

# Create, Redesign, or Redefine Your Ideal In-Situ Simulation Program



IMSH 2021

## Course Faculty

Dawn Swiderski, MSN, RN, CCRN-K, CHSE, FSSH  
Crystal L. Bencken, MSN, RN, CEN, CPEN, CHSE  
Jennifer F. Noble, MSN, RN, AGCNS-BC, CEN, CHSE  
Stacy Seay Capel, MSN, RN, CHSE  
John Ehlers, BA

# Purpose

This virtual presentation will guide learners through planning and development of an in-situ simulation program. Instructors will demonstrate key components of an in-situ build including preparation, strategies for success, and potential barriers and pitfalls.

# Content

The goal of this virtual presentation is to give learners the opportunity to develop an outline to support an in-situ simulation project that they can implement. Throughout this event instructors will utilize video vignettes to guide participants through a build of an in-situ simulation project from the identification stage to the evaluation phase.

Our panel of educators have teamed together to offer a robust understanding of in-situ events within academic curriculums and acute care facilities. Each instructor is familiar with pre-licensure student needs and post-licensure learner essentials. This unique partnership offers participants access to a comprehensive view of “in place” experiential learning events.

Information will be offered on safety measures required for this distinctive style of education, project identification, planning, implementation, and evaluation. As part of the presentation learners will be given a workbook as a template to guide them through the course and take back to their facility as a cognitive aid after completion of the experience. Participants will also leave with a reference list of articles regarding in-situ simulation in each patient care service line. The publications were curated by the instructor team as to give peer reviewed examples of in-situ simulation project implementation and outcomes. The list can be utilized as another resource and / or possible literature review origin point as individuals completing this course begin to organize their own in-situ programs.

# Learning Objectives

- Learners will develop an outline for a future in-situ simulation project including planning, implementation, and evaluation phases.
- Learners will identify 3 key components during preparation of an in-situ simulation project to ensure success.
- Learners will recognize 2 common in-situ simulation barriers/pitfalls and develop strategies for success.

# Project Identification

Who are your key stakeholders?

What are your goals / objectives / outcomes?

Logistics?

Resources?

Funding?

# Planning

Safety

Curriculum Development

Scheduling

Checklists

Resource Selection

# Test Run

Set-up

Timing

Scouting the space

Scenario running as planned

# Implementation

Just do it!

# Evaluations / Feedback

Participant

Facilitators

Project Debrief

Measurable outcomes

Lessons learned / Barriers

Successes / Plans for Future

# References

Clapper, T. C. (2013). In situ and mobile simulation: Lessons learned...authentic and resource intensive. *Clinical Simulation in Nursing*, 9(11), 551-557.

Hebers, M. D. & Heaser, J. A. (2016). Implementing an in situ mock code quality improvement program. *American Journal of Critical Care*, 25(5), 393-399.

INACSL Standards Committee (2016, December). INACSL standards of best practice: Simulation<sup>SM</sup>. *Clinical Simulation in Nursing*, 12(S), S5-S50.  
<http://dx.doi.org/10.1016/j.ecns.2016.10.001j.ecns.2016.10.012>.

Jeffries, P.R. (2012). Simulation in nursing education. New York, NY: NLN.

Lanfranchi, J. A. (2013). Instituting code blue drills in the OR. *AORN Journal*, 97(4), 428-434.

Palaganas, J. C., Maxworthy, J. C., Epps, C. A., & Mancini, M.E. (2015). Defining excellence in simulation programs. Philadelphia, PA: Wolters Kluwer.

Raemer, D., Hannenberg, A., & Mullen, A. (2020). Foundation for healthcare simulation safety. <https://healthcaresimulationsafety.org/>

# Contact Us

Thank you for participating in this virtual presentation!  
Please consider reaching out to us if you have any questions regarding your in-situ project development.

Dawn.Swidorski@atriumhealth.org  
Crystal.Bencken@atriumhealth.org  
Jennifer.Noble@atriumhealth.org  
Stacy.Capel@atriumhealth.org



# Supplemental In-situ Simulation Resources

# New User Request Form Example

## **New User Groups or Changes to Existing Groups Approval Application**

Please complete the form below to give ensure that information is up to date regarding your simulation curriculum. If you have any questions, please contact General Hospital at (704) 911-3333.

### **User Information**

Type of user: New User

User Group:

Department and Project Title:

Facilitator Name:

Email:

Phone Number:

Contact Person Name

Email:

Phone Number:

[Type here]

## New User Request Form Example (continued)

### **Curriculum Development**

Instructional Goals and Objectives:

Instructional Methods: How will the instructions be delivered?

Assessment Methods: How will we know if the instruction was effective? What are the educational outcomes of the instruction?

Evaluation: How will you measure learners and facilitators satisfaction?

### **Logistics**

Expected number of simulation sessions:

Duration (hours) of each session:

Location:

- General Hospital Simulation Center
- Surgical Skills Lab
- Other

Please select your top 3 date choices:

Date	Time
------	------

First

Second

Third

## New User Request Form Example (continued)

Description of requested time: (ex. Tuesday or Wednesday mornings)

Approximate number of learners:

Type/Level of learner:

Number of facilitators:

Content experts: Who are the facilitators/instructors?

Facilitator simulation experience: Has facilitator used simulation before, if so how?

## Resources

Please select what simulation equipment you are interested in using for your session. For more information on the available equipment visit <http://www.generalhospital.org/- equipment>.

### High Fidelity Manikins

- Adult
- Maternity
- Pediatric
- Infant/Newborn
- Premie

### Task Trainers

- Airway
- Arterial/IV Access
- Birthing
- Central Line Access
- Laparoscopic Surgery
- Lumbar Puncture
- Orthopedic Injection
- Trauma (cricothyrotomy, chest tube, paracentesis, thoracentesis, thoracotomy)
- Urinary Catheterization
- Other

Specific/Specialty equipment not listed above:

## New User Request Form Example (continued)

### Room Requirements

- Adult
- Pediatric
- Labor/Delivery
- Operating Suite
- Procedural Suite
- Live Streaming
- In-situ (mobile)
- Classrooms (qty)

### Simulated Participants

- Nurse
- Respiratory Therapist
- Healthcare Technician
- Patient (with script)
- Patient (anatomy model)
- Family Member
- Other

Other requests or comments:

*For Administrative Use*

Date Received:

Alignment with general Hospital's strategic goals:

Comments on curriculum objectives or outcome goals:

Prospect for future partnerships:

Prospect for added diversity within user groups:

Quality of curriculum:

Reimbursement:

- Grant funded
- Hospital funded
- Departmental funding
- External revenue
- Other

Total simulation hours requested: (including set-up and break-down)

Total number of learners:

Resources needed: (supplies, personnel, equipment, and costs associated)

Mobile vehicle required:

Appropriate coordination in place:

Appropriate educational facilitators: (Sim Intern or higher) Scheduling conflicts:

# Scenario Template Sample

Click here to enter Scenario Title.

Click here to enter User Group(s).

Click here to enter Author(s).

Date Created: *Date*

Date Reviewed: *Date*

## Simulation Scenario Template

I. Target Audience:

II. Learning Objectives: *(2-5 recommended; Physicians list applicable RRC core competencies)*

III. American College of Surgeons Learning Domains

Cognitive  
Training

Psychomotor

Affective

Team

IV. American College of Surgeons Assessment Types

Assessment of learning

Assessment of performance and outcomes

Assessment of faculty

Continuous improvements in education & training  
programs

V. Scenario Logistics: ([Link to Simulation Equipment](#))

*Environment/Setting:*

*Manikin:*

*Moulage:*

*Equipment:*

*SP's (RN/Patient/Family):*

*\*Attach SP script when applicable*

VI. Case Scenario:  Click box if patient profile is to be available at start of scenario

*Age:*

*Gender:*

*Pt. Name:*

*Chief Complaint:*

## Scenario Template Sample (continued)

*History of Present Illness:*

*Past Medical/Surgical History:*

*Allergies:*  NKDA (check box if none or enter below)

*Current Medications:*

*Family/Social History:*

### VII. Case Progression/Narrative:

### VIII. Physical Exam:

Primary Exam

*Vital signs:*

Click box(es) below if these vitals are to be:

Visible at scenario start    Not visible until learner asks

HR:                      Rhythm:                       PEA (select if yes)

BP:                      RR:                      Temp:                      SpO2:    %

WT:                      kg    CVP:                      ABP:                      etCO<sub>2</sub>:

*Airway:*

*Breathing:*

*Circulation:*

## Scenario Template Sample (continued)

### Secondary Exam

*General:*

*Skin:*

*HEENT:*

*Neck:*

*Lungs:*

*Cardiac:*

*Abdomen:*

*GI/GU:*

*Extremities:*

*Neurologic:*

---

### **IX. Supplemental Images:**

#### **Patient Pictures:**

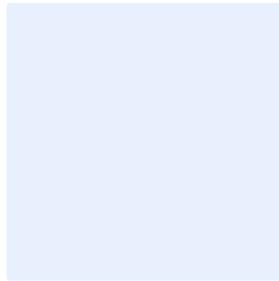
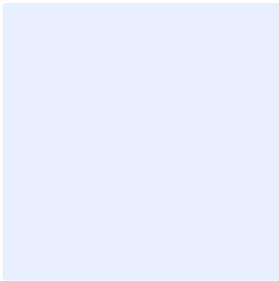
*If applicable, insert photos necessary for accurate assessment (patient, swollen feet etc.)*

## Scenario Template Sample (continued)



### **EKG:**

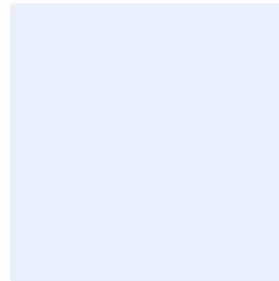
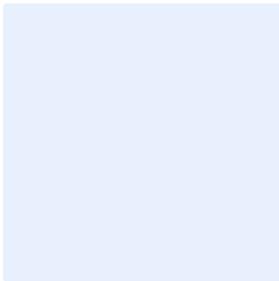
*If applicable, insert preferred 12-lead EKG(s)*



*Cardiology Interpretation of 12-lead EKG:*

### **Radiology Images:**

*If applicable, insert preferred radiology images*

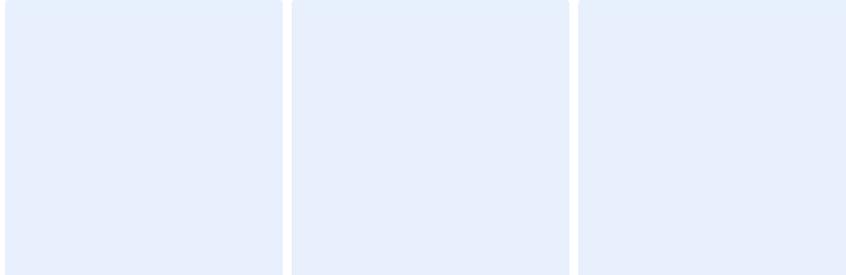


*Radiology Interpretation of Image:*

## Scenario Template Sample (continued)

### Other Diagnostic Images:

*If applicable, insert preferred diagnostic images*



### X. Laboratory

*Fill in only labs that are pertinent to your case. You may change reference ranges as indicated for your scenario. If there are additional labs you would like but do not see, please add them as needed.*

CBC – Hematology			Reference Range
WBC		K/ $\mu$ L	3.5 - 11
RBC		K/ $\mu$ L	4.7 - 6.0
HGB		gm/dL	11.0 - 15.0
HCT		%	32.0 - 45.0
MCV			
Platelets		K/ $\mu$ L	150 – 400
Reticulocytes			Reference Range
Reticulocytes		/L	18 - 158 x 10 <sup>9</sup>
Coagulation Studies			Reference Range
PTT		sec	24.2 - 32.0
Fibrinogen		mg/dL	200 - 400
PT		sec	9.4 - 11.5
INR			0.9 - 1.2
D-Dimer			Reference Range
D-Dimer		ng FEU/mL	<500

Chemistry			Reference Range
Sodium Level		mEq/L	136 – 144
Potassium Level		mEq/L	3.6 - 5.1
Chloride Level		mEq/L	101 - 111
Calcium Level		mg/dL	8.9 - 10.3
Glucose Level		mg/dL	74 - 118
BUN		mg/dL	8 - 20
Creatinine		mg/dL	0.6 - 1.3
CO2		mEq/L	20 - 30
Phosphorus Level		mg/dL	2.5 - 4.6
Magnesium Level		mg/dL	1.8 - 2.5
Liver Function Tests			Reference Range
ALT (SGPT)		IU/L	17 - 63
AST (SGOT)		IU/L	15 - 41
Total Bilirubin		mg/dL	0.3 – 1.4
Albumin Level		gm/dL	3.5 - 4.8
ABG			Reference Range
pH			7.35 - 7.45
pCO2		mmHg	35 - 45
pO2		mmHg	80 - 100
HCO3		mEq/L	22 – 32
Lactate		mmol/L	0.5 - 2.2
VBG (CG4)			Reference Range
pH			7.32 - 7.42
pCO2		mmHg	38 - 52
pO2		mmHg	28 - 48
HCO3		mEq/L	22 - 32
Lactate		mmol/L	0.5 - 2.2

Cardiac Enzymes			Reference Range
Troponin I		ng /mL	<0.03 Normal ≥0.03 – 0.3 Borderline > 0.2 Abnormal
Total CPK		mg/mL	38 - 397
Urinalysis			Reference Range
Color			
Appearance			
Specific Gravity			1.016 - 1.022
pH			4.6 - 8.0
Protein		mg/dL	< 15
Glucose		gm/24hr	< 0.5
Ketones			
Urobilinogen			
Blood			
WBC		cells/hpf	<1 - 2
RBC		Cells/hpf	
Epithelial Cells			
Hyaline Casts			0
Bacteria			
Nitrites			
Crystals			0
Leuko Esterase			
Urine Pregnancy Test			Reference Range
UPT			Positive/Negative
Urine Drug Screen			Reference Range
UDS			Negative
TSH			Reference Range

TSH		μIU/mL	0.34 – 4.5
Total T4		μg/dL	6.1 - 12.2
Total T3		ng/dL	90 - 178
Free T4		ng/dL	0.6 - 1.6
<b>Specific Drug Panels</b>			<b>Reference Range</b>
EtOH		mg/dL	<5
Acetaminophen		μg/mL	10 - 30
Salicylate (ASA)		mg/dL	2 - 29
<b>Other Labs</b>			<b>Reference Range</b>
Iron Level		μg/dL	28 - 182
Serum Osmolality		mOsm/kg	280 - 300
Lactic Acid		mmol/L	0.5 - 2.2
Ammonia		μmol/L	10 – 47
β hCG		mIU/mL	< 5 Not Pregnant

**XI. Debriefing:**

*Participant Critical Actions:*

*Take Home/Teaching Points:*

*Pathophysiology:*

*Diagnostic testing:*

*Management:*

**XII. References:**

**XIII. Authors and Affiliations:**

# Mobile Simulation Equipment

## Checklist Example

### **Maternal / Fetal Simulator Checklist**

Maternal Simulator  
Fetal Simulator  
Instructor Workstation  
Monitor  
Zoll Handsfree adaptor  
Uterus? Boggy uterus? Inverted uterus? Birthing ring? Bleeding tank? Trauma tank?  
Placenta  
Cervix  
Back plate (both parts)  
User Guide  
Ethernet cord  
Power cord  
Fetus power cord  
Extension cord  
Wireless mic  
Wipes  
Goo Gone  
Liquid soap  
Cotton seed oil  
Moulage?  
Batteries for mic  
Tape for patient  
Tape for cords  
Sign--Basic Assumption  
Sign—No Food  
Orientation guidelines & recommended clinical supply size lists  
Measuring tape  
Evals  
Pencils / Pens  
Debrief Info  
Food coloring?  
Distilled water / vinegar  
Magic Eraser  
Glue

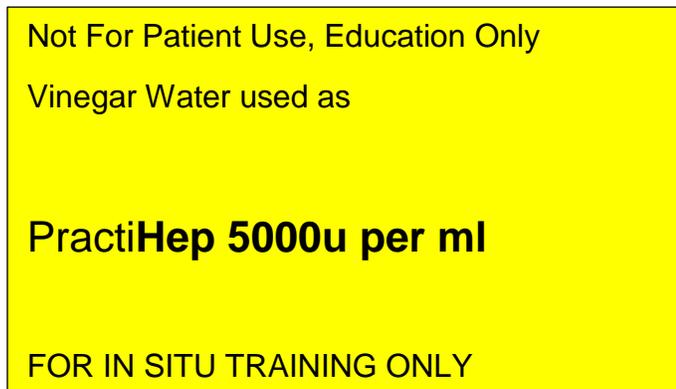
# Simulated Medication Policy Example

## **General Hospital Policy SIM-0569 Use of Simulated Medications in Clinical Areas**

The policy for labeling of practice “medications” used during Simulation Lab training is outlined as below:

- No practice meds can be purchased / delivered through Pharmacy Services
- Pharmacy may provide plain IV bags or empty containers, but cannot fill them with “substitute fluids”
- Pharmacy can assist with the bright yellow labels, but cannot fill the bag or container
- All sim meds must be labeled with a bright yellow sticker
- Label must contain four elements in this order:
  1. Not For Patient Use, Education Only
  2. Vinegar Water Used as “ \_\_\_\_\_ ”
  3. Practi???? (substitute first portion of drug name) and supposed concentration  
Make the simulated med all one name
  4. FOR IN SITU TRAINING ONLY
- No actual drug vials to be used, expired or otherwise.
- A count of the vinegar water containers must be done before the simulation and then reconciled after the event, before learners can leave the room.

Example of the label:



# Mobile Simulation Medication Checklist

## Example

**Mobile Simulation  
Medication Checklist**

Project: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Scenarios: \_\_\_\_\_

Cardiac Drugs			
Adenosine	<input type="checkbox"/>		<input type="checkbox"/>
Amiodarone	<input type="checkbox"/>		<input type="checkbox"/>
Atropine	<input type="checkbox"/>		<input type="checkbox"/>
Epinephrine 1:10,000 (Box)	<input type="checkbox"/>		<input type="checkbox"/>
Epinephrine 1:1,000 (1ml Vial)	<input type="checkbox"/>		<input type="checkbox"/>
Epinephrine 1:1,000 (30ml)	<input type="checkbox"/>		<input type="checkbox"/>
Lidocaine	<input type="checkbox"/>		<input type="checkbox"/>
Diltiazem	<input type="checkbox"/>		<input type="checkbox"/>
Procainamide	<input type="checkbox"/>		<input type="checkbox"/>
Nitroglycerin Paste	<input type="checkbox"/>		<input type="checkbox"/>
Nitroglycerin Tablets	<input type="checkbox"/>		<input type="checkbox"/>
RSI Drugs			
Rocuronium	<input type="checkbox"/>		<input type="checkbox"/>
Succinylcholine	<input type="checkbox"/>		<input type="checkbox"/>
Vecuronium	<input type="checkbox"/>		<input type="checkbox"/>
Sedatives			
Fentanyl	<input type="checkbox"/>		<input type="checkbox"/>
Etomidate	<input type="checkbox"/>		<input type="checkbox"/>
Ketamine	<input type="checkbox"/>		<input type="checkbox"/>
Midazolam (Versed)	<input type="checkbox"/>		<input type="checkbox"/>
Propofol	<input type="checkbox"/>		<input type="checkbox"/>
Morphine	<input type="checkbox"/>		<input type="checkbox"/>
Ativan	<input type="checkbox"/>		<input type="checkbox"/>
Fluids			
0.9% NS	<input type="checkbox"/>		<input type="checkbox"/>
Ringers Lactate	<input type="checkbox"/>		<input type="checkbox"/>
D <sub>5</sub>	<input type="checkbox"/>		<input type="checkbox"/>
D <sub>5</sub> 1/2NS	<input type="checkbox"/>		<input type="checkbox"/>
D <sub>5</sub> 1/4NS	<input type="checkbox"/>		<input type="checkbox"/>
Miscellaneous			
Narcan	<input type="checkbox"/>		<input type="checkbox"/>
D50	<input type="checkbox"/>		<input type="checkbox"/>
D25	<input type="checkbox"/>		<input type="checkbox"/>
Sodium Bicarbonate	<input type="checkbox"/>		<input type="checkbox"/>
Calcium Chloride	<input type="checkbox"/>		<input type="checkbox"/>
Calcium Gluconate	<input type="checkbox"/>		<input type="checkbox"/>
Magnesium Sulfate	<input type="checkbox"/>		<input type="checkbox"/>
Dopamine	<input type="checkbox"/>		<input type="checkbox"/>
Dobutamine	<input type="checkbox"/>		<input type="checkbox"/>

# Mobile Wi-fi Network Example



Having a mobile Wi-fi network during in-situ can be very helpful. You only need 2 items.

1. WI FI router with AC power



2. Power bank/ Battery with AC out and USB port



We used velcro to secure the router to the Omars power bank and plugged the router into the power bank. Now you have an active network that is mobile. You can use this network for manikins or to connect laptops to create an active monitor for vital signs. Smaller routers, that use USB power, can be used to make it lighter to carry around.

# Facilitator Observation Checklist Exemplar

**Pediatric Trauma Observation Checklist**

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Secondary Survey	Task/Meets	Time Ordered	Time Done	Correct Y/N	# of Attempts
1. Perform a head to toe exam	0 - None	intubation			
	1 - Incomplete	IV fluids			
	2 - Complete	TXA bolus			
2. Proper log roll technique	0 - None	TXA gtt			
	1 - Incomplete				
	2 - Complete				
3. Examines spine & state need for rectal exam	0 - None				
	1 - Incomplete				
	2 - Complete				
4. Verbalize clear plan for patient disposition	0 - None				
	1 - Incomplete				
	2 - Complete				
5. Pain medication given	0 - None				
	1 - Given Inappropriately				
	2 - Correct dose & administration				
6. Initiate TXA	0 - None given				
	1 - Bolus given				
	2 - drip started				
7. Appropriate mobilization of resources (i.e. MTP)	0 -				
	1 -				
	2 -				

Time Called	Arrival Times	Please list any missing equipment or supplies that would be needed in the future.
Patient		
Trauma Attending		
ED Attending		
Trauma Resident		
ED Resident		
Respiratory Therapy		
Radiology		
Child Life		
Consultants		
Neuro (if applicable)		Comments
Ortho (if applicable)		

Extras		
Patient volume		
# of Residents on the Unit		
# of RNs on the Unit		
# of Tech on the Unit		
Obtained Acuity Snapshot		Y/N
Appropriate CT ordered		Y/N
Temperature Obtained		Y/N
Paged out appropriately to PED		Y/N
Assigned correct triage code		Y/N
Upgraded appropriately		Y/N

Disposition Location	Time

# Facilitator Observation Checklist Exemplar (continued)

Pediatric Trauma Observation Checklist			Date: _____
			Time: _____
<b>Team Organization</b>		<b>Breathing</b>	
1. Clearly defined team leader emerges	0 - No clear leader emerges 1 - Leader emerges, partially effective 2 - Strong leader emerges, very effective	1. Breathing assessed by auscultation	0 - >90 seconds 1 - 30-60 seconds 2 - <30 seconds
2. Other team members assume clearly defined roles	0 - No clear role definition 1 - Some participants have defined roles 2 - All participants have defined roles	2. Recognizes tension pneumothorax (if applicable)	0 - >3 minutes - Leave blank if NA 1 - 1.5 - 3 minutes 2 - <1.5 minutes
3. Verbal communication within the team	0 - No clear communication 1 - Some findings called out 2 - Clear, 2-way communication	3. Performs needle thorocentesis (if applicable) with proper technique and landmarks	0 - incorrect - Leave blank if NA 1 - Incomplete 2 - Correct
4. Verbal communication by team leader	0 - No delegation/no instruction 1 - Some delegation/instruction to team 2 - Delegates/instructs team throughout	4. Performs thoracostomy (if applicable) with proper technique and landmarks	0 - incorrect - Leave blank if NA 1 - Incomplete 2 - Correct
5. Systematic and orderly assessment	0 - Disorganized 1 - Vertical progression/one task at a time 2 - Horizontal resuscitation/many tasks	5. Reassess patient	0 - None 1 - Smooth sounds or vitals 2 - Smooth sounds + vitals
<b>Patient Weight</b>		<b>Circulation</b>	
1. Estimate patient weight using Broselow Tape	0 - None 1 - Estimated without Broselow 2 - Yes	1. Checked monitor for BP, HR (time to recognition of vitals & verbalized out loud)	0 - >1 minute 1 - 30-60 seconds 2 - <30 seconds
<b>Airway</b>		2. Assess pulses and perfusion	0 - Not checked 1 - Checked pulse or perfusion 2 - Checked pulse and perfusion
1. C-Spine precautions	0 - None 1 - Sometimes 2 - Throughout including ETT and log roll	3. Applied pressure to stop bleeding (if applicable)	0 - >1 minute 1 - 30-60 seconds 2 - <30 seconds
2. Airway assessed	0 - No assessment in the first 30 seconds 1 - No assessment in the first 15 seconds 2 - Look/Listen/Feel, talk to patient <15 sec	4. Established or verified large bore (age appropriate) IV or IO	0 - >3 minutes 1 - 1.5 - 3 minutes 2 - <1.5 minutes
3. Appropriate Oxygen applied	0 - >60 seconds 1 - 30-60 seconds 2 - <30 seconds	5. Provided adequate fluid replacement	0 - Inappropriate fluid, volume or rate 1 - Inadequate volume or delivery method 2 - Appropriate volume & delivery method
<b>Intubation</b>		6. Initiated Mass Transfusion Protocol or blood administration	0 - Inappropriate volume or rate 1 - Inadequate volume or delivery method 2 - Appropriate volume & delivery method
1. Appropriate use of oxygen	0 - No preoxygenation 1 - Some bagging 2 - Vital capacity breaths (BVM) w/100% O2	7. MEDIC Initiated TXA	0 - No 1 - Yes
2. Correct positioning	0 - No c-spine prepositioning with block 1 - Copine prepositioning position	<b>Disability</b>	
3. Connect laryngoscopic technique	0 - Unfamiliarity with equipment 1 - Check equipment/fuses correctly	2. Assessed responsiveness	0 - No 1 - Incomplete, no GCS 2 - Yes
4. Endotracheal tube secured	0 - Not secured 1 - Secured after thought/delayed 2 - Secured immediately	2. Pupils	0 - Not examined 1 - 2 - Examined
5. Reassessment of patient	0 - None 1 - Lungs/epigastrium auscultated 2 - All above + monitor check/ETCO2	3. Full/complete exposure	0 - None 1 - Incomplete 2 - Complete & warming resumes
6. Time to secure airway	0 - >5 minutes 1 - 3-5 minutes 2 - <3 minutes		
7. Appropriateness of Intubation	0 - Patient did not require intubation 2 - Patient was intubated appropriately		

# Simulation Evaluation for Learner Example

3B/9A/9T/NSICU Code Management Session					
* 1. Please select the appropriate choice for the following questions.					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My simulation experience was helpful in equipping me for clinical practice.	<input type="radio"/>				
The simulation experience included tasks/concepts that are relevant to me.	<input type="radio"/>				
The level of difficulty of the simulation experience was appropriate.	<input type="radio"/>				
The facilitator(s) delivered constructive feedback.	<input type="radio"/>				
When appropriate, the facilitator(s) explained concepts clearly.	<input type="radio"/>				
I see simulation as a valuable learning method that I would recommend to others.	<input type="radio"/>				

1

# Debrief Summary for Stakeholders

## Example

### Simulation Debrief Summary

**Title of simulation:**

**Date:**

**Time:**

**Facility:**

**Last names of Education Team:**

**Description of participants:** 31 team members consisting of Pre/Post RN's, Scrub Techs, CRNA, OR RN's, CNAs, anesthesia tech, RN's & CNA's participated

We request that you **do not send whole summary out via email**. Feel free to send out individual parts (cut and paste) that need follow up or read from / discuss document in staff meetings. Never forward entire file. We want to be sure that team members trust that simulation is a safe activity and that specifics will not be shared indiscriminately.

**Summary of Scenario:** Scenario objectives were related to workflow and new environment evaluation regarding support of a patient who is in a Malignant Hyperthermia Crisis at General Hospital IPOR. Recognition of the signs and symptoms, need for additional help, need for Malignant Hyperthermia cart, ice etc. were emphasized. Scenario included diagnosis of malignant hyperthermia, immediate treatment using Dantrolene and need for eventual admittance to Critical Care due to possible recurrence. Due to the number of participants there were observers and a simultaneous tabletop discussion of the same scenario. All participants were debriefed to make sure all content was covered.

**Applause for:**

- High level engagement by participating team members
- Role understanding and adherence by participants
- Open interactive debriefing
- Multi-disciplinary participation including anesthesia, nursing, both OR and pre/post

**Key learning opportunities**

Communication

- Need to establish ability to obtain extra help (understanding of how phone/ intercom systems work throughout OR) (John Stamos to follow up)
- Need to train team members on how to work the telephone system as well as Voalte (Luke Spencer to follow up)
- Establish roles/expectations for ancillary team members (Big Bird to follow up)
- Establish process at night and on weekends if different than normal business hours. ? need to page a Code Blue or Rapid Response to OR as extra hands will be needed. Response teams must understand how to assist. Anesthesia is lead, responders will be directed. If paged over whole house, one OR team member must assist responders with badges access, wayfinding and whether scrubs needed). (Oscar Grouch to follow up)

## Debrief Summary for Stakeholders Example (continued)

### Equipment/supplies:

- Process to obtain second MH cart once first cart used. (Where, Who & badge access) (John Stamos to follow up)
- Ice: where (kitchen via back door). Do all employe bades access kitchen? (Big Bird to follow up)

### Documentation/checklist:

- Visibility of checklist that CRNA uses from Dimensions (Roger Rabbit to follow up)

### **On the spot action: (items that MUST be clarified before Simulation team leaves the unit)**

- Confirmation that Crisis Checklist will be utilized at General Hospital IPOR (John Stamos called & confirmed with Dr. Seuss on 9/5/2018)
- How to acquire copies of Crisis Management Check list (John Stamos ordered 10 checklist binders 9/5/2018)

### **Suggested Clinical Education Resources:**

- Enrollment into emergency response class (q5430) to practice code blue documentation
- Suggest topics the team would like to practice to be placed in the learning lab (r6820)
- Enrollment into the critical care learning lab (b3227)

Thank you all for all the support and willingness to participate in the MH simulations. It was a pleasure to work with your team. Please pass our thanks to your team members.

# Additional References for In-Situ Simulations

- Auebach, M., Roney, L., Aysseh, A., Gawel, M., Koziel, J., Barre, K., Santucci, K. (2014). In situ pediatric trauma simulation: Assessing the impact and feasibility of an interdisciplinary pediatric in situ trauma care quality improvement simulation program. *Pediatric Emergency Care, 30*(12), 884-891.
- Bae, D. S., Lynch, H., Jamieson, K., Yu-Moe, W., & Roussin, C. (2017). Improved safety and cost savings from reductions in cast- saw burns after simulation-based education for orthopaedic surgery residents. *Journal of Bone and Joint Surgery, 99*(17), 1-6.
- Brunette, V. & Thibodeau- Jarry, N. (2017). Simulation as a tool to ensure competency and quality of care in the cardiac critical care unit. *Canadian Journal of Cardiology, 33*, 119-127.
- Bullough, A. S., Wagner, S., Boland, T., Waters, T. P., Kim, K. K., & Adams, W. (2016). Obstetric team simulation program challenges. *Journal of Clinical Anesthesia, 35*, 564-570.
- Burns, T. L., DeBaun, M. R., Boulet, J. R., Murray, G. M., Murray, D. J., & Fehr, J. J. (2013). Acute care of pediatric patients with sickle cell disease: A simulation performance assessment. *Pediatric Blood & Cancer, 60*, 1492-1498.
- Calhoun, A. W., Boone, M. C., Peterson, E. B., Boland, K. A., & Montgomery, V. L. (2011). Integrated in-situ simulation using redirected faculty educational time to minimize costs: A feasibility study. *Simulation in Healthcare, 6*(6), 337-344.
- Chichester, M., Hall, N., Wyatt, T., & Pomilla, R. (2015). A cost- effective approach to simulation –based team training in obstetrics. *Nursing for Women’s Health, 18*(6), 501-507.

- Corbitt, N., Malick, L., Nishioka, J., Rigdon, A., Szoch, S., & Torr, P. (2017). An innovative strategy using simulation to enhance chemotherapy safety. *Journal of Infusion Nursing, 40*(6), 346-352.
- Daniels, K., Hamilton, C., Crowe, S., Lipman, S. S., Halamek, L. P., & Lee, H. C. (2017). Opportunities to foster efficient communication in labor and delivery using simulation. *American Journal of Perinatology Reports, 7*(1), 44-48.
- Dworetzky, B. A., Peyre, S., Bubrick, E. J., Milligan, T. A., Yule, S. J., Doucette, H., & Pozner, C. N. (2015). Interprofessional simulation to improve safety in the epilepsy monitoring unit. *Epilepsy & Behavior, 45*, 229-233.
- Fan, M., Petrosoniak, A., Pinkney, S., Hicks, C., White, K., Silva Almeida, A. P., Trbovich, P. (2016). Study protocol for a framework analysis using video review to identify latent safety threats: Trauma resuscitation using in situ simulation team training (TRUST). *BMJ Open, 6*, 1-11.
- Gali, B., Glen, A., & Rosenbush, K. A. (2016). Simulation incorporating cardiac surgery life support algorithm into cardiac intensive care unit practice. *Simulation in Healthcare, 11*(6), 419-424.
- Gardner, A. K., Scott, D. J., Pedowitz, R. A., Sweet, R. M., Feins, R. H., Deutsch, E. S., & Sachdeva, A. K. (2015). Best practices across surgical specialties relating to simulation- based training. *Surgery, 158*(5), 1395-1402.
- Gundrosen, S., Solligard, E., & Aadahl, P. (2014). Team competence among nurses in an intensive care unit: The feasibility of in situ simulation and assessing non- technical skills. *Intensive and Critical Care Nursing, 30*, 312-317.
- Hirshey Dirksen, S. J., Van Wicklin, S. A., Mashman, D. L., Neiderer, P., & Merritt, D. R. (2013). Developing effective drills in preparation for a malignant hyperthermia crisis. *AORN Journal, 97*(3), 330-352.
- Hocker, S., Schumacher, D., Mandrekar, J., & Wijdicks, E. F. (2015). Testing confounders in brain death determination: A new simulation model. *Neurocritical Care, 23*, 401-408.

- Lavelle, M., Attoe, C., Trischler, C., & Cross, S. (2017). Managing medical emergencies in mental health settings using an interprofessiona; in-situ simulation training programme: A mixed methods evaluation study. *Nurse Education Today*, 57, 103-109.
- Marshall, N. E., Vanderhoeven, J., Eden, K. B., Segel, S. Y., & Guise, J. M. (2015). Impact of simulation and team training on postpartum hemorrhage management in non-academic centers. *The Journal of Maternal- Fetal & Neonatal Medicine*, 28(5), 495-499.
- Newey, C. R., Bell, R., Burks, M., & Nattanmai, P. (2017). A new strategy in neurocritical care nursing continuing stroke education: A hybrid simulation pilot study. *Electronic Physcian*, 9(5), 4255- 4260.
- O’Leary, F. M., Hokin, B., Enright, K. & Campbell D. E. (2013). Treatment of a simulated child with anaphylaxis: An in situ two- arm study. *Journal of Paediatrics and Child Health*, 49, 541-547.
- Spadaro, S., Karbing, D. S., Fogagnolo, A., Ragazzi, R., Mojoli. F., Astolfi, L.,...Volta, C. A. (2017). *Simulation in Healthcare*, 0(0), 1-7.
- Villemure, C., Tanoubi, I., Georgescu, L. M., Dube, J. N., & Houle, J. (2016). An integrative review of in situ simulation training: Implications for critical care nurses. *Canadian Journal of Critical Care Nursing*, 27(1), 23-31
- Walker, S. T., Sevdalis, N., McKay, A., Lambden, S., Gautama, S., Aggarwal, R., & Vincent, C. (2013). Unannounced in situ simulations: Integrating training and clinical practice. *BMJ Quality Safety*, 22, 453-458.
- Wong, A. H., Wing, L., Weiss, B., & Gang, M. (2015) Coordinating a team response to behavioral emergencies in the emergency department: A simulation-enhanced interprofessional curriculum. *Western Journal of Emergency Medicine*, 16(6), 859-865.

Yang, C. P., Hunt, E. A., Shilkofski, N., Dudas, R., Egbuta, C., & Schwartz, J.M. (2017). Can telemedicine improve adherence to resuscitation guidelines for critically ill children at community hospitals? A randomized controlled trial using high fidelity simulation. *Pediatric Emergency Care, 33*(7), 474-479.