

UC Irvine

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health

Title

Manual Uterine Aspiration (MUA) Simulation for Emergency Medicine (EM) Residents

Permalink

<https://escholarship.org/uc/item/94g820pp>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 24(3.1)

ISSN

1936-900X

Authors

Wegman, Katherine
Gorka, Caroline
Linden, Judith
[et al.](#)

Publication Date

2023

DOI

10.5811/westjem.61021

Copyright Information

Copyright 2023 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Table 1. Post session anonymous survey questions used for feedback from learners.

For each of the following statements, please indicate how true it is for you, using the following scale:
 1 2 3 4 5 6 7

Note: True [1] Somewhat True[4] Very True [7]

Regarding your interest/enjoyment around the session:
 I enjoyed doing this activity very much.
 This activity was fun to do. I thought this was a boring activity.
 This activity did not hold my attention at all.
 I would describe this activity as very interesting.
 I thought this activity was quite enjoyable.
 While I was doing this activity, I was thinking about how much I enjoyed it.

Regarding your perceived competence with this session:
 I think I am pretty good at this activity.
 I think I did pretty well at this activity, compared to other students.
 After working at this activity for a while, I felt pretty competent.
 I am satisfied with my performance at this task.
 I was pretty skilled at this activity.
 This was an activity that I could not do very well.

How did you feel about the value and usefulness of this activity?
 I believe this activity could be of some value to me.
 I think that doing this activity is useful for _____ [Narrative feedback]
 I think this is important to do because it can _____ [Narrative feedback]
 I would be willing to do this again because it has some value to me.
 I think doing this activity could help me to _____ [Narrative feedback]
 I believe doing this activity could be beneficial to me.
 I think this is an important activity.

Would you like to learn more about this topic? Select one answer.

1. Absolutely
2. Maybe
3. Not really
4. Definitely not

Table 2. Survey results.

Question	Minimum	Maximum	Mean	Std. Deviation	Variance	N
1 I enjoyed doing this activity very much.	1.00	7.00	6.3	0.81	0.63	10
2 This activity was fun to do.	1.00	7.00	6.28	0.87	0.76	10
3 I thought this was a boring activity.	1.00	4.00	1.30	0.90	0.81	10
4 This activity did not hold my attention at all.	1.00	7.00	1.90	1.52	2.61	10
5 I would describe this activity as very interesting.	4.00	7.00	6.70	0.90	0.81	10
6 I thought this activity was quite enjoyable.	4.00	7.00	6.40	0.92	0.84	10
7 While I was doing this activity, I was thinking about how much I enjoyed it.	4.00	7.00	6.00	1.18	1.40	10
Question: perceived competence	Minimum	Maximum	Mean	Std. Deviation	Variance	N
1 I think I am pretty good at this activity.	4.00	7.00	5.20	1.17	1.36	10
2 I think I did pretty well at this activity, compared to other students.	4.00	7.00	5.00	1.18	1.40	10
3 After working at this activity for a while, I felt pretty competent.	4.00	7.00	5.40	1.02	1.04	10
4 I am satisfied with my performance at this task.	4.00	7.00	5.30	1.02	1.04	10
5 I was pretty skilled at this activity.	4.00	7.00	5.30	1.22	1.49	10
6 This was an activity that I could not do very well.	1.00	7.00	3.90	2.12	4.49	10
Question: value	Minimum	Maximum	Mean	Std. Deviation	Variance	N
1 I believe this activity could be of some value to me.	4.00	7.00	6.40	1.02	1.04	10
2 I would be willing to do this again because it has some value to me.	4.00	7.00	6.40	1.02	1.04	10
3 I believe doing this activity could be beneficial to me.	4.00	7.00	6.40	1.02	1.04	10
4 I think this is an important activity.	4.00	7.00	6.40	1.02	1.04	10

session was based in a mix of both cognitive and social constructivist learning theories.

Impact/Effectiveness: Mean rating of the session was 6.4 out of 7 (95%CI 4.4-8.4) for value, and 6.7 out of 7 (95%CI 4.94-8.46) for participant interest. All respondents reported that they wanted more training. Education in

neurodiversity is an effective way to broaden awareness and promote diversity and inclusion in graduate medical education programs.

23 Learning Mass Casualty Triage via Role Play Simulation

Martin Morales-Cruz, Ayanna Walker, Drake Dixon, Latha Ganti, Shayne Gue

Background: The purpose of this educational intervention was to introduce trainees to the core competencies of disaster preparedness/ resource allocation/mass casualty incident (MCI) command, and event medicine. This innovative learning activity involving trainees from different programs teaches effective techniques of how to perform START (Simple Triage and Rapid Transport) in a mass casualty event.

Educational Objectives: 1. Differentiate between day-to-day triage and triage during MCI 2. Apply the components of START.

Curricular Design: The scenario is a Music Festival. A group of residents are granted backstage access to tour the concert grounds and medical tent. During the facility tour, the operations director (proctor #2) radios the tour guide (proctor #1) to let them know of an emergency crowd stampede due to unapproved pyrotechnics causing a fire; the medical tent is all of a sudden being flooded with patients. “Patients” are trainees who receive an index card labeled with vital signs and mental status and transported one at a time to the tent. Residents run over to the tent, perform triage then select two of the most critical patients for air transport. The station leader documents the accuracy of each team. Winners are selected based on time of completion and accuracy of correctly triaging patients. For every incorrect triage a 30 second penalty is added. Incorrectly triaged patient cards are debriefed in detail.

Impact/Effectiveness: This activity engages learners both physically and mentally, necessitating everyone to be active. Impact was measured by post-activity survey, accessed via QR at the station. 93% reported feeling better prepared to manage a real-life MCI. 98% reported that START triage better motivated them to learn. 96% reported this activity challenged them more than other learning activities. Verbal feedback included appreciation for the innovative activity design and being able to get some exercise.

24 Manual Uterine Aspiration (MUA) Simulation for Emergency Medicine (EM) Residents

Katherine Wegman, Caroline Gorka, Judith Linden, Shannon Bell, Stephanie Stapleton, Virginia Tancioco, Laura Walsh

Background: Early pregnancy loss (EPL) is a common

pregnancy complication and often results in vaginal bleeding. There is a paucity of evidence informing the ED management of hemodynamically unstable patients with EPL. EM residency training for this situation typically focuses on medical management. However, for unstable patients hemorrhaging as a result of EPL, the American College of Gynecology recommends prompt surgical evacuation of the uterus as definitive management. This procedure is called manual uterine aspiration. EM physicians do not routinely receive formal training in MUA despite its potential utility in the ED, particularly in settings without in-house gynecology consultants.

Educational Objectives: Our goal was to implement a curriculum to teach EM learners how to identify and procedurally manage hemorrhage from EPL using MUA.

Curricular Design: Rooted in the mastery learning model, this curriculum sought to use simulation to teach EM learners the indications, contraindications, and steps for performing MUA as an ED treatment for hemorrhage from EPL. A two-part simulation session was designed for a group of EM learners. Part one consisted of a lecture and video demonstration showing a competent instructor performing MUA. Part two consisted of hands-on deliberate practice with procedural simulation models at three different stations. Learners were supervised at each station by a trained gynecologist, who used checklists to ensure that all steps of the procedure were performed.

Impact/Effectiveness: The MUA curriculum was evaluated using a post-workshop survey. 100% of participants reported increased confidence in their ability to identify indications for ED MUA and cases that would be deemed higher risk for ED MUA. All reported increased comfort in performing steps necessary for ED MUA. To our knowledge, this was the first time MUA was taught to EM learners using simulation.

25 Medical Humanities: A Novel Residency Curriculum

Lauren Klingman, Luz Silverio, Alana Harp

Background: The medical humanities have a long-recognized role in strengthening resilience, empathy, communication, critical thinking, and observation while reducing burnout in physician training. However, few medical institutions incorporate humanities teaching into their residents' curricula, and the block structure of emergency medicine residency makes established curricula difficult to implement.

Design: Our humanities electives are designed for two-week blocks and focus on autonomy, relatedness, and competence. Elective offerings include Introduction to the Medical Humanities and subspecialized electives in literature, theatre, fine arts, climate and health, philosophy, and film. Through self-directed learning, residents read, listen to, watch, and observe a curated medical humanities selection. Residents follow and interpret prompts, submit a reflection journal, and produce an independent project at the completion of the elective. Participants then evaluate the electives on a 5-point Likert scale. Impact: Since the initial course offering in 2020, 23 of our residents have taken a medical humanities elective. Deliverables included narratives, poetry, visual art, a novel, videos, music, a cookbook, and the creation of further electives. On post-intervention survey, participants reported the electives met their professional needs (4.88/5), empowered them to change their practice (4.72/5), enhanced their practice (4.8/5), reduced burnout (4.93/5) and provided them with a clear plan for new skill implementation (4.64/5).

Impact: Our course has filled a significant gap related to enhancing the physician experience and building fundamental skills through the medical humanities. This curriculum is

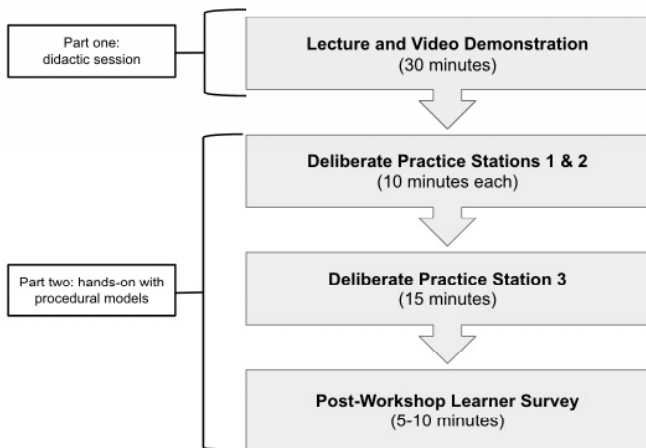


Figure.

Table 1. Postintervention survey item mean responses with 95% CI.

Question	M (95% CI)
This medical humanities elective met my current professional needs.	4.88 (4.71 to 5.05)
Upon completion of this elective, I feel empowered to implement specific changes or strategies that will enhance my professional practice and competence.	4.72 (4.51 to 4.93)
The content of this elective served to enhance my professional practice and competence.	4.8 (4.60 to 5.00)
It is clear to me how I would implement the desired learning outcomes (changes or new strategies) in my practice, if given the chance.	4.64 (4.39 to 4.89)
Reduced Burnout	4.93 (4.80 to 5.06)