection.

The UNMHSC policy on the use of protected health information (PHI) in research covers all aspects of conducting research in the health system, and PIs are encouraged to review them.

Research conducted at the Center is overseen and reviewed by the BEROC, which meets on a periodic basis. The members of this committee are faculty members with significant experience and an interest in simulation-based research and education.

Responsibilities of the committee include:

- Review the merits of proposed simulated based research projects and make suggestions regarding protocol amendments to the initiating investigator.
- Maintain copies of Institutional Review Board (IRB) approval on file for research conducted at the Center.
- Ensure procedures and policies of research are followed.
- Promote the submission of research conducted at the Center for presentation at a national society meeting or for publication in a peer-reviewed journal.

Center instructors/faculty wishing to join the BEROC are welcome to submit their name to the Director for consideration. Current research topics as well as PDFs of presented posters and presentations may be posted on the Center website with Faculty consent.

17. Supply and Equipment Management

Proper labeling and maintenance of supplies and equipment is required for safe use and handling. Instructors should include in their pre-brief to the learners that no simulation equipment should ever be used for clinical purposes and it should be treated with the same safety precautions employed with actual clinical equipment. They should also be made aware that while the packaging and labels of medications may replicate their clinical appearance, they are simulated. The wall mounted medical gas connections are for simulation training only.

Appropriate maintenance of equipment, timely repair, and service must be ensured for the longevity of the Center’s equipment. Equipment that
is out of service interferes with scheduled training and disrupts curricula. Therefore the Center has purchased warranties on all its major simulation systems to ensure that the maximum number of repairs and service is included. In addition to noting the date of purchase, serial numbers and simulator vendor at the time of purchase, the Center tracks the date of warranty expiration for all equipment, whether annual service checks are included, and the service check due date. The Center incorporates the cost of warranty renewals in its annual operational budget.

When there is an issue with a piece of equipment, the Simulation Technician will alert the Center Manager and/or Director, attempt to troubleshoot and resolve the situation himself. If this is not possible, he will contact the vendor and determine the next steps to return the device to operational status as quickly as possible. If there is no resolution to the problem within five working days, he will escalate the issue to the Center Director.

For those pieces of simulation equipment covered under warranty agreements that include annual services checks, the Simulation Technician(s) will contact the vendor several months prior to that date to schedule an onsite visit. The Simulation Technician(s) is also responsible for day-to-day service and care of all simulation equipment. They will clean, refill fluids, make basic repairs, and replace disposable parts as needed. They will be aware of the current maintenance status of all equipment in the Center and will maintain a log of all requests, repairs, and preventative maintenance work conducted.

Equipment purchases are coordinated through the HSC and UNMH purchasing processes according to their guidelines. Requests for any simulation equipment must be made in writing to the Center manager and Director for consideration. A justification for the acquisition, a complete description of the item(s), and a recent cost estimate must be provided. All requests will be reviewed by the center management, the BEROC and a priority will be assigned. Significant capital equipment requests must be presented in the annual budgeting process for approval. Any such requests must be submitted by mid-November to be considered for inclusion in the budget for the following fiscal year. It is expected that the associated department will submit a letter of support for the item (and may be expected to contribute for any high cost items).

a. Maintenance and stocking

Maintenance Plan for Trainers / Manikins / Equipment
Prior to each course, BATCAVE will turn all necessary equipment and make sure it is working order. The Pre- and Post-session Checklist (see appendix) should be followed.

After each use, staff will:

- Wipe down all manikins and low fidelity skills trainers to remove all adhesives, moulage and markings.
- Drain all fluids and the flush tubing system. Top off all fluids as needed.
- Clean and disinfect all training equipment (masks, valves) in conjunction with hospital guidelines.
- Assess all task trainers, manikins and medical equipment for obvious damage, leaks, necessary part replacements, and cleanliness. If not in use or scheduled to be used, once wiped, drained and dried, store in appropriate area.
- Check supply of sheets, replace as needed. Change dirty/wet linen and clothing.
- Set aside course disposables to be inventoried. Once inventoried, unused disposables should be returned to storage.
- Power off simulators, PCs and wall monitors.

Weekly:
- Clean and inspect all equipment
- Wipe down skin/covers. Remove any adhesive, moulage or markings left on skin
- Calibrate all sensors and monitors (including VR systems)
- Turn on and test all electronic devices, check/replace batteries as needed
- Run associated programs that control equipment
- Drain all fluids and the flush tubing system. Top off all fluids as needed. Add antifungal agent as needed.
- Change dirty/wet linen and clothing.

Monthly:
- Inspect (and if needed replace) all disposable parts
- Assess for wear and tear that might need major work or factory service

Annually:
- Preventative maintenance package completed by respective vendor

As Needed:
- Contact vendor for onsite maintenance or verbal/written guidance if equipment issue is unable to be successfully resolved by tech.

The Center submits capital requests on an annual basis. If there is a piece of equipment that has been serviced adequately but is due for replacement due
to age or wear, replacement of that item will be included in the annual request. This system of maintenance also holds true for the computers, AV and software systems in the facility.

b. Qualification of users
To assist in the longevity of the Center’s equipment, students must use the equipment only as directed, under the supervision of an instructor unless special arrangements have been made (see after hours use and access policy). If there are any questions as to the functioning or proper use of a piece of equipment, the Simulation Technician should be consulted.

c. Policy on equipment damage
The student(s) and/or his/her department will be held responsible for any damage to equipment that is the result of behavior that is deemed to have been careless or contrary to instructional use. Any damage noted or difficulty with the operation of equipment must be immediately brought to the attention of the BATCAVE staff.

18. Use of Equipment in Onsite and Offsite Locations
Some simulators and task trainers are available for off-site use with a minimum 24 hour notice. Please contact the Center Manager at 272-3362 or lmtrujillo@salud.unm.edu for questions or to reserve equipment. All equipment must be checked in and out by a Simulation Education Specialist. A BATCAVE Equipment Sign-out Sheet (see Appendix) must be filled out for all off-site use. The user department/unit will be held responsible for any damage or losses of equipment used off-site.

19. General Guidelines for Conduct at the Simulation Center

a. Registration
To register for a class, please go to the BATCAVE. For questions regarding BATCAVE offerings please call 272-5998.

b. Conduct/dress code
For the safety and well-being of all BATCAVE users and staff, do not wear perfume or scented lotions. Course participants should dress appropriately in the designated uniform or business casual attire. No tank tops, halter tops, shorts, pajamas, yoga-style pants or leggings, sweatpants, miniskirts, jeans with holes, bare midriffs or low-cut tops are permitted. Participants not conforming to this rules will be asked to leave and reschedule.
c. **Use of computers and access to internet**

The classrooms and breakout rooms have computers with internet access for presentations. Internet access is also available via wi-fi using UNM login or guest access.

Users are asked to refrain from using their personal cellphones and devices while engaged in courses in the BATCAVE.

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### 20. Complaint Resolution Process

In the event a complaint arises from a Center employee, the primary policy that would guide the resolution would be the pertinent UNM HSC Policy. In such a situation, the Center Manager would be the primary “manager” and the first to respond. However, the complaint can be escalated to the BATCAVE Director at any time.

When dealing with in-person learner issues or complaint or concern, it may be either the student or their instructor who brings the complaint directly to the attention of the Center staff. If the complaint requires an immediate response, the staff member who received it may either resolve the complaint him or herself or escalate it to the Center Manager based on its scope. The Center Manager can in turn, either resolve the issue or bring it to the attention of the Director for guidance and resolution. If the dispute involves ASHI certification courses such as ACLS, BLS or PALS, (students showing up late to class or with expired certifications) the chain of escalation would also include the UNM Director of Nursing Education.

Complaints or suggestions are also received through emails, letters, and session evaluations. Issues submitted in writing, as well as in-person complaints, will be discussed as quickly as is reasonable. If the complaint pertains to a Center instructor, the complaint would be shared directly with him/her.

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**Complaint Resolution Chain of Command**

- **Student/Center User**
  - **Course Instructor**
  - Center Staff or ASHI Center Coordinator (if ACLS/BLS/PALS related)
  - **Center Manager (if ACLS/BLS/PALS related)**
  - **BATCAVE Director (if ACLS/BLS/PALS related)**

The BATCAVE Simulation Center Director may also be contacted at any point during this process to resolve disputes.
21. Employee Policies

As BATCAVE staff work as employees of both the UNM-HSC and the UNMH, they will each follow employee policy for their respective employer. If in doubt, overall UNM employee policy supersedes the others. All employees will be expected to conform to UNM ethics and behavioral policies (See relevant UNMH and UNM-HSC policies). All users and faculty are expected to comply with UNM Code of Conduct and other pertinent policies while working in the center.
22. APPENDIX-Resource Documents and Templates

- BC Simulation course scheduling request and template
- Participant Course Feedback Template
- BATCAVE Recommended Course Development Process Template
- BATCAVE Recommended Simulation Instructor Development and Quality Improvement Template
- Audio/video Recording Consent
- The Basic Assumption