# Getting Hospitalists Up to Speed: A Novel Hands-On POCUS Training Program

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## BACKGROUND

Point-of-care ultrasound (POCUS) is nothing less than a paradigm shift in patient care. The technology has advanced rapidly and the competence in performing, interpreting and utilizing POCUS is extremely variable. There is often an inversion in competence with medical students and residents, in general, having more competence in this modality than many of their attendings. This situation exists at our institution given the mature internal medicine (IM) POCUS program taught at our IM residency since 2011 which has been successful in training our residents through lectures, hands-on image acquisition on models, and then supervision to competency during patient care. A similar skill acquisition model has proven less efficient for our hospitalist faculty over the years.

## **PURPOSE**

Leveraging our resources, we sought to more effectively train hospitalist faculty in POCUS. Our hospitalists had been exposed to introductory lectures and short 2-day courses with a mix of lectures and hands-on practice on healthy models, but few consistently utilized the modality in patient care. We postulated that the limiting factor in consistent use of clinical POCUS was the lack of comfort in using the ultrasound machine, obtaining images on real patients, and the time limitations of a hospitalist on service.

## DESCRIPTION

We designed an intensive training week for hospitalists who had recently completed a 2-day training. Two hospitalists were paired for the week with one of three trainers who were hospitalists with significant POCUS clinical and teaching experience. Funding was secured for 6 weeks of training so 12 hospitalists were able to complete the training pilot. Trainers were removed from their clinical scheduled work for the training week and paid a stipend. The hospitalists learning POCUS were not paid and were scheduled during a week they were available but not working.

A shared patient list was created in our electronic health record so partners could add patients appropriate for POCUS exams. The team examined multiple organ systems on most patients including obtaining cardiac images on as many patients as possible and integrating the findings with the patient's clinical story. The 12 hospitalists in the pilot were each able to perform a mean of 135.7 total organ system exams (cardiac (42.8), pulmonary (30.9), IVC (37.3), abdominal (24.7)) over the 5-day training period. Though there are limitations to the comparison, hospitalists (n = 10) left to "learn on their own" amidst their normal workload after a previous 2-day course performed a median of 9.5 exams (range 0-32) over the 30 days following the course.

## CONCLUSIONS

The week of "real patient" POCUS training allowed participating hospitalists to complete a volume of exams not achievable outside this type of training and with real-time feedback and education. They were much more comfortable managing the machine, the process, and the discussion with patients. They demonstrated much improved image acquisition, image interpretation, and understanding of real benefits and limitations of POCUS.

## Hospitalist Trainers (3)

- 5-7 years of POCUS experience
- Two are proceduralists as well

## Hospitalist Trainees (12)

- IM and IM/Peds
- 4-21 years
   of practice
   experience
- Completed a twoday classroom and hands-on training

## COST AND FUNDING

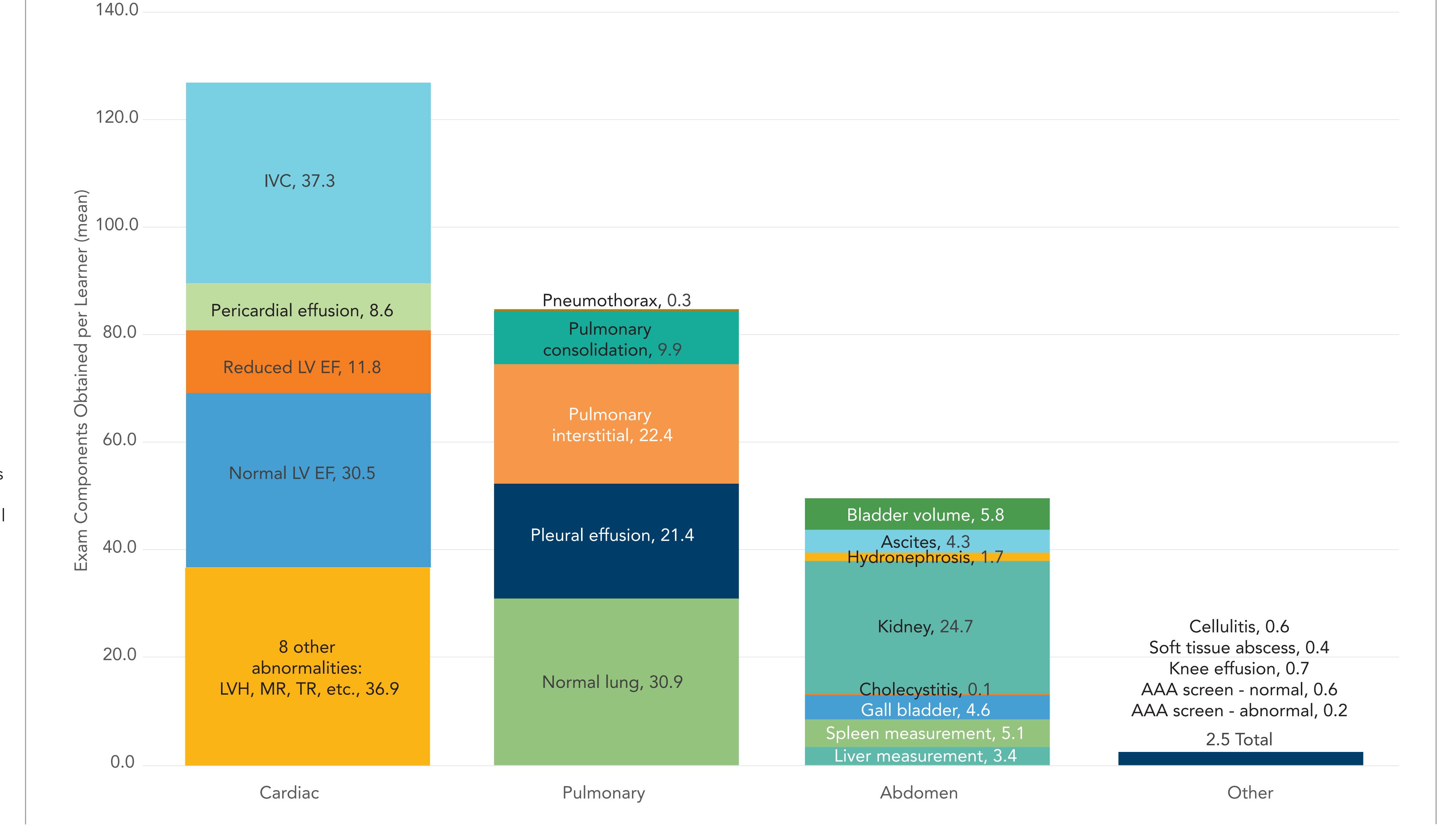
## Cost of five-day POCUS proctoring

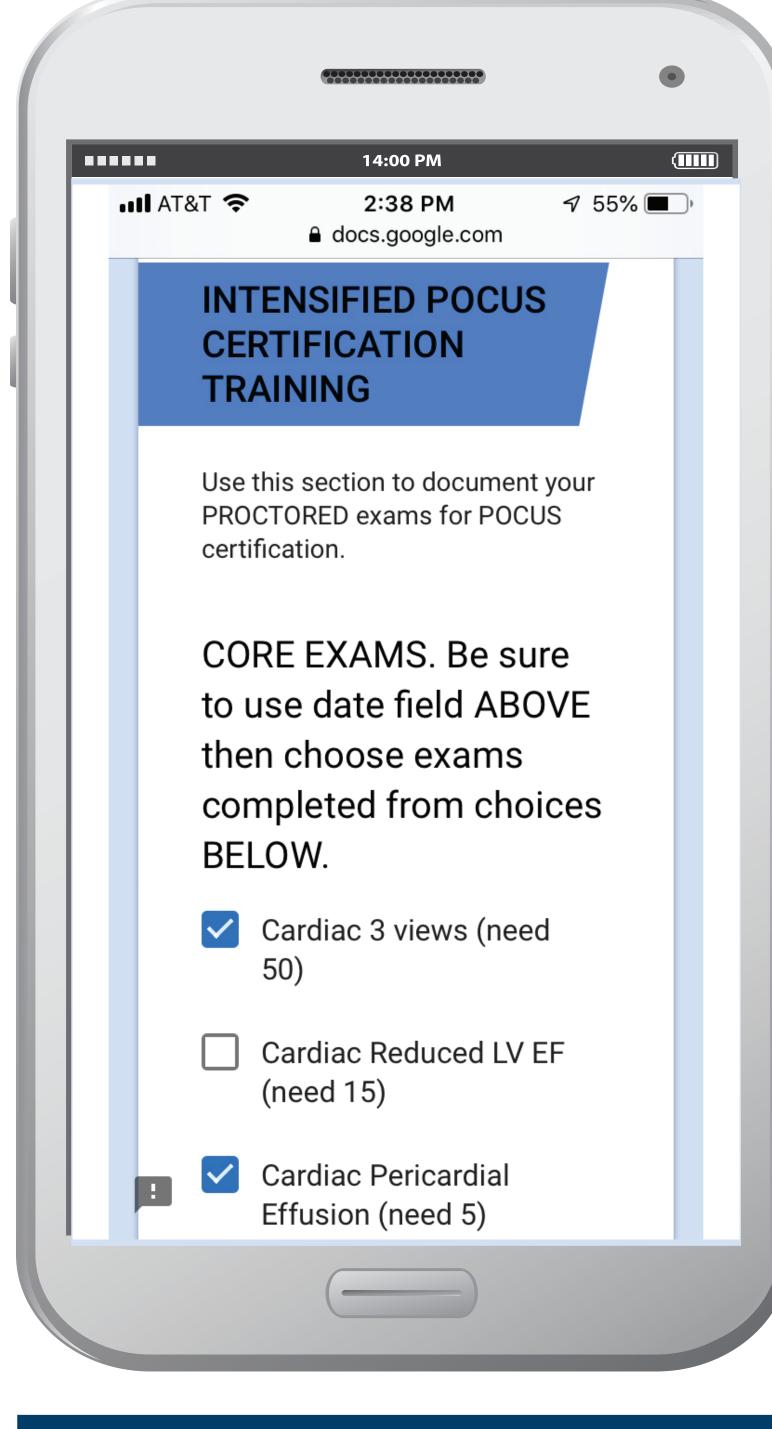
- Proctor pay: \$1,400/day, \$7000/week
- Cost per learner for 1 week: \$3,500

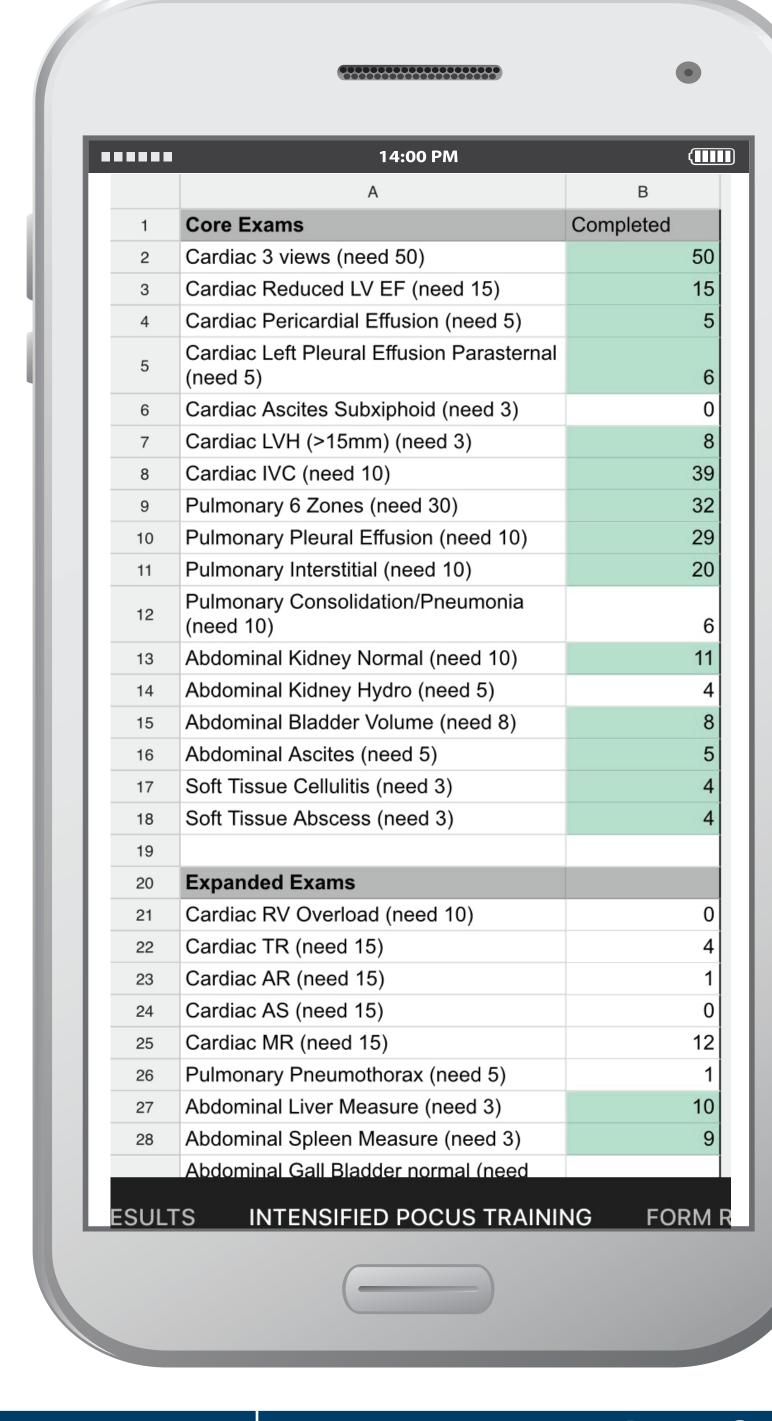
## Funding

- Pilot funding:
- Allina Health Hospitalist fundAbbott Northwestern Hospital
- Foundation grant
- Future funding (50% each)
- Individual CME dollars
- Abbott Northwestern Hospital
   Foundation grant

## Distribution by Body Area of Exam Components Obtained During 5-Day Training







POCUS views	Requisite number for internal certification
Cardiac	
Cardiac 3 view	50
Normal LV EF	
Reduced LV EF	15
Pericardial effusion	5
IVC	10
8 other abnormalities	variable (3-15 each)
Pulmonary	
Pulmonary 6 view	30
Pleural effusion	10
Pulmonary interstitial	10
Pulmonary consolidation	10
Pneumothorax	5
Abdomen	
Liver measurement	3
Spleen measurement	3
Gall bladder - normal	20
Cholecystitis	10
Kidney	10
Hydronephrosis	5
Ascites	5
Bladder volume	8
Other	
Cellulitis	3
Soft tissue abscess	3
Knee effusion	3
AAA screen - normal	20
AAA screen - abnormal	10