

**University of Central Florida College of Medicine
Clinical Skills & Simulation Center
Flexible Operations Plan in the COVID-19 Response**

Executive Summary

This Flexible Operations Plan has been created by the Clinical Skills and Simulation Center (CSSC) leadership and staff, supported by the Office of Faculty and Academic Affairs in accordance with University of Central Florida Return to Campus Plan (1), the Florida Department of Health (2), CDC (3) and OSHA (4) workplace COVID-19 guidelines, and strategically aligned with healthcare simulation best practices. It is a necessary supplement to the UCF College of Medicine (COM) Return to Campus Plan due to our facility, and associated operations presenting unique safety concerns to the CSSC Team and all CSSC stakeholders. This plan prioritizes employee and stakeholder safety, specifies environmental modifications required to ensure safe operations and highlights employee guidelines and communication strategies to ensure awareness and compliance. This plan requires a collaborative approach from all CSSC stakeholders.

1. Employee and stakeholder safety

Since our work necessitates simulating a variety of clinical encounters and physical/procedural skills, and our stakeholders include faculty, staff, students, residents, and health professions learners who work in clinical environments, our plan outlines resources and procedures necessary to ensure the safest possible working conditions for all of our team members (including more than 100 standardized patients (SPs) classified as OPS who do not routinely work in high-risk clinical settings. This is imperative as most CSSC team members and many of our learners do not work in clinical settings and risk exposure to COVID-19 from any stakeholders working clinically.

2. Environmental modifications to support safety

The CSSC space at COM is a 7500 ft, multi-purpose space located in a shared facility designed for clinical encounters, classroom space and traditional office settings. Therefore, this document synthesizes safety considerations pertaining to all three of these environments and the people who serve in them.

3. Iteratively assessing and communicating risk

This plan purposefully identifies iterative assessment and communication of risk due to the fluid nature of the pandemic. The fall semester of 2020 may not constitute a one-time reopening of our on-site facilities and associated services. In fact, it is anticipated that our team will need to streamline and/or scale back facility use and associated services if there is a COVID-19 resurgence (5). Transparent communication coupled with integrity and professionalism are core tenets of ethical simulation practice (6).

University of Central Florida College of Medicine
Clinical Skills & Simulation Center
Flexible Operations Plan in the COVID-19 Response

Draft July 13, 2020

This Flexible Operations Plan is intended to fulfill the requirements for the University of Central Florida (UCF) Return to Campus Plan (1). UCFCOM stakeholders seeking to collaborate with CSSC to implement simulation activities during the COVID-19 pandemic should specifically review the first 6 pages of this plan for guidance on criteria used to determine whether a simulation event will be classified as online, hybrid, or on-site / Face-to-Face (F2F) . Our goal is to keep on-site activities to a minimum for the safety of learners, faculty, staff and all COM personnel required to work on-site. Detailed protocols for on-site simulation are offered in the second half of this plan. Please contact Analia Castiglioni, MD, Medical Director of CSSC at Analia.Castiglioni@ucf.edu or Carolina Marchena, Assistant Director at Carolina.Marchena@ucf.edu with questions or for activity planning needs.

Table of Contents

Introduction	1
Collaborating to Implement Flexible Operations.....	3
Collaboration Guidelines for CSSC Team Members and Stakeholders	5
Online Simulation.....	7
Hybrid: Online and Onsite Simulation.....	8
On-Site Simulation	8
Safety Protocols to support Flexible Operations	8
Safety Guidelines for CSSC Team Members.....	8
Safety Guidelines for Stakeholders utilizing Simulation Facilities	10
Logistical Guidelines for On-Site Simulation	11
Future Directions: Expanding Modalities for Online Simulation	15
Conclusion: Iteratively Assessing and Communicating Risk.....	15
References.....	16
Appendix 1	17



Introduction

In March of 2020, the University of Central Florida (UCF) implemented mandatory remote learning for all students and mandatory remote operations for all faculty, staff and employees as a result of the SARS CoV-2 (COVID-19) worldwide pandemic. Similar plans had been implemented throughout the world in order to mitigate the spread of this new, highly contagious coronavirus. The basic tenets of the worldwide response were human safety and risk mitigation. The following document is aligned with both of these tenets and was created to maximize the safety of all UCFCOM CSSC stakeholders during the COVID-19 pandemic.

The CSSC facility <https://med.ucf.edu/about/learning-centers/clinical-skills-and-simulation-center/> consists of 16 standard medical exam rooms, 8 common hallways routinely traversed by dozens of people multiple times a day, 6 offices (3 of which are shared), 4 small simulation bays, 2 open-air office reception areas and 2 small multi-purpose classrooms with a non-pandemic capacity between 18 and 30 people. All areas have standard ventilation systems and lack opening windows or negative-pressure rooms.

The CSSC Team consists of 9 staff members and a Standardized Patient (SP) Program, including 100+ OPS employees ranging in age from 20-80 years old. On any given day, our SPs routinely see an average of six (6) students per session and may be assigned to two (2) sessions on any given day. This equates to at least 6 and as many as 12 contacts per SP per day, and between 30 to 60 contacts per week for each SP. With an average of 10-12 SPs per session, these numbers quickly become exponential factors which directly impact human safety and risk mitigation principles amidst a worldwide pandemic.

With human safety and risk mitigation serving as our core principles for a return to CSSC activity, the following pages represent purpose-driven, strategic measures to maximize the health and well-being of every learner, faculty member, staff member and SP. It is a necessary supplement to the UCFCOM Return to Campus Plan due to our facility, services, and associated operations presenting unique safety concerns for the CSSC team and our stakeholders. This plan prioritizes employee and stakeholder safety, and specifies environmental modifications, employee guidelines to support safety, and communication strategies to ensure awareness, collaboration and compliance.

Collaborating to Implement Flexible Operations

Implementing flexible operations to meet safety protocols for students returning to clinical environments, accreditation requirements for health sciences programs and trainee learning objectives requires innovative approaches and collaborative style. This necessitates a shift in thinking on the part of the CSSC Team and our stakeholders. We ask that our stakeholders engage with us in collaborative partnerships to reimagine simulation events with the lowest risk possible for all involved (7). During this unprecedented and unpredictable health crisis, the CSSC Team encourages a remote-by-default approach for all simulation activity unless and until a classification (online, hybrid, on-site/F2F) is assigned during collaborative discussion.

The CSSC Team will operate from a proactive, strength-based place of collaboratively designing curriculum highlighting best practices of simulation methodology including physical and psychological safety (8). This will likely necessitate implementing new methods and practices to effectively achieve trainee learning

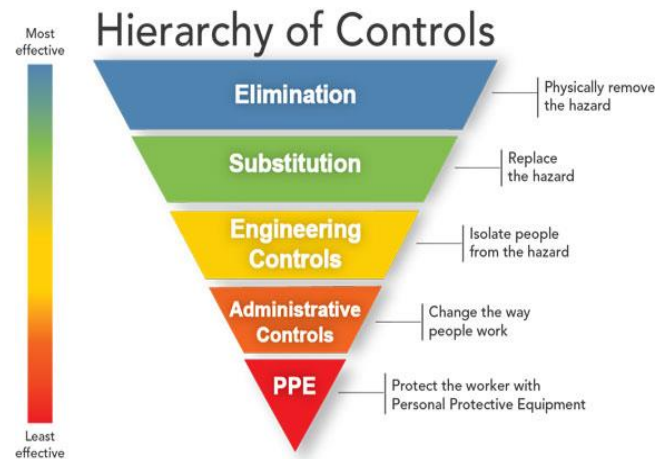
objectives with the lowest risk possible. Taking a collaborative approach rather than one of accommodation will improve the quality of our shared work for learners and the patients they will ultimately serve.

Figures 1 and 2 below demonstrate occupational risk exposure and steps employers and workers may take to decrease risks. **The CSSC Flexible Operations plan recommends online simulation as the default choice to stakeholders as this approach represents the lowest-possible exposure risk.**

Figure 1: OSHA risk exposure pyramid (4)



Figure 2: CDC Hierarchy of Controls (3)



Online Simulation

When CSSC team members are implementing simulation activities online, they are in the Low Exposure Risk category of the Occupational Risk pyramid and the Engineering Controls section of the Hierarchy of Controls inverse pyramid. Given the current COVID-19 hazard, this simulation modality yields the lowest risk possible with the highest amount of control for CSSC Team members and stakeholders.

Hybrid Simulation - Online and On-Site Simulation

When the CSSC Team members are implementing hybrid simulation activities, those working online are in the Low Exposure Risk category of the Occupational Risk pyramid and the Engineering Controls section of the Hierarchy of Controls inverse pyramid. Those working on-site are elevated to the Medium Exposure Risk category of the Occupational Risk Pyramid, and the Administrative Controls and PPE sections of the Hierarchy of Controls inverse pyramid. Given the current COVID-19 hazard the team members working online remain in the Low Risk category with the highest amount of control for CSSC team members and stakeholders. However, CSSC team members working on-site are increased to a Medium Exposure Risk category while being potentially exposed to stakeholders in the High or Very High-Risk exposure categories of the Occupational Risk pyramid. Additionally, employees and stakeholders working on-site have the least control over the hazard, having to rely on administrative/policy modifications and PPE.

On-Site (F2F) Simulation

All CSSC team members working on-site are in the Medium Exposure Risk category of the Occupational Risk Pyramid, and the Administrative Controls and PPE sections of the Hierarchy of Controls inverse pyramid. All CSSC team members working on-site are increased to a Medium Exposure Risk category while being potentially exposed to stakeholders in the High or Very High-Risk exposure categories of the Occupational Risk pyramid. Additionally, employees and stakeholders working on-site have the least control over the hazard having to rely on administrative/policy modifications and PPE.

Collaboration Guidelines for CSSC Team Members and Stakeholders

- I. All stakeholders - internal and external - will have an initial meeting with CSSC Team members (including the Medical Director and/or the Assistant Director) to discuss simulation activity needs, whether the activity would be best done virtually, as a hybrid or on-site/F2F. All factors from all angles will be discussed yet human safety and risk mitigation will remain the core principles for every discussion and every decision.

Note: all events will be conceptualized as online simulation activities unless a collaborative decision is reached to implement the event as a hybrid or on-site/F2F simulation based on the criteria below and any other emerging considerations.

Criteria - Online Simulation Activity

- Default option
- SP activities, communication skills training, medical interviewing, clinical reasoning, didactic sessions, demonstration role plays, narrated physical exam skills, SP verbal feedback to learner, faculty feedback to learners
- Additional physical exam skills training (in development)
- Formative assessment
- Summative assessment

Criteria - Hybrid Simulation Activity

- SP activities, communication skills training, medical interviewing, clinical reasoning, didactic sessions, demonstration role plays, narrated physical exam skills assessment, SP feedback and faculty feedback to learners
Additional physical exam skills training (*in development*)
- Formative assessment
- Summative assessment
- Specific technical and procedural skill that may be combined with any of the above done remotely

- “Ad-Hoc” individual or small group customized training for which learners, faculty, SP(s) and most CSSC Team members are online while one or two CSSC Team members are onsite in order to utilize manikins or task trainers to integrate with online components

Criteria - On-site Simulation Activity (F2F)

- Standardized training for specific technical and procedural skill(s) necessary for safe clinical practice by an advanced group of learners that requires utilizing standardized patients, manikins, task trainers and/, or other simulation equipment safely within the simulation center setting. Skill(s) that align with this category may not be gained via any other modality than on-site, in person (F2F) activity
- Training meets essential need for graduation requirement that may be achieved in no other manner;
- Standardized training for a specific technical and procedural skill(s) necessary for health sciences students to safely work in clinical spaces including training sessions specific to PPE and COVID-19;
- PPE and any other needed disinfectants and supplies specific to on-site training must be agreed upon in advance in terms of sourcing and procurement.

- II. For any activity involving on-site/in-person (F2F) exposure, traditional event schedules will likely be modified in order to maximize safety and minimize risk. Such modifications may include space/capacity adjustments, group size adjustments, timing adjustments (to enable cleaning and sanitization between events) and partial use of facilities to align with social distancing guidelines.

Prior to this pandemic, the 7,500 square feet of CSSC space was intended to be utilized by multiple learner groups of varying size and academic levels; many groups routinely exceed 100 participants per activity. These large groups are strategically assigned blocks of time, although many people within each group often circulate freely throughout CSSC space on the 3rd floor of the COM building. Annually CSSC hosts hundreds of UCF health sciences learners, faculty, staff and external stakeholders during more than 600 activities per year. As federal and Florida state guidelines still recommend limiting the number of people at any one gathering and social distancing, this Flexible Operations Plan is directly aligned with those recommendations and serves as a significant guiding document for modifying on-site/in-person (F2F) events.

Additionally, CSSC space was designed to promote self-directed practice (SDP) to supplement curricular learning. While we hope to return soon to on-site SDP for learners and other stakeholders, we must remain focused on safety and risk mitigation for the indefinite future. Any stakeholder seeking to use CSSC facilities must be authorized by CSSC Leadership and accompanied by at least one CSSC Team member at all times.

- III. Any activity that may be successfully implemented virtually (online) will be done so in order to maintain all CSSC personnel and stakeholders in the lowest risk category (Low Exposure) as defined by OSHA COVID-19 workplace guidelines. As the COM building is a shared facility, this will also help

mitigate risk for other employees working throughout the building. Moving any activity to an on-site/F2F category would automatically elevate many people to a higher risk category. This means that those stakeholders working clinically who fall into the High or Very High exposure risk category may be interacting with CSSC Team members and other stakeholders who would otherwise remain in the Low Exposure risk category during online/virtual activities. Therefore, CSSC Leadership will collaboratively prioritize essential training for incoming interns and students returning to the clinical environment and re-categorize as necessary. All other activities will be discussed on a case by case basis with the default being virtual/online activity.

- IV. The CSSC Assistant Director will review all requests to ensure master calendar compatibility. Until further notice and unless absolutely necessary, the CSSC Team will schedule one simulation event during a given time period so that events do not overlap. There may be more than one event per day, but not in the same timeframe and scheduled in a manner consistent with proper cleaning and sanitization.
- V. The Lead Stakeholder(s) requesting any given activity will complete a CSSC Event Request Form and then submit the completed form to the CSSC Assistant Director for review. The CSSC Assistant Director will use this form to manage all activities.
- VI. Once the activity is scheduled after the CSSC Event Request Form has been submitted, the Assistant Director will request a follow-up meeting with all relevant stakeholders. During this meeting, all stakeholders will work collaboratively to design and/or modify the activity to align with safety and risk mitigation efforts and in accordance with this Flexible Operations Plan.

Online Simulation

On May 6, 2020, the CSSC team successfully held its first fully online Spanish simulation education event with 6 M3 students who participated in standardized patient (SP) encounters. In addition, on May 8 and 29th, over 120 learners participated in remote LCT sessions that involved more than 22 SPs. We anticipate this capacity will grow and have not yet turned away stakeholders seeking to implement online simulation.

At this time, CSSC requires that all human simulation activities with SPs remain online at a minimum through the end of September 2020 and potentially until there is a COVID-19 vaccine available or at such time as there is no additional risk posed to SPs by working on-site. These activities pose the lowest-possible risk to learners, faculty, and CSSC team members including the SPs. It is optimal that human simulation activities with SPs continue online until there is a COVID-19 vaccine available or at such time as there is no additional risk posed to SPs by working on-site. Additionally, by keeping human simulation activities online, this reduces the number of employees and learners in the on-site simulation facilities leaving more room for physical exam, technical and procedural skills training that must be conducted in a face-to-face environment.

Hybrid: Online and Onsite Simulation

Many options exist to support hybrid simulation. One example would be for two CSSC team members or faculty to be on-site at UCFCOM to deliver a simulation encounter to learners via approved software applications (such as Zoom and Learning Space). In this example, one MD Faculty member would be in the room with the patient (manikin) to perform any tasks suggested by the virtual group of learners while the second CSSC or Faculty member will operate the manikin software enabling appropriate responses based on suggested actions. A second example of a hybrid simulation would be for the same two CSSC/faculty members to deliver a simulation-based encounter with partial manikin features (vital signs, images, etc.) via remote methodology. In this example, learners and faculty would remain remote while sharing strategic components of the simulation via selected software application(s).

On-Site Simulation (F2F)

CSSC team members could work effectively in a medium exposure risk environment with decreased controls relying on administrative/procedural controls and PPE. Though this training is possible, it should be reserved for skills training that may not be achieved in online or via hybrid formats.

Equipment/Supplies Required for On-Site Simulation to be Provided by CSSC and/or stakeholders

- Hand sanitizer
- EPA Recommended wipes (see Appendix 1 for product details)
- Face shields (preferred) or goggles for CSSC team members
- Gloves
- Masks

Safety Protocols to support Flexible Operations

To decrease risk of illness as much as possible during on-site simulation, it is essential that all CSSC team members and stakeholders adhere to the following guidelines which align with UCF Return to Work Plan (1), Florida Department of Health Recommendations (2), CDC (3), and OSHA (4) guidelines for workplace safety during COVID-19.

Safety Guidelines for CSSC Team Members (Staff and SPs)

1. Establish a team of online/remote workers and a team of on-site workers.
2. Continue practice of instituting a back-up team/person for each simulation event in the event an employee becomes sick and cannot work.
3. CSSC team members working on-site may not bring visitors to the simulation center facilities
4. CSSC team members should carefully review and must comply with UCF COVID-19 Return to Campus Policy (EP-20-1) <https://policies.ucf.edu/documents/PolicyEmergencyCOVIDReturnPolicy.pdf>, specifically
 - a. All employees returning to campus must complete the required training course (PER231) that provides a general overview of COPVID-19 prevention and control measures and campus specific policies prior to returning to campus.

- b. Employees coming to campus must complete the symptom-checker each day that they come to campus. The symptom-checker may be accessed as a form, available at <https://hr.ucf.edu/files/COVID-19-Employee-Self-Questionnaire.pdf> or through the UCF App (currently in development with details to follow - go to <https://www.ucf.edu/coronavirus/> for updates as available). Either way, if an employee answers YES to any of the screening questions, the employee should not report or come to campus and use the appropriate procedures to notify a supervisor.
 - c. Employees are required to stay home if they are sick or if any person living in the same residence is sick with COVID-19 symptoms. CDC guidance as to COVID-19 symptoms is found here: https://www.cdc.gov/coronavirus/2019-ncov/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2Findex.html
 - d. As applicable, employees should use the appropriate procedures to notify a supervisor if they will not be reporting to work.
 - e. Face coverings are required to be worn in all inside common spaces and outdoors when in close proximity to others, except as noted in UCF COVID-19 Return to Campus Policy (EP-20-1), Section F.3
5. Given their increased risk, CSSC team members working on-site are recommended to use objective temperature monitoring (i.e. take their temperature) before completion of their symptom-check questionnaire, on the days they are scheduled to come to work.
6. In addition to required face coverings, CSSC team members participating in onsite/F2F simulation activities, where social distancing cannot be maintained or direct physical contact is anticipated (i.e. physical exam), will be provided additional PPE (e.g. disposable masks, gloves, eye protection) to be used during the simulation. PPE will be determined based on the simulation activity characteristics.
7. Members working on-site will engage in frequent handwashing for 20 seconds or more at a time, or hand sanitizer, including after each time they disinfect simulation areas and before and after they eat. Sanitizer stations have been added to the CSSC and throughout the COM.
8. Members working on-site will practice social distancing of six (6) feet or more, floor markings will provide social distance guidance and direction.
9. Members working on-site will not serve as models for simulation events even if they have done so previously (e.g. ultrasound) and will have no physical contact with each other or other stakeholders in the simulation facilities.
10. Members working on-site will bring limited personal items and store them in an area only they access and reserved for their personal use. CSSC team members previously utilizing shared offices, will determine-in advance of working on-site- another lockable area with a door to be used as office space.
11. Members working on-site will not congregate in common areas such as conference rooms, copy rooms or the kitchen.
12. Members working on-site are encouraged to bring food that does not need to be microwaved or refrigerated and can be stored in their designated personal space. Members may use kitchen facilities to refrigerate or microwave their food one at a time but should not congregate.

13. Members working on-site are not permitted to share any office equipment (e.g. desks, chairs, pens) or other equipment (e.g. headphones) and are responsible for cleaning their own desk and equipment.

Safety Guidelines for Stakeholders (Students, Faculty, Staff) Utilizing Simulation Facilities

1. Student must abide by the general health and hygiene rules outlined in UCF COVID-19 Return to Campus Policy (EP-20-1), specific Students-Returning to Campus section:
<https://policies.ucf.edu/documents/PolicyEmergencyCOVIDReturnPolicy.pdf>.
2. Participating faculty and staff who are UCF Employees must
 - a. complete the mandatory COVID-19 online training course (PER231) that provides a general overview of COVID-19 prevention and control measures and campus specific policies prior to returning to campus.
 - b. carefully review and must comply with UCF COVID-19 Return to Campus Policy (EP-20-1)
<https://policies.ucf.edu/documents/PolicyEmergencyCOVIDReturnPolicy.pdf>
3. Participating faculty and staff who are not UCF Employees must abide by the general health and hygiene rules outlined in UCF COVID-19 Return to Campus Policy (EP-20-1), specific Campus Visitors and Contractors section:
<https://policies.ucf.edu/documents/PolicyEmergencyCOVIDReturnPolicy.pdf>.
4. Upon arriving at the CSSC, all stakeholders will be met by a staff member (CSSC team member or course coordinator) who will take attendance and obtain verbal confirmation of their completion of symptom self-checker and being symptom-free (*i.e.* "Did you complete the UCF symptom-checker today? Are you symptom free?").
5. Any stakeholders who say they have COVID-19 symptoms will not be allowed to participate in the simulation activity and may not enter the simulation center.
6. No visitors are allowed in the simulation center, so stakeholders must be sure before the event date that all stakeholder names (e.g. learners, faculty, staff) are provided to the CSSC team lead for the event.
7. No unannounced visitors will be allowed on-site including stakeholders if they are not on the attendance list. This includes tours for guests or new employees.
8. All stakeholders participating in on-site simulation must bring and wear their own cloth face coverings/masks at all times. No stakeholders will be allowed into the simulation center facilities if they do not bring and wear their own mask. If a student does not have a mask or is unable to wear a mask due to medical condition, he/she must contact their course director to let them know at least 24 hours before the event. Disposable masks will be available in CSSC in the event a stakeholder needs a replacement.
9. All stakeholders including trainees, faculty and staff, participating in on-site/F2F simulation will engage in either frequent handwashing for 20 seconds or more, or hand sanitizing, including before and after each time they complete a simulation exercise. Sanitizer station have been added to the CSSC and throughout the COM.

10. All stakeholders are expected to practice respiratory etiquette including covering coughs and sneezes.
11. All stakeholders participating in on-site simulation will practice social distancing of six (6) feet or more, unless otherwise directed by a CSSC team member on an as needed basis to achieve a training objective. This will be agreed upon in advance with the Module/Course Director and the Assistant Director of CSSC (or a designated representative).
12. All stakeholders should refrain from any physical contact with CSSC team members and one another, unless specifically directed by a CSSC team member or session instructions that physical contact is permitted.
13. All stakeholders are asked to keep talking within the CSSC to a minimum, outside the simulation event, and must wear face covering
14. No stakeholders may eat in any CSSC common area at any time.
15. All stakeholders must use only those restrooms clearly marked for their use when in the facility.
16. All stakeholders must go only where directed in the simulation center by CSSC team members; signage will make this clear upon arrival. This is so CSSC Team members know where and how to disinfect areas between sessions.
17. Stakeholders should bring limited or no personal items to the simulation center. Any phones, pens, or wallets, etc. should stay on that person. There is nowhere to leave personal belongings including water bottles and backpacks, etc.

Logistical Guidelines for On-Site Simulation

Preparation for Simulation Events/Set-up

1. Each CSSC team member should establish a lockable workspace that allows them to be socially distant with at least six (6) feet between other employees and stakeholders. This space is considered their home base for the day. CSSC team members working on-site should coordinate and move if needed.
2. CSSC team members should only use restrooms designated for their use.
3. CSSC team members should wash/sanitize their hands prior to donning PPE then go to the storage room to get supplies.
4. Don PPE: masks, (if not already on), and gloves when entering any shared workspace, storage room, or simulation room(s).
5. Face shields or goggles should be worn when stakeholders are present or in dirty rooms when cleaning.
6. Depending on chemicals used, change out gloves or PPE in accordance with the chemical data sheet provided and OSHA guidelines.
7. Check, identify, organize supplies needed for the simulation; take what you need but refrain from touching what you do not need in order to keep it clean.
8. Disinfect all equipment/task trainers/manikins before and after every use.
9. Load clean supplies onto a cart.

10. Throw away dirty gloves upon leaving the storage room or after cleaning equipment and don new, clean gloves.
11. Transport supplies to simulation event rooms.
12. Disinfect surfaces in simulation event rooms.
13. Place equipment in the room in order to establish safe social distancing (may include tape placement on floor or utilization of screen).
14. Consider draping supplies/equipment placed a day in advance of simulation, as appropriate.
15. Confirm appropriate and adequate disinfection/hand hygiene supplies are in the room.
16. Ensure room is secured up to the start of the simulation.
17. Post a sign indicating the room is clean and prepped for simulation and no one may enter without permission of a CSSC team member. Cleaning crew would be allowed to access the center overnight to clean floors, but must be instructed not to touch any surfaces or equipment.
18. Place any needed handouts outside simulation area rather than in clean simulation rooms though physical handouts are discouraged.

During the Simulation Event

1. Stakeholders report to an identified area as directed by the CSSC team lead.
2. Hand sanitizer and PPE will be in place for all stakeholders on arrival.
3. Verbally review safety protocol (PPE, restroom locations, facility use, avoid physical contact with others and unnecessary contact with equipment, social distancing) with stakeholders and obtain verbal acknowledgement from each group member. Standardized safety protocol script for CSSC team members to use for on-site events is in development.
4. Handwashing and/or hand sanitizing is required each time before entering or leaving a new simulation space (e.g. treat this like surgery spaces).
5. Orientation/Pre-brief for stakeholders will take place in this same space with all involved standing-as they are able-and stakeholders will be directed to move to active simulation space(s) by an CSSC team member.
6. CSSC staff will remain outside of simulation spaces actively in use by stakeholders and will utilize AV equipment for overhead announcements to assure safe social distance (e.g., to redirect stakeholders to stay socially distant, to direct stakeholders not to make physical contact with one another or equipment in the room not being used as part of the simulation).
7. CSSC Staff provides ad hoc supplies, as necessary, by bringing a cart/tray outside the room and leaving it at the doorway; stakeholders will pick up any needed ad hoc items from the cart/tray. So, CSSC team members will be able to remain outside of simulation rooms in active use by stakeholders.
8. Stakeholders will disinfect surfaces or equipment in between use by individual participants/learners during an active simulation. CSSC team members will not enter the room during an active simulation.
9. Any stakeholders needing to leave the space during an active simulation event need to notify staff so the CSSC team member can plan for additional disinfection/direction within or in and out of the

facility, (e.g. if a faculty member is paged and needs to make a call rather than going and finding a space on their own they need to work with the CSSC team member to do so).

10. Any stakeholder debriefing will take place outside of CSSC. These can be schedule remotely, in a lecture hall or even outside in open air, where participants will be able to practice social distancing.
11. Stakeholders must only move between stations as directed by an CSSC team member or course coordinator in order to minimize contamination/contact.
12. Stakeholders must dispose of items in assigned receptacles, and wash hands following trash disposal and prior to leaving the simulation room.
13. Stakeholders will be directed by an CSSC team member or course coordinator to use specific pathways, designated by signage or floor markings, to exit the CSSC.
14. Stakeholders will continue wearing masks while in the building.
15. Once session is complete and stakeholders exit from an active simulation event, an CSSC team member will post a sign indicating the room is dirty.
16. Scheduled downtime is necessary to decrease airborne exposure prior to simulation rooms that were just in active use by stakeholders being disinfected by CSSC team members (e.g. each simulation room should sit empty for 15 minutes prior to an CSSC staff member entering and disinfecting the room).

Post-Simulation Event/Clean-up by CSSC Team member(s)

1. Don PPE (if team member took off PPE at any point or if new team member is assisting): masks, gloves, eye protection (e.g. ideally face shields or goggles)
2. Disinfect all surfaces and equipment/task trainers/manikin used prior to removing from the dirty room. Depending on chemicals used, change out gloves or PPE in accordance with the chemical data sheet provided and OSHA guidelines.
3. Throw away dirty gloves after cleaning equipment and don new, clean gloves.
4. Place equipment/supplies (after cleaning) on the cart to return storage. The cart should also be disinfected.
5. Place a sign on the room that indicates the simulation room is clean.
6. Transport the clean equipment to the storage room.
7. The storage room is intended to be maintained as a clean space. If any contaminated items are inadvertently brought into the space, the individual responsible for the dirty item(s) is to clean the item(s) promptly as well as any part of the space impacted by the dirty item(s).
8. Staff must sanitize hands prior to leaving the storage room.

Logistical Guidelines for CSSC Team for Multiple Session Task Training

1. CSSC Staff will Don PPE: masks (if not already on) and gloves when entering any shared workspace, storage room, or simulation room(s). Face shields or goggles should be worn when stakeholders are present or in dirty rooms when cleaning.
2. Depending on chemicals used, change out gloves or PPE in accordance with the chemical data sheet provided and OSHA guidelines.

3. All simulator and task trainer equipment and supplies will be kept in an access-controlled storage room, when not in use
4. Check, identify, organize supplies needed for the simulation; take what you need but refrain from touching what you do not need in order to keep it clean
5. Disinfect all equipment/task trainers/manikins to be used.
6. Load clean supplies onto a cart.
7. Throw away dirty gloves after cleaning equipment and supplies and don new, clean gloves as you are leaving the room.
8. Transport supplies to simulation event rooms.
9. Disinfect surfaces in simulation event rooms.
10. Place equipment in the room in order to establish safe social distancing (may include tape placement on floor or utilization of simulation screen).
11. Consider draping supplies/equipment placed a day in advance of simulation, as appropriate.
12. Confirm appropriate, adequate disinfection/hand hygiene supplies are in the room.
13. Ensure room is secured up to the start of the simulation.
14. Post a sign indicating the room is clean and prepped for simulation and no one may enter without permission of a CSSC team member. Cleaning crew would be allowed to access the center overnight to clean floors but must be instructed not to touch any surfaces or equipment.
15. Place any needed handouts outside simulation area rather than in clean simulation rooms though physical handouts are discouraged.
16. Before engaging with the task trainer equipment, stakeholders must have donned a new set of gloves.
17. Throughout the engagement all stakeholders must be practicing proper coughing and sneezing etiquette.
18. Designated CSSC staff will ensure all task trainers, manikins, surfaces and frequently touched areas are disinfected with the EPA recommended disinfectant wipes.
19. Designated CSSC staff will follow all up to date CDC recommendations to ensure surfaces are properly disinfected before and after task trainer use.
20. All disposables will be discarded into their appropriate receptacles by stakeholders.
21. All reusable material items (Gowns, Surgical Towels, etc.) used during the training will be collected and transported to the washer and dryer.
22. The room at this time will be reset for the next training session.
23. CSSC Staff will again mark the door to the room as "Clean" and the next group of stakeholders will be allowed to enter.
24. After the entire course is finished and stakeholders have exited the facility, CSSC team members will then need to follow the guidelines indicated above in the *Post-Simulation Event and Cleanup*

Future Directions: Expanding Modalities for Online Simulation

This Flexible Operations Plan provides detailed guidance for working with SPs, task trainers, manikins, and other equipment utilized for technical and procedural skills training. As the COVID-19 pandemic continues, a key priority for the CSSC team is to expand our options for online simulation by adopting other virtual platforms potentially including augmented and virtual reality, and other web-based platforms in addition to Zoom. As we continue to innovate with new and existing technologies, we will update this plan.

Conclusion: Iteratively Assessing and Communicating Risk

This plan purposefully identifies iterative assessment and communication of risk as expansion of services in Fall 2020 may not constitute a one-time reopening of our on-site facilities and associated services. It is likely that our team will need to streamline or scale back facility use and associated services if there is a COVID-19 resurgence. Flexible operations will enable us to consistently, collaboratively and imaginatively rebuild programs with stakeholders in keeping with iteratively assessing safety for all and to carry out business as best as possible (14).

The CSSC Team is committed to clear and transparent communication with stakeholders and to provide updates to this plan which will be posted on the CSSC website at: <https://med.ucf.edu/about/learning-centers/clinical-skills-and-simulation-center/>. This Flexible Operations plan may change based on CSSC team's assessment and emerging UCF, state, and federal safety recommendations and guidelines.

Thank you for reading and adhering to this Flexible Operations Plan. Should you have questions or seek to arrange a meeting to discuss collaborating with CSSC please contact:

Analia Castiglioni, MD
Medical Director, CSSC
UCF College of Medicine
Analia.Castiglioni@ucf.edu

Carolina Marchena
Assistant Director, CSSC
UCF College of Medicine
Carolina.Marchena@ucf.edu

Acknowledgements: The CSSC Flexible Operations Plan was written in close alignment with the University of Minnesota M-Simulation Flexible Operations Plan (15). We thank Lou Clark, PhD, MFA, Executive Director at the University of Minnesota (louclark@umn.edu) for her guidance and for sharing the materials with us.

References

1. President Alexander N. Cartwright, University of Central Florida Return to Campus Plan, <https://www.ucf.edu/coronavirus/returning-to-ucf/>, June 14th, 2020.
2. Florida Department of Health, Coronavirus Disease COVID-19, <http://www.floridahealth.gov/>, June 14th, 2020.
3. Centers for Disease Control and Prevention, Coronavirus (COVID-19), <https://www.cdc.gov/coronavirus/2019-nCoV/index.html>, June 14, 2020.
4. Occupational Safety and Health Administration, COVID-19 Hazard Recognition, <https://www.osha.gov/SLTC/covid-19/hazardrecognition.html>, June 14, 2020.
5. Queensland Government, Disaster Management, <https://www.osha.gov/SLTC/covid-19/hazardrecognition.html>, June 14, 2020. lation Code of Ethics Work Group, Society of Simulation and Healthcare, <https://www.ssih.org/SSH-Resources/Code-of-Ethics>, June 14, 2020.
6. Dueck-Read JM. Managing Conflict through Communication 5th ed.
7. Lewis KL, Bohnert CA, Gammon WL, Hölzer H, Lyman L, Smith C, Thompson TM, Wallace A, Gliva-McConvey G. The association of standardized patient educators (ASPE) standards of best practice (SOBP). *Advances in Simulation*. 2017 Dec;2(1):10.
8. Clark, L, Woll, A, Miller, J., Using Zoom to train Standardized Patients (SPs) and implement formative Objective Structured Clinical Examination (OSCEs) with health science students, <https://www.simulation.umn.edu/research-and-innovations>, June 14, 2020.
18. United States Environmental Protection Agency, List-N Disinfectants for Use Against SARS- CoV-2, <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>, June 14, 2020.
19. Gliva-McConvey, G, Nicholas, C, Clark, L, editors. *Comprehensive Healthcare Simulation: Implementing Best Practices in Standardized Patient Methodology*. New York: Springer; in press.
20. University of Minnesota, M Simulation, <https://www.simulation.umn.edu/>, June 14, 2020.

Appendix 1

EPA Recommended Disinfectant Wipes (16)

These are products that are commonly used in our simulation center and are effective against spreading SAR- CoV-2 as long as the identified wait times are followed.

- *PDI Super Sani-Cloth (2 Min)* - Effective against Bacteria, Multi Resistant Bacteria, Viruses, and Bloodborne Pathogens, and Pathogenic Fungi. These wipes are to be used to clean all surfaces and frequently touched areas before, during, and after task trainer use. (The surface must remain wet for at least 2 min in order for these wipes to be effective)
- Disinfecting Wipes (4 Min) - Effective at killing 99.9% of bacteria and viruses and more than 95% of allergens, including pet dander, dust mites, and pollen. These wipes are to be used to clean all task trainers and manikins (The surface must remain wet for at least 4 min in order for these wipes to serve as a disinfectant)

Other alternatives may be considered for purchase if they fall on the EPA's list of approved disinfectant products.