

Challenged to ‘Probe the Future’

Reflection is a vital part of self and organizational improvement. With over 400 members, a [1k twitter followership](#), and an abundance of programs now incorporating POCUS, it would be easy to bask in the accomplishments of our members over the recent past. But the true value of reflection lies its ability push us to greater heights. The dynamic nature of the POCUS community can make that challenging, but imperative nonetheless. With [their landmark presentation at PAEA '18](#), members Janelle Bludorn and Jason Parente have inspired me (and undoubtedly others) to reflect and “probe the future” of POCUS.

The speed at which POCUS is changing is truly astounding. While educators are rushing to integrate POCUS into their curricula, professional societies are struggling to figure out POCUS governance, certification methodology, and clinical practice integration. Meanwhile, industry is creating miniaturized devices, layered with artificial intelligence, [which are increasingly autonomous, with visions of allowing minimally-trained novices and even laypersons to employ ultrasound](#). It made me think about how to best thrive in such a dynamic environment. One day, as I struggled to define the key to the successful future for SPOCUS, my wife Kati shared with me a pic of how she spent her day at work. To thrive as an impactful influencer in a male-dominated organization like the military is no easy task, yet she wins, day-in and day-out, in her duties and this picture well-summarizes the key to her success, and demonstrates how SPOCUS can be successful in the future.

Agile Adaptability

While rigged and awaiting her turn to execute a parachute jump as a SOLDIER, Kati is pictured collecting data for a clinical study she is conducting as a RESEARCHER. Not seen in the picture is the breast pump she had just finished using to fulfill her duties as a mother, or the fact that she had spent the morning teaching POCUS to her soldiers as part of her duties as a LEADER/EDUCATOR, or that she would later care for a soldier injured on that same drop zone, fulfilling her duties as a CLINICIAN. She had done each of these things individually before, but her ability to seamlessly

integrate her duties together struck me as an incredible example of agile adaptability.

The parallels to both POCUS, and the future success of our organization were striking. POCUS is adaptable to any setting, from hospital bed to OR suite to mountaintop, battlefield, or even space. Its employment can also be adapted to a myriad of clinical scenarios....to rapidly answer a specific clinical question, as part of the physical exam, to guide an invasive procedure, or as a means to physiologically monitor a patient. POCUS is agile enough to be employed in a number of ways in a myriad of practice settings.



Meanwhile, it is imperative that we recognize, embrace, and adapt to the changing POCUS landscape and remain adaptably agile. As EDUCATORS, we must recognize that the younger generation of students, which comprise much of our membership, are increasingly rejecting traditional classroom-based teaching methods that many of us cut our teeth on, while craving innovatively and asynchronously delivered material which is cognitively-offloading and inclusive of constructively curated feedback. We must maximize the potential for POCUS by expanding training opportunities to unconventional populations such as nurses, medics, or techs who operate in medically underserved areas. As RESEARCHERS we have a duty to gather data on the effectiveness of such newly implemented measures. As LEADERS, we must embrace, actively engage, and guide industry in the creation and clinical implementation of AI-driven ultrasound, tele-ultrasound, and other technological advances. As CLINICIANS, we must ensure all of this is done with one thing in mind...the patients we serve.

-Jonathan Monti, President

SPOCUS Member News!

The American Academy of Surgical PA's and SPOCUS put on their 2nd Annual Intro to US Course in Orlando in January. This coincided with the novel and successful AASPA's pre-PA meeting. Here seasoned AASPA members and directors help future PA students with all the ins and outs of applying and preparing for PA school. This year's course was again well attended and reviewed, including two hospitalist physicians from Australia.



[Shannon Crabtree, MMS, PA-C](#), Instructor of Medical Education at Northwestern University and her co-principal investigator, Ryan Adler, MS, PA-C, and co-investigator Roger Kunes, MMSc, PA-C, will be researching “Online Point-of-Care Ultrasound Training for Physician Assistant Students at Resource-Limited Institutions: A Pilot Study.” With already-packed curricula, POCUS educators must consider innovative ways to integrate POCUS into education programs.



Laura Blesse-Hampton presented at the annual conference for the Ohio Association of Physician Assistants (OAPA). Her lecture on POCUS was well received and she has plans for a collaboration for another talk on ultrasound next year. Shortly before her presentation, she learned that she had been named OAPA's PA Educator of the Year for 2018. Four of her current students (three of whom were on the ultrasound team) came down to surprise her while they presented the award. Laura credits the SPOCUS Train-the-Trainer with helping her understand and appreciate POCUS. She also felt

implementation of ultrasound was likely a big part in her students nominating me for the educator award. Congrats, Laura!

Latest Student Ultrasound Interest Section!

Congratulations to Yale SOM’s PA program for getting the Student Ultrasound Interest Section up and running. According to one of the prime movers – Senior PA Student **Sammy Jo Wright**:

“We had our first meeting on our call back day on 1/25 in the afternoon at the Yale Center for Medical Simulation. 17 students showed up and we had available two ultrasounds and two instructors. We went over knobology as well as the FAST exam. We then practiced on each other till everyone was finished! It took about 2 hours total and was VERY helpful and informative. Our next meeting will be 2/22 and cover some positive fast exams. Then we’ll be going over POC Echos! Everyone is really looking forward to this next meeting. We are hoping to get more ultrasounds as well as help from one of the other PA residency graduates as this will be a more challenging subject matter. Miro is also trying to secure us some time to practice in small groups on patients in the ED.”

The two Yale SUIS Mentors are:

Mirofora Paradis: Miro attended undergrad at UConn, EMT for five years, PA school at the University of Bridgeport and just graduated from the Yale New Haven Hospital Emergency Medicine PA Residency. Working at Yale New Haven Hospital Emergency Department.

Sarah Campbell: Sarah attended undergrad at the University of Oklahoma with a Bachelors of Arts in Human Relations as well as Medical Spanish Specialization from Universidad de Alcalá de Henares, Physician Assistant education at Oklahoma City University, and post-graduate training at Yale New Haven Hospital Emergency Medicine PA Residency.



Mirofora Paradis, PA-C, Alan Vleig PA-S, Caroline DeSaussure, PA-S



Angela Preda, PA-S,
Sammy Jo Wright,
PA-S



Sarah Campbell, PA-C, Olivia Hayward PA-S,
Lander Jewett PA-S

How SPOCUS Supports You

We've been busy with numerous initiatives aimed at better supporting our members and our mission. Below is a snapshot of some of them.

Advocacy

- Collaboration with several external bodies on towards policies which are inclusive of POCUS utilization by all clinicians
- Mitigation of problems that prevent the full employment of POCUS by our members, at local, regional, and national levels – This quarter we crafted a response to the Texas Medical Board's proposal to prevent PAs from ordering or interpreting radiologic studies
- Personalized guidance on overcoming barriers that prevent our members from employing POCUS

Member Benefits

- 25% discount on individual subscriptions to EMSono
- 20% discount on individual subscriptions to SonoSim
- 10% discount for 3rd Rock Ultrasound courses
- 5% discount on Gulfcoast Ultrasound products

Education

- Co-sponsoring / directing several regional/national workshop opportunities
- Development and mentorship of free Student Ultrasound Interest Groups across the country
- Mentorship and resources on POCUS curriculum integration
- Development of FOAMUS and other educational resources for members
- Exploring development of online CME Webinar opportunities for members
- Support and mentorship of student ultrasound interest groups (SUIS)
- Summaries of the latest POCUS research, cool cases, and articles demonstrating the value of ultrasound

If you believe in the power of POCUS and SPOCUS has supported you in your practice/endeavors, please share with us and your peers the value of SPOCUS!



Member Spotlight

An interview with Jeremy, a CRNA working in a smaller community hospital with six operating rooms.

1) How did you get interested in POCUS? How has this changed your practice?

“I had attended an ultrasound guided regional nerve block conference that introduced me to a quick pulmonary exam to check for a pneumothorax after a supraclavicular nerve block. It was introduced at the end of the conference almost as a side note but it really struck me as a potentially vital exam. That’s when I realized that the ability to have real time answers could be a huge benefit for me during the perioperative period. As my interest in POCUS grew, I was able to find more and more resources that spurred me on. My practice is actively changing. Preoperative POCUS exams are helping me to decide whether a fluid bolus would be beneficial or if fluid restriction is recommended. Assessing global heart function is helping to tailor my anesthetic induction on more complicated patients.”

2) What applications do you frequently utilize? What applications do you still want to learn?

“I use ultrasound on a daily basis for all regional nerve blocks and frequently use ultrasound for venous access. Recently I’ve added parasternal long and short axis cardiac views along with a 4-field lung assessment to my routine. My practice includes a small amount of trauma and sepsis so assessing the IVC is helpful for those patients. Moving forward I’d like to incorporate the gastric exam into my daily routine and fine tune the subxyphoid cardiac view.”

3) have you encountered barriers to doing more POCUS exams?

“I currently practice independently as a CRNA at a smaller hospital that has 6 operating rooms. I have met resistance from administration, surgeons, and the credentialing committee. Using ultrasound as a diagnostic tool and tailoring treatment based on those findings has historically been the role of a physician. The idea that an Advanced Practice Registered Nurse (APRN) can utilize POCUS to improve patient care is difficult for some veteran physicians to accept. The easiest barrier to overcome was convincing administration to order a phased array probe to improve the cardiac imaging over the aged curved linear probe.”

4) We know you are quiet adept at all things nerve block related- what would you say to someone wanting to learn how to do them at work?

“The changing healthcare environment emphasizes a decrease in narcotic usage. Nerve blocks can satisfy that need for some acute pain patients. The quick reduction in pain is gratifying for both the patient and the provider. I was fortunate that when I began to learn blocks that I was able to come back from the training and perform a high volume of blocks. Also I was in a position to do follow up phone calls. Talking with the patients post op allowed me to fine tune the local anesthetic concentration and volume that worked the best.”

5) Can you think of three pearls for blocks in general?

“In order to perform a good block you need to start with a good image. From there:

1. Know your anatomy. Since everyone is built differently, finding nerves can be difficult. Often times knowing the surrounding structures can reorient you if you are anatomically lost.

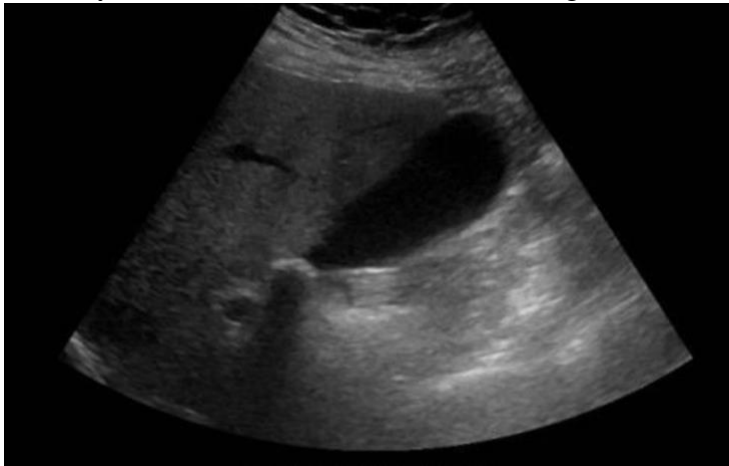
2. Stabilize your probe. Don't hold your probe like a pencil. Grip your probe in a way that you can use some portion of your hand and fingers to anchor the probe to your patient. Remember that you are aiming at a target (nerve bundle). Once you identify that target, the only two things that should be moving are a neighboring artery and your needle.
3. One of the most frustrating experiences when performing nerve blocks is to have a great image but not be able to see your needle. The best view of your needle occurs when the needle is positioned 90 degrees to the probe. When learning ultrasound guided nerve blocks a lot of people find it comforting to enter the skin close to the probe which results in a about a 45 degree approach to your target. In order to achieve an angle that is closer to that perfect 90 degree angle to the probe, it is sometimes necessary to enter the skin further away from the probe."

6) Anything else you'd like to say to the general membership or students/faculty in particular?

“Ultrasound has rejuvenated my career. I enjoy bringing something new to the table for my patients. I can't think of a better way to increase both your patient satisfaction and your professional value.

UltraCool Case of the Quarter

A 37y/o male presents to ED with a history of intermittent epigastric pain for several weeks, worse today, associate with some nausea. Vitals are unremarkable, and exam reveals localized epigastric tenderness with negative murphy's sign. The resident states LFTs and WBC are normal and the patient noted “a little” improvement with analgesia. As the resident preps the discharge paperwork with a diagnosis of “GERD/epigastric abdominal pain” the ultrasound rotator asks the resident if he can scan his belly. Soon the US rotator returns stating the exam was unremarkable. Upon review of the images.....



This image depicts the “SIN” (Stone in Neck) Sign of a gallstone within the neck of the gallbladder. Note that the stone itself isn't very hyperechoic, but the posterior acoustic shadowing that it creates solidifies the diagnosis. There is no visible anterior wall thickening, or pericholecystic fluid.

Case Resolution: This patient's “GERD” was likely intermittent symptomatic cholelithiasis. Due to poor pain control in the ED, surgery was consulted and they agreed to admit the patient for eventual elective lap chole for his symptomatic cholelithiasis.

It is well described in the literature that acute cholecystitis can present with normal laboratory values. [This paper by Adhikari et al](#) highlights the value of biliary POCUS in cases of isolated epigastric tenderness.

Upcoming POCUS Workshops

[Family Medicine Point-of-Care Ultrasound \(POCUS\)](#) March Sponsored by University of Minnesota

[School of Medicine Ultrasound Institute University of South Carolina. Introduction to Primary Care US, Columbia, SC](#)
2019 March 21-22 May 23-24

[Limited OB Ultrasound](#)
March 21-23, 2019 or June 13-15, 2019
October 3-5, 2019 Philadelphia, PA
Sponsored by Thomas Jefferson University.

[US for Primary Care Courses conducted by the Institute for International Medicine.](#)

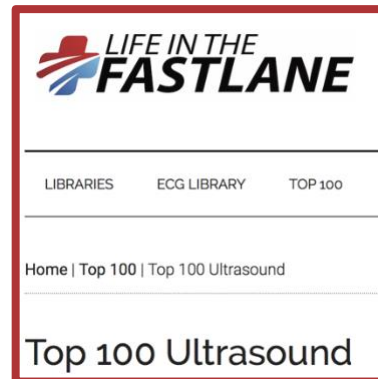
2019 Fort Worth, TX, hosted by John Peter Smith Hospital
On-Line Section: March 14 – 27, 2019 (2 weeks)
In-Classroom Section: March 28, 2019 (Thurs) in Fort Worth, TX

<https://www.bendfest19.com>
July 11-13, 2019 Bend, Oregon

[MSK Ultrasound Course](#)
May 30, 2019 – June 2, 2019 Pensacola, FL
Sponsored by The American Institute of Ultrasound in Medicine (AIUM) and the Andrews Research & Education Foundation

For a more extensive list of upcoming courses, visit us at SPOCUS.org

FOAMUS Feature of the Quarter



So you've taken that introductory course and are steadily honing your image acquisition skills, but still wary of how to

best clinically correlate your findings. LITFL's Top 100 Ultrasound has a myriad of cases in which you can test your image interpretation skills and practice how to best incorporate your findings into your management plan. After all, you can't just scan in a bubble....that's the power of POCUS!

Check it out <https://litfl.com/top-100/ultrasound/>

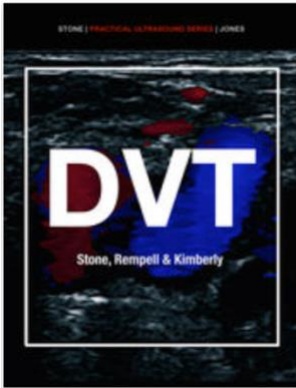
Featured POCUS App



Though primarily geared for the emergency clinician, SonoSupport's app is comprehensive enough to be useful for any POCUSonologist. It includes exam performance guides, normal and abnormal

sonographic anatomy and examples, documentation requirements, critical images checklists, and numerous pearls and pitfalls by application. Though it comes with a one-time fee of \$9.99, we wish you luck finding a better quick-reference tool. Available from [iTunes App Store](#) and [GooglePlay](#).

Featured Free eBook Resource



This free iBook introduces providers to the key concepts, technical considerations, and image acquisition and interpretation skills required to evaluate patients for DVT using ultrasound at the point-of-care. A combination of text, image galleries, narrated video clips and interactive media is used to provide an immersive educational experience for the emergency clinicians. A deep-dive for those looking for expertise on this clinically valuable POCUS application.

If you haven't checked it out yet, SPOCUS teamed up with The Total EM to bring you a podcast series discussing the challenges POCUS educators face in integrating POCUS into educational programs. Premier educators Janelle Bludorn and Laura Blesse-Hampton share their thoughts on the value of POCUS, and the methods by which they've successfully built POCUS into their programs and how students have valued the education. Check it out!



Connect with SPOCUS on social media where you can stay up to date on the latest workshop opportunities and catch great cases, the latest lit, and educational material from across the worldwide web

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