

Ultrasound experience

1. The purpose of this survey is to gain a better understanding of the current landscape of training and experience with point-of-care ultrasound across Indian Emergency Medicine Residency Programs affiliated with George Washington University. We are also looking to identify programs that would be suitable for a pilot of an ultrasound curriculum. This is a research project being conducted by Dr. Keith Boniface and Dr. Kate Douglass at George Washington University. You are invited to participate in this research project because you are either faculty or resident at an emergency medicine training program affiliated with GWU.

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized.

The procedure involves filling an online survey that will take approximately 12 minutes. Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address.

We will do our best to keep your information confidential. All data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain information that will personally identify you. The results of this study will be used for scholarly purposes only and may be shared with George Washington University representatives.

If you have any questions about the research study, please contact Dr. Keith Boniface at kboniface@mfa.gwu.edu. This research has been reviewed by George Washington University IRB procedures for research involving human subjects.

ELECTRONIC CONSENT: Please select your choice below.

Clicking on the "agree" button below indicates that:

- you have read the above information
- you voluntarily agree to participate
- you are at least 18 years of age

If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

- Yes, I agree to participate
- No, I disagree. I decline to participate

* 2. What is your institution?

* 3. What is your level of training?

4. Have you previous hands-on (practical) exposure to ultrasound?

Yes

No

5. Have you ever used an ultrasound machine independently to help make clinical decisions?

Yes

No

6. If yes, how many independent ultrasound scans have you done?

0-10

10-20

20-40

40-100

100-1000

>1000

7. Please select all types of ultrasonography you have had hands-on exposure to:

trauma

volume status

echocardiography

bladder evaluation ,

lung and pleura

spleen

Obstetrics first trimester,

nerve blocks ,

Obstetrics second and third trimester

paracentesis

liver

thoracentesis

gallbladder

lumbar puncture

Soft tissue

vascular access

ocular

musculoskeletal ,

deep vein thrombosis

abdominal aortic aneurysm

kidney

Other (please specify)

8. How comfortable do you feel independently performing and interpreting the following ultrasound examinations? (0 = NOT comfortable at all, 5 = extremely comfortable)

	0 = no experience at all	1 = very uncomfortable	2 = uncomfortable	3 = neutral	4 = comfortable	5 = very comfortable
trauma	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
echocardiography	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
lung and pleura	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obstetrics first trimester,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obstetrics second and third trimester	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
liver	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
gallbladder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
soft tissue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ocular	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
deep vein thrombosis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
kidney	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
volume status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
bladder evaluation ,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
spleen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
nerve blocks ,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
paracentesis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
thoracentesis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
lumbar puncture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
vascular access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
musculoskeletal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
abdominal aortic aneurysm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other types of ultrasound examination experience (please specify)

9. Have you had formal instruction in ultrasonography?

- Yes - I have attended a CME course with scanning of models as well as didactics
- Yes - I have had bedside teaching in the hospital setting
- No

Describe any training you have had:

10. If yes, how many hours of ultrasound lectures have you had?

- 0
- 1-5
- 6-10
- 11-15
- 16-20
- >20

11. If yes, how many hours of ultrasound hands-on training have you had?

- 0
- 1-5
- 6-10
- 11-15
- 16-20
- >20

12. How would you describe your interest in learning more about ultrasonography?

- None
- Low
- Medium
- High

13. What do you think the likelihood of your learning to use ultrasound for at least one clinical application in your anticipated assigned clinical setting?

- None
- Low
- Medium
- High

14. Please rank the top 5 indications that you feel would be helpful for you to learn, given where you are going to be practicing (you can "drag and drop" indications into order if you wish):

<input type="text"/>	trauma
<input type="text"/>	echocardiography
<input type="text"/>	lung and pleura
<input type="text"/>	Obstetrics first trimester,
<input type="text"/>	Obstetrics second and third trimester
<input type="text"/>	liver
<input type="text"/>	gallbladder
<input type="text"/>	Soft tissue
<input type="text"/>	ocular
<input type="text"/>	deep vein thrombosis
<input type="text"/>	kidney
<input type="text"/>	volume status
<input type="text"/>	bladder evaluation ,
<input type="text"/>	spleen
<input type="text"/>	nerve blocks ,
<input type="text"/>	paracentesis
<input type="text"/>	thoracentesis
<input type="text"/>	lumbar puncture
<input type="text"/>	vascular access
<input type="text"/>	musculoskeletal ,
<input type="text"/>	abdominal aortic aneurysm

15. When patients present with the following chief complaints, how likely are you to perform point-of-care ultrasound to help with clinical decision making?

	Never	Sometimes	Often	Most of the time	Every time
Shortness of breath / dyspnea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hypotension / shock	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chest pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Abdominal pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaginal bleeding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joint pain or swelling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soft tissue infection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trauma patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vision changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. How important are the following barriers to the use of ultrasound in your practice?

	1 = NOT important at all	2 = Of little importance	3 = Moderately important	4 = Important	5 = Very important
Lack of ultrasound equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Radiology opposition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospital opposition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No time to use while working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No interest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of financial incentive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concern for legal (OTHER than malpractice) liability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concern for malpractice liability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other barriers to the use of ultrasound in your practice (please specify)

17. Do you have dedicated time in your residency program to learn ultrasound?

- Yes
 No

18. Is there currently an ultrasound curriculum for emergency medicine residents at your institution?

- Yes
 No

19. How important is it to you to have a structured curriculum with dedicated time for ultrasound in your residency program?

1 = NOT important at all	2 = Of little importance	3 = Moderately important	4 = Important	5 = Very important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Thank you for your time. Would you be interested in participating in a pilot of an ultrasound curriculum through your institution and George Washington University? *(if yes, we have a few more questions for you)*

- Yes
- No

Point-of-care ultrasound in India Emergency Departments

Ultrasound equipment availability

Thank you for your interest in a pilot program in ultrasound education from George Washington University. In order to determine the most suitable locations for this pilot, we would like to ask about the current ultrasound equipment available at your institution.

* 21. Does the Emergency Department own its own ultrasound machine that is located in the ED?

- Yes
- No, we borrow one when necessary from Radiology
- No, we borrow one when necessary from Obstetrics and Gynecology
- No, we borrow one when necessary from Cardiology
- No, we have no access to an ultrasound machine
- Other (please specify)

Point-of-care ultrasound in India Emergency Departments

22. What brand of ultrasound machine do you have? (if more than one machine, answer the following questions with regard to the most updated machine, and add as much detail as possible regarding your other ultrasound equipment to the "other" box below)

- Sonosite 180plus
- Sonosite Titan
- Sonosite MTurbo
- Sonosite XPorte
- Sonosite S-Series
- GE
- Philips
- Mindray
- Zonare
- Siemens
- BK medical
- Toshiba
- Esaote
- Samsung-Medison
- Hitachi-Aloka
- Terason

Other (please specify)

23. Approximately how old is the machine?

- Less than two years old
- Two to five years old
- Greater than 5 years old

24. What transducers are available and functional for this machine?

- Phased array / cardiac
- Abdominal large curvilinear
- Abdominal small microconvex curvilinear
- Linear high frequency (vascular)
- Intracavitary / transvaginal
- Other (please specify)

25. What features are available on your machine?

- M-mode
- Color Doppler
- Pulsed wave Doppler
- Continuous wave Doppler
- Cardiac calculations package
- Obstetrics calculations package
- Other (please specify)

26. Select which of the following tasks the ultrasound machine is able to perform:

- Label images with patient demographics (name, medical record number, date, and time)
- Store digital images and video clips
- Export stored images onto a USB thumb drive
- Label images with text and save as a still image

Other (please specify)

27. What services are available from radiology 24 hours a day?

- XRay (plain radiographs)
- CT
- Ultrasound
- MRI

Comment

28. Who is the person at your institution that would be the best person to coordinate an ultrasound curriculum?