JC-MSC

# MEDICAL SIMULATION CENTER

## **OPERATIONS MANUAL**



### TABLE OF CONTENTS

1.	Mission, Vision, Strategic Goals	2
2.	Simulation Center Overview, Definitions	4
3.	Simulation Activity Facilitation: Roles and Responsibilities	5
4.	Professional Conduct and Safety	6
5.	Dress Code	8
6.	Simulation Activity Requests and Approvals	8
7.	Simulation Activity Facilitation	9
8.	Industry, Vendor Relations, and Tours	10
9.	Compliant Resolution Process	10
10.	Simulation Session Evaluation	11
11.	Special Accommodation	11
APPENDIX:		
<i>A</i> .	Simulation Activity Request Form:	
<i>A</i> .	Simulation Activity Request Form: <a href="https://forms.office.com/r/f9fejJVzBT?origin=lprLink">https://forms.office.com/r/f9fejJVzBT?origin=lprLink</a>	
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	https://forms.office.com/r/f9fejJVzBT?origin=lprLink	
	https://forms.office.com/r/f9fejJVzBT?origin=lprLink  Confidentiality Agreement and Video and Photo Consent Form:	
В.	https://forms.office.com/r/f9fejJVzBT?origin=lprLink  Confidentiality Agreement and Video and Photo Consent Form:  https://forms.office.com/r/G8AqQE7wBQ?origin=lprLink	
В.	https://forms.office.com/r/f9fejJVzBT?origin=lprLink  Confidentiality Agreement and Video and Photo Consent Form:  https://forms.office.com/r/G8AqQE7wBQ?origin=lprLink  Incident Report Form:	
В.	https://forms.office.com/r/f9fejJVzBT?origin=lprLink  Confidentiality Agreement and Video and Photo Consent Form:  https://forms.office.com/r/G8AqQE7wBQ?origin=lprLink  Incident Report Form:  https://forms.office.com/r/QBb7wPsgxu?origin=lprLink	
В.	https://forms.office.com/r/f9fejJVzBT?origin=lprLink  Confidentiality Agreement and Video and Photo Consent Form:  https://forms.office.com/r/G8AqQE7wBQ?origin=lprLink  Incident Report Form:  https://forms.office.com/r/QBb7wPsgxu?origin=lprLink  Student Feedback Form:	

#### JACKSON COLLEGE MEDICAL SIMULATION CENTER (JC-MSC)

#### **MISSION:**

JC-SIC is committed to providing excellence in simulation-based training through leadership, research, and interactive learner-centered experiences. Through innovative pedagogy and methodologies, JC-SIC will provide evidence-based and competency-based education promoting students' cognitive, affective, and psychomotor skills.

#### **VISION:**

We aspire, by providing challenging, immersive simulations, to deliver advanced and creative simulations with quality-driven opportunities to encourage exploration and promote the highest quality education and equitable outcomes to meet college-wide needs by:

- Creating an environment for the learner that supports knowledge integration, problem-solving, and clinical reasoning to enhance practice readiness.
- Create and design programs to address system needs that are research-based, prioritized, and responsive to the global environment.
- Develop trainers to grow educational programs, leadership, and critical thinking skills within our healthcare and industry systems.
- Prepare students by aligning with Jackson College's statement of beliefs and values.

#### STRATEGIC GOALS WITH ALIGNMENT TO JC STRATEGIC AGENDA:

#### **Education and Training of Students & Clinical Trainees:**

- **COMMITTED**: Support the growth of each unique, whole learner through experiential education.
- **CONNECTED**: Foster human-centered learning environments that build empathy, care, and service.
- INNOVATIVE: Deliver cutting-edge, industry-aligned simulation curricula.

#### **Assessment/Testing:**

- **ADAPTIVE**: Employ data-driven, evidence-based methods to evaluate competencies and improve performance.
- **COMMITTED**: Ensure fair, individualized assessment that respects the learner and their potential.

#### Research:

- INNOVATIVE: Advance the science of simulation and industry education through rigorous inquiry.
- ADAPTIVE: Encourage curiosity and data-informed innovation in research design and application. Provide Immersive Learning to External Experienced Professionals:
- **CONNECTED**: Strengthen partnerships and knowledge exchange with the broader healthcare and industry community.
- INNOVATIVE: Incorporate real-world, future-focused simulation practices for professional upskilling.
- ADAPTIVE: Stay responsive to the evolving needs of external partners and industry systems. Community Outreach:
- **CONNECTED**: Promote service through accessible simulation experiences.

• **COMMITTED**: Support community learning and engagement, embracing the unique needs of all populations.

#### Leadership and Advocacy:

- ADAPTIVE: Champion ethical leadership rooted in discipline, data, and innovation.
- **CONNECTED**: Inspire a culture of advocacy and shared responsibility in healthcare. **Faculty Development**:
- **COMMITTED**: Nurture educators as whole individuals through personalized growth and support.
- INNOVATIVE: Equip faculty with the latest tools, pedagogies, and technologies in simulation.
- ADAPTIVE: Build leadership capacities and a culture of continuous improvement.

#### **Industry Systems Improvement:**

- INNOVATIVE: Utilize simulation to redesign processes and improve industry outcomes.
- **CONNECTED**: Align efforts with interprofessional and organizational goals.
- ADAPTIVE: Lead change using systems thinking, curiosity, and resilience
- Use of advancing technology:
- INNOVATIVE: Integrate emerging technologies to enhance realism, accessibility, and outcomes.
- ADAPTIVE: Stay ahead of trends and adjust strategies to align with evolving industry standards.
- **COMMITTED**: Ensure technology is used to support and empower each learner.

#### STUDENT LEARNING OBJECTIVES:

- 1. Students will be able to expand their knowledge and skills by applying classroom-learned concepts in realistic, hands-on scenarios. This Experiential approach reinforces learning and enhances their ability to perform effectively in real-life clinical situations.
- 2. Students will be able to apply clinical reasoning, solve complex problems, and prioritize tasks effectively in time sensitive, high-pressure situations.
- 3. Students will be able to communicate empathetically with patients and families, collaborate effectively within interdisciplinary teams, and perform accurate hand-offs/ documentation to ensure continuity of care
- 4. Students will be able to make ethical decisions, demonstrate cultural competency, and engage in self-reflection to maintain accountability and professionalism in patient care.
- 5. Students will be able to respond confidently to medical emergencies, manage crisis situations, and allocate resources effectively while maintaining situational awareness.
- 6. Students will be able to identify and prevent potential errors, perform root cause analysis of adverse events, and apply quality improvement methods to enhance patient safety and care outcomes.

#### SIMULATION CENTER OVERVIEW:

• Location: 2111 Emmons Rd. Jackson, MI 49202

**Justing Whiting First Floor** 

Email: Casesarahm@jccmi.edu

Website: Simulation Innovation Center | Explore the SIC - Jackson College (jccmi.edu)

• **Hours of Operation:** JC-MSC normally operates 9:00 am to 4:00 pm Monday – Thursday, except for holidays. After-hours and weekend activities required preapproval by the JC-MSC coordinator prior to scheduling.

After-hours use of the Skills and Procedures Laboratory is limited to individuals and groups participating in an approved activity or with a proper orientation by the JC-MSC team.

\*Latex: JC-MSC is not a latex-free facility. If you have a latex allergy, use protective measures, and notify the staff PRIOR to any activities.

#### • Simulation Lab Physical Spaces:

- JW 101: Home Setting/ DScribe
- JW 109: Simulation Work Room
- JW 109A: Control & Monitoring
- **JW109B:** Patient changing room
- **JW 120**: Registration
- JW 121: Bay A
- JW 121A: Patient Care Suite A
- JW 121B: Debriefing Room
- **JW 122**: Pre-Op/Anesthesia Bay
- JW 124: Pre-Op
- **JW 125**: Operating Room
- **JW 126**: *Triage* Bay
- JW 127: Trauma Care Bay B
- **JW 129**: *Storage*
- **JW 129A**: Building Systems
- **JW 130:** Triage
- **JW 131**: Building Systems

#### • All Modalities of Simulation:

- o Task training/Procedural based simulation
- Virtual Reality
- o High Technology (Fidelity) Manikins
- Standardized Patients
- State-of-the-art equipment throughout all rooms including advanced audio and visual systems.

#### **DEFINITIONS:**

**JC-MSC:** Jackson College – Medical Simulation Center

**Simulation:** Simulation in education is a teaching strategy to mirror real-life situations and complement clinical education. High-fidelity manikins, standardized patients, realistic equipment, and realistic environments are used to recreate the clinical environment to provide nursing students with a controlled, risk-free environment to demonstrate psychomotor skills, teamwork, communication, and critical thinking. Using simulation allows students to learn by doing and reflecting on their experience.

**Debriefing:** Debriefing is arguably the most important component of a simulation experience. It is a process of examining the actions and the meanings of actions during a simulation experience. It is learner-centered and uses reflection to promote learning. The debriefing session is not for lecturing. The role of the debriefer is to guide students through the reflective process of debriefing in a structured manner. The aim is to reflect on and make sense of the experience, improve understanding and clinical reasoning, and relate the learning to future experiences.

#### SIMULATION ACTIVITY FACILITATION: ROLES AND RESPONSIBILITIES

#### • Simulation Coordinator:

- Oversees all instructional and operational aspects of the Simulation Lab
- Manages day to day operations, including scheduling, staffing, supply ordering/management/inventory, and budget.
- Room set up: All rooms will be set up prior to the start of the course by the coordinator or staff designated by the coordinator. Any special requests for room setup should be indicated during the intake meeting with faculty or in writing at least one week prior to an event.

#### • Simulation Technician:

Oversees all maintenance, preventative maintenance/schedule, simulation equipment, and equipment maintenance in the simulation lab.

o Troubleshooting: JC-MSC simulation technician will be available during high-fidelity sessions and assist in operating and troubleshooting all equipment.

- o The specialist will provide a detailed overview of the simulation center resources and the proper use of all simulation equipment pertaining to your course.
  - o If equipment is malfunctioning, we will attempt to repair the equipment.
  - If the equipment cannot be repaired, a replacement will be provided (if possible).

#### • Faculty/Adjunct:

- Facilitates simulation scenarios, skills stations, or tabletop exercises on scheduled simulation days.
- It is expected that faculty will assist in the preparation of their upcoming simulation scenarios using the simulation building template.
- Faculty can set up routine education competencies that do not require faculty or adjunct attendance.
- These skill labs are approved by the Simulation Coordinator and, if requested, can be scheduled by students once set up and approved.
- Faculty are expected to notify students of concepts/objectives that should be met or will be reviewed during simulation.
- o Faculty/Adjunct must lead the debrief.
- o Faculty/ Adjunct will be asked to complete a Simulation Feedback Form after each simulation.

#### • Students:

- Assists with simulation days as needed.
- o Students are expected to complete a Simulation Feedback Form after each simulation.
  - The simulation coordinator will send this form to all students in attendance.

#### PROFESSIONAL CONDUCT:

Professional conduct and communication are always expected in the Simulation Lab. Students will be participating in and observing others during simulation experiences. It is expected that all participants will maintain a respectful learning environment.

- The JC-MSC should always be treated as a real clinical setting. We recognize that the manikins are not real. However, all manikins and actors should be treated as if they are actual patients.
- Vulgar or unprofessional verbiage, language, or attitudes will not be permitted in the simulation lab.
- Cellular Devices: Cellular phones are not to be used during your simulation day and should be off or silenced (unless approved by the governing faculty or JC-MSC Coordinator).

• **Recordings**: Simulations and/or debriefings may be recorded or viewed for quality assurance, quality improvement, instructional purposes, or research purposes.

- o All participants must sign the confidentiality agreement: https://forms.office.com/r/G8AqQE7wBQ?origin=lprLink
- Confidential: All simulation day and practice information are confidential and not to be discussed outside of the JC-MSC. All participants in simulation scenarios are to be treated professionally. No student performance information may be discussed outside of the JC-MSC.
- Markers, Pens, Pencils, etc.: No ink writing instruments (markers, pens, highlighters, etc.) are allowed in the simulation rooms (except dry erase) as they may permanently damage manikins. The JC-MSC will provide pencils for use in simulation rooms.

#### **SAFETY:**

All students should follow Universal Precautions against infectious disease while participating in clinical activities in the lab.

- **Food and Beverages:** Food is not permitted in simulation laboratories, exam rooms, or control rooms. Only covered beverages are permitted in control rooms. Closed drinks are permitted in the locker area on the designated table only. No food or drinks are allowed in the student lockers.
- **Student Lockers:** Lockers are a one time use during simulation only. JC-MSC is not responsible for any lost or stolen items. After each simulation, each locker must be emptied out and ready for the next group of students.
- Sharps: All sharps must be disposed of in appropriately labeled red containers.
  - Under no circumstances may sharps or supplies be removed from the simulation lab area.
  - A faculty/adjunct member must be present if sharps are used by students for skills training.
- The medical and disposable equipment within the Simulation Lab should never be used for clinical purposes. However, it should be treated with the same safety precautions as actual clinical equipment.
- **Hand Hygiene:** Hand washing or use of hand sanitizer in between all activities shall be a part of practice in the Simulation Lab.
- All equipment malfunction or personal injuries shall be reported to the Simulation Lab staff, faculty, or adjunct instructors.

• **Injury**: If an injury occurs with a needle or other sharp instrument, wash the wound thoroughly with soap and water as soon as possible, and report the injury to the Simulation lab staff or Faculty/Adjunct.

- o An Injury and Illness Form must be completed by Faculty/Adjunct.
- o If necessary, the student or staff member will be referred to Jackson College Health Clinic for additional treatment.
  - Incident report form: <a href="https://forms.office.com/r/QBb7wPsgxu?origin=lprLink">https://forms.office.com/r/QBb7wPsgxu?origin=lprLink</a>
- **Damaged Equipment:** Any damaged or potentially dangerous equipment must be reported to the Simulation Lab staff. The staff shall attempt to correct the problem; if unsuccessful, the Simulation Lab Coordinator will be notified.
- Lab Equipment: It is against JC-MSC policy that items, including equipment and supplies taken from the simulation environment, be used for patient care. Never place items in pockets. Check to ensure items used in lab practice are safe for patient care and that items marked for simulation use only are not used for patient care.
- **Medication:** The JC-MSC does not use real medication during simulated activities. Disposable supplies used in simulation have not been used for patient care. Supplies and kits may be reused by other learners as designated. Please ask JC-MSC for assistance with proper disposal or questions regarding equipment use and disposal.

#### **DRESS CODE:**

Students are expected to comply with the dress code in their program's student handbook. Clinical uniform and name badge must be worn during practice, skills, and all simulation activities.

#### SIMULATION ACTIVITY REQUESTS AND APPROVALS:

All sessions, classes, and training at JC-MSC should be initiated via the Activity Request Form on the website. This request form should be used for new simulation construction, repeat simulations, assessment, and simulation lab clinics.

- Events should be scheduled at least three months before the session date. Requests are honored in the order in which they are received, taking into consideration staff and space availability and institutional priorities.
  - If the date and appropriate resources requested are available as deemed by JC-MSC staff, a tentative hold on the requested date(s) will be placed.
  - JC-MSC Coordinator will schedule a time to review course information, goals, objectives, logistics, equipment needs, and event schedule.

• **After-Hours**: Scheduling of specific courses and/or utilization of the JC-SIC Lab after-hours should be coordinated at least six weeks prior to the requested activity via email for approval.

- **Review:** Once the scenario is developed, it is reviewed with the Faculty, Simulation Coordinator, and Technician (ideally in person) two weeks prior to the scheduled session date so that any remaining questions or missing scenario aspects can be addressed.
- **Schedule/Material Access:** Two weeks prior to the first scheduled simulation day, faculty may access daily simulation schedules and materials for each assigned simulation scenario, skill assessment, or lab clinic in the scheduling system.
- **Participants Notification:** Faculty are responsible for scheduling, notifying, and communicating with all students and adjuncts in their simulation event.
- Changes: must be submitted at least 10 business days prior to a high-fidelity event or Standardized Patient Activity. Last-minute additions will be considered on a case-bycase basis, determining whether time exists and whether staff and equipment are available.

#### SIMULATION ACTIVITY FACILITATION

**Simulation Days:** For each course with a clinical component, students are scheduled for at least one day in the simulation hospital. Simulation activities are designed to correlate with theory content. Simulations and/or debriefings may be recorded or viewed for quality assurance, quality improvement, instructional, or research purposes.

**Faculty Absence:** All simulation sessions require appropriate, trained instructors to be present. If faculty is ill and unable to attend a scheduled simulation day, they should text or call the Simulation Coordinator. If staffing is unavailable, the simulation day may be rescheduled for those students and the faculty member later in the semester.

#### • Simulation Day Faculty Responsibilities:

- Faculty are responsible for all information for their specific assigned scenarios, skills, or tabletop activities so they may facilitate and answer student questions.
- Faculty are encouraged to schedule an appointment with the Simulation Coordinator prior to their scheduled day for additional support or practice in running simulation scenarios if needed.
- Faculty should arrive at the lab approximately 15-30 minutes early to ensure faculty are prepared to facilitate assigned simulation scenarios and equipment.
- Faculty should provide ongoing input and feedback to lab staff for continuous quality improvement and assurance.
- o Faculty will lead the debriefing.

#### INDUSTRY, VENDOR RELATIONS, AND TOURS:

JC-MSC coordinator and technician will continuously seek educational opportunities and establish ongoing relationships with vendors.

#### **External Vendors at Simulation Center**

Courses involving external vendors must adhere to the following:

- All vendors must be approved prior to their visit by the JC-MSC coordinator.
- Faculty must remain at the Simulation Center for the duration the vendor is onsite, along with a member of the simulation staff.
- The vendor is always responsible for their product; JC-MSC is not responsible for lost or stolen items.
- The vendor must coordinate all shipping logistics, including shipping labels, packaging, pick-up location, and transport.
- If the product demonstration includes the usage of food-grade animal parts, the faculty and/or vendor are responsible for cleaning the area and correctly disposing of all material.
- If the vendor conducts activities in the lab outside of regular business hours, the sponsoring department may incur staff overtime charges.

#### **Requesting tours:**

- Tours of the JC-MSC should be requested through Casesarahm@jccmi.edu. Tour requests should include the institution's name, date and time, and any specifics that should be included in the tour.
- Tour details: tours will include, as available, simulation suites, classrooms, and simulation use in education. Tours should not interfere with any planned simulations in progress.
- Tour requirements: Tours will last approximately thirty (30) minutes to an hour, depending on the size of the group. There is no cost associated with JC-MSC tours.
- Tour cancellation: Tours can be canceled one week prior to the scheduled date.

#### **COMPLAINT RESOLUTION PROCESS:**

In the event a complaint is issued concerning JC-MSC staff, faculty, or learners related to personal interactions or performances during simulation sessions, the following procedure will be initiated:

• Student or adjunct instructor issues: The Lead Course faculty member will be notified if the issue(s) was/were witnessed by Simulation Lab staff. If the complaint needs an

- immediate response, the lead faculty member can either resolve the issue immediately or bring it to the attention of the Program Director, then to the Program Chair.
- Simulation Lab Staff issues: Lead Course faculty or adjunct faculty will notify the Simulation Lab Coordinator. If the issue can be resolved immediately by the faculty member or Simulation Lab Coordinator, that would be ideal; if not, the issue(s) will be brought to the attention of the Dean of Health Sciences, Career & Technical Trades.

#### **SIMULATION SESSION EVALUATION:**

As instructor-to-student feedback is vital to simulation-based education, so are learners' evaluation of scenarios, Standardized Patient(s), Simulation Lab staff, equipment, and facilities. Without the benefit of feedback from student participants, the simulation lab would be unable to improve or enhance its offerings. Student and faculty simulation evaluation forms are found in the appendix. Below are guidelines for simulation evaluations following sessions conducted in the Simulation Lab:

- All JC-MSC activities and events will require an evaluation of the learning session.
  - These evaluations can be completed via cell phones by scanning the provided QR code in the lab.
  - The Simulation Lab team will send out a link to the surveys. Evaluations must be completed within 72 hours after their learning session ends.
  - The results are reviewed and maintained by lab staff and can be shared with Course Faculty. The course curriculum can be modified based on student evaluation feedback.
- Any grievances are immediately shared with the Lead Course Faculty and Nursing Simulation Lab staff following the session so that improvements can be incorporated in future sessions.
- Faculty evaluations of the simulation session will follow the same guidelines as student evaluations.

#### SPECIAL ACCOMMODATIONS

Special accommodations may be provided in conjunction with the Course Faculty and the Center for Student Success.

#### REFERENCES

Clinical Simulation Center | Clinical Simulation Center | Michigan. (2022, August 12). Clinical Simulation Center. https://medicine.umich.edu/dept/clinical-simulation-center

Simulation Center. (n.d.). UT Southwestern, Dallas, Texas. https://www.utsouthwestern.edu/departments/simulation-center/

#### **MODIFICATION AND UPDATES:**

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9/2/20205: Update