

# American Board of Emergency Medicine Report on Residency and Fellowship Training Information (2016-2017)



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The American Board of Emergency Medicine (ABEM) gathers extensive background information on emergency medicine residency programs and the residents training in those programs. We present the 2017 annual report on the status of US emergency medicine training programs. [Ann Emerg Med. 2017;69:640-652.]

0196-0644/\$-see front matter

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<http://dx.doi.org/10.1016/j.annemergmed.2017.03.025>

## INTRODUCTION

The American Board of Emergency Medicine (ABEM) gathers extensive information on emergency medicine residency programs and the residents training in those programs. Survey data are collected annually from all emergency medicine programs accredited by the Accreditation Council for Graduate Medical Education (ACGME). Selected parts of the data are reported in this article.<sup>†</sup> Also included in this report is information on accredited emergency medicine–sponsored fellowship programs reported by the ACGME.

ABEM has several reasons for collecting and disseminating information on emergency medicine programs, residents, and fellows. As the evaluating and certifying arm of the specialty, ABEM seeks to meet the following goals:

- Collect accurate and comprehensive information pertaining to residents and residency programs
- Disseminate information that will aid policymakers and educators in establishing guidelines to improve the quality of graduate medical education in emergency medicine
- Gather background information on residents and fellows to understand the diversity in training programs and among residents
- Facilitate hypothesis generation and support research related to emergency medicine training

<sup>†</sup>This report reflects the status of data contained in the ABEM Residency Training Information Survey as of February 22, 2017. Data accuracy is contingent on survey compliance of participating 2016-2017 programs.

- Support the interface between residents and ABEM to facilitate certification activities

This annual publication serves the specialty of emergency medicine and the medical community at large by serving as a reference tool for evaluating the status and growth of emergency medicine residency and fellowship training and informing decisions to enhance the quality of training for emergency physicians.

## METHODOLOGY

ABEM annually surveys all ACGME-accredited US categorical residency programs, ABEM-approved combined residency programs, and ACGME-accredited fellowship programs. Categorical programs are residency programs in a single primary specialty such as emergency medicine. There are currently 2 types of emergency medicine categorical programs, based on the number of postgraduate years (PGYs) that residents are in the program: PGYs 1 to 3 and PGYs 1 to 4. ABEM-approved combined programs consist of PGY 1 to 5 and PGY 1 to 6 program formats. The ACGME-accredited fellowships range between 1 and 3 years long. Information about new residents, fellows, and their respective programs is annually collected from July through October. Information about all enrolled residents and fellows is verified from December through January.

ABEM asks programs for the following information about each of their residents and fellows:

- Name
- Date of birth
- Sex

- Country of birth
- Medical degree
- Location of medical school (United States, international)
- Year of medical school graduation
- Dates of residency
- Citizenship
- Previous internships or specialty training
- Ethnicity (not required)

Programs are also asked for the following information:

- Number of applications received
- Interviews
- Residents or fellows enrolled

ABEM also reports the following data provided by the ACGME:

- Approved positions
- Type of program
- Length of fellowship
- Date of accreditation

Additional information on resident demographics is obtained from comparison data derived from the Graduate Medical Education report that is published annually in the *Journal of the American Medical Association (JAMA)*. Data are used with permission.

Analyses are performed with academic year and calendar year. For the most part, analyses related to a residency or a fellowship program are conducted with the academic year (July 1 to June 30). Analyses related to residents or fellows are based on their status as of December 31, referred to as “calendar year.” For clarity, the use of academic or calendar year is specified for each analysis throughout the article.

## RESULTS

In academic year 2016-2017, there are 201 accredited US categorical emergency medicine residency programs. One hundred ninety-one categorical programs were surveyed by ABEM in 2016; 10 programs were not surveyed because their date of accreditation was after December 2016. Twenty-three combined training programs were also surveyed; one program was not surveyed because they will not begin training residents until July 2017. All surveyed programs, categorical and combined, submitted the requested program and resident information. The ACGME reports that there are 121 accredited emergency medicine–sponsored fellowship programs, with a total of 271 filled positions.

### Emergency Medicine Residency Programs

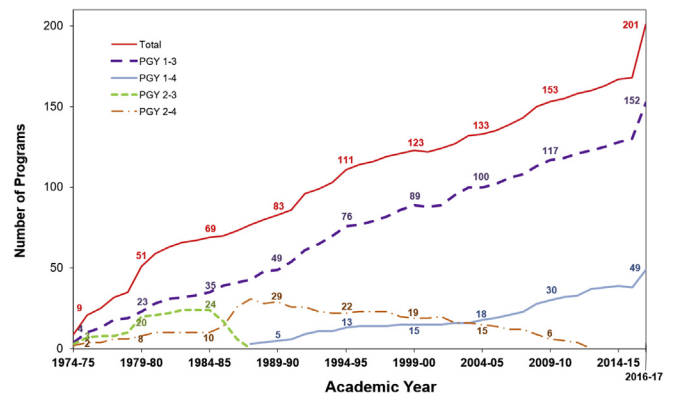
Programs were first endorsed in the early 1970s by the Liaison Residency Endorsement Committee, and the ACGME began to accredit emergency medicine

residency programs in 1981. [Figure 1](#) illustrates the change in number of residency programs since the 1974-1975 academic year by program format type. The PGY 2 to 3 format ended in 1986-1987 because a 36-month residency was first required in 1988. The PGY 2 to 4 format was discontinued in 2011-2012. During the 2015-2016 academic year, there was an increase in residency programs because of the implementation of the Single Accreditation System (SAS). Under this agreement, residency training programs approved by the American Osteopathic Association (AOA) can become accredited by the ACGME. Of the 201 accredited US categorical emergency medicine programs, 152 (76%) have a PGY 1 to 3 program format and 49 (24%) have a PGY 1 to 4 program format. The numbers of PGYs 1 to 3 and 1 to 4 increased this year by 17% and 29%, respectively. This reflects both an increase in allopathic programs and the addition of the osteopathic programs under the SAS.

[Table 1](#) illustrates the path from ACGME-approved positions through applications and interviews to enrolled residents during the last 5 years. Applications and interviews are the number reported by programs for the academic year. Last, the table contains the number of enrolled first-year residents, which increased 16% from calendar years 2012 to 2016.

[Figure 2](#) presents the geographic distribution of accredited US categorical emergency medicine training programs by region within the United States. ACGME regions 5, 6, and 7 account for more than 53% of all emergency medicine residency programs.

The full list of current ACGME-accredited US categorical residency training programs in emergency medicine is contained in [Appendix 1](#). [Appendix 2](#) has the



**Figure 1.** The growth and development of ACGME-accredited residency training programs in emergency medicine (academic years 1974-1975 to 2016-2017).

**Table 1.** The number of first-year ACGME-approved positions, applications received, interviews held, and enrolled residents for all accredited US categorical emergency medicine training programs as reported by programs.

Academic Year	ACGME-Approved Positions	Applications	Interviews	Enrolled First-Year Residents
<b>Program format 1-3</b>				
2012-13	1,374	75,007 (nr=11)	13,503 (nr=12)	1,374
2013-14	1,428	83,667 (nr=11)	14,812 (nr=11)	1,403
2014-15	1,455	90,330 (nr=9)	15,821 (nr=8)	1,426
2015-16	1,547	97,344 (nr=12)	16,957 (nr=12)	1,476
2016-17	1,658	119,130 (nr=10)	19,299 (nr=9)	1,592
<b>Program format 1-4</b>				
2012-13	476	25,313 (nr=3)	4,846 (nr=3)	476
2013-14	483	29,538 (nr=0)	5,415 (nr=0)	480
2014-15	500	30,664 (nr=1)	5,647 (nr=1)	500
2015-16	532	31,382 (nr=5)	5,736 (nr=5)	536
2016-17	576	39,230 (nr=6)	6,678 (nr=7)	555

nr, Number of programs not reporting considered missing data.

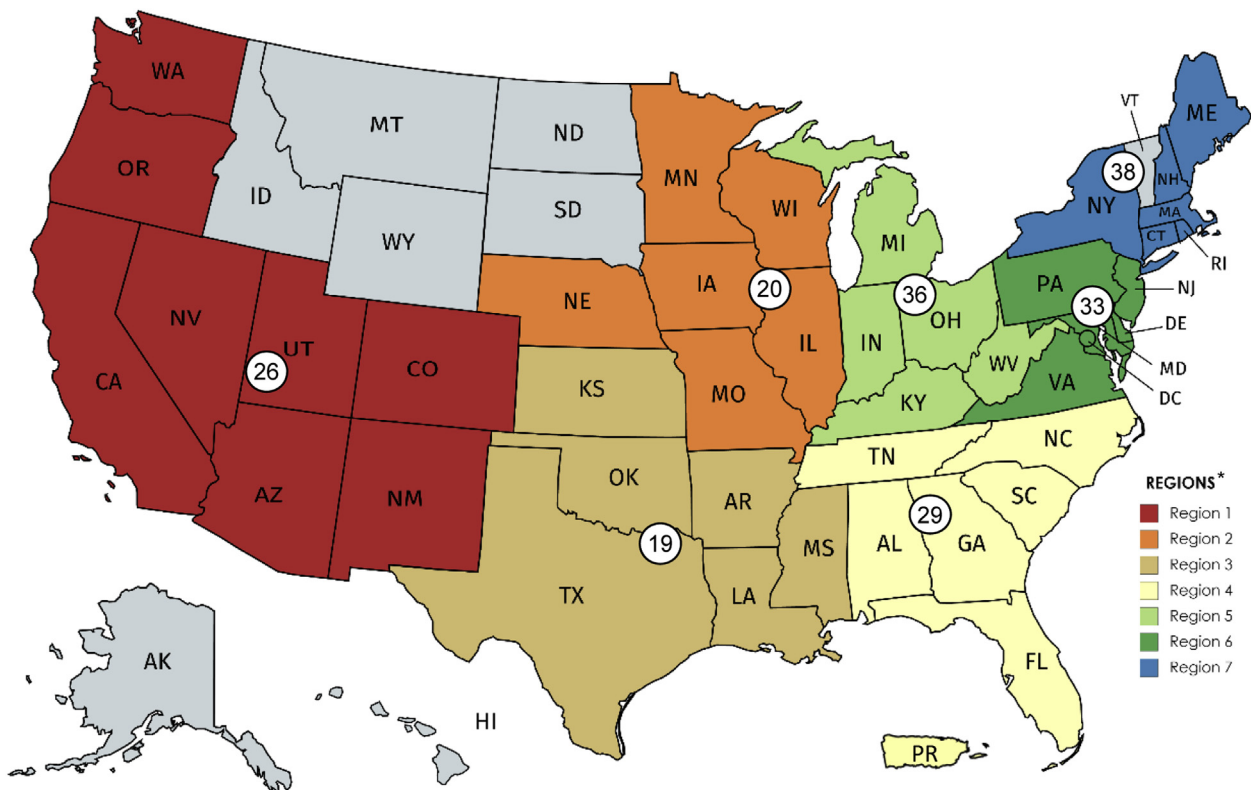
number of programs and residents currently training by state.

**Overview of Residents in Emergency Medicine**

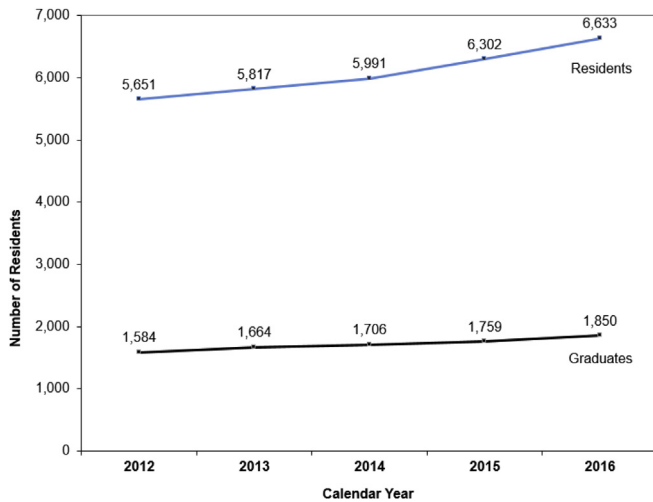
As of December 31, 2016, there were 6,633 residents enrolled in ACGME-accredited US categorical emergency medicine programs, with 4,458 (67%) in

PGY 1 to 3 programs and 2,135 (32%) in PGY 1 to 4 programs. In addition, 40 residents are completing their PGY 2 to 4 program format.

From January 1, 2016, to December 31, 2016, there were 1,850 residents who graduated from emergency medicine programs. Figure 3 presents the trend in the number of residents and graduates during the past 5



**Figure 2.** The geographic distribution of the ACGME-accredited US categorical emergency medicine training programs (2016-2017; see Appendix 2). Gray states do not have any emergency medicine training programs. \*The regions are based on the American Medical Association regional designations used for national-level analyses (<https://www.ama-assn.org/regions>).



**Figure 3.** The number of residents and graduates from ACGME-accredited US categorical emergency medicine training programs during the last 5 years.

calendar years. During this 5-year period, there has been a 17% overall growth rate in the number of residents enrolled in emergency medicine.

Table 2 contains the distribution of emergency medicine residents enrolled in each program type by their level within the program. Residents across both formats (PGYs 1 to 3 and 1 to 4) are fairly evenly distributed across levels, with slightly larger numbers in the first year and slightly smaller ones in each format’s final year.

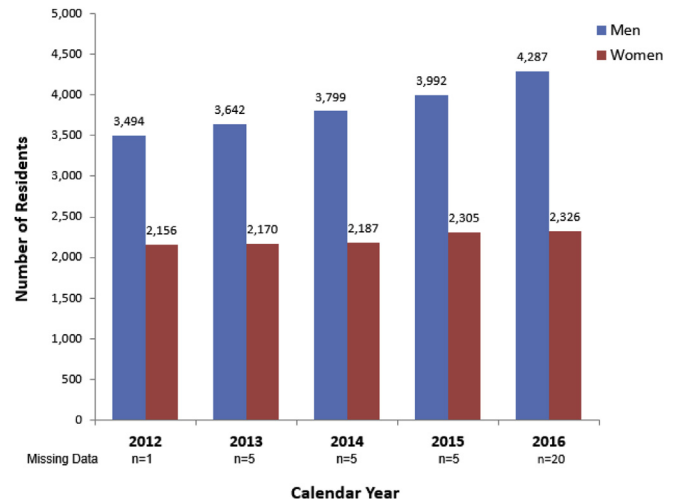
In each of the previous 5 years, physicians transferred in and out of emergency medicine categorical and combined programs. The numbers of residents transferring out of emergency medicine across categorical and combined programs were 47 in 2012, 33 in 2013, 31 in 2014, 42 in 2015, and 31 in 2016. The numbers of residents transferring into emergency medicine across categorical and combined programs were 42 in 2012, 29 in 2013, 38 in 2014, 41 in 2015, and 44 in 2016.

**Table 2.** The number of emergency medicine residents enrolled in ACGME-accredited programs, categorized by program format, for the 2016 calendar year.

Level	PGY 1–3	PGY 1–4	Total
1	1,589	546	2,135
2	1,475	529	2,004
3	1,394	541	1,935
4	N/A	519	519
<b>Total</b>	<b>4,458</b>	<b>2,135</b>	<b>6,633*</b>

N/A, Not applicable.

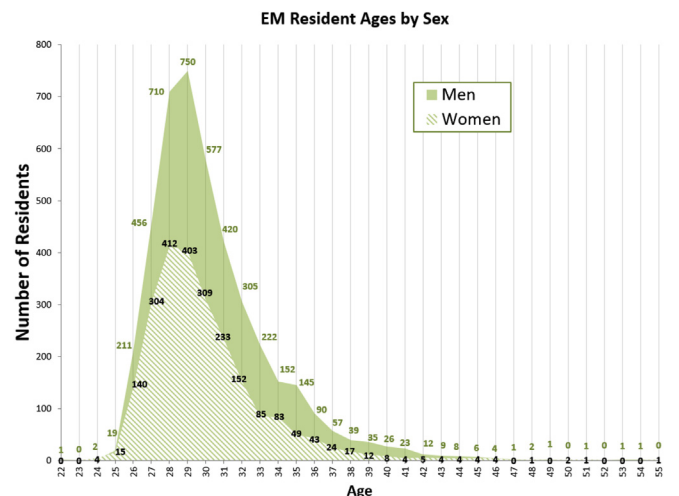
\*Forty residents are completing their PGY 2 to 4 program format. This includes 11 residents in level 1, 13 residents in level 2, and 16 residents in level 3.



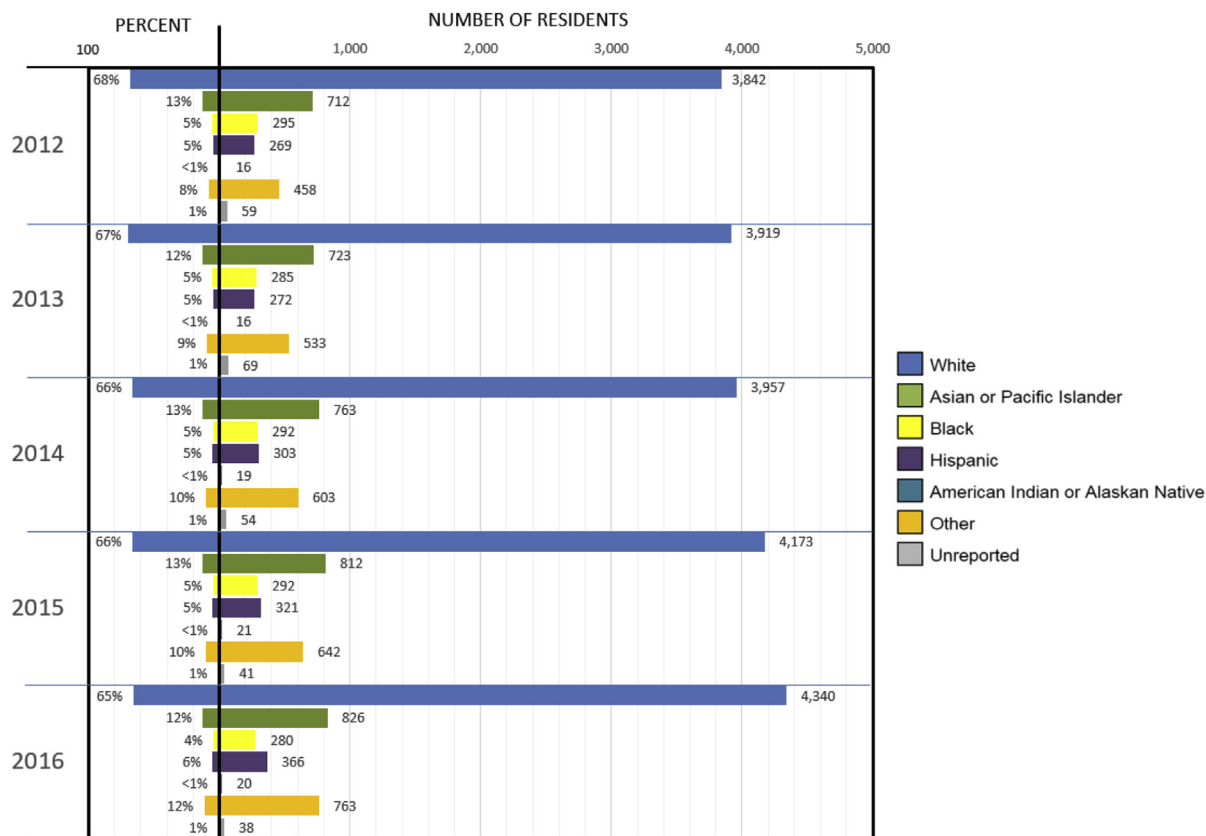
**Figure 4.** Comparison of residents in ACGME-accredited US categorical emergency medicine training programs, stratified by sex, for the last 5 calendar years.

Figure 4 presents the composition of residents by sex and calendar year. In 2012, residents were 38% women and 62% men. In 2016, residents were 35% women and 65% men. The percentage of women residents steadily decreased during this period because the increase in proportion of men residents (23%) has outpaced that of women residents (8%).

Figure 5 presents the distribution of age for residents for calendar year 2016. The median age that year was 31 years, with 59% (N=3,921) of residents aged between 27 and 30 years. As Figure 6 illustrates, the ethnic composition of residents during the past 5 calendar years has had little change, with the largest percentage of residents categorizing



**Figure 5.** Distribution of age for residents currently training in ACGME-accredited US categorical emergency medicine training programs, stratified by sex, as of December 31, 2016.



Percentages may not total 100 because of rounding. Grouping in some ethnic categories has been changed to make the data consistent across years.

**Figure 6.** Ethnic composition of enrolled residents in ACGME-accredited US categorical emergency training programs during the last 5 calendar years, from the ABEM residency training information survey (TIS).

themselves as white (65%) and the second largest as Asian or Pacific Islander (12%).

Table 3 presents ethnic composition and sex comparisons for several specialty areas of medicine in the previous academic year (2015–2016). The comparisons are made with boards of various sizes, including specialties that represent the original American Board of Medical Specialties (ABMS) sponsoring boards of emergency medicine. The comparison data are derived from the Graduate Medical Education report that is published annually in *JAMA* and are used with permission. *JAMA* reports ethnicity with slightly different categories than those on the ABEM residency program survey. Comparisons between Table 3 and Figure 6 will also differ because of a difference in data sources, recency of the data, and the collection window (academic year 2015–2016 versus calendar year 2016, respectively). Figure 6 represents a slightly more recent data collection.

Table 4 illustrates the distribution of various degree types earned by residents. During the past 5 years, the percentage of residents with DO degrees has increased slightly, with the relative proportion of MD degrees decreasing.

Table 5 presents the origin of birth and medical training status of residents during the past 5 years. Since 2012, foreign- and US-born resident numbers have increased by 19% and 16%, respectively.

Figure 7 presents the geographic location of residents currently training in ACGME-accredited US categorical emergency medicine training programs by the American Medical Association’s designated regions. A majority of residents (54%) are concentrated in regions 5, 6, and 7. More information at the state level is available in Appendix 2.

**Combined Programs**

Table 6 contains data that ABEM collects from the various combined emergency medicine programs. In calendar year 2016, the combined training programs had the following numbers of residents enrolled: emergency medicine/internal medicine (N=123), emergency medicine/pediatrics (N=38), emergency medicine/internal medicine/critical care medicine (N=18), and emergency medicine/family medicine (N=20). Across all combined programs, there has been a 14% increase in the number of residents enrolled since 2012. A new combined training program in emergency



**Table 3.** Demographic comparisons for emergency medicine residents and residents in related specialty areas of medicine for the previous academic year (2015-2016), from the National GME Census.\*

Specialty	Emergency Medicine No. (%)	Family Medicine No. (%)	Internal Medicine No. (%)	Obstetrics and Gynecology No. (%)	Orthopedic Surgery No. (%)	Pediatrics No. (%)	Psychiatry No. (%)	Surgery, General No. (%)
<b>Ethnicity</b>								
Black	289 (5)	812 (8)	1,379 (6)	495 (10)	141 (4)	527 (6)	371 (7)	470 (6)
American Indian/ Alaskan Native	12 (<1)	32 (<1)	15 (<1)	9 (<1)	8 (<1)	10 (<1)	15 (<1)	22 (<1)
White	4,316 (73)	6,159 (59)	10,787 (46)	3,442 (68)	2,786 (77)	5,359 (62)	2,808 (54)	5,518 (66)
Asian	888 (15)	2,427 (23)	9,166 (39)	724 (14)	475 (13)	2,039 (24)	1,497 (29)	1,598 (19)
Native Hawaiian/ Pacific Islander	1 (<1)	22 (<1)	15 (<1)	4 (<1)	1 (<1)	7 (<1)	5 (<1)	10 (<1)
Multiracial <sup>†</sup>	183 (3)	305 (3)	465 (2)	163 (3)	99 (3)	227 (3)	143 (3)	205 (2)
Other/unknown	227 (4)	602 (6)	1,837 (8)	224 (4)	107 (3)	492 (6)	314 (6)	489 (6)
Hispanic origin <sup>‡</sup> (not included in count)	442 (7)	889 (9)	1,852 (8)	506 (10)	197 (5)	778 (9)	440 (9)	707 (9)
<b>Total Resident Physicians</b> (does not include Hispanic origin)	<b>5,916</b>	<b>10,359</b>	<b>23,664</b>	<b>5,061</b>	<b>3,617</b>	<b>8,661</b>	<b>5,153</b>	<b>8,312</b>
<b>Sex</b>								
Male	3,735 (63)	4,692 (45)	13,441 (57)	855 (17)	3,083 (85)	2,330 (27)	2,402 (47)	5,148 (62)
Female	2,181 (37)	5,667 (55)	10,223 (43)	4,206 (83)	534 (15)	6,331 (73)	2,751 (53)	3,164 (38)
<b>IMG</b>	330 (6)	3,319 (32)	9,270 (39)	601 (12)	62 (2)	1,684 (19)	1,622 (31)	1,305 (16)

IMG, International medical graduate.

Includes resident physicians on duty as of December 31, 2015, reported through the 2015 National GME Census.

\*Source: Adapted from Brotherton SE, Etzel SI. Graduate medical education, 2015-2016. JAMA. 2016;316:2291-2310. Copyright © 2016. American Medical Association. All rights reserved.

<sup>†</sup>“Multiracial” refers to residents who have self-identified as more than one race.

<sup>‡</sup>Following the US Census Bureau, the National GME Census asked for race and Hispanic ethnicity in 2 separate questions. A person of Hispanic ethnicity can be of any race.

medicine/anesthesiology will begin training residents in the 2017-2018 academic year. More information in regard to the state-level distribution of residents and combined residency programs is available in [Appendix 3](#).

**Examination Performance**

Figures 8 and 9 contain data on examination performance of residency graduates taking the ABEM Qualifying Examination and the Oral Certification

**Table 4.** Medical degree held by residents training in ACGME-accredited US categorical emergency medicine training programs during the last 5 years.

Calendar Year	MD		DO		Other Degrees*	
	No.	(%)	No.	(%)	No.	(%)
2012	4,891	(87)	691	(12)	69	(1)
2013	5,042	(87)	718	(12)	57	(1)
2014	5,210	(87)	723	(12)	58	(1)
2015	5,327	(85)	923	(15)	52	(1)
2016	5,477	(83)	1105	(17)	51	(1)

Percentages may not total 100 because of rounding.

\*Bachelor of medicine, bachelor of surgery, PhD, or a combination of these.

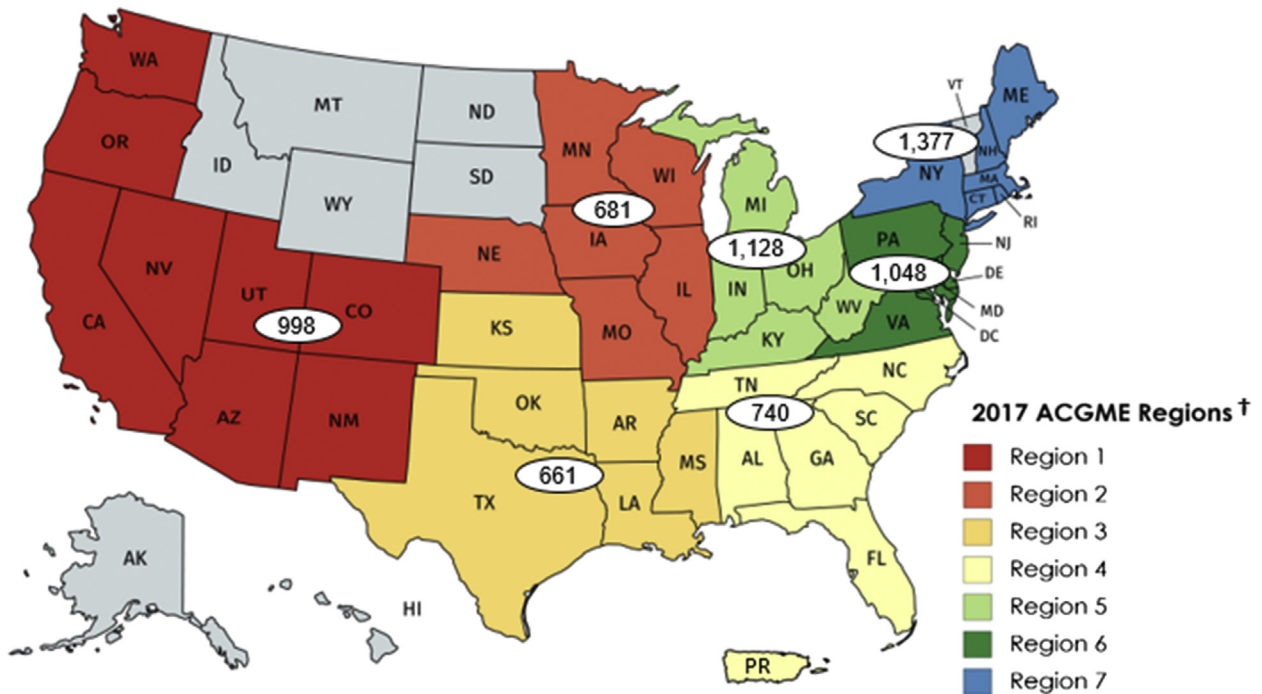
Examination during the 5 most recent calendar years. Performance is stratified by first and multiple attempts. ABEM examinations are criterion referenced. Candidates’

**Table 5.** Origin of birth and medical training status of residents currently training in ACGME-accredited US categorical emergency medicine training programs, stratified by sex, for the last 5 calendar years.

Academic Year	Foreign Born		US Born	
	No.	(%)	No.	(%)
<b>IMG</b>				
2012	146	(38)	241	(62)
2013	139	(43)	188	(57)
2014	144	(42)	199	(58)
2015	146	(42)	204	(58)
2016	145	(39)	229	(61)
<b>USMG</b>				
2012	603	(12)	4,603	(88)
2013	645	(12)	4,783	(88)
2014	670	(12)	4,926	(88)
2015	696	(12)	5,142	(88)
2016	745	(12)	5,372	(88)

IMG, International medical graduate; USMG, US medical graduate.

Missing data: 2012, n=58; 2013, n=63; 2014, n=53; 2015, n=115; 2016, n=142.



**Figure 7.** The geographic distribution of residents currently training in ACGME-accredited US categorical emergency medicine training programs (2016; see Appendix 2). Gray states do not have any residents because there are no emergency medicine training programs in those states. †The regions are based on the American Medical Association regional designations used more broadly for national-level analyses (<https://www.ama-assn.org/regions>).

performance is based on a preset standard for acceptable achievement and is independent of other candidates’ performance. Performance on the certification examinations has remained stable from 2012 through 2016, with a first-attempt pass rate ranging from 89% to 94% for the Qualifying Examination and 96% to 98% for the Oral Certification Examination. Pass rates for individuals with multiple attempts range from 39% to 60% and 71% to 90%, respectively.

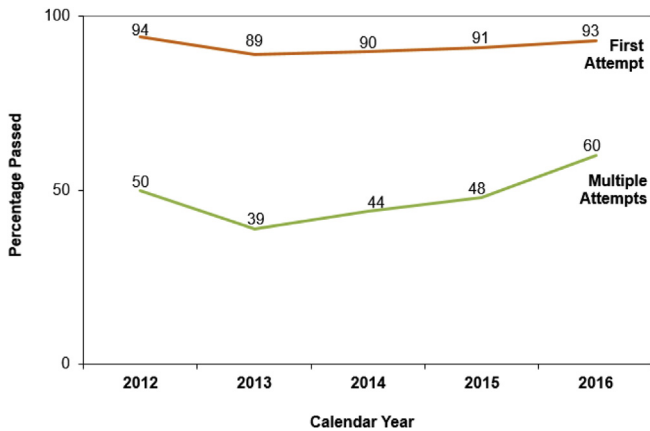
**Fellowship Training Programs**

Emergency medicine sponsors 121 ACGME-accredited fellowship programs in the subspecialties of clinical informatics (N=3), emergency medical services (N=53), medical toxicology (N=26), pediatric emergency medicine (N=25), sports medicine (N=7), and undersea and hyperbaric medicine (N=7). Figure 10 presents the change in number of accredited emergency medicine–sponsored fellowship programs by subspecialty during the past 5 academic years.

**Table 6.** The number of residents enrolled in combined training programs, stratified by sex, for the last 5 calendar years.\*

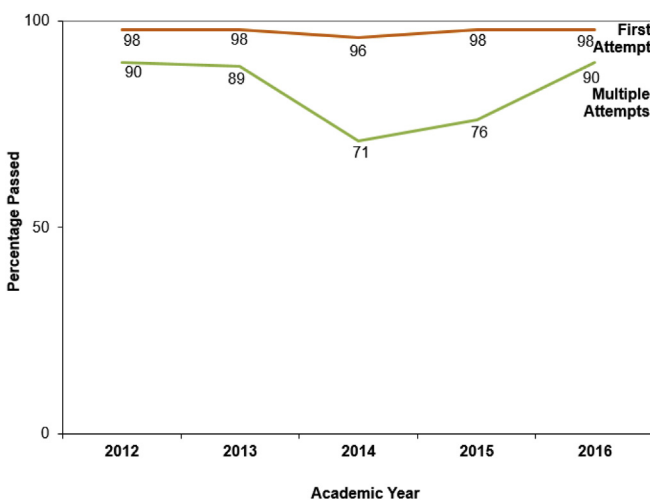
Calendar Year	Emergency Medicine/ Family Medicine				Emergency Medicine/ Internal Medicine				Emergency Medicine/ Internal Medicine/ Critical Care Medicine				Emergency Medicine/ Pediatrics			
	Men		Women		Men		Women		Men		Women		Men		Women	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
2012	9	(53)	8	(47)	70	(63)	41	(37)	10	(91)	1	(9)	15	(42)	21	(58)
2013	11	(58)	8	(42)	71	(63)	42	(37)	11	(73)	4	(27)	16	(46)	19	(54)
2014	11	(55)	9	(45)	72	(64)	40	(36)	12	(63)	7	(37)	18	(49)	19	(51)
2015	12	(57)	9	(43)	80	(69)	36	(31)	14	(64)	8	(36)	18	(46)	21	(54)
2016	12	(60)	8	(40)	87	(71)	36	(29)	13	(72)	5	(28)	18	(47)	20	(53)

\*Percentages may not total 100 because of rounding.

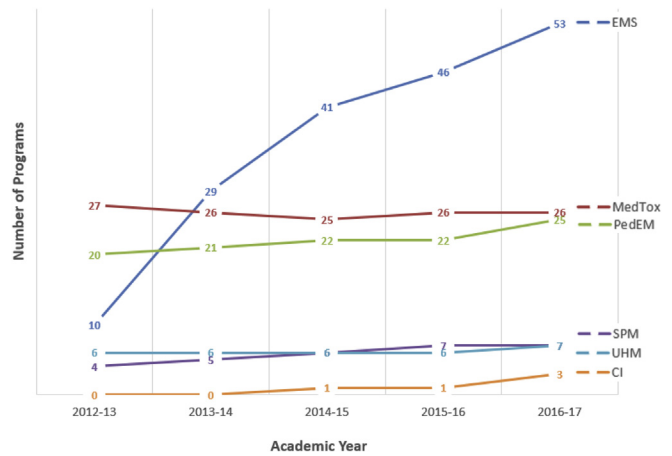


**Figure 8.** Performance of emergency medicine residency-trained candidates on the ABEM Qualifying Examination, stratified by first and multiple attempts, for the last 5 calendar years.

Figure 11 presents the reported numbers of emergency physicians enrolled in ACGME-accredited fellowship programs, by subspecialty, during the last 5 calendar years. There are currently at least 230 emergency medicine-trained physicians enrolled in ACGME-accredited fellowship programs in these 10 subspecialties: anesthesiology critical care medicine (N=19), clinical informatics (N=1), emergency medical services (N=52), hospice and palliative medicine (N=5), internal medicine/critical care medicine (N=49), medical toxicology (N=52), pain medicine (N=0), pediatric emergency medicine (N=32), sports



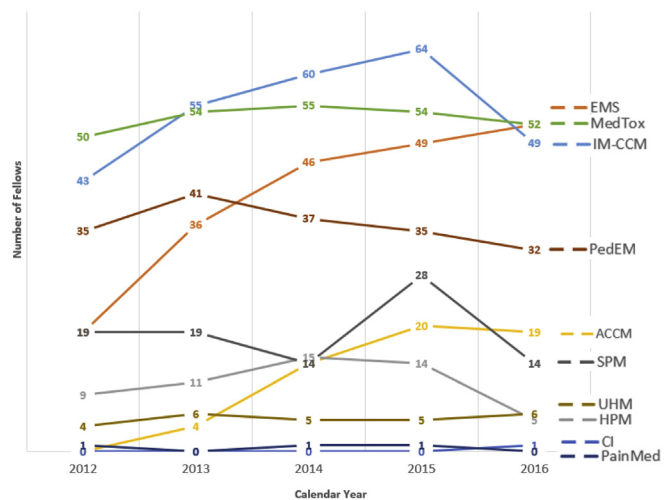
**Figure 9.** Performance of emergency medicine residency-trained candidates on the ABEM Oral Certification Examination, stratified by first and multiple attempts, for the last 5 academic years.



**Figure 10.** Number of ACGME-accredited fellowship programs sponsored by emergency medicine, stratified by subspecialty, for the last 5 years. *CI*, Clinical informatics; *EMS*, emergency medical services; *MedTox*, medical toxicology; *PedEM*, pediatric emergency medicine; *SPM*, sports medicine; *UHM*, undersea and hyperbaric medicine.

medicine (N=14), and undersea and hyperbaric medicine (N=6). Forty-three percent (N=99) of the fellows are women.

Other subspecialty certifications are available to emergency medicine diplomates through other ABMS boards, such as brain injury medicine and surgical critical care.



**Figure 11.** Number of fellows\* enrolled in ACGME-accredited fellowship programs, stratified by subspecialty, that leads to an ABMS-approved subspecialty certification, for the previous 5 years.

\*Includes only physicians who have completed an emergency medicine residency and are eligible to apply to ABEM for certification.



## DISCUSSION

Perhaps the most significant recent change in training has been the addition of programs under the SAS, which is a structure for accrediting graduate medical education resulting from an agreement between the ACGME, the AOA, and the American Association of Colleges of Osteopathic Medicine. Under this agreement, residency training programs approved by the AOA can become accredited by the ACGME. AOA-approved programs began applying to the ACGME for accreditation July 1, 2015.

The number of US categorical emergency medicine programs has increased steadily since 1975. Of the 2 program formats currently offered, PGYs 1 to 3 and 1 to 4, both had a marked increase in the number of ACGME-accredited programs in 2016.

During the same period, there has been a general upward trend in the number of residents and graduates. Again, because of SAS, there has been a marked increase in the number of enrolled residents. The greatest concentration of programs was in regions 5, 6, and 7, which average almost 6 programs per state. These regions also account for approximately 53% of the programs.

Simultaneously, there has been modest growth in the number of graduates from emergency medicine-sponsored fellowship programs since 1991, when the first emergency medicine subspecialty, pediatric emergency medicine, was approved by the ABMS.

During the last 5 calendar years, demographic characteristics have changed slightly compared with those of the 2012 residents. Although the percentage of women emergency medicine residents has increased 8%, there has been a 23% increase in the number of men emergency medicine residents, resulting in an overall decrease in the percentage of women entering the specialty. The cause is unknown, but may be an indication of barriers to women entering the specialty or merely an indication that women are choosing other specialties at a higher rate.

## LIMITATIONS

Most of the data are self-reported and, although all categorical residency programs reported data, some

individual responses were not complete and resulted in missing data, as noted in the tables and figures.

## SUMMARY

To the best of our knowledge, the information presented in this document is the most comprehensive compilation of data pertaining to residency and fellowship training in emergency medicine. These data portray the recent status of training within the specialty.

In sum, the information presented in this article yields 3 main conclusions. First, there is continuous growth within the specialty of emergency medicine postgraduate training. In addition, the SAS has had a significant stimulatory effect on growth. Moreover, the proportion of women within the field reached a peak, plateaued, and has now begun to decline. It is our desire that the information contained in this publication (1) inform educators in regard to training issues in emergency medicine; (2) assist policymakers in arriving at well-informed decisions; (3) provide investigators with descriptive data that may facilitate hypothesis generation and further analyses; and (4) offer the emergency medicine community, as well as the medical community at large, a better understanding of the evolution and dynamic nature of residency training in emergency medicine.

*The authors acknowledge Laura A. Clark-Roumpz, Erin Houlroyd, Robert G. Purosky, Earl J. Reisdorff, MD, and Karen J. Shannon for their careful and dedicated support of this project. Their expertise continues to be reflected in the comprehensive and accurate data presented in this report.*

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*Authorship:* All authors attest to meeting the four [ICMJE.org](http://ICMJE.org) authorship criteria: (1) Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND (2) Drafting the work or revising it critically for important intellectual content; AND (3) Final approval of the version to be published; AND (4) Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

This article was not peer reviewed by the *Annals of Emergency Medicine* editorial board or reviewers.

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**Appendix 1.** Currently accredited US categorical residency training programs in emergency medicine: Accredited by the ACGME as of February 22, 2017.\*

Advocate Health Care (Advocate Christ Medical Center)	Lakeland Health
Akron General Medical Center/NEOMED	Lehigh Valley Health Network/University of South Florida College of Medicine
Alameda Health System-Highland Hospital	Lincoln Medical and Mental Health Center
Albany Medical Center	Loma Linda University Health Education Consortium
Albert Einstein Healthcare Network	Los Angeles County-Harbor-UCLA Medical Center
Allegheny Health Network Medical Education Consortium (AGH)	Louisiana State University
Arnot Ogden Medical Center	Louisiana State University (Baton Rouge)
Atlantic Health (Morristown)	Louisiana State University (Shreveport)
Aventura Hospital and Medical Center	Madigan Healthcare System
Baylor College of Medicine	Maimonides Medical Center
Beth Israel Deaconess Medical Center/Harvard Medical School	Maine Medical Center
Boston University Medical Center	Maricopa Medical Center
Brookdale University Hospital and Medical Center	Mary Hitchcock Memorial Hospital
Brooklyn Hospital Center	Massachusetts General Hospital/Brigham and Women's Hospital/Harvard Medical School
Brown University	Mayo Clinic College of Medicine and Science (Rochester)
Carilion Clinic-Virginia Tech Carilion School of Medicine	McGaw Medical Center of Northwestern University
Carolinas Medical Center	McLaren Oakland
Case Western Reserve University (MetroHealth)	McLaren Oakland (Macomb)
Case Western Reserve University/University Hospitals Cleveland Medical Center	Medical College of Georgia
Central Michigan University College of Medicine	Medical College of Wisconsin Affiliated Hospitals
Christiana Care Health Services	Medical University of South Carolina
Christus Spohn Memorial Hospital	Memorial Health System
Conemaugh Memorial Medical Center	Mercy St Vincent Medical Center/Mercy Health Partners
Cooper Medical School of Rowan University/Cooper University Hospital	Montefiore Medical Center/Albert Einstein College of Medicine (Jacobi/Montefiore)
Crozer-Chester Medical Center	Mount Sinai Medical Center of Florida, Inc.
Darnall Army Medical Center	Mountain State Osteopathic Postdoctoral Training Institutions, Inc. (MSOPTI)/Ohio Valley Medical Center
Denver Health Medical Center	Naval Medical Center (Portsmouth)
Detroit Medical Center/Wayne State University (Detroit Receiving Hospital)	Naval Medical Center (San Diego)
Detroit Medical Center/Wayne State University (Sinai Grace)	New York Medical College (Metropolitan)
Doctors Hospital/OhioHealth	New York Medical College At St Joseph's Regional Medical Center
Drexel University College of Medicine/Hahnemann University Hospital	New York-Presbyterian Brooklyn Methodist Hospital
Duke University Hospital	New York Presbyterian Hospital
Eastern Virginia Medical School	New York-Presbyterian/Queens
Emory University School of Medicine	New York University School of Medicine
Florida Atlantic University Charles E. Schmidt College of Medicine	Newark Beth Israel Medical Center
Florida Hospital Medical Center	Ohio State University Hospital
Geisinger Health System	Oklahoma State University Center for Health Sciences
Genesys Regional Medical Center	Oregon Health & Science University
George Washington University	Orlando Health
Georgetown University Hospital/Washington Hospital Center	Palmetto Health/University of South Carolina School of Medicine
Good Samaritan Hospital Medical Center	Penn State Milton S Hershey Medical Center
Grand Rapids Medical Education Partners/Michigan State University	Presence Resurrection Medical Center
Grand Strand Regional Medical Center	Riverside Community Hospital/University of California Riverside School of Medicine
Greenville Health System/University of South Carolina	Rush University Medical Center
Hackensack University Medical Center	Rutgers New Jersey Medical School
HealthPartners Institute for Education and Research/Regions Hospital	Rutgers Robert Wood Johnson Medical School
Hennepin County Medical Center	San Antonio Uniformed Services Health Education Consortium
Henry Ford Allegiance Health	Sidney Kimmel Medical College at Thomas Jefferson University/TJUH
Henry Ford Hospital/Wayne State University	Southern Illinois University School of Medicine
Henry Ford Macomb Hospital	Sparrow Hospital/Michigan State University
Henry Ford Wyandotte Hospital	Spectrum Health/Michigan State University
Hofstra Northwell School of Medicine	St Barnabas Hospital
Hofstra Northwell School of Medicine at Long Island Jewish Medical Center	St John Hospital and Medical Center
Hofstra Northwell School of Medicine at Staten Island University Hospital	St Louis University School of Medicine
Hospital Episcopal San Lucas/Ponce School of Medicine	St Luke's Hospital
Icahn School of Medicine at Mount Sinai	St Mary Mercy Hospital
Icahn School of Medicine at Mount Sinai (Beth Israel)	St. John Macomb-Oakland Hospital
Icahn School of Medicine at Mount Sinai/St Luke's-Roosevelt Hospital Center	St. John's Riverside Hospital
Indiana University School of Medicine	Stanford University Hospital/Kaiser Permanente Medical Center
Inspira Medical Center Woodbury	Stony Brook Medicine/University Hospital
Jackson Memorial Hospital/Jackson Health System	Summa Health System/NEOMED
John H Stroger Hospital of Cook County	SUNY Health Science Center at Brooklyn
John Peter Smith Hospital (Tarrant County Hospital District)	SUNY Upstate Medical University
Johns Hopkins University	Temple University Hospital
Kaiser Permanente Southern California	Texas A&M College of Medicine-Scott and White
Kaweah Delta Health Care District (KDCHD)	Texas Tech University Health Sciences Center Paul L Foster School of Medicine
Kendall Regional Medical Center	UCLA David Geffen School of Medicine/UCLA Medical Center/Olive View
Kent Hospital	UMMS-Baystate
Kern Medical Center	

**Appendix 1.** Continued.

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University at Buffalo	University of Oklahoma School of Community Medicine (Tulsa)
University of Alabama Medical Center	University of Pennsylvania Health System
University of Arizona College of Medicine - Tucson	University of Puerto Rico
University of Arizona College of Medicine at South Campus	University of Rochester
University of Arkansas for Medical Sciences	University of South Florida Morsani
University of California (Davis) Health System	University of Southern California/LAC+USC Medical Center
University of California (Irvine)	University of Tennessee College of Medicine at Chattanooga
University of California (San Diego)	University of Tennessee College of Medicine at Memphis
University of California (San Francisco)/Fresno	University of Tennessee College of Medicine at Murfreesboro
University of California (San Francisco)/San Francisco General Hospital	University of Texas at Austin Dell Medical School
University of Central Florida College of Medicine/HCA GME Consortium (Greater Orlando)	University of Texas Health Science Center at Houston
University of Chicago	University of Texas Health Science Center School of Medicine at San Antonio
University of Cincinnati Medical Center/College of Medicine	University of Texas Southwestern Medical School
University of Connecticut	University of Toledo
University of Florida	University of Utah
University of Florida College of Medicine Jacksonville	University of Virginia Medical Center
University of Illinois College of Medicine at Chicago	University of Washington
University of Illinois College of Medicine at Peoria	University of Wisconsin Hospitals and Clinics
University of Iowa Hospitals and Clinics	UPMC Medical Education (Erie)
University of Kansas School of Medicine	UPMC Medical Education (Pittsburgh)
University of Kentucky College of Medicine	Vanderbilt University Medical Center
University of Louisville School of Medicine	Vidant Medical Center/East Carolina University
University of Maryland	Virginia Commonwealth University Health System
University of Massachusetts	Wake Forest University School of Medicine
University of Michigan Hospitals and Health Centers	Washington University/B-JH/SLCH Consortium
University of Mississippi Medical Center	West Virginia University
University of Missouri at Kansas City	Western Michigan University Homer Stryker MD School of Medicine
University of Missouri-Columbia	William Beaumont Hospital
University of Nebraska Medical Center	Wright State University
University of Nevada Reno School of Medicine (Las Vegas)	Wyckoff Heights Medical Center
University of New Mexico	Yale-New Haven Medical Center
University of North Carolina Hospitals	York Hospital

\*Names of emergency programs as they appeared on the ACGME web site (<http://www.acgme.org>) as of February 22, 2017.

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**Appendix 2.** ACGME-accredited US Categorical residency training programs and residents by state.\*

State <sup>†</sup>	USMG in Categorical Programs		IMG in Categorical Programs		Not Reported <sup>††</sup>	Emergency Medicine Resident Total		Categorical Programs	
	N	(%)	N	(%)		N	N	(%)	N
Alabama (AL)	30	(<1)	0		0	30	(<1)	1	(<1)
Arizona (AZ)	104	(2)	1	(<1)	0	105	(2)	3	(1)
Arkansas (AR)	30	(<1)	0		0	30	(<1)	1	(<1)
California (CA)	609	(10)	7	(2)	0	616	(9)	16	(8)
Colorado (CO)	68	(1)	0		0	68	(1)	1	(<1)
Connecticut (CT)	104	(2)	9	(2)	0	113	(2)	2	(1)
Delaware (DE)	35	(1)	1	(<1)	0	36	(1)	1	(<1)
Florida (FL)	210	(3)	22	(6)	0	232	(3)	11	(5)
Georgia (GA)	90	(1)	11	(3)	0	101	(2)	2	(1)
Illinois (IL)	346	(6)	4	(1)	0	350	(5)	9	(4)
Indiana (IN)	56	(1)	1	(<1)	0	57	(1)	1	(<1)
Iowa (IA)	26	(<1)	1	(<1)	0	27	(<1)	1	(<1)
Kansas (KS)	22	(<1)	0		0	22	(<1)	1	(<1)
Kentucky (KY)	60	(1)	0		0	60	(1)	2	(1)
Louisiana (LA)	102	(2)	12	(3)	0	114	(2)	3	(1)
Maine (ME)	26	(<1)	0		0	26	(<1)	1	(<1)
Maryland (MD)	77	(1)	10	(3)	0	87	(1)	2	(1)
Massachusetts (MA)	217	(4)	9	(2)	0	226	(3)	5	(2)
Michigan (MI)	489	(8)	50	(13)	46	585	(9)	20	(10)
Minnesota (MN)	89	(1)	0		0	89	(1)	3	(1)
Mississippi (MS)	35	(1)	7	(2)	1	43	(1)	1	(<1)
Missouri (MO)	116	(2)	7	(2)	1	124	(2)	4	(2)
Nebraska (NE)	27	(<1)	0		0	27	(<1)	1	(<1)
Nevada (NV)	29	(<1)	0		0	29	(<1)	1	(<1)
New Hampshire (NH)	18	(<1)	0		0	18	(<1)	1	(<1)
New Jersey (NJ)	150	(2)	35	(9)	1	186	(3)	8	(4)
New Mexico (NM)	35	(1)	1	(<1)	0	36	(1)	1	(<1)
New York (NY)	816	(13)	86	(23)	17	919	(14)	27	(13)
North Carolina (NC)	180	(3)	3	(1)	0	183	(3)	5	(2)
Ohio (OH)	340	(6)	29	(8)	28	397	(6)	11	(5)
Oklahoma (OK)	17	(<1)	0		0	17	(<1)	2	(1)
Oregon (OR)	32	(1)	1	(<1)	0	33	(<1)	1	(<1)
Pennsylvania (PA)	459	(7)	20	(5)	30	509	(8)	15	(7)
Puerto Rico (PR)	35	(1)	16	(4)	0	51	(1)	2	(1)
Rhode Island (RI)	74	(1)	0		1	75	(1)	2	(1)
South Carolina (SC)	55	(1)	1	(<1)	1	57	(1)	4	(2)
Tennessee (TN)	80	(1)	6	(2)	0	86	(1)	4	(2)
Texas (TX)	417	(7)	14	(4)	4	435	(7)	11	(5)
Utah (UT)	27	(<1)	0		1	28	(<1)	1	(<1)
Virginia (VA)	154	(3)	4	(1)	1	159	(2)	5	(2)
Washington	83	(1)	0		0	83	(1)	2	(1)
Washington, DC	62	(1)	7	(2)	2	71	(1)	2	(1)
West Virginia (WV)	29	(<1)	0		0	29	(<1)	2	(1)
Wisconsin (WI)	64	(1)	0		0	64	(1)	2	(1)
<b>TOTAL</b>	<b>6,124</b>		<b>375</b>		<b>134</b>	<b>6,633</b>		<b>201</b>	

\*This report reflects the status of data contained in the ABEM Residency Training Information System as of February 22, 2017. Percentages may not total 100 because of rounding.

<sup>†</sup>States not listed do not have a US categorical residency program.

<sup>††</sup>Some programs did not report the residents' location of their medical school.

**Appendix 3.** ABEM-approved combined residency training programs and residents by state.\*

State <sup>†</sup>	USMG in Combined Programs		IMG in Combined Programs		Not Reported <sup>††</sup>	Emergency Medicine Resident Total		Combined Programs	
	N	(%)	N	(%)		N	N	(%)	N
Arizona (AZ)	12	(7)	3	(14)	0	15	(8)	1	(4)
Delaware (DE)	19	(11)	2	(10)	3	24	(13)	2	(8)
Illinois (IL)	15	(9)	0		0	15	(8)	1	(4)
Indiana (IN)	9	(5)	1	(5)	0	10	(5)	1	(4)
Louisiana (LA)	16	(10)	7	(33)	0	23	(12)	3	(13)
Maryland (MD)	16	(10)	2	(10)	0	18	(9)	4	(17)
Michigan (MI)	9	(5)	3	(14)	0	12	(6)	2	(8)
Minnesota (MN)	9	(5)	1	(5)	0	10	(5)	2	(8)
New York (NY)	28	(17)	0		1	29	(15)	3	(13)
North Carolina (NC)	10	(6)	1	(5)	0	11	(6)	2	(8)
Ohio (OH)	5	(3)	0		0	5	(3)	1	(4)
Pennsylvania (PA)	8	(5)	1	(5)	0	9	(5)	1	(4)
Virginia (VA)	10	(6)	0		0	10	(5)	1	(4)
<b>TOTAL</b>		<b>166</b>		<b>21</b>	<b>4</b>		<b>191</b>		<b>24</b>

\*This report reflects the status of data contained in the ABEM Residency Training Information System as of February 22, 2017. Percentages may not total 100 because of rounding.

<sup>†</sup>States not listed do not have an approved EM combined residency program.

<sup>††</sup>Some programs did not report the residents' location of their medical school.

**Future Meetings of the  
American College of the Emergency Physicians**

The following are the planned sites and dates for the future annual meetings of the American College of Emergency Physicians:

2017	Washington, DC	October 30-November 2
2018	San Diego, CA	October 1-4
2019	Denver, CO	October 28-31
2020	Dallas, TX	October 26-29
2021	Boston, MA	October 25-28