

American Board of Emergency Medicine

Final Results of the 2010 LSEP EM Physician Survey

Background

In 2010, ABEM continued the practice of creating three distinct versions of the LSEP interim survey. The EM physician survey was sent to 1,165 physicians believed to be currently practicing in EM or an EM subspecialty. A second survey was mailed to 115 retired LSEP participants, and a third survey was mailed to 86 participants working in alternate occupations. This report presents final results from the EM physician survey. Results of the other two surveys are described in separate reports.

Frequency distributions for all but the open-ended questions are presented in the annotated survey, attached. The N's reflect the number of people responding to each question. The first two questions are used to determine whether each person received the correct survey. N's are shown only for those whose responses are retained for this survey. Apparent inconsistencies may occur when respondents answer questions they are instructed to skip or skip questions they should answer. Percents may not always sum to exactly 100% due to rounding. The sum of percents may exceed 100% when participants are asked to "circle all that apply."

Results of the EM Physician Survey

As usual, a small number of surveys were returned either blank, or with a request to discontinue participation, or due to an outdated address, leaving an effective sample size of 1,160 and a response rate of 79%. A total of 53 respondents indicated they had either retired or changed occupations. Those responding online were automatically directed to the survey questions appropriate to their situation, while those who responded on paper were counted in the response rate but are excluded from the count for the questions they were directed to skip on the EM physician survey. In 2011, these physicians will receive the survey designed for either retirees or those in alternate occupations. The number of valid responses available for the final analysis on the EM survey was 866. Of these, 224 (26%) chose to complete the survey online.

The focus of the 2010 EM physician survey was on ultrasound (US). The majority (77%) of respondents indicated that they have had some sort of training in applications of emergency US, with 93% of these having received training in trauma US (FAST). Approximately three-fourths of those with some training were trained in US of the abdominal aorta (78%), US-guided vascular access (78%), and/or biliary US (74%). Approximately two-thirds were trained in US in pregnancy (68%) and/or cardiac US or echocardiography (66%). Half (51%) were trained in various other procedural US applications, and 42% had received training in renal US. Other applications of US in which training was reported include DVT, pulmonary and pneumothoracic, ocular/retinal, peritonsillar, testicular, spinal, and musculoskeletal US.

The amount of time EM physicians reported spending in US training varies widely, from zero hours to 7500 hours. Excluding those who cited zero hours, the median amount of training time reported was 20 hours.

Asked what educational resources were used in their US training, 655 physicians selected one or more of the choices provided. A course in US was the most common resource cited (67%). Nearly half of those responding (49%) made use of textbooks in their training, and 44% had received training during their residencies. The percentage of physicians selecting each resource is shown in the annotated survey, attached. Additional resources mentioned under "other" include human models, fellowship training, and various forms of on-the-job training.

The percentage of central venous catheters (CVCs) that physicians reported placing with US guidance ranged from zero to 100%. Excluding those who indicated they never use US guidance in placing CVCs (N=361), the median percentage reported was 75%, and the most frequently reported values were 50% (N=73) and 100% (N=73). Among EM physicians who sometimes use US guidance in placing CVCs, 70% employ US at least half of the time, 35% use US at least 90% of the time, and 16% always use US guidance.

There are varying degrees of comfort with the use of US guidance for CVC insertion among responding physicians. Each of the options ranging from very comfortable to very uncomfortable was selected by approximately one quarter of those responding. The primary reason given for not using US guidance with CVCs was insufficient training (45%). A variety of other reasons (see annotated survey) were either selected or listed under "other." The most common of these was the time required to use US (26%). Write-in responses indicated that the patient condition or situation could also be a factor in choosing not to use US. Some physicians reported working in settings where CVC insertion is not done or is done by residents. Some do not have access to US in the emergency department. Others are simply more comfortable with the traditional technique.

Several demographic questions were also asked on the EM survey (questions 9-13). As their primary practice setting, 65% work in a private or community hospital, as opposed to a university or a city, county, or public hospital. Other settings described include military and government hospitals, rural hospitals, urgent care centers, and free standing clinics. One-third of those responding (33%) work in a setting with an EM residency training program. Just over half (52%) work in a Level 1 or Level 2 trauma setting, with about another fourth (23%) working in a Level 3 setting. Size of ED, as measured by annual patient volume, ranges from 20 (excluding one response of zero) to 360,000, with a median value of 50,000. Years of experience in practicing EM varies from just out of residency to 60 years, with a median value of 20 years.

The forthcoming study on US guidance in CVC placement by Cydulka, Backlund, and Kendall will examine the relationship of this procedure to these demographic variables. The study will also focus on the relationships among training, frequency, and level of comfort in this application of US among emergency physicians.



American Board of Emergency Medicine Longitudinal Study of Emergency Physicians

2010 EM Physician Survey

1. Do you consider yourself fully retired—that is, no longer regularly working for pay, either part-time or full-time, in any medical or non-medical occupation? **N=834 (N missing=32)**

(Circle Only One)

Yes 1 Go to Question 14
No, I still work for pay 5 Go to Question 2 **100%**

2. In what area(s) do you currently work? **N=851**

AREA	(Circle All That Apply)	
a. Emergency Medicine (EM) (includes EM clinical, administrative, academic, & consulting)	1	93%
b. EM subspecialty	1	6%
c. Urgent care	1	14%
d. Critical care EM.....	1	3%
e. Internal medicine.....	1	1%
f. Occupational medicine	1	3%
g. Physical & rehabilitative medicine	1	<1%
Other medical (non-EM) (Please specify) _____	1	8%
Other (non-medical) (Please specify) _____	1	3%

Options a-d above are defined as EM work for the purposes of this survey. If you circled none of options a-d, please go to Question 14.

3. In which applications of emergency ultrasound have you received training (during residency or otherwise)? **N=845; N for options other than a = 651**

a. None 1 Go to Question 4 **N=194 (23%)**

(Circle All That Apply)

b. Biliary ultrasound (gallbladder) 1 **74%**
c. Cardiac ultrasound/emergency echocardiography..... 1 **66%**
d. Ultrasound-guided vascular access..... 1 **78%**
e. Other procedural ultrasound (abscess or foreign body localization, paracentesis, thoracentesis, nerve blocks, etc.) 1 **51%**
f. Renal ultrasound..... 1 **42%**
g. Trauma ultrasound/FAST (Focused Assessment with Sonography for Trauma)..... 1 **93%**
h. Ultrasound in pregnancy..... 1 **68%**
i. Ultrasound of abdominal aorta..... 1 **78%**
Other (Please specify) _____ 1 **10%**

4. Please estimate how many hours of training you have received in emergency ultrasound. _____ hours
N=796 Range = 0 to 7500 hours, Median =16.8 hours, Non-zero Median=20 hours

5. What educational resource(s) have you used for training in the use of emergency ultrasound?
N=823, N for options other than a = 655

- a. None 1 *Go to Question 6 N=168 (20%)*
- (Circle All That Apply)*
- | | | |
|--|---|-----|
| b. Animal model | 1 | 4% |
| c. Computer simulation | 1 | 15% |
| d. DVD/CD program | 1 | 28% |
| e. Mannequin or manufactured model ("Blue Phantom" or similar) | 1 | 33% |
| f. Online educational resource | 1 | 27% |
| g. Textbook | 1 | 49% |
| h. Training during residency | 1 | 44% |
| i. Ultrasound course | 1 | 67% |
| Other <i>(Please specify)</i> _____ | 1 | 13% |

6. In your emergency department, *approximately* what percentage of central venous catheters do you place using ultrasound guidance? _____ %
N=814 Range = 0 to 100%, Median = 10%, Non-zero Median = 75%

6. How comfortable are you using ultrasound guidance for central venous catheter insertion? **N=797**

- (Circle Only One)*
- | | | |
|--------------------------|---|-----|
| Very comfortable | 1 | 25% |
| Comfortable | 2 | 25% |
| Uncomfortable | 3 | 27% |
| Very uncomfortable | 4 | 23% |

7. Please identify any reasons why you do not use ultrasound guidance to place central venous catheters (either in general, or in specific instances). **N=803, N for options other than a = 676**

- a. I always use ultrasound guidance..... 1 *Go to Question 9 N=127 (16%)*
- (Circle All That Apply)*
- | | | |
|---|---|-----|
| b. Central lines for ED patients are placed by other services (e.g. surgery, critical care, interventional radiology) | 1 | 17% |
| c. Don't have the right equipment..... | 1 | 19% |
| d. No benefit over landmark (traditional) approach | 1 | 16% |
| e. No specific training, or not enough training, in ultrasound-guided vascular access..... | 1 | 45% |
| f. Opposition within hospital..... | 1 | 4% |
| g. Preferred anatomic site not amenable to ultrasound guidance | 1 | 19% |
| h. Ultrasound guidance requires too much time to perform..... | 1 | 26% |
| i. Technique too difficult or awkward | 1 | 15% |
| Other <i>(Please specify)</i> _____ | 1 | 17% |

8. What is your primary practice setting? **N=845**

(Circle Only One)

City/county/public hospital.....1 **14%**
 Private/community hospital.....2 **65%**
 University hospital.....3 **12%**
 Other.....97 **9%**

(Please specify) _____

9. Is your emergency department affiliated with an emergency medicine residency program? (i.e., Do emergency medicine residents work in your department for training purposes?) **N=832**

(Circle Only One)

Yes..... 1 **33%**
 No 5 **67%**

10. What is your hospital's trauma designation? (Circle Only One) **N=807**

Level 1	Level 2	Level 3	Level 4	Level 5	Unsure/ Don't know
1 24%	2 28%	3 23%	4 6%	5 4%	97 15%

11. What is the annual volume of your emergency department? _____ visits per year
N=809 Range 0 – 360,000, Median=50,000, Non-zero Median=50,000

12. How long have you practiced emergency medicine (since completing residency training)?
 _____ years **N=815. Range 0 – 60, Median=20, Non-zero Median=20**

14. PLEASE MAKE ANY
 NEEDED CORRECTIONS
 TO THIS INFORMATION

COMMENTS: Please add any comments you have about this survey or issues related to Emergency Medicine and ABEM. Please print clearly so your comments can be noted.

Please return this survey to ABEM by May 28, 2010. Thank you for your generous support. If ABEM can be of assistance, please call (517) 332-4800 or email research@abem.org.