

## **UC Irvine**

# **Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health**

### **Title**

The POCUS Atlas - A Novel Crowdsourced Ultrasound Archive

### **Permalink**

<https://escholarship.org/uc/item/17s2d6jv>

### **Journal**

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 19(4.1)

### **ISSN**

1936-900X

### **Authors**

Riscinti, M  
Macias, M  
Solari, C  
[et al.](#)

### **Publication Date**

2018

### **License**

[CC BY 4.0](#)

these recommendations and subsequently distribute them to a wider audience.

**Table 1.** Best practice guidelines for osteopathic emergency medicine applicants

Key Recommendations	Comments
<b>Get help from those in the know</b>	<ul style="list-style-type: none"> <li>Find academic EM mentors and advisors</li> <li>Get involved in an EM interest group</li> <li>Join EMRA, SAEM, RSA or other professional organizations</li> </ul>
<b>Take the test that counts</b>	<ul style="list-style-type: none"> <li>The USMLE exam allows direct comparison to your allopathic peers</li> </ul>
<b>Rotate where you want to train</b>	<ul style="list-style-type: none"> <li>Rotate by mid-September of your final year in 2 ACGME - affiliated residency programs</li> </ul>
<b>Get two SLOEs</b>	<ul style="list-style-type: none"> <li>Group SLOEs written by leadership teams representing residency programs carry the highest weight</li> </ul>
<b>Apply wisely</b>	<ul style="list-style-type: none"> <li>30-40 programs (based on perceived application competitiveness)</li> <li>Strongly consider programs with a history of accepting osteopathic applicants</li> </ul>
<b>Focus applications</b>	<ul style="list-style-type: none"> <li>Look in geographic areas that statistically match higher percentages of DO applicants (New York, Pennsylvania, Texas, Ohio, and Michigan)</li> </ul>
<b>Interview and rank 10 programs</b>	<ul style="list-style-type: none"> <li>Data has shown that applicants who rank 9-10 programs had an approximately 90% match rate in EM</li> </ul>

## 17 The Effects of Stress Inoculation Training in a High Stress Simulated Medical Environment

*Shin R, Nichlany A /New York Presbyterian Queens, Flushing, New York*

**Background:** Acute stressors in the field of emergency medicine have been shown to have a large impact in medical decision making. Studies have shown that stressful stimuli during critical care resuscitation tend to negatively affect performance of health care providers. Implementation of stress inoculation training (SIT) has been well studied among athletes, military and emergency response teams. Emergency physicians may benefit from a deeper understanding of the physiological stressors that affect medical performance. Feedback obtained will allow doctors to provide optimal care and ultimately improve patient safety.

**Educational Objectives:** Our primary objective is to identify the potential benefits of SIT and its effect on a simulated patient care environment. We also have secondary measures which will monitor the correlation of heart rate

and decision making ability in real time. Our hypothesis is that with the use of SIT our physicians will be able to better handle stressful situations in the simulated environment and should translate to improvement on the job performance with a focus on patient care and safety.

**Curricular Design:** This is an educational study where we will recruit emergency medicine residents at our institution to participate as team leader in 20 minute multi patient simulation cases, which will include common interruptions in the true-to life ER setting. A grading rubric will be used to evaluate critical actions, missed diagnoses, communication and leadership skills. We will then introduce interventions for stress inoculation therapy with lectures to all the participants. These lectures will include techniques that focus on cognitive and physiological control. We will then observe each resident in another 20 minute simulation case, and data will be extracted from the two sessions to observe any changes, utilizing stress inoculation therapy as a method to improve resident’s performance.

**Impact/Effectiveness:** With the introduction of SIT, we hope to observe improvement in medical decision making during the two simulated emergency scenarios. SIT is applicable to all emergency medicine training programs as it will allow future ER physicians to identify their weaknesses during stressful clinical scenarios and modify their behaviors accordingly.

## 18 The POCUS Atlas - A Novel Crowdsourced Ultrasound Archive

*Riscinti M, Macias M, Solari C, Kilpatrick J, /SUNY Downstate/Kings County, Brooklyn, New York; University of California, San Diego, San Diego, California*

**Background:** Point-of-care-ultrasound (POCUS) has become an essential skill in Emergency Medicine with concordant integration throughout resident and medical student education. This has been accompanied by the organic growth of many POCUS oriented FOAMed (Free and Open Access Medical Education) resources including websites, podcasts and blogs. Despite this abundance of resources, it remains difficult for learners and educators to find high quality POCUS clips that demonstrate exemplary pathology. We have created The POCUS Atlas to fill this educational need.

**Educational Objectives:**

Create a crowdsourced, open-access atlas of high quality POCUS images edited by ultrasound fellowship trained Emergency Medicine faculty.

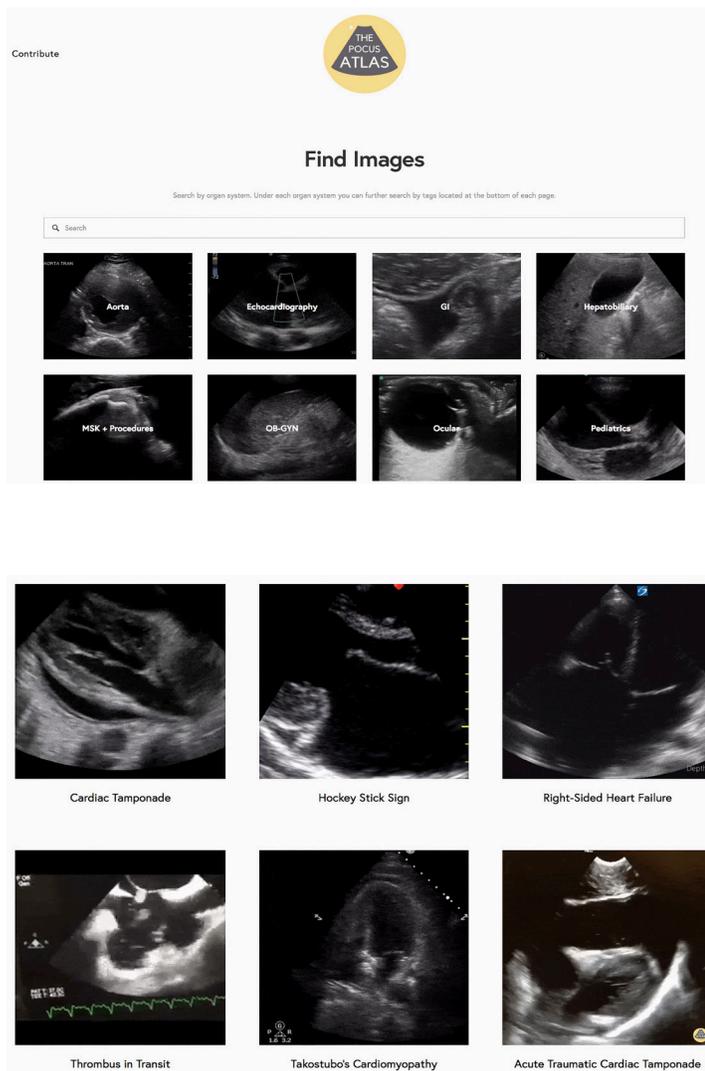
Encourage captions that highlight the clinical case, ultrasound physics or operating characteristics of each case.

Provide opportunities for POCUS learners and educators to share their images with the academic community.

**Curricular Design:** The POCUS Atlas ([www.thepocusatlas.com](http://www.thepocusatlas.com)) capitalizes on FOAMed principles to

democratize POCUS education by allowing learners and educators of all levels to rapidly find high quality clips of normal, abnormal, common, or rare pathology. The intended use is for bedside teaching or download for use in educational content without copyright concern. The atlas was built via crowd-sourcing with contributions from around the world. Each submission is reviewed and edited by our team and exemplary submissions are uploaded to the atlas. Clips and cases are hosted on our site and shared throughout FOAMED channels and social media.

**Impact/Effectiveness:** The POCUS Atlas has over 200 publications and has been viewed by more than 5,000 unique users with over 15,000 page views in the first year. The atlas continues to expand and has partnered with ultrasound departments to encourage submissions as educational exercises for their learners. We are also transitioning our library to a mobile app, integrating our image library into other FOAMED resources and assisting medical schools in creating POCUS curriculums.



## 19 There's An App for That: A Mobile Procedure Logging Application Using Quick Response Codes

Folt J, Goyal N, Lam P, /Henry Ford Hospital, Detroit, Michigan

**Background:** The Accreditation Council for Graduate Medical Education (ACGME) requires that emergency medicine residents accurately log all procedures, and failure to do this is a frequent source for citations. Studies show that only 60% of procedures performed are eventually logged. Most current web-based procedure logging platforms require accessing a workstation, logging in, selecting the procedure and inputting patient information. This can be cumbersome to implement during a shift, and procedures may not get logged, or are logged inaccurately. We designed a mobile, web-based application that uses Quick Response (QR) codes to input patient information quickly and accurately.

**Educational Objectives:** Design an alternative to web-based procedure logging that increases the logging rate of procedures performed during residency and decreases the transcription errors that occur with traditional data entry.

**Curricular Design:** A mobile-friendly, web-based app was designed to integrate with our procedure log database. It is behind the health care system's secure firewall and maintains the necessary information privacy standards. Users may set the application to automatically log in allowing quick access. The app scans the QR code displayed on each patient's arm band or identification sticker, automatically extracting patient name, birthdate, medical record number and sex. The user selects the procedure performed and the app uses data analytics to recommend logging additional procedures (Dialog box: "People who logged this procedure also logged") Source code for our app is freely available for anyone to customize to their requirements.

**Impact/Effectiveness:** A mobile, web-based procedure log application using QR codes allows for portability, decreases the time needed to enter data, and eliminates transcription errors. Average time spent logging a procedure decreased from 79 seconds to 27 seconds after implementation. In addition, typographical errors were found with an error rate of 15% for last name, 9% for age, and 2% for sex when using the traditional web-based method. These errors were eliminated using the mobile application. A similar app can be easily integrated into any residency program in a health care system that has adopted QR code technology for patient identification and is required to maintain a procedure log.