

\* 1. Please indicate what best describes your emergency ultrasound training to date:

- Formal curriculum in medical school
- Formal curriculum in residency
- Formal curriculum in PEM fellowship
- Ultrasound specific fellowship
- Bedside instruction while on shift
- Primarily self-taught
- No experience with emergency ultrasound
- Other (please specify)

## US Training and Education

\* 2. When did you receive the majority of your emergency ultrasound education?

- In medical school
- In residency
- In PEM fellowship
- In an ultrasound specific fellowship
- As an attending physician
- Other (please specify)

\* 3. In what form did you receive the majority of your emergency ultrasound education? Choose all that apply

	Yes	No
Structured US rotations and/or scanning shifts supervised by trained Emergency US faculty/PEM US Faculty	<input type="radio"/>	<input type="radio"/>
Live lectures	<input type="radio"/>	<input type="radio"/>
An independent ultrasound course	<input type="radio"/>	<input type="radio"/>
Online Emergency US modules	<input type="radio"/>	<input type="radio"/>
Emergency US simulation in a skills lab	<input type="radio"/>	<input type="radio"/>

Other (please specify)

\* 4. How much pediatric emergency ultrasound training do you have?

- All of my ultrasound training is specific to pediatrics
- Most of my ultrasound training is specific to pediatrics
- Some of my ultrasound training is specific to pediatrics
- I do not have training in pediatric emergency ultrasound

\* 5. Do you have direct access to an ultrasound machine?

Yes

No

\* 6. Is the machine stationed in your department?

Yes

No

\* 7. Do you feel there are departmental barriers that negatively impact the use of pediatric emergency ultrasound in your clinical environment?

Yes

No

## Departmental Barriers

\* 8. Please rate the following statements regarding departmental barriers and the use of emergency ultrasound in your clinical environment:

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
There is no functional ultrasound machine available for use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a lack of funding to further emergency ultrasound pursuits and education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no structured curriculum to educate the physicians on how to use pediatric emergency ultrasound	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is not sufficient mentorship or emergency ultrasound trained faculty to use this modality effectively and safely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The use of pediatric emergency ultrasound is not a priority in my department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a lack of sub-specialists/consultants that would use emergency ultrasound findings for medical decision-making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We encounter resistance to usage of emergency ultrasound from other departments/divisions at our site. (ex surgery, radiology, etc).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

\* 9. Do you feel there are individual (personal) barriers that negatively impact the use of pediatric emergency ultrasound in your clinical environment?

Yes

No

## Individual Barriers

\* 10. Please rate the following statements regarding individual barriers and the use of emergency ultrasound in your clinical environment:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I do not ascribe significant value to using emergency ultrasound clinically in my patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not feel comfortable enough with my ultrasound skills to use this modality clinically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not have sufficient educational time to dedicate to learning pediatric emergency ultrasound	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not work enough clinical shifts to effectively practice my emergency ultrasound skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that using emergency ultrasound during my clinical shifts negatively impacts my efficiency and patient flow.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

\* 11. In your last 5 shifts of work, how many clinical emergency ultrasound exams have you personally performed (or supervised) on pediatric patients?

- a. Zero
- b. 1-5
- c. 6-10
- d. 11-15
- e. >15 exams

\* 12. Are you familiar with the concept of, or in the past, have you used the ACGME Milestones Project for evaluating residents and fellows?

- Yes
- No

\* 13. Are you familiar with the recently published American Academy of Pediatrics (AAP) Policy Statement on "Point-of-Care Ultrasonography for Pediatric Emergency Medicine Physicians"?

- Yes
- No



## ACGME Milestones

\* 14. Based on the ACGME milestones, please indicate your highest level of competency:

With regards to goal-directed focused ultrasound in pediatric patients, I feel that I am able to:

- Level 1: Describe the indications for emergency ultrasound.
- Level 2: Explain how to optimize ultrasound images and identify the proper probe for each of the focused ultrasound applications. I also can perform a FAST/eFAST exam.
- Level 3: Perform goal-directed focused US exams and correctly interpret acquired images.
- Level 4: Perform a minimum of 150 focused ultrasound examinations.
- Level 5: Consistently achieve scans at the technical level of an imaging professional, meaning I would feel comfortable documenting the results, making a clinical decision based on my findings, saving the images to the chart, and billing the patient for my images.

\* 15. Based on the ACGME milestones, please indicate your highest level of competency:

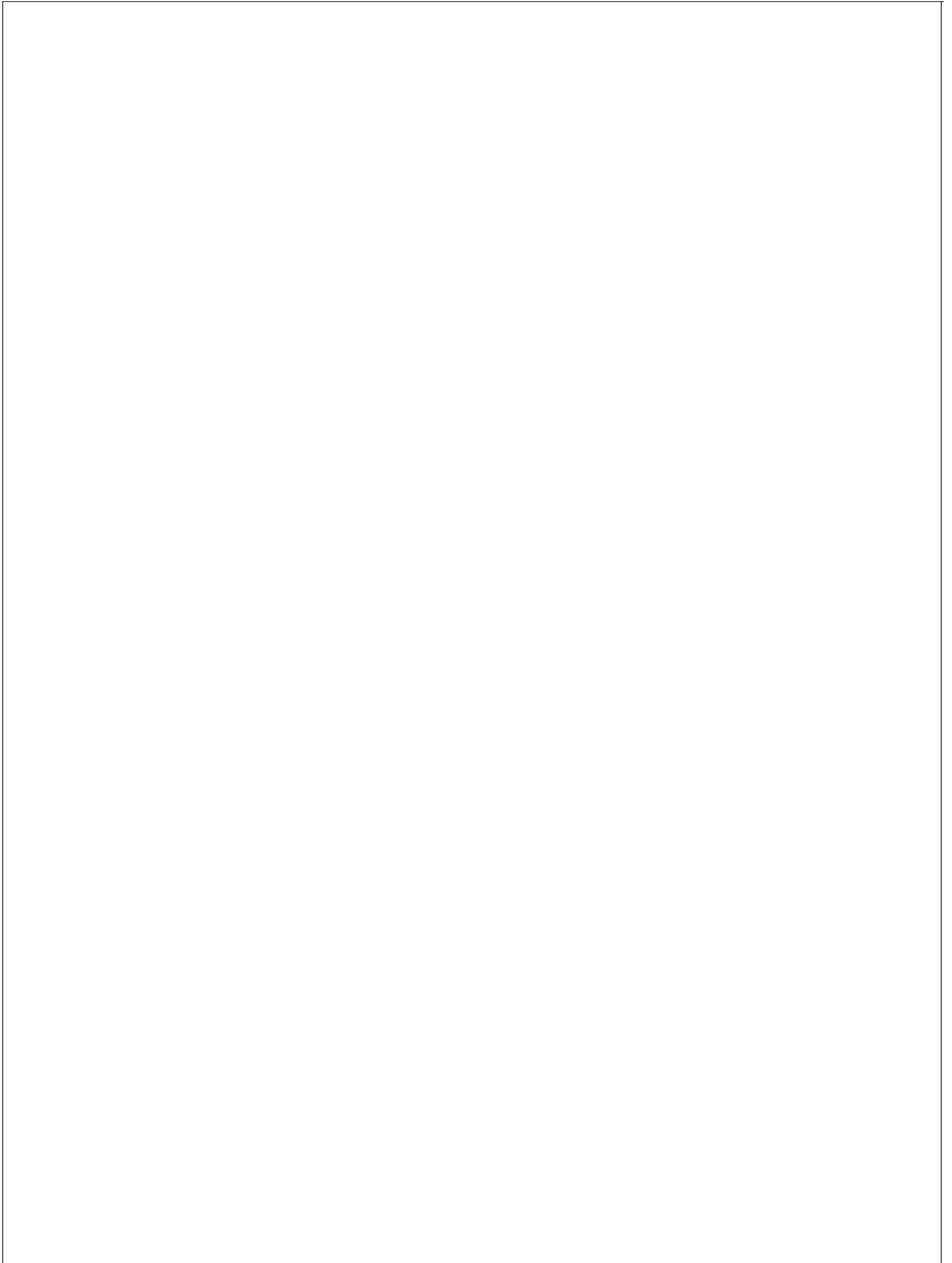
With regards to procedures in pediatric patients, I feel that I am able to:

- Level 1: Identify pertinent anatomy and physiology for a specific procedure, and use appropriate Universal Precautions.
- Level 2: Perform patient assessment, obtain informed consent and ensure monitoring equipment is in place in accordance with patient safety standards. I know indications, contraindications, anatomic landmarks, equipment, anesthetic and procedural technique, and potential complications for common ED procedures. I can perform the indicated common procedure on a patient with moderate urgency who has identifiable landmarks and a low-moderate risk for complications. I can perform post-procedural assessment and identify any potential complications.
- Level 3: Determine a backup strategy if initial attempts to perform a procedure are unsuccessful. I can correctly interpret the results of a diagnostic procedure.
- Level 4: Perform indicated procedures on any patients with challenging features (e.g., poorly identifiable landmarks, at extremes of age or with co-morbid conditions). I can perform the indicated procedure, take steps to avoid potential complications, and recognize the outcome and/or complications resulting from the procedure.
- Level 5: Teach procedural competency and correct mistakes.

\* 16. Based on the ACGME milestones, please indicate your highest level of competency:

With regards to emergency stabilization in pediatric patients, I feel that I am able to:

- Level 1: Recognize abnormal vital signs.
- Level 2: Recognize when a patient is unstable requiring immediate intervention. I am able to perform a primary assessment on a critically-ill or injured patient. I can discern relevant data to formulate a diagnostic impression and plan.
- Level 3: Manage and prioritize critically-ill or injured patients. I can prioritize critical initial stabilization actions in the resuscitation of a critically-ill or injured patient. I can reassess after implementing a stabilizing intervention and evaluate the validity of a DNR order.
- Level 4: Recognize in a timely fashion when further clinical intervention is futile. I can integrate hospital support services into a management strategy for a problematic stabilization situation.
- Level 5: Develop policies and protocols for the management and/or transfer of critically-ill or injured patients.



\* 17. What is your gender?

Male

Female

\* 18. What is your current position?

Attending Physician

Fellow Physician

\* 19. How long have you been in practice as an attending physician post training?

0-5 years

6-15 years

> 15 years

\* 20. What year of fellowship are you in?

- First year
- Second year
- Third year

\* 21. What was your training path?

- Categorical Pediatrics
- Internal Medicine-Pediatrics
- Categorical Emergency Medicine
- Pediatrics or IM-Peds with PEM fellowship
- Emergency Medicine with PEM fellowship

\* 22. How many clinical shifts do you do on average per calendar month?

- 0-4 shifts
- 5-8 shifts
- 9-12 shifts
- 13-16 shifts
- 17 or more shifts

\* 23. What is the name of the hospital at which you work most of the time?

- Children's Hospital of Michigan
- Nationwide Children's Hospital
- C.S. Mott Children's Hospital
- Children's Hospital of Pittsburgh

\* 24. Does your institution currently have a formal emergency ultrasound educational curriculum for PEM fellows?

- Yes
- No