

# Simulation in Obstetrics

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# Disclosures

- ▶ I have no relevant financial disclosures

# Objectives

- ▶ Discuss why simulation is important
- ▶ Discuss the basics of starting a simulation program
- ▶ Stay under 20 minutes

# The Basic Assumption of Simulation

- ▶ Everyone is intelligent, well trained, cares about patients, and wants to get better.
- ▶ This is not an exam, nobody is going to be made to feel stupid or that they are bad at their job

# Why Simulation



Avenue for residents to learn basic skills (i.e. shoulder dystocia, post partum hemorrhage)



Practice critical but perhaps rarely used skills for attending physicians (i.e. maternal code, peripartum hysterectomy)



Refresher course and introduction of new techniques for experienced physicians



Improvement of team work and identification of systems based challenges (maternal trauma, rapid transfer to the OR, maternal code)



Hospital credentialing



## Starting a Simulation Program: The Wrong Way

- ▶ Buy an expensive birth simulator
- ▶ Do training with the simulator
- ▶ Try to figure out what to do with it while the simulator gathers dust in the closet



# Keys to a Successful Simulation Program

- ▶ Who is it geared towards
  - ▶ Residents, attendings, nursing, team overall
- ▶ What program or topic
  - ▶ ECO, ALSO
  - ▶ Procedure, teamwork
- ▶ Where
  - ▶ Onsite or off site?
- ▶ When
  - ▶ Working hours or not
  - ▶ How to capture everyone
- ▶ Why
  - ▶ The simulation should have specific goals





# Step I and II: Who Are You Working With and What Are You Trying to Accomplish?

- ▶ Residents are going to benefit more than attendings practicing fundamental skills like breech delivery
- ▶ Nurses are not going to be interested in a course focusing on the finer points of management of DIC
- ▶ I would recommend starting with a goal
  - ▶ I want to improve our system response to an emergency cesarean delivery on antepartum or maternal code
  - ▶ I want to improve our residents overall skill set with breech vaginal delivery



# Step III: Where

- ▶ Offsite
  - ▶ Undivided attention of participants
  - ▶ Can be scheduled and make sure you have adequate space and facilities
- ▶ Onsite
  - ▶ May identify components to systems based practice that you will not identify at an off site drill
    - ▶ Not knowing where the stat elevator key is, poor signage, bad paging system etc
    - ▶ Have to deal with clinical distractions

# Step IV: When

- ▶ During work hours
  - ▶ Have the additional fidelity of dealing with clinical scenarios in the midst of other ongoing processes
  - ▶ Staff are already at work
- ▶ After hours
  - ▶ Lack of distractions vs potential lack of engagement or resentment at working off hours
  - ▶ Not really any 'off hours' for labor and delivery

# Step V: Set Clear Expectations

- ▶ Our goal is to improve our average response time from decision to delivery from X to Y in the setting of cesarean delivery
- ▶ Our goal is to improve resident comfort with operative vaginal delivery

# Components



DIDACTIC



SIMULATION  
ITSELF



DIDACTIC



DEBRIEFING

# What Programs Are Out There

- ▶ ECO
  - ▶ Emergencies in Clinical Obstetrics
  - ▶ Shoulder dystocia, hemorrhage, breech delivery, cord prolapse, teamwork
  - ▶ Low tech, includes didactic components and simulations
  - ▶ <https://www.acog.org/education-and-events/simulations/eco>
- ▶ ALSO
  - ▶ Larger scale, multi-day course with more didactics and more complex simulations
  - ▶ <https://www.aafp.org/cme/programs/also.html>
- ▶ SMFM Megasims
  - ▶ Course is run at a simulation hospital in Phoenix AZ
  - ▶ Complex multi-part simulations of critical illness in obstetrics
  - ▶ Didactics from sub-specialists



# Debriefing

- ▶ Very important and maybe the hardest part
- ▶ A 'Board Examiner' approach will turn people off and not work well
- ▶ Must be able to guide an open discussion of what worked well and what did not

# The Basic Assumption of Simulation

- ▶ Everyone is intelligent, well trained, cares about patients, and wants to get better.
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# What Am I Doing?

- ▶ Survey of residents, faculty, and staff to determine what kind of simulation they are interested in
- ▶ Plan to design a program based on those interests to maximize enthusiasm and participation
  - ▶ Concern is that attending physicians may not be very interested in a scenario where they could be critiqued in front of trainees. This is where the basic assumption comes into play.
- ▶ Will probably start simple with something like ECO and build from there

# My Recommendations

- ▶ If you have not participated in a simulation program you probably should before starting one
- ▶ ACOG offers training for ECO
- ▶ Attend the SMFM course in Phoenix
- ▶ Come up with a specific plan using the 5 Ws and build a sim program to address it. Don't just buy an expensive simulator and have residents pull a breech baby out of a mannequin a few times and call it a day.

# Questions?

