the utility and educational value of patient follow-up logs. In order to address the RRC-EM requirement for patient follow-up logs we have created a web-based follow up system (WBFUS) with a faculty feedback loop to enhance educational value.

Curricular Design: The patient follow up is designed around a clinical question for a patient encounter. The resident performs a brief literature review to answer this question, follows up on inpatient reports, consults or calls the discharged patient. Once the question is answered it is entered into a WBFUS. This is encrypted for Patient Health Information and allows for entry of a number of descriptors (Image 1). Also included is a brief description of the clinical course, entry of the clinical question, and the reflection on the case as well as resources used. The unique feature for our WBFUS is that the resident can assign their faculty advisor as well as the faculty involved in the patient's care to be prompted via email for feedback on the entered case. This is all organized in a concise one-page web interface allowing for a fast, efficient provider input. The WBFUS has convenient search options including, but not limited to, listing those lacking cases and/or feedback.

Impact/Effectiveness: The WBFUS incorporates the tenants of deliberate practice into a life-long learning component for our curriculum. During the first year of its implementation in 2014 we had a total of 150 patient follow-up logs created. Out of the 150 created, 107 residents (71%) reported that it will impact their practice. In addition there were 147 faculty feedback comments to increase the educational value. Using this model we have created an effective and satisfactory method of self-learning with faculty feedback.

13 ABCs of Team Leadership: Using Shift Card Data to Guide Future Education

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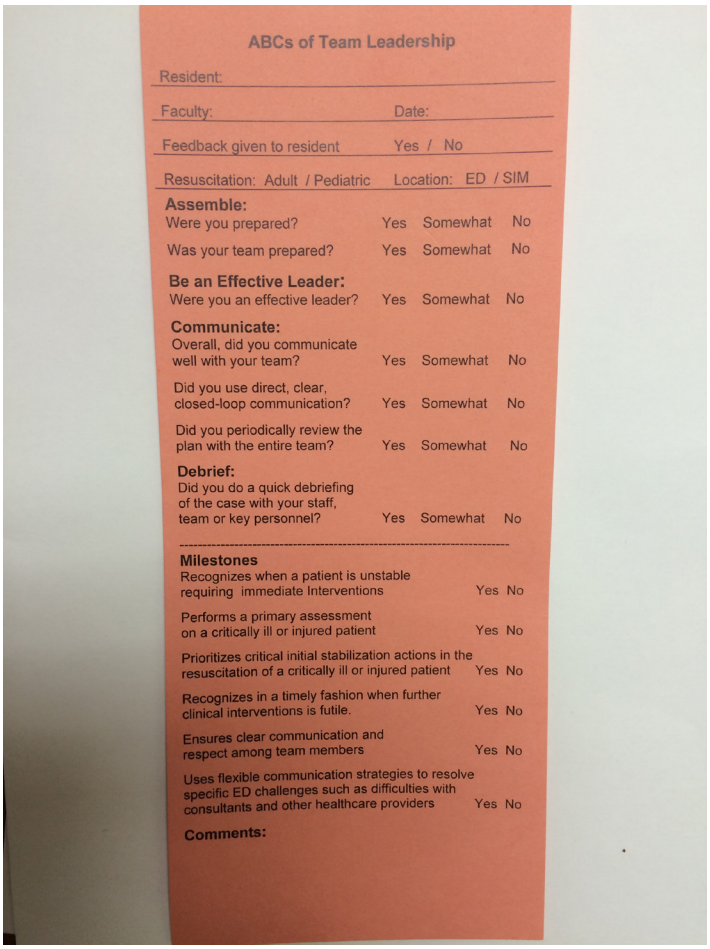
Background: Based on the need for Emergency Medicine (EM) Residents to gain expertise in leading medical and trauma code teams, we created the ABCs of Team Leadership curriculum in 2012. In addition to teaching our residents the team leadership curriculum, we have an optional end-of-shift card filled out by residents and faculty to facilitate focused feedback on team leadership performance (image 1).

Educational Objectives: The Residency Review Committee for EM states that 'each resident must have sufficient opportunities to direct major resuscitations of all types on all age groups'. Our team leadership curriculum was created to prepare residents to direct and lead those resuscitations.

Curricular Design: The ABCs of Team Leadership curriculum was created in 2012 based on a literature review of team leadership in medicine, aviation, business and the military. We applied common themes learned from the literature review to our own experience to develop this EM-specific team leadership curriculum. Residents complete one session per year with a simulated case followed by a debriefing and review of the ABCs of Team Leadership. An end-of-shift feedback card was created to enable the residents to do a self-evaluation of their team leadership performance, as well as to receive faculty comments. In 2015 we modified the faculty section of the feedback card to incorporate some milestone questions to the card.

Impact/Effectiveness: To guide future education in this topic, we performed an educational quality review of the resident card data in November 2015. Based solely on the resident self-evaluation section of the card, we looked for any specific questions in which they did not answer 'yes' as consistently to see if we need to modify our yearly educational team leadership session. The data for the classes of 2014, 2015 and 2016 is presented in Table 1. Based on the data, it would appear that 'Did you use direct, clear, closed-loop communication?', 'Did you periodically review the plan with the entire team?' and 'Did you do a quick debriefing of the case with your staff, team, or key personnel?' may need to be emphasized or taught differently in our yearly team leadership session. Other EM residencies that teach team leadership skills may find this data helpful to guide their curriculum as well.


ABCs of Team Leadership

Resident:

Faculty: Date:

Feedback given to resident Yes / No

Resuscitation: Adult / Pediatric Location: ED / SIM

Assemble:
Were you prepared? Yes Somewhat No
Was your team prepared? Yes Somewhat No

Be an Effective Leader:
Were you an effective leader? Yes Somewhat No

Communicate:
Overall, did you communicate well with your team? Yes Somewhat No
Did you use direct, clear, closed-loop communication? Yes Somewhat No
Did you periodically review the plan with the entire team? Yes Somewhat No

Debrief:
Did you do a quick debriefing of the case with your staff, team or key personnel? Yes Somewhat No

Milestones
Recognizes when a patient is unstable requiring immediate Interventions Yes No
Performs a primary assessment on a critically ill or injured patient Yes No
Prioritizes critical initial stabilization actions in the resuscitation of a critically ill or injured patient Yes No
Recognizes in a timely fashion when further clinical interventions is futile. Yes No
Ensures clear communication and respect among team members Yes No
Uses flexible communication strategies to resolve specific ED challenges such as difficulties with consultants and other healthcare providers Yes No

Comments:

Figure.

Table. Data from the classes of 2014, 2015, and 2016.

Total Cards: 92	Yes	Somewhat	No	Not Answered
Were you prepared?	77 86%	10 11%	3 3%	2
Was your team prepared?	75 85%	11 13%	2 2%	4
Were you an effective leader?	66 80%	17 20%	0 0%	9
Overall, did you communicate well with your team?	69 79%	18 21%	0 0%	5
Did you use direct, clear, closed-loop communication?	**52** **60%**	**34** **39%**	1 1%	5
Did you periodically review the plan with the entire team?	**61** **72%**	**24** **28%**	0 0%	7
Did you do a quick debriefing of the case with your staff, team or key personnel?	**39** **48%**	**13** **16%**	**29** **36%**	11

14 Adapting Gel-Wax into a Low Cost Ultrasound Guided Pericardiocentesis Model

Daly R, Planas J, Edens M/University of Florida-Shands Hospital, Gainesville, FL; LSUHSC-Shreveport, Shreveport, LA; LSUHSC-Shreveport, Shreveport, LA

Background: Cardiac tamponade is a life-threatening emergency for which pericardiocentesis may be required. Real-time bedside ultrasound has obviated the need for routine blind procedures in cardiac arrest and the number of pericardiocenteses being performed has declined. Despite this fact, pericardiocentesis remains an essential skill in emergency medicine.

While commercially available training models exist, cost and durability limit their usefulness.

Educational Objectives: We sought to create a pericardiocentesis model that is realistic, simple to build, reusable and cost efficient.

Curricular Design: The model was constructed utilizing a saline filled Ping-Pong ball (simulating the left ventricle) and a 250cc saline IV bag (simulating the effusion) encased in an artificial rib cage, held in place by gel-wax with flour mixed in (Picture 1). The inner saline bag was connected to a 1L saline IV bag outside of the main assembly to act as a fluid reservoir for repeat uses. The model was mounted loosely on a piece of plywood and covered with latex exercise bands to simulate skin. The cost of the materials was <$200 (Table 1). The construction time was about 4 hours, but then an additional day was given for gel-wax to cool and set before use.

The model was introduced to Emergency Medicine residents and students during a procedure simulation lab and compared to another DIY model model previously described by dell'Orto. The learners performed ultrasound guided pericardiocentesis using both models and were asked to complete a survey regarding the realism of the two models.

Impact/Effectiveness: Learners felt our model was more realistic than the previously described model. On a scale of 1-9 with 9 being very realistic, the previous model was rated a 4.5. Our model was rated a 7.8. Additionally, 100% of students were successful at performing the procedure using our model.

In simulation, our model provided both palpable and ultrasound landmarks and held up to several months of repeated uses. It was much less expensive than commercial models while being more realistic in simulation than other described DIY models. This model can be replicated in training programs to teach the necessary skill of pericardiocentesis.

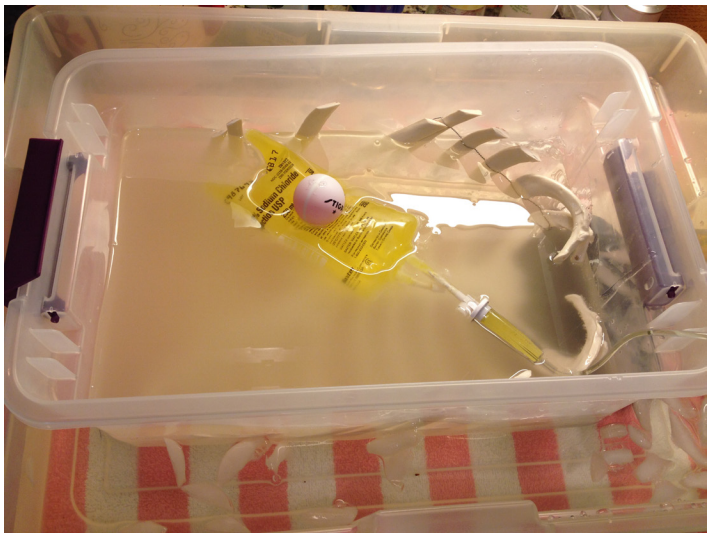


Figure.

Material	Store	Cost (USD)
Gel-Wax	Any craft supply store	$53
Rib Cage	Skeletons and More LLC. (through amazon.com)	$62.95 + $12.95 Shipping
Plastic storage bin	Target	$5
250cc fluid bag		$4.40
1000cc fluid bag		$8.29
Secondary IV tubing		$4.40
3 way stopcock		$6.99
Exercise band 6 in x 6 ft	Any sporting goods store	$17.99
Plywood	Any lumbar store	$5
Ping pong balls x 2	Any sporting goods store	$3.99

Table. List of Materials.