Guide to Creating Ultrasound Workshops

(As a Medical Student!)

What Workshop Looks Like

- 15-20 minute lecture (about why to use the scan and how to perform it)
- 1-1 ½ hours of hands practice in small groups
- Lecture given by lead instructor (whoever is most knowledgeable about the scan)
- Hands-on teaching by small group instructors (aka ultrasound student leaders)
- All student classes invited to one event
- Ultrasound machines are borrowed from various departments (if you don’t have them)

What you will need

- Lead instructor
- Small group instructors
- Student workshop organizer
- Ultrasound machines (see Getting Resources Guide for how to do this)
- Ultrasound models
- Space with tables

Setting Up Your Workshop

Finding a lecturer

You have a lot of options here. Examples for of instructor options include:

- Ultrasound trained physican (RDMS/ultrasound fellowship trained)
- Physician who’s an ultrasound enthusiast
- Med student who’s an ultrasound enthusiast
- A FOAMed lecturer (such as the Ultrasound Podcast)

Everyone has access to one of the above options. If you’ve got an army of ultrasound trained faculty, you are in luck and this will be easy. You can usually find them in Emergency Medicine. This is because the specialty was an early adopter of bedside ultrasound, so there are just more ultrasound trained physicians in emergency medicine (for now).

However not everyone has access to physicians with formal ultrasound training (yet). There are physicians out there who are ultrasound enthusiasts. They didn’t get formal training, but they’re excited and they’re learning. These are a great resource for teaching workshops. There are a similar breed of ultrasound enthusiasts among med students. They stumbled upon Ultrasound
Podcast and have listen to every podcast *twice*. They are also a good resource! Ask around, find the most ultrasound savvy at your institution, and get them to teach you what they know.

If nothing else, pull up one of the many FOAM based ultrasound lectures that can be found in the FOAM Ultrasound Curriculum on SonoMojo’s site. Using FOAM education, you can get instruction from the best of the best in ultrasound whenever you need it.

**Basic Logistics**

**Workshop Organizer**

You need a workshop organizer, someone who coordinates all the activities of workshop set up. If you’re reading this, it’s probably you! You need to make sure there is an instructor confirmed, a room reserved, machines available (read Getting Resources Guide for more info on this), students have been emailed the sign up link for the workshop, your small group instructors (aka your fellow ultrasound students) are prepared, and you have a basic curriculum for the workshop.

**Reserve a Space**

Reserve the right space for your workshop. This should be somewhere with a projector for a brief presentation and flat surfaces (like tables) for the ultrasound models to lay on. You can always bring in folding tables in a pinch.

**Selecting a Date**

I know this seems obvious, but get the schedules of all the classes. Maybe even have a representative from each class that you consult for picking a workshop date. You want your workshops to be at convenient times for your attendees. Don’t pick a date right before or the day of a major exam, a mandatory lecture, etc. Basically, be strategic about

**Send Out Workshop Reminders**

Everyone is busy and it’s easy to forget a workshop date, so send out a brief reminder email. Remind the students attending the workshop the day before. Remind you instructors too. Confirm that your instructors will be there. Be sure to include the date, time, and location.

**Publicizing the Workshop**

This is essential. For your first few workshops you will be inviting students to come learn as skill they may not even know exists. Crazy, I know. You are going to be first ultrasound exposure many of your peers have experienced, so be thoughtful and make it sounds fun. Highlight how other schools have this already built into their curriculums (if you don’t already have an ultrasound curriculum). U of South Carolina gives their med students hand held ultrasound on their first day! Explain knowing bedside ultrasound will make them look amazing on their clinical rotations and make them better doctors. It has also been shown to improve test scores in
pre-clinical courses like anatomy and physiology (because you’re actually looking at structures and physiology in real-time in real people when you use ultrasound).

An easy and effective way to reach your fellow students is via class list serves. Be sure to put the most important information first (what, when, where, and how to sign up) using bullet points/bolding/underlines/etc. Honestly, do you read every line of all the many emails you get everyday… I didn’t think so. With the important info taken care, go ahead and write that nice description of why they should care about ultrasound or why the scan you’re teaching is useful. For your sign ups, google docs make those a breeze. If you just add a link to your workshop announcement email, people can sign up easily and you can view to the link to know how many people to plan for.

**Getting Small Group Instructors**

Student mentors will be your hands-on instructors (see USIG Leadership Guide about this role). You, the ultrasound student leaders, will lead small groups of students in hands-on ultrasound instruction. Most institutions do not have enough ultrasound trained faculty *yet* to train the large number of med students at your ultrasound workshops. Your student mentors have the most ultrasound experience among the students and usually have more ultrasound training than more faculty at your school. To help develop more student instructors, pair new instructors with more experienced instructors for their first few workshops.

In preparation for the workshop student mentors should complete the FOAM curriculum module for that scan (See the FOAM Curriculum from SonoMojo). They should also be comfortable performing the scan, *obviously*. This may involve getting your small group instructors together to practice before the workshop. Be sure your instructors know the information in the “Cheat Sheet” for that scan (see below for more info about cheat sheets).

**Establishing a Basic Curriculum**

This is pretty straight forward. Just pick an ultrasound scan you would like to learn. There are “Ultrasound Cheats Sheets” on SonoMojo you can choose from. These are an overview of a variety of ultrasound scans that contain the essentials of that scan in 1-2 pages. You can use the cheat sheet during the workshop to make sure your instructors are teaching the same information and students can look them to make sure they understand the scan. These are independent of what your instructor puts together for the lecture. Basically, your cheat sheet makes sure that each group is getting similar instruction, provides a basic lesion plan for your small group instructors, and lets your learner review the essential knowledge of that scan.

**Getting Machines**
There are ultrasound machines all over most institutions, if you know where to look. The most high yield areas are the emergency department, all the ICUs, and anesthesia.

Ask the department heads if you can use their ultrasounds for educational purposes when they are not being used for patient care. This means you workshops should probably be in the early evenings (5pm-ish), when there are few procedures and patient evaluations being done. When you ask be sure to explain that the machines would be used for educational purposes for a student organization.

Explain that patient care is your top priority too, so you will be posting a sign where the machine is stored with the name of the borrower, location of the machine, and a phone number to reach if the machine is needed. If the machine is needed for patient care, they can simply call and you will return it in less than 5 minutes. A sample sign can be found at the end of this guide. Explain that you will return the machine after a couple of hours. Machine are expensive, so reassure them that you and the students using the machines appreciate this and will handle them with care!

If they are still resistant to you borrowing ultrasound machines, ask to use them within the department (in a conference room perhaps) and send a small group with an instructor to the machine. This is also covered in more detail in the “Finding Resources Guide”.

**For the Day of the Workshop**

**Things to Complete Before the Workshop Starts**

**Gather Your Supplies**

- Have enough gel
- Borrow plenty of towel and wash clothes (which you’ll return when you’re done)
- Have ultrasound borrowing signs printed off (laminated signs can be reused if you write with dry erase markers)
- Print out cheat sheets

**Gather Your Ultrasounds**

Get your ultrasound ½ - 1 hour prior to the start of your workshop. Gathering machines from all over the hospital takes time, *more time than you think*. Be absolutely sure there is a sign up for each machine borrowed (patient care has to be the priority with these machines!). Be sure to have the contact person listed for each machine turn their cell phone ringers to high, so they can hear it during the loudness of the workshop. Reminder each small group instructor that they are in charge of returning their machine to the department from which it came, if it’s needed for patient care. If a machine is called back, just redistribute that small group to the other groups.

If you’ve got a fantastic education program that has teaching dedicated ultrasounds, just kick back and enjoy your machines. The rest of us are jealous!
Using Your Workshop to Promote Ultrasound Curriculum Integration

By collecting survey data from your workshop to provide objective information to your school administration about student interest in ultrasound education. Simply print off a surveys before the workshop and hand them out at the end. Since people will tend to leave at different time, post an obvious sign on the exit door asking them to please fill out a survey before they leave. Place survey and pens by the door. Basically, make filling out your survey as easy as possible. A sample survey can be found at the end of this guide. Once you have your raw data, generate basic descriptive statistics and calculate the percent of attendees that agreed with statements about ultrasound in medical education. You can then give your administration the analyzed data to objectively demonstrate student interest in ultrasound education and support effort for curriculum integration. When your administration is ready to start integrating ultrasound in the curriculum, they can use your workshop data to support their decision.
This ultrasound machine is currently being used for educational purposes. It was check out by _____________________ (Name) at __________ (Time/Date). It can be found in _________________ (Location). Please call or text _________________ (Phone #) and it will be returned within 5 minutes.

This ultrasound machine is currently being used for educational purposes. It was check out by _____________________ (Name) at __________ (Time/Date). It can be found in _________________ (Location). Please call or text _________________ (Phone #) and it will be returned within 5 minutes.

This ultrasound machine is currently being used for educational purposes. It was check out by _____________________ (Name) at __________ (Time/Date). It can be found in _________________ (Location). Please call or text _________________ (Phone #) and it will be returned within 5 minutes.
AFTER Insert Name of Scan WORKSHOP SURVEY

1) Bedside ultrasound would enhance my medical education.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

2) Bedside ultrasound would increase my ability to learn 3-D relational anatomy.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

3) Bedside ultrasound would increase my ability to learn physical exam skills.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

4) Bedside ultrasound should be integrated into medical student basic anatomy courses.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

5) Bedside ultrasound should be integrated into medical student physical exam courses.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

6) I would like to have more ultrasound education in my curriculum.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

7) I am interested in bedside ultrasound.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

8) I would be interested in a fourth year bedside ultrasound elective.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

9) This workshop was worthwhile.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

10) I learned something that I would not learn elsewhere in my current medical education curriculum.
    - Strongly Disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

11) I learned something that I can use in clinical practice.
    - Strongly Disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

12) I learned something that is or would have been relevant to my pre-clinical coursework.
    - Strongly Disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

13) This USIG workshop has added something valuable to my medical education.
    - Strongly Disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

14) I plan to attend future USIG workshops.
    - Strongly Disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

15) I want to learn more about bedside ultrasound after this experience.
    - Strongly Disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

16) I have attended _____ of the USIG workshops.
    - All
    - Most
    - Some
    - 1 or 2

17) I am most strongly considering a residency in __________.
    - Emergency Medicine
    - Internal Medicine
    - Surgery
    - Pediatrics
    - Family Medicine
    - OB/GYN
    - Other

18) My year in medical school is ______.
    - 1st year
    - 2nd year
    - 3rd year
    - 4th year