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NOSM

EST. 2005

DEVELOPING AN IPE SIMULATION TOOL BOX

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We have no conflict of interest to declare

How many of you work in simulation?

How many of you
are involved in
multi-disciplinary education?

How many of you
are involved in
inter-professional education?

How many of you

think that

I just asked the same question

twice?

Multi-disciplinary Education: Combining or involving several academic disciplines or professional specializations in an approach to a topic or problem; within an educational *format (J.J.D Juchniewicz, K.J Thomas 2013).*

Interprofessional Education: occurs when two or more professions **learn with, from and about each other to improve collaboration** and the quality of *care (J.J.D Juchniewicz, K.J Thomas 2013).*

Why is Interprofessional Education Important?

One research study shows at one hospital of 437 patients…

Patient care priorities of MDs and RNs…

..were in **full agreement** in **17%** or cases,
partial agreement in **53%** of cases,
no agreement in **30%** of cases.
(Evanoff, Potter, Wolf, Grayson, Dunagon and Boxerman 2005).

Why is Interprofessional Education Important?

"Collaboration increases team members' awareness of each others' type of knowledge and skills, leading to continued improvement in decision making."

(C. Christensen, LR Larson 1993).

https://www.youtube.com/watch?v=x91iciAYcw0

Benefits of Interprofessional Education

✓Significant improvement in team behaviours

✓Reduction in adverse patient outcomes

✓Reduced costs

…… improved patient care

How Collaboration be Improved?

Simulation

Understanding Terms

Simulation: the imitation or representation of one act or system by another.

Healthcare simulations can be said to have four main purposes – *education, assessment, research, and health system integration* in facilitating patient safety. (SSIH 2015)

Understanding Terms

Fidelity: Believability, or the degree to which a simulated experience approaches reality; as fidelity increases, realism increases. The level of fidelity is determined by the environment, the tools, and resources used, and many factors associated with the participants (Dieckmann et al., 2007).

Understanding Terms

Prebrief: An information or orientation session held prior to the start of the simulation based learning experience in which instructions or prepatory information is given to the participants. The purpose of the prebriefing is to set the stage for the scenario and assist participants in achieving scenario objectives. Suggested activities in a prebrief include orientation to the equipment environment, mannequin, roles, time allotment, objectives and patient situation (INACSL 2013).

Understanding Terms

Clinical Scenario: The plan of an expected and potential course of events for a simulated experience. The clinical scenario provides the context for the simulation and can vary in length and complexity, depending on the objectives (INACSL 2013).

Understanding Terms

Debrief: An activity that follows a simulation experience and is led by a facilitator. Participants reflective thinking is encouraged, and feedback is provided regarding the participants performance while various aspects of the completed simulation are discussed. The purpose of debriefing is to move toward assimilation and accommodation to transfer learning to future situations (Johnson-Russell & Bailey, 2010: NLN-SIRC 2013).

Understanding Terms

Mannequin Based Simulation involves learners practicing their behaviour, skills and processes on life sized mannequins. A computer operator directs the mannequin's physiological reaction in response to the learner's actions. There are a variety of mannequins available, covering the human life span, and providing varying levels of complexity.

Understanding Terms

Standardized Patient Simulation is using a person trained to consistently portray a patient or other individual in a scripted scenario for purposes of instruction, practice or evaluation (Robinson-Smith, Brandley, Meakim, 2009)

Understanding Terms

Hybrid Simulation or Mixed Modality Simulation: is use of more than one type of simulation at the same time. A common type of hybrid simulation is the use of standardized patients and task trainers.

Understanding Terms

Task trainers: Task Trainers are simulated body parts which are used for psychomotor skills training for specific procedures.

- Examples of task trainers, are chest tube insertion, airway management, central line insertion … and many … many more





Understanding Terms

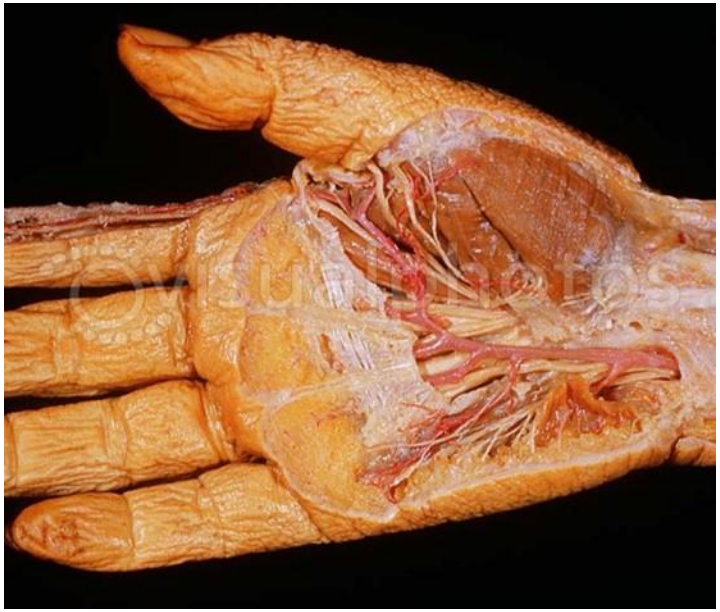
Virtual reality is a computer generated simulation of replicas of hospitals, clinics and emergency response stations where learners are presented with guided simulations that replicate the physical world in a virtually interactive manner.

Understanding Terms

Haptic Simulators recreate a sense of touch by applying force and vibration to the users. This mechanical simulation can assist in the creation of virtual objects in computer simulation, and provides the learner with a opportunity to develop tactile skills.

Understanding Terms

Cadaveric Simulation allows learners to acquire knowledge and experience in handling human tissue.



Understanding Terms

Role Play allows learners to pretend to be in a specific situation than they are actually in at the time.

Understanding Terms

In situ refers to situated in the original, natural, or existing place or position (Merriam-Webster Dictionary 2015).

Understanding Terms

Moulage is the use of techniques used to simulate injury, disease, aging, and other physical characteristics specific to the scenario. Moulage supports the sensory perceptions of the participants and supports the fidelity of the simulation scenario through the use of makeup, attachable artifacts (e.eg., penetrating objects and smells (Mercia, 2011; Smith-Stoner 2011)

Understanding Terms

Confederate: A person assigned a role in a simulation encounter to help guide the scenario. Although the embedded actor's role is part of the situation, the underlying purpose of the embedded actor is not identified to the participants in the scenario simulation (INACSL, 2013).

Putting it All Together

1. **Defining the Simulation**
   a. Faculty / instructors from different fields of study identify IPE learning objectives that are well suited to simulation-based learning.
   b. Based on the stage of learning of the students in their programs, and the learning objectives, select the best simulation modality.
   b. The goal is to provide an experience that will improve clinical situations and develop enhanced team dynamics, communication, problem solving, and be a positive learning experience for participants

Putting it Altogether

2. **<u>Determining common learning objectives</u>** and/or complimentary learning objectives among professional groups:
   - primary objective (common) - communication
   - complimentary objective (varied responsibility)

   i.e. health assessment in SOB scenario
   - nurse assesses, requests physician, charts and communicates
   - physician assesses, diagnoses, charts, orders treatment, and communicates
   - respiratory therapist assesses, provides breathing intervention as ordered, charts and communicates

Putting it All Together

3. **<u>Complete the Simulation Scenario Template</u>** document as IP team of faculty/instructors (handout)

4. **<u>Share</u>** this with your Simulation Team.

Putting it All Together

Remember to **pre-brief**

Before the day of the simulation provide to all participants

i. Basic information regarding each profession represented, including participants' level of study
ii. Relevant study material for their profession
iii. Learning objectives for all professions

Day of simulation provide information of

i. Introductions and roles of all present
ii. Length of scenario
iii. Orientation to Simulation Lab (or other) and mannequin
iv. Advise that debrief will follow
v. Relevant patient information (also may occur in initial state of simulation)

Putting it All Together

Most importantly, to put it all together, remember your **DEBRIEF.**

1. **DEBRIEF** is built from the learning objectives and events which occurred during the simulation.

2. **DEBRIEF** should include a facilitator from each profession of learning represented.

3. Decide how **DEBRIEF** is to be done: individual professions first and then as a whole group, or only as a whole group (may depend upon learning objectives and should be determined when the template is completed, and communicated learners at prebrief).

4. If video recording occurred, decide whether and how it will be viewed during the **DEBRIEF**.

Select 1 simulation modality and build a brief outline of a potential IP simulation for 2 or more chosen health fields.

Sim Modalities

- Mannequin-based
- Role playing
- Standardized patient
- (Task trainers)
- (Cadaveric)
- (Haptic)

Considerations

- # participants / professions
- # instructors available / needed
- Location
- Availability / Cost of Equipment
- Scheduling for
  - Preparation of scenario
  - Practice
  - Prebrief
  - Event

Putting it All Together

What went well in planning?

What were challenges in planning?

What will you take home with you from this session?

Any Questions

References, Works Cited

Slide 2: Tool box, http://www.yeomansmarketing.co.uk/wp-content/uploads/2013/11/Toolbox.jpg Retrieved October 15, 2015

Slide 7: Juchniewicz, J., Thomas, K., Multi-disciplinary vs Interprofessional Education, Design, development and evaluation, (2013 April) http://www.academycme.org/pdfs/Alliance%202012%20_multi%20v%20interprof%20edu.pdf Retrieved October 14, 2015

People with Puzzle Pieces, http://trbcphx.org/wp-content/uploads/2011/07/people-with-puzzle-pieces.jpg Retrieved October 15, 2015

Slide 8: Juchniewicz, J., Thomas, K., Multi-disciplinary vs Interprofessional Education, Design, Development and evaluation, (2013 April)

http://www.academycme.org/pdfs/Alliance%202012%20_multi%20v%20interprof%20edu.pdf Retrieved October 14, 2015

Colourful puzzle pieces: http://thumbs.dreamstime.com/z/colourful-puzzle-pieces-11255914.jpg Retrieved October 15, 2015

Slide 9: Evanoff, B., Potter, P., Wolf L., Grayson, D., Dunagan, C., Boxerman., S., Can We Talk? Priorities for Patient Care Differed Among Health Care Providers http://www.ncbi.nlm.nih.gov/books/NBK20468/ Retrieved September 28, 2015

Slide 10:Evanoff, B., Potter, P., Wolf L., Grayson, D., Dunagan, C., Boxerman., S., Can We Talk? Priorities for Patient Care Differed Among Health Care Providers http://www.ncbi.nlm.nih.gov/books/NBK20468/ Retrieved September 28, 2015

Slide 11: USS Montana :https://www.youtube.com/watch?v=x91iciAYcw0 Retrieved October 20, 2015

Slide 14: Meakim, C., Boese, T., Decker, S., Franklin, A. E., Gloe, D., Lioce, L., Sando, C. R., & Borum, J. C. (2013, June). Standards of Best Practice: Simulation Standard I: Terminology. Clinical Simulation in Nursing, 9(6S), S3-S11. http://dx.doi.org/10.1016/j.ecns.2013.04.001. Retrieved December 3, 2014

Slide 15: Meakim, C., Boese, T., Decker, S., Franklin, A. E., Gloe, D., Lioce, L., Sando, C. R., & Borum, J. C. (2013, June). Standards of Best Practice: Simulation Standard I: Terminology. Clinical Simulation in Nursing, 9(6S), S3-S11. http://dx.doi.org/10.1016/j.ecns.2013.04.001. Retrieved December 3, 2014

Slide 16: Meakim, C., Boese, T., Decker, S., Franklin, A. E., Gloe, D., Lioce, L., Sando, C. R., & Borum, J. C. (2013, June). Standards of Best Practice: Simulation Standard I: Terminology. Clinical Simulation in Nursing, 9(6S), S3-S11. http://dx.doi.org/10.1016/j.ecns.2013.04.001. Retrieved December 3, 2014

Slide17: Meakim, C., Boese, T., Decker, S., Franklin, A. E., Gloe, D., Lioce, L., Sando, C. R., & Borum, J. C. (2013, June). Standards of Best Practice: Simulation Standard I: Terminology. Clinical Simulation in Nursing, 9(6S), S3-S11. http://dx.doi.org/10.1016/j.ecns.2013.04.001. Retrieved December 3, 2014

Slide 18: Meakim, C., Boese, T., Decker, S., Franklin, A. E., Gloe, D., Lioce, L., Sando, C. R., & Borum, J. C. (2013, June). Standards of Best Practice: Simulation Standard I: Terminology. Clinical Simulation in Nursing, 9(6S), S3-S11. http://dx.doi.org/10.1016/j.ecns.2013.04.001. Retrieved December 3, 2014

Slide 19: Sim Lab, http://today.uconn.edu/wp-content/uploads/2009/08/Simlab_lg.jpg Retrieved October 15, 2015

Slide 20: Meakim, C., Boese, T., Decker, S., Franklin, A. E., Gloe, D., Lioce, L., Sando, C. R., & Borum, J. C. (2013, June). Standards of Best Practice: Simulation Standard I: Terminology. Clinical Simulation in Nursing, 9(6S), S3-S11. http://dx.doi.org/10.1016/j.ecns.2013.04.001. Retrieved December 3, 2014

Untitled image, http/backstage.blogs.com/.a/6a00d8341c9cc153ef0154349ab768970c-800wi Retrieved May 22, 2015

Slide 21 definition of Hybrid http://www.umassmed.edu/icels/services/simulation/hybrid-simulation/

Hybrid Simulation, https://www.samuelmerritt.edu/images/hssc/hybrid_simulation_640x480.jpg Retrieved October 15, 2015

Larry Sim1, http://www.preventingcrashes.ca/images/larry_sim1_smaller.jpg Retrieved June 30, 2015

Untitled Image, http://passy-muir.com/sites/default/files/bayada.jpg Retrieved October 15, 2015

Slide 22: Chest Drain, http://pharmabotics.com/files/eshoppics/chest%20drain.jpg Retrieved May 22, 2015

Untitled image, http://www.anatomywarehouse.com/media/catalog/product/cache/9/image/9df78eab33525d08d6e5fb8d27136e95/S/I/SIM500.JPG Retrieved May 22, 2015

Femoral line, http://astec.arizona.edu/sites/astec.arizona.edu/files/images/femoral%20line.JPG Retrieved May 22, 2015

Untitled image https://www.armstrongmedical.com/itm_img/AB1145.jpg Retrieved May 22, 2015

IV arm https://www.sdc.qld.edu.au/resources/images/equip/multivenous-iv-arm.jpg Retrieved May 22, 2015

Slide 23: Untitled image, http://img.medscape.com/article/780/819/780819-figure-3.jpg Retrieved May 22, 2015

Slide 24: Right hand palmer dissection, http://www.visualphotos.com/photo/1x8464534/right-hand-palmar-dissection.jpg Retrieved May 29, 2015

Slide 25: Merriam-Webster Dictionary, http://www.merriam-webster.com/dictionary/role-play Retrieved October 15, 2015

Volunteer Patient, http://smp.med.ubc.ca/__shared/assets/Volunteer_Patient__SP_Page_38101.jpg Retrieved October 1, 2015

Slide 26: Wikipedia, https://en.wikipedia.org/wiki/Haptic_technology Retrieved October 15, 2015

Untitled image, http://www.medgadget.com/img/333vv3455.jpg Retrieved October 15, 2015

Slide 27: Merriam-Webster Dictionary, http://www.merriam-webster.com/dictionary/in%20situ Retrieved October 15, 2015

Untitled image, http://blogs.cardiff.ac.uk/hallje/wp-content/uploads/sites/124/2013/12/DSC_1878.jpg Retrieved October 15, 2015

Slide 28: Meakim, C., Boese, T., Decker, S., Franklin, A. E., Gloe, D., Lioce, L., Sando, C. R., & Borum, J. C. (2013, June). Standards of Best Practice: Simulation Standard I: Terminology. Clinical Simulation in Nursing, 9(6S), S3-S11. http://dx.doi.org/10.1016/j.ecns.2013.04.001. Retrieved December 3, 2014

Slide 29: Meakim, C., Boese, T., Decker, S., Franklin, A. E., Gloe, D., Lioce, L., Sando, C. R., & Borum, J. C. (2013, June). Standards of Best Practice: Simulation Standard I: Terminology. Clinical Simulation in Nursing, 9(6S), S3-S11. http://dx.doi.org/10.1016/j.ecns.2013.04.001. Retrieved December 3, 2014

Slide 35: Epic collaboration https://www.youtube.com/watch?v=wJKTGRTrGD8 Retrieved October 20, 2015

Slide 38: Spinning question mark, http://www.netanimations.net/Animated-gif-spinning-question-mark-picture-moving.gif Retrieved October 15, 2015