American Board of Emergency Medicine

Final Report on the 2009 Longitudinal Study

Background

The Longitudinal Study of Emergency Physicians (LSEP) began in 1994 with a representative sample of 1,008 emergency physicians. Additional participants were selected in 1995, 2000, and 2005 during their first year of residency. New participants take the Longitudinal Study of Emergency Medicine Residents (LSEMR) during three years of residency and then join the LSEP.

The long form of the LSEP survey is administered every five years, with shorter surveys given in the interim years. Since 2005, separate interim surveys have been sent to practicing EM physicians, retired physicians, and former EM physicians now working in alternate occupations. In 2009, all three groups received the long form of the survey, which focuses primarily on EM work. With the exception of a few questions of current interest, the long form has remained the same over its administrations in 1994, 1999, and 2004. A few changes were made for the 2009 edition of the long form to reflect changes in the field of EM and to facilitate the ongoing collection of valid data. In 2009, for the first time, respondents were also given the option to complete the long form of the LSEP survey online.

This report will focus primarily on new questions unique to the 2009 survey as well as questions whose content was revised.

The LSEP survey was sent to 1,399 participants on May 11, 2009, including 177 physicians who had taken the LSEMR from 2006 to 2008. Twenty-four participants were removed from the list due to death, outdated address, or a request to be removed, leaving an effective sample size of 1375. By mid-September, 1,107 participants responded. One of the paper surveys contained a response to only the first item and a comment explaining that the participant was no longer in EM; this survey was excluded from the analysis, leaving 1,106 survey responses to be analyzed, an effective response rate of 80%. Of these, 325 (29%) completed the survey online and 781 submitted the survey on paper.

Frequency distributions are presented in the annotated list of selected survey questions, attached. Questions appear in the order they are described in this report. The N's reflect the number of people responding to each question. 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 "select all that apply."

Survey Results

<u>New Questions</u>

Three questions were included in the 2009 LSEP survey that were not asked in previous years. One dealt with interpretation of diagnostic procedures (A30), the other two with night shifts (A31, A31a). These questions are attached, along with the response frequencies.

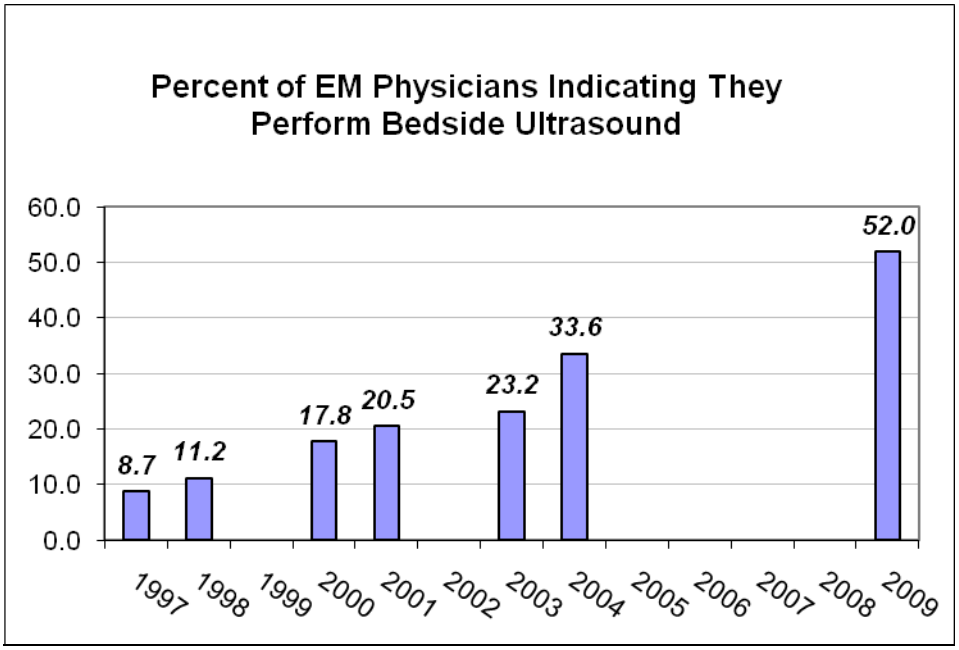
The majority (82%) of physicians responding indicated that they make clinical decisions based on their own interpretations of continuous 12-lead ECG monitoring. Sizeable minorities interpret the results of bedside ultrasound (39%) and CT scan of the head (39%). Very few rely on their own interpretation of abdominal CT scans (9%) and MRIs (1%) for making clinical decisions.

About one out of six respondents (17%) indicated that their hospital or work group allows older physicians to be exempt from overnight shifts. If those who checked "not applicable" are removed from the analysis, 19% are allowed an age-related exemption. For those who are allowed an exemption, the median age at which a physician may opt out of overnight shifts is 55, with the largest number of respondents reporting exemptions beginning at either age 55 (36%) or age 50 (31%).

Ultrasound

The question on ultrasound (A26) has appeared on several previous surveys although it was not asked in its current form in 2005-2008. Results over the years are shown in Figure 1. As the chart indicates, the use of ultrasound by emergency physicians continues to rise.

Figure 1



Problems in Day-to-Day Work

Several items were added to Question A2, "How much of a problem is each of the following in your day-to-day work for pay?" The new items are shown, along with their means and response distributions, in the attached list of selected survey questions. Means are calculated from the responses of those using the 1 to 5 scale; respondents selecting "not applicable" are excluded. Clearly, the new items represent an important addition to this question, as all were rated at or above 2.5 on the five-point scale. Among the new items,

those most likely to be viewed as problems are crowding in the ED (mean=3.5), time spent on documentation and bureaucratic issues (mean=3.5), and boarding in the ED (mean=3.3). Crowding in the ED and boarding in the ED were the only items, old or new, for which the most frequent response, or mode, was 5, “serious problem.”

Among the older items (not shown) in Question A2, those with the highest means on the 1 to 5 scale were concern about malpractice suits (3.0), stress (2.9), subspecialty support (2.8), and hospital politics (2.8). Except for malpractice concerns, mean ratings for these items in 2009 were very similar to those in 2004. The mean rating for concern about malpractice suits is noticeably lower (less serious) than it was in 2004, although it is still one of the more highly rated items.

Table 1
Mean Ratings of Selected Day-to-Day Problems in EM in 2004 and 2009

	2004	**2009**
Concern about malpractice suits	3.4	3.0
Stress	2.9	2.9
Subspecialty support	2.9	2.8
Hospital politics	2.9	2.8

Problems in EM

Problems in EM in general are addressed in Question A21. Seven new items were added to this question in 2009. These are shown in the attached list of questions along with their means and distributions of responses. All of the new items were rated above the center of the scale, indicating that they are perceived as problems by many participants. The most frequent response was 5, “serious problem,” for three of the new items: ED crowding (mean=4.4), ED boarding (mean=4.3), and lack of availability of consultants (mean=3.9). Increasing mandates for maintaining certification and quality measure reporting were also seen as problems, although these items were perceived as less serious (mean=3.4, most frequent response=3) than the other new items.

Among the older items (not shown), poorly funded patients were also seen as a serious problem, with a mean rating of 4.3 and a mode of 5. Mean ratings were also high for greater demands on time (3.8), meeting expectations of patients (3.9), and funding under the new health care plan (3.9). These means are based on all responses from 2009 survey participants.

There have been small, but statistically significant differences from 1994 to 2009 in the mean ratings assigned to most of the older problems listed in Question A21. Table 2 shows the changes in mean ratings over time for these items. The data in Table 2 are based on repeated measures analyses, using responses only from LSEP participants who responded to all four surveys. Therefore, some means differ slightly from those reported in the previous paragraph. However, group analyses including all participants who responded to at least one of the four surveys show a very similar pattern of results.

Table 2
Changes in Mean Ratings of Problems in EM from 1994 to 2009

	Mean Rating by Year			
Declining Means	**1994**	**1999**	**2004**	**2009**
Contract groups	3.6*	3.5*	3.3*	3.0
Closing of ABEM nonresidency application track	2.4*	1.9	1.8	1.9
Funding new subspecialties	2.3*	2.2	2.2	2.2
Funding under the new health care plan	4.0*	3.9	3.8	3.8
Restrictive covenants (noncompetitive clause)	3.1*	3.1*	3.0*	2.8
Establishing a solid base of EM research	2.9*	2.9*	2.7*	2.5
Declining, Then Rising Means	**1994**	**1999**	**2004**	**2009**
Shortage of certified emergency physicians	3.7*	2.9*	3.0*	3.3
Shortage of emergency physicians	3.2	2.6*	2.7*	3.2
Shortage of EM residency programs	3.2*	2.2*	2.4*	2.9
Rising Means	**1994**	**1999**	**2004**	**2009**
Meeting expectations of patients	3.6*	3.6*	3.8	3.8
Poorly funded patients	4.2*	4.2*	4.4	4.4
Greater demands on time	NA	3.6*	3.7	3.8

* = significantly different from 2009 mean, p<.025

Contract groups have been perceived as less of a problem on each survey, with the mean rating declining from 3.6 in 1994 to 3.0 in 2009. The closing of the nonresidency application track, funding for new subspecialties, and funding “under the new health care plan” all were rated as more serious in 1994 than in subsequent years. Of course, the meaning of “the new health care plan” may change over time, and it will be interesting to see how this item is rated on the next full-length survey in 2014. Restrictive covenants and establishing a solid base of EM research were perceived as less problematic in 2004 and 2009 than they were earlier.

Shortages of emergency physicians (EPs), certified EPs, and EM residency programs were seen as less problematic in 1999 and 2004 then they were in 1994, but the ratings on these items rose again in 2009, suggesting that improvements made in these areas have not been sustained as times have changed. Meeting expectations of patients, poorly funded patients, and greater demands on time were all seen as more serious problems in 2004 and 2009 than they were earlier.

Competence in EM Work

Four new items were added to Question A5, which asks for self-ratings of competence on a 1 to 5 scale in various aspects of EM work. The distributions of responses appear in the attached list of questions. Responses of “not applicable” were excluded in calculating means. Respondents indicated their competence was fairly strong in all four areas: arriving at the diagnosis (mean=4.3), use of online information (mean=4.0), use of new technologies (mean=3.7), and use of electronic records (mean=3.8). Only 7% selected “not applicable” for use of electronic records, suggesting that electronic records are being widely used. The most frequent response for each of the new items was 4. Respondents indicated they were

least competent in grant writing (mean=1.5) and most competent at interaction with other ED staff (mean=4.4), both older items (not shown).

Research

Question C25c asks respondents to indicate what areas of research they are pursuing. Four new research topics were added to the list in 2009: health services, EMS, disaster medicine, and epidemiology. Survey responses show that some research is occurring in each of these areas. Of the 196 physicians who reported currently participating in research and who identified one or more topic areas, 17% (N=33) are participating in research related to EMS. Smaller numbers of respondents reported participating in research on health services (N=17), disaster medicine (N=6), and epidemiology (N=17). The percentages of respondents selecting each research topic are shown for both old and new items on the attached list of survey questions. Most research is being done in the area of clinical science (70%).

Twenty-eight physicians (14%) reported involvement in research on other topics. Six of these indicated they are participating in research on ultrasound. A variety of other topics were listed, including addictions, clinical trials, ethics, injury prevention, international EM, medical informatics, palliative care, patient safety, pharmacology, public health, simulation, sports medicine, stroke, and toxicology.

Reasons for Retiring

Question C34 asks retirees about their reasons for retiring. The original list of five reasons was expanded in 2009 to include some of the reasons that have been listed under “other” in past surveys. Ninety-two retired physicians responded to this question. The percentages of respondents selecting each reason are shown for both old and new items on the attached list of survey questions. The most commonly cited reason for retiring was age (45%), followed by financial independence (38%) and desire to pursue other activities (38%). Some negative factors contributing to the retirement decision were also apparent: burnout (26%), shift work problems (23%), malpractice concerns (22%), disability (19%), and disenchantment (18%). Conversely, safety issues (9%), electronic medical records (5%), and spouse disability (1%) were selected as reasons for retiring by relatively small numbers of physicians. Additional reasons cited under “other” included family issues such as quality time or caring for children and grandchildren, job loss, and discomfort with the changing nature of EM work.

General Comments from Participants

Among the total group of respondents, 173 wrote additional comments at the end of the survey. The number of comments that were clearly positive or negative was balanced. The number of negative comments regarding the LLSA and maintenance of certification was small (N=6). Approximately 40 participants provided comments related to the survey itself in terms of suggested changes or the difficulty of answering some questions because of the nature of their current work situation.

Negative comments were mostly related to changes in the practice of EM and specific comments about the survey. Problems with the EM working environment that were mentioned included high patient volume, shortages of funding or resources, patients without insurance or access to a primary physician, medicolegal risks, effects of new health care

legislation, politics (both national and hospital level), inefficient/cumbersome electronic medical records programs, and intrusion of bureaucratic activities in physicians' work.

Regarding the LSEP survey, three respondents felt that the long form of the survey puts too much emphasis on academic EM. The most common complaint (N=24), however, was that the survey is too long and/or the study will never end. A few participants asked to be removed from the study or indicated that they would not likely complete another long survey.

Positive comments included appreciation for the opportunity to participate in the longitudinal study and satisfaction with current work, whether EM or an alternative occupation. Some of the new participants expressed their thanks for the gift of the longitudinal study pen, and some of those who responded online appreciated the opportunity to respond electronically.

Suggested changes included providing separate surveys for those just completing their residency, those no longer working in the clinical practice of EM, and those who have retired. (This is actually done in the interim years between long surveys.) Increasing coverage of a variety of issues was recommended: health-related political issues (new health care legislation), JCAHO, compensation issues, volunteer and pro-bono work, physician health, burnout, depression, "compassion fatigue," and "locum tenens." Suggestions were also made to clarify some questions—for example, what is the difference between an "urban" and a "suburban" setting, or what is the distinction between clinical practice and clinical teaching when these activities are intertwined? A desire for increased reporting of LSEP results was also expressed.

/EAW
March 31, 2010
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Annotated Survey:
Responses to Selected Questions
from the 2009 LSEP Survey

A30. Do you routinely make clinical decisions based solely on YOUR interpretation of the following studies, that is, without waiting for an interpretation from a radiologist or cardiologist? **(N=943)**

	Yes	No	
a. Bedside ultrasound	1 (39%)	5 (61%)	N=937
b. Abdominal CT scan	1 (9%)	5 (91%)	N=935
c. CT scan of the head	1 (39%)	5 (61%)	N=935
d. Continuous 12-lead ECG monitoring	1 (82%)	5 (18%)	N=937
e. Magnetic resonance imaging (MRI)	1 (1%)	5 (99%)	N=932

A31. Does your hospital or work group allow an emergency physician to be exempt from working overnight shifts beginning at a certain age? **(N=938)**

(Circle Only One)

Yes	1	(17%)	
No	5	(71%)	*Go to p. 12, Section B.*
Not applicable to my work setting	8	(13%)	*Go to p. 12, Section B.*

A31a. At what age are emergency physicians allowed to be exempt?_____ **(N=138)**

A31a Age	N	Percent
30	1	**1**
40	2	**1**
45	2	**1**
50	43	**31**
53	1	**1**
54	2	**1**
55	50	**36**
56	1	**1**
59	1	**1**
60	27	**20**
62	3	**2**
63	1	**1**
65	3	**2**
75	1	**1**

A26. Do you personally perform bedside ultrasound? **(N=954)**

(Circle Only One)

Yes	1	**(52%)**
No	5	**(48%)**

A2. How much of a problem is each of the following in your day-to-day work for pay? **(N=1002)**

(Circle Only One for Each Item)

(Items a through ff not shown)	Not a Problem				Serious Problem	Not Applicable
hh. Implementation of electronic medical records systems (N=864, mean=2.7)	1 (20%)	2 (24%)	3 (19%)	4 (15%)	5 (12%)	8 (9%)
ii. Ongoing use of electronic medical records systems (N=854, mean=2.6)	1 (20%)	2 (25%)	3 (20%)	4 (14%)	5 (10%)	8 (11%)
jj. Boarding in the emergency department (N=843, mean=3.3)	1 (9%)	2 (19%)	3 (20%)	4 (18%)	5 (23%)	8 (11%)
kk. Crowding in the emergency department (N=851, mean=3.5)	1 (6%)	2 (16%)	3 (18%)	4 (23%)	5 (26%)	8 (11%)
ll. Time devoted to documentation and bureaucratic issues (N=926, mean=3.5)	1 (5%)	2 (16%)	3 (24%)	4 (33%)	5 (19%)	8 (3%)
mm. Clinical productivity (N=911, mean=2.5)	1 (16%)	2 (32%)	3 (31%)	4 (14%)	5 (3%)	8 (4%)

A21. How much of a problem is each of the following in EM at this time? **(N=951)**

(Circle Only One for Each Item)

(Items a through n not shown)	Not a Problem				Serious Problem
p. Increased pressure for testing in the ED (N=937, mean=3.7)	1 (4%)	2 (10%)	3 (25%)	4 (40%)	5 (21%)
q. Increasing mandates for maintaining certification (N=934, mean=3.4)	1 (5%)	2 (17%)	3 (30%)	4 (30%)	5 (17%)
r. Closure of emergency departments (N=938, mean=3.6)	1 (5%)	2 (13%)	3 (24%)	4 (33%)	5 (25%)
s. Lack of availability of consultants (N=940, mean=3.9)	1 (3%)	2 (9%)	3 (21%)	4 (33%)	5 (34%)
t. ED boarding of admitted patients (N=936, mean=4.3)	1 (2%)	2 (4%)	3 (13%)	4 (29%)	5 (52%)
u. ED crowding (N=946, mean=4.4)	1 (1%)	2 (3%)	3 (11%)	4 (27%)	5 (58%)
v. Quality measure reporting (N=917, mean=3.4)	1 (4%)	2 (10%)	3 (40%)	4 (30%)	5 (16%)

A5. What is your current level of competence in each of the following aspects of work? **(N=957)**

(Circle Only One for Each Item)

(Items a through s not shown)	Weak				Strong	Not Applicable
t. Arriving at the diagnosis (N=929, mean=4.3)	1 (<1%)	2 (1%)	3 (9%)	4 (48%)	5 (39%)	8 (3%)
u. Use of online information (N=948, mean=4.0)	1 (1%)	2 (6%)	3 (17%)	4 (42%)	5 (32%)	8 (1%)
v. Use of new technologies (N=930, mean=3.7)	1 (1%)	2 (9%)	3 (29%)	4 (37%)	5 (20%)	8 (3%)
w. Use of electronic medical records (N=891, mean=3.8)	1 (6%)	2 (8%)	3 (18%)	4 (31%)	5 (30%)	8 (7%)

C25c. What is (are) the primary area(s) of this research? **(N=196)**

(Circle All That Apply)

a.	Basic science (bench)	1	(6%)
b.	Clinical science	1	(70%)
c.	Faculty development	1	(3%)
d.	Health care delivery/operations	1	(19%)
e.	Health policy	1	(9%)
f.	Medical education or evaluation	1	(18%)
New items:			
h.	Health services research	1	(9%)
i.	EMS	1	(17%)
j.	Disaster medicine	1	(3%)
k.	Epidemiology	1	(9%)
Other		1	(14%)

*(Please specify)*_____

C34. Why did you decide to retire? **(N=92)**

(Circle All That Apply)

a.	Age	1	(45%)
b.	Disenchanted with medicine	1	(18%)
c.	Disability	1	(19%)
d.	Financial independence	1	(38%)
e.	Spouse disability	1	(1%)
New items:			
g.	Burnout	1	(26%)
h.	Problems related to shift work	1	(23%)
i.	Safety issues	1	(9%)
j.	Malpractice concerns/costs	1	(22%)
k.	Desire to pursue other activities	1	(38%)
l.	Electronic medical records	1	(5%)
m.	Health concerns	1	(13%)
Other		1	(26%)

*(Please specify)*_____