

# **Results of the 2009 Medical School Enrollment Survey**

Report to the Council of Deans

Center for Workforce Studies

April 2010

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## Summary/Abstract

- First year medical school enrollment in 2014-15 is projected to reach 20,281; 23% above 2002-03.
- Current projections indicate medical school enrollment is on track to reach the 30% targeted increase by 2018.
- Growth over the past several years reflected expansion at medical schools accredited prior to 2002; over the next few years growth will come equally from the original schools and from schools established after 2002. After 2015, growth will largely come from the newer schools.
- Between 2002-03 and 2009-10 academic years, 102 of the 125 schools accredited in 2002 (82%) expanded their enrollment reflecting the extensiveness of the response to the call for expansion.
- On the other hand, in 2009, 12 schools indicated plans to reduce enrollment, largely due to fiscal pressures. The recession is slowing growth at schools in existence prior to 2002.
- In response to growing concerns in the health policy community, 62 schools (49% of the 126 respondents) reported instituting or considering initiatives to encourage primary care.
- Forty seven (47) schools (40% of expanding schools) indicated efforts to target expansion to meet specific missions such as needs in rural and underserved communities as well as to increase diversity.
- Nearly three-quarters (73%) of respondents expressed concern with the supply of qualified preceptors and 58% were concerned with the number of clinical training sites. Particular concern was expressed with growing competition from osteopathic students, NPs, PAs, and students from off shore medical schools.
- DO enrollment continues to rise very rapidly: 1<sup>st</sup> year enrollment in 2014-15 is expected to reach nearly 6,300, more than twice as high then it was in 2002.
- Combined 1<sup>st</sup> year MD and DO enrollment in 2014-15 is projected to be more than 26,550, nearly 7,000 (36%) above 2002-03. This will provide Americans far more opportunities to become physicians. It will also put great pressure on entry level GME positions which have not been growing as rapidly.

## I. Introduction/Background

In 2006, in response to concerns of a likely future physician shortage, the AAMC recommended a 30 percent increase in U.S. medical school enrollment by 2015. This recommendation used the first year enrollment of 16,488 students in 2002 as a baseline. A 30 percent increase would lead to 21,434 first year medical students, an increase of 4,946 students per year.

The AAMC recommended this goal be met by increasing enrollment at existing medical schools and, where appropriate, the creation of new medical schools. The AAMC also recommended ongoing monitoring of supply and demand for physicians in order to continue to provide guidance to the medical education community and other interested parties.<sup>1</sup> The annual survey of medical school enrollment plans is part of the monitoring process.

In 2002, there were 125 medical schools, including the then preliminarily accredited, now fully accredited Florida State University College of Medicine. By early 2010, one additional existing school had received LCME accreditation (San Juan Bautista) and six new medical schools have been granted Preliminary Accreditation status by the LCME since 2002 (see appendix) bringing the number of U.S. medical schools to 132.<sup>2</sup> In addition, as of March 15, 2010, there are 8 schools that have been designated by the LCME as having “Applicant School” or “Candidate School” status. Though they cannot yet enroll students, some hope to receive “Preliminary” accreditation in time to enroll students before 2012. Finally, there have been discussions of the possibility of starting a new medical school reported in the media in at least 10 communities where an application has not yet been made to the LCME. For purposes of this report, we have only included enrollment projections for the 132 schools that have received full or preliminary accreditation and the 8 schools with LCME “Applicant School” or “Candidate School” status. (Refer to Appendix A for details).

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<sup>1</sup> AAMC Statement on the Physician Workforce (2006). Retrieved February 2, 2010, from <http://www.aamc.org/workforce/workforceposition.pdf>

<sup>2</sup> Institutions with Developing Medical Education Programs that have Applied for Preliminary Accreditation by the LCME (2009). Retrieved February 2, 2010, from <http://www.lcme.org/newschoolprocess.htm>

## II. Methodology

The AAMC Center for Workforce Studies administered the sixth annual survey of medical enrollment plans to U.S. medical schools in the fall of 2009. Most of the information contained in this report is from their responses. The Center also gathered public information regarding new medical schools either in the planning stages or under discussion in order to provide a more accurate assessment of potential future of allopathic medical school enrollment. Further, data were received from the American Association of Osteopathic Colleges of Medicine (AACOM) on enrollment plans at osteopathic programs. The deans of 131 LCME accredited or preliminarily accredited U.S. medical schools were asked to participate in the survey in the fall of 2009<sup>3</sup>. An e-mail introduction of the survey was sent out followed by a link to the web survey itself. Follow-up reminder e-mails were sent to deans who did not initially respond. Of the schools surveyed, 126 (96%) responded to the survey. The survey was completed by the dean of the medical school or their designated appointee, most often an associate dean. While the survey was designed to be confidential, each of the 126 responding schools identified themselves for tracking purposes.

Respondents were asked to provide their medical school's enrollment for the current year as well as their anticipated enrollment for the next five years, ending with the 2014-15 academic year. For schools that did not respond in 2009, first year enrollment in 2009 from the AAMC records system was projected forward through 2014 with no change in class size. The information provided by the respondents was self-reported, though current year enrollment was validated with AAMC records<sup>4</sup>.

As a supplement to the enrollment survey administered to the 131<sup>5</sup> accredited schools, the AAMC requested data from each of the Applicant and Candidate Status schools. Four schools are anticipating enrollment of a first class in 2012, with one school hoping to enroll its first class in 2011. Table 1 shows the estimated class sizes for the new institutions. For this report, our projections only include schools somewhere in the LCME accreditation process ("preliminary accreditation," "candidate school", or "applicant school"). Except where otherwise noted, projected increases represent the increases of enrollment above the baseline year of 2002.

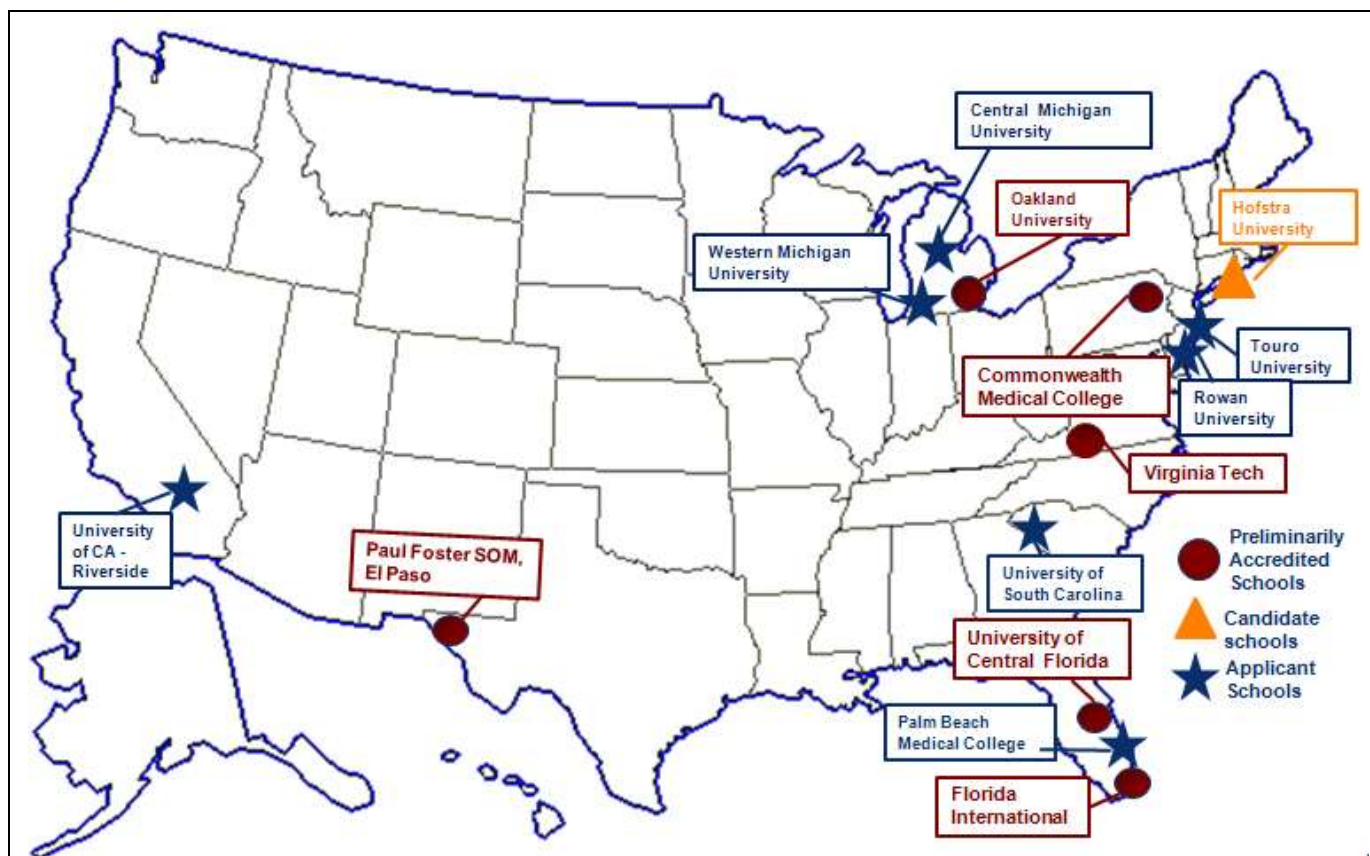
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<sup>3</sup> Oakland University William Beaumont School of Medicine was not included in the initial 2009 survey as its preliminary accreditation status was granted after the survey was released. However, this school did provide planned enrollment figures via e-mail communication.

<sup>4</sup> <http://www.aamc.org/data/facts/applicantmatriculant/table1-facts2009school-web.pdf>, accessed March 19, 2010

<sup>5</sup> Oakland University William Beaumont School of Medicine was not included in the initial 2009 survey as its preliminary accreditation status was granted after the survey was released. However, this school did provide planned enrollment figures via e-mail communication.

**Figure 1: Schools in the LCME Accreditation Process**



### III. Results

One hundred and two (82%) of the 125 schools accredited by the LCME in 2002 have increased their first year enrollment as of the 2009-10 academic year. Thirty-seven of the schools who have already increased enrollment have plans for further increases between now and 2014-15. Two additional schools project higher enrollment than 2002 by the 2014-15 academic year for a total of 104 schools (83%) that have already increased or plan to increase first year enrollment. If plans do not change, the original 125 schools will increase enrollment by over 2500 positions as of 2014-15, a 15.3% increase above 2002 levels. Ultimately, two-thirds (66.3%) of the projected increase in medical school enrollment by 2014-15 will come from the original 125 LCME accredited schools. The remaining third will come equally from new schools that have been accredited since 2002 and the current applicant and candidate schools.

With the inclusion of applicant and candidate schools, the total planned enrollment for academic year 2014-15 grows to 20,281 (Table 1). This represents a 23% increase from the baseline year of 2002-03.

**Table 1: Summary of Baseline and Projected First Year Enrollment Through 2014**

	Base	Projected					
	2002	2009	2010	2011	2012	2013	2014
<b>A. Schools accredited as of 2002 (125)</b>	16488	18138	18449	18643	18738	18851	19003
<b># increase from 2002</b>		1650	1961	2155	2250	2363	2515
<b>% increase from 2002</b>		10.0%	11.9%	13.1%	13.6%	14.3%	15.3%
<b>B. Accredited schools since 2002 (7)*</b>		252	328	501	566	631	656
<b>C. Accredited schools as of 2010 (132) (A + B)</b>	16488	18390	18777	19144	19304	19482	19659
<b>D. Applicant and Candidate Schools (8)</b>		0	0	40	370	500	622
<b>E. Total (140) (A+B+D)</b>	16488	18390	18777	19184	19674	19982	20281
<b># increase from 2002</b>		1902	2289	2696	3186	3494	3793
<b>% increase from 2002</b>		11.5%	13.9%	16.4%	19.3%	21.2%	23%

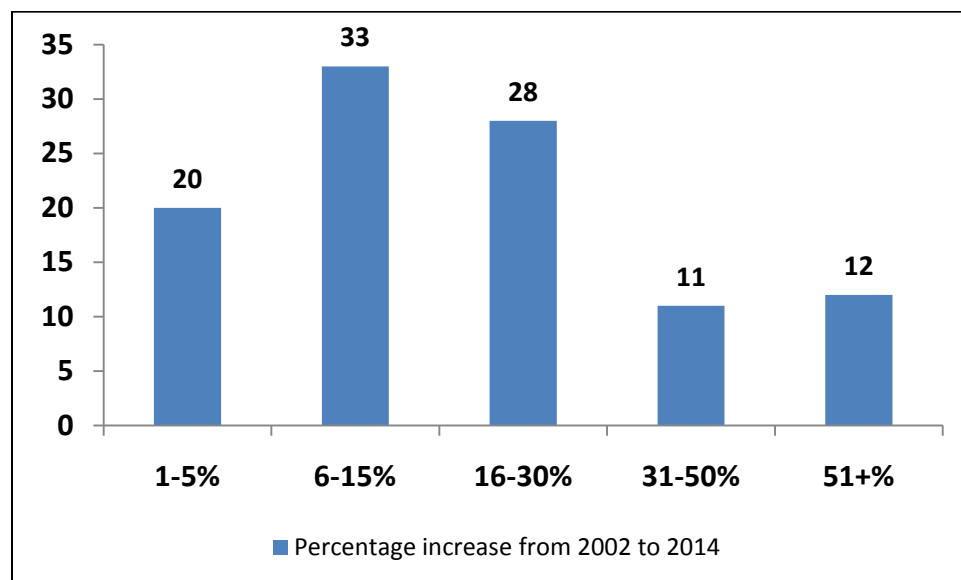
\* Note: "B" includes schools with "Preliminary Accreditation" status.

Most of the projected growth in enrollment for schools accredited as of 2002 has already occurred. The majority of schools (n=66, 53%) project no change in enrollment in the next five years, 46 (37%) show they are planning to increase or continue to increase in the next five years, and 12 (9.7%) are planning to decrease below their 2002 enrollment.

As of 2009, the total enrollment for the 132 LCME accredited medical schools is projected to increase by 19.2% (3,171 positions) by the 2014-15 academic year and has already increased by 11.5% (1,902 positions) as of the 2009 enrollment period. Including the expected enrollment at applicants under review by the LCME, the increase in total enrollment by 2014-15 is projected to be 3,793 (23%) above the 2002 medical school enrollment.

As noted above, 104 of the original 125 LCME accredited medical schools either have increased or plan to increase enrollment by 2014. Of these schools the magnitude widely varies (Figure 2). Twenty schools (19.3%) report an increase from 1-5 percent, thirty-three schools report an increase between 6-15 percent (31.7%), twenty-eight schools (26.9%) report an increase from 16-30 percent, eleven schools (10.6%) report an increase of 31-50 percent and an additional twelve schools (11.5%) report an increase above 51 percent. It's important to note these are consistent increases of 2 or more positions over several years, not simply a fluctuation in one enrollment period. Twelve schools (9.6%) showed plans to decrease, ranging from 1-21%, and nine schools (7.2%) showed no change in enrollment since the baseline year.

**Figure 2: Number of schools by percentage increase in enrollment from 2002 to 2014**



#### IV. Distribution of Growth from the Existing 132 Medical Schools

Of the 3,171 projected new positions from the existing 132 medical schools, 983 (31%) would come from private schools and 2,188 (69%) would come from public schools. Regionally, the central and southern schools are showing larger numerical increases than the northeast or western schools although the western schools are increasing at the most rapid rate. (Table 2)

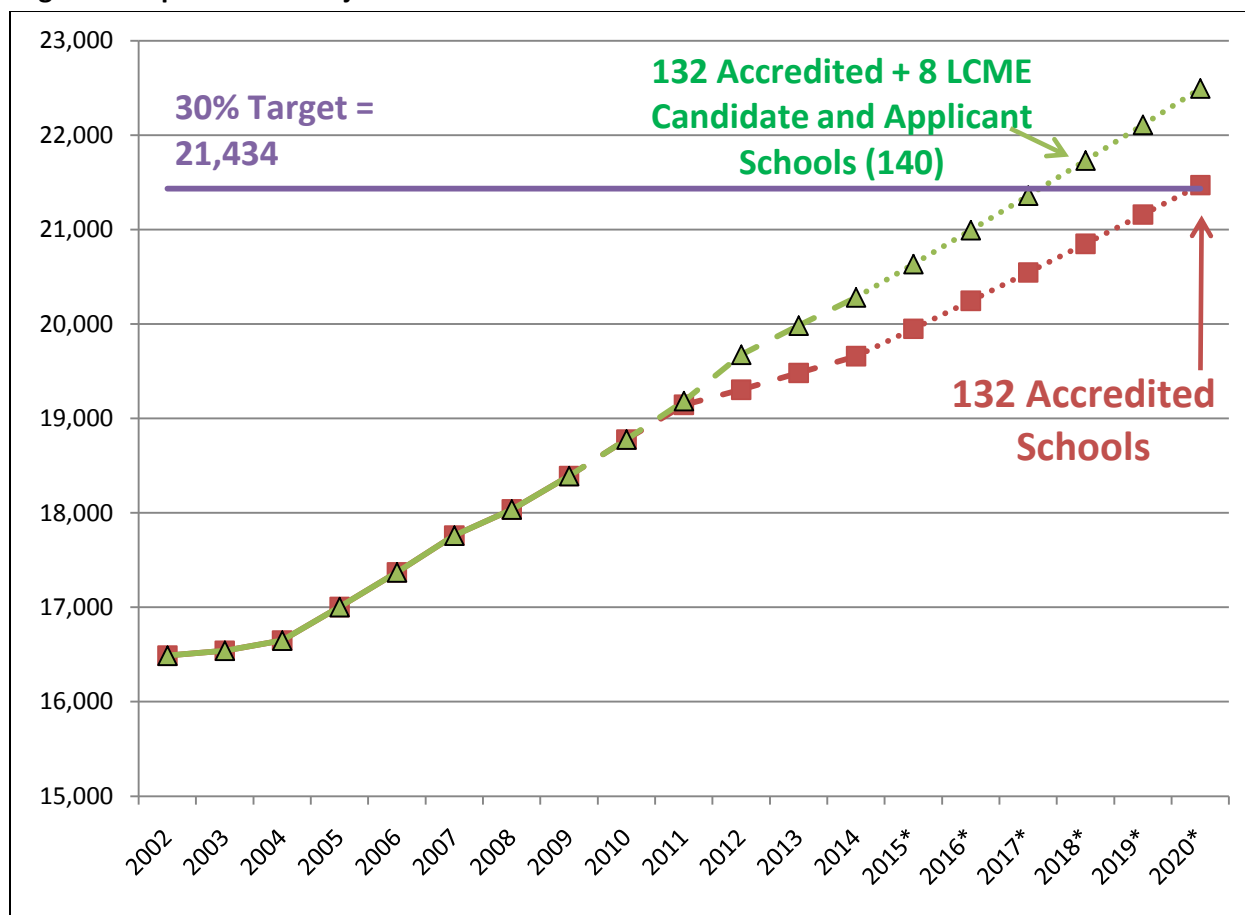
**Table 2: Distribution of Growth by Sponsorship and Region 2002/03 – 2014/15 (Current 132 Schools)**

	Baseline Enrollment 2002-03	Planned enrollment 2014-15	Planned Increase 2013-14	Percent increase from baseline	Percent of total Increase
<b>Institution Type</b>					
Private	6217	7200	983	15.8%	31%
Public	10271	12459	2188	21.3%	69%
<b>Region</b>					
Central	3826	4771	945	24.7%	30%
Northeast	4551	5027	476	10.5%	15%
South	5863	6996	1133	19.3%	36%
West	2248	2865	617	27.4%	19%
<b>All Schools</b>	<b>16488</b>	<b>19659</b>	<b>3171</b>	<b>19.2%</b>	100%

## V. Estimated Enrollment Beyond 2014

Although the expected increase in medical school enrollment falls short of AAMC’s call for a 30 percent increase by 2015, existing schools continue to show substantial growth in first year enrollment. Estimating beyond 2014 (the last year of projected data from the survey) using historical growth rates, the existing schools plus the 8 LCME candidate and applicant schools would reach the 30% target by 2018. (Figure 3)

**Figure 3: Reported and Projected Growth from 2002-2020**



\*the data from these years reflects projections based on historical growth

## VI. Targeted Enrollment

Schools were asked if their recent or planned increase in enrollment was targeted to specific population groups or underserved communities. Forty-seven (40%) of the 118 schools who responded to the question indicated such plans. The majority of respondents indicated targeting more than one population group. The most common targets for expansion were indicated as minority groups underrepresented in medicine and rural communities. (Table 3)



**Table 3: Targeting Enrollment Increases**

	# of schools
Minority groups currently underrepresented in medicine	32
Rural communities	31
Urban underserved communities	20

## VII. Clinical Training Sites

This year’s survey expanded questions on clinical training sites to include questions about preceptors and patient volume. The majority of respondents indicated being “very or moderately concerned” with the number of clinical training sites (73%) and with the supply of qualified preceptors (60%); however, only 30% indicated being “very or moderately concerned” with the volume or diversity of patients. (Table 4A)

**Table 4A: Difficulties Related to with Training Clinical Sites**

	Very Concerned		Moderately Concerned		Not Concerned	
	#	%	#	%	#	%
Supply of Qualified Preceptors	13	11%	73	62%	31	26%
Number of Clinical Training Sites	12	10%	58	50%	46	39%
Volume or Diversity of Patients	3	3%	32	27%	82	70%

Respondents were also asked to indicate if they had any difficulties with their existing training sites regarding payment pressures, competition for training sites, and physician volunteers. Of the 126 schools who responded to the survey, 32% reported receiving pressure from existing clinical training sites regarding payment for student rotations, 24% reported competition from other healthcare professionals (NPs/PAs), 17% reported competition from off-shore medical schools, and 26% reported competition from osteopathic schools. (Table 4B)

**Table 4B: Specific Difficulties with Clinical Training Sites**

<b>Have you recently experienced any of the following difficulties with your existing clinical training sites?</b>		
	#	%
Pressure from existing clinical training sites regarding payment (s) for student rotations	40	32%
Competition from osteopathic medical schools for clinical training sites	33	26%
Competition from other healthcare professionals (ex: NPs, PAs)	30	24%
Competition from off shore medical schools for clinical training sites	22	17%
Difficulty in replacing retired physician volunteers	22	17%
High turnover among volunteer physicians	14	11%

## VIII. Economic Recession

In 2009, with economic conditions weakening, a question was added regarding concerns with maintaining current enrollment or continuing planned increases in enrollment. Of the 117 schools who responded to the question, the majority (61%) were “not concerned”, 28% reported being “moderately concerned”, and 11% reported being “very concerned” regarding the ability to maintain or increase enrollment in light of the recent economic recession. (Table 5)

**Table 5: Concern that economic recession will limit ability to keep current or increase enrollment**

	#	%
Moderately Concerned	33	28%
Very Concerned	13	11%
Not concerned	71	61%
<b>Total</b>	<b>117</b>	<b>100%</b>

## IX. Primary Care

With increasing concerns regarding primary care shortages being extensively reported in the news, the 2009 survey included a question on efforts to encourage student interest in primary care. Of the 126 schools who responded to the survey, 49% affirmed current or future plans to institute programs or policies to encourage student interest in primary care. Of those 62 schools, 71% reported new or expanded extra-curricular opportunities, 44% reported modified clinical rotations, 29% reported changed pre-clinical curriculum, and 11% reported changed admission criteria. (Table 6)

**Table 6: Activities to Encourage Primary Care**

<b>“Have you recently instituted or are you planning any specific new programs or policies designed to encourage student interest in primary care?”</b>		
	#	%
Yes	62	49%
No	54	43%
<b>If yes, check all that apply*</b>		
New or expanded extra-curricular opportunities	44	71%
Modified clinical rotations	27	44%
Changed pre-clinical curriculum	18	29%
Changed admission criteria	7	11%
Other	20	32%

\*Percent based on “yes” responses

## X. Osteopathic Enrollment Projections

The American Association of Osteopathic Colleges of Medicine (AACOM) uses a similar survey as the AAMC to collect their future enrollment figures. The 2009 first year enrollment at osteopathic schools (5104) was an increase of 65.8% from the baseline year of 2002. Further growth is expected in 2010; and by 2014 they expect to reach a first year enrollment of 6,271, a 103.7% increase from 2001.<sup>6</sup> (Table 7)

**Table 7: Combined Medical and Osteopathic Enrollment Growth and Increase above 2002**

	2002	2009			2014		
	Enrollment	Enrollment	# increase	% increase	Enrollment	# increase	% increase
MD	16488	18390	1902	11.5%	20281	3793	23%
DO	3079	5104	2025	65.8%	6271	3192	103.7%
Total	19567	23494	3927	20.1%	26552	6985	35.7%

## XI. Discussion: Enrollment Growth, GME and the Physician Supply

Medical school enrollment is continuing to increase steadily, despite the recession. Enrollment has already increased by 11.5% since 2002, and the nation is on track to see a 30% increase in medical school enrollment by 2018. Two thirds of the growth is from the original 125 medical schools, and the balance comes from the 7 schools that have received preliminary accreditation since 2002, as well as the 8 schools that are in the beginning stages of LCME accreditation. In addition, osteopathic growth continues at a rapid pace. The net result of these expansion efforts is that graduates of US medical and osteopathic schools will be rising in the range of 7,000 over the next decade. This results in a growth rate of approximately 2.5% per year. However, growth in entry positions in graduate medical education is not keeping pace.

Based on the preference of residency programs for US MDs as evidenced by the results of the National Residency Match Program (NRMP), US medical school graduates are likely to be preferred over other residency applicants. Given that there are more than 9,000 non-US seniors entering ACGME accredited GME each year (primarily international graduates and osteopaths), there should be sufficient training opportunities to accommodate the growing number of US MD seniors. Nevertheless, the NRMP is likely to continue to become more competitive even for US MDs in the future and some US MDs will have a difficult time obtaining a residency position. Graduates of foreign medical schools are likely to face the greatest difficulty in obtaining a training position and their numbers in training are likely to drop.

Given the requirement for all physicians to complete some accredited US residency training to become licensed, increasing entry positions in graduate medical education (GME) is the key factor in increasing the inflow of new physicians – the ultimate goal of these medical school expansion efforts. An analysis by the AAMC Center for Workforce Studies found that GME entry positions have been growing at less than 1% per year. While this will allow for some growth in physician supply, it will not be sufficient to meet the expected increase in demand and need for physician services.

<sup>6</sup> [www.aacom.org/resources/bookstore/documents/growthrpt2009.pdf](http://www.aacom.org/resources/bookstore/documents/growthrpt2009.pdf)

## Appendix: Schools in LCME Accreditation Process

<b>Schools With Preliminary LCME Accreditation</b>
Florida International University Wertheim College of Medicine (Florida)
Texas Tech University Health Sciences Center Paul L. Foster School of Medicine (Texas)
The Commonwealth Medical College (Pennsylvania)
University of Central Florida College of Medicine (Florida)
Virginia Tech Carilion School of Medicine (Virginia)
Oakland University William Beaumont School of Medicine (Michigan)
San Juan Bautista School of Medicine (Puerto Rico)
<b>LCME Candidate Schools</b>
Hofstra University School of Medicine (New York)
<b>LCME Applicant Schools</b>
University of California Riverside (California)
Central Michigan University School of Medicine (Michigan)
Cooper Medical School of Rowan University (New Jersey)
Touro University College of Medicine (New Jersey)
University of South Carolina School of Medicine, Greenville (South Carolina)
Palm Beach Medical College (Florida)
Western Michigan University (Michigan)