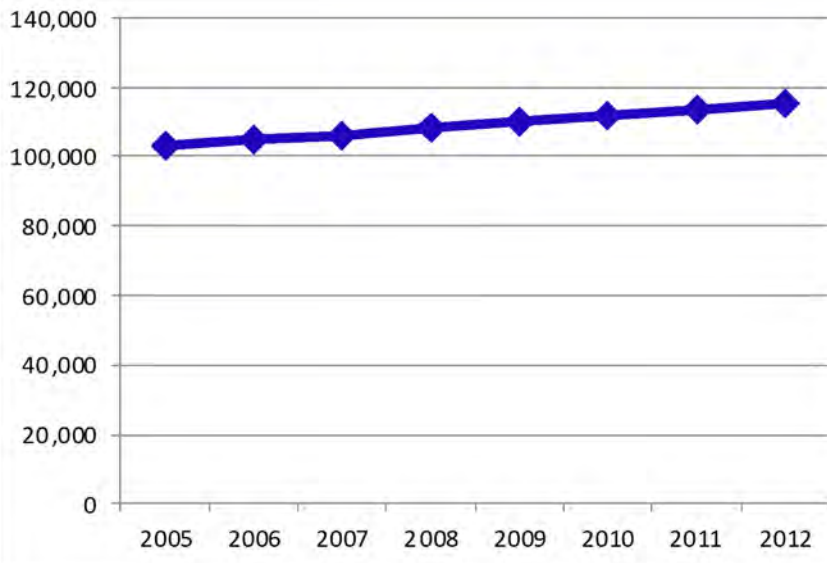




The Impact of New York's Graduate Medical Education System

New York GME programs have trained 17% of the nation's physicians

Number of Physicians in Training in the United States



Sources: Table 1 in Brotherton SE and Etzel SI. "Appendix II: Graduate Medical Education." *Journal of the American Medical Association* 2013;310(21): 2328-2346. Table 1 in Brotherton SE and Etzel SI. "Appendix II: Graduate Medical Education." *Journal of the American Medical Association* 2011;306(9): 1015-1030.

Graduate Medical Education in the United States

In order to practice medicine in the United States, physicians must complete a program of training after they obtain an MD or DO degree from an accredited medical school or graduate from an international medical school. This additional period of time is referred to as residency, or graduate medical education (GME), and can last from three to five years. Many physicians also elect to continue training in a fellowship program for a particular specialty or subspecialty, which can last for several additional years beyond residency training.

During graduate medical education, physicians see and treat patients under the supervision of more experienced physicians. Their training typically takes place in hospitals in residency programs accredited by the Accreditation Council for Graduate Medical Education (ACGME).

Physicians in training are an integral part of the workforce at these hospitals.¹

In 2012, there were more than 115,000 physicians training in more than 9,300 ACGME-accredited and combined GME programs in the United States.² It has been forecast that the supply of physicians will not be adequate to meet the requirements of the population in the future. The projected gap has widened with the expansion of insurance coverage under the Affordable Care Act.³ However, with the fundamental changes to the way health care will need to be delivered in order to meet the goals of the Triple Aim (improving the patient experience of care, improving the health of populations, and reducing the per capita cost of health care),⁴ the

Number of Physicians in Graduate Medical Education Programs in Selected States, 2012

New York	15,904	13.8
California	9,780	8.5
Pennsylvania	7,784	6.8
Texas	7,390	6.4
Illinois	5,969	5.2
Ohio	5,713	5.0
Massachusetts	5,564	4.8
Michigan	4,884	4.2

Source: Table 4 in Brotherton SE and Etzel SI. "Appendix II: Graduate Medical Education." *Journal of the American Medical Association* 2013;310(21): 2328-2346.

Graduate Medical Education in New York, 2012

Specialty	Number of GME Programs in NY	Number of Physicians in Training in NY
Primary Care	114	6,161
<i>Family medicine</i>	30	615
<i>Internal medicine</i>	54	4,260
<i>Pediatrics</i>	30	1,286
Obstetrics and Gynecology	37	661
Internal Medicine Specialties	242	1,604
<i>Cardiology</i>	55	419
<i>Critical care medicine</i>	5	49
<i>Endocrinology</i>	17	75
<i>Gastroenterology</i>	28	201
<i>Geriatrics</i>	19	63
<i>Infectious disease</i>	19	108
<i>Hematology/Oncology</i>	33	279
<i>Nephrology</i>	26	143
<i>Pulmonary disease and critical care</i>	27	221
<i>Rheumatology</i>	13	46
General Surgery	28	973
Surgical Specialties	169	1,272
<i>Ophthalmology</i>	18	179
<i>Otolaryngology</i>	11	159
<i>Neurological surgery</i>	11	118
<i>Orthopedic surgery</i>	50	482
<i>Plastic surgery</i>	13	62
<i>Thoracic surgery</i>	11	29
<i>Urology</i>	18	158
<i>Other surgical specialties</i>	37	85
Facility Based	170	1,852
<i>Anesthesiology</i>	43	828
<i>Pathology</i>	47	318
<i>Radiology</i>	80	706
Psychiatry	79	1,038
<i>Psychiatry</i>	62	892
<i>Child and adolescent psychiatry</i>	17	146
Other	280	2,332
<i>Allergy and immunology</i>	8	37
<i>Dermatology</i>	22	160
<i>Emergency medicine</i>	31	858
<i>Neurology</i>	50	360
<i>Pediatric subspecialties</i>	98	408
<i>Physical medicine and rehabilitation</i>	15	221
<i>Other specialty</i>	56	288

exact number of physicians required to serve the population remains somewhat uncertain.

The federal government is the largest single supporter of graduate medical education, contributing \$9.5 billion in Medicare funds, and \$2 billion in Medicaid matching dollars.⁵ The federal government also provides funding through a number of other agencies including the Department of Defense, Department of Veterans Affairs, and the Health Resources and Services Administration.

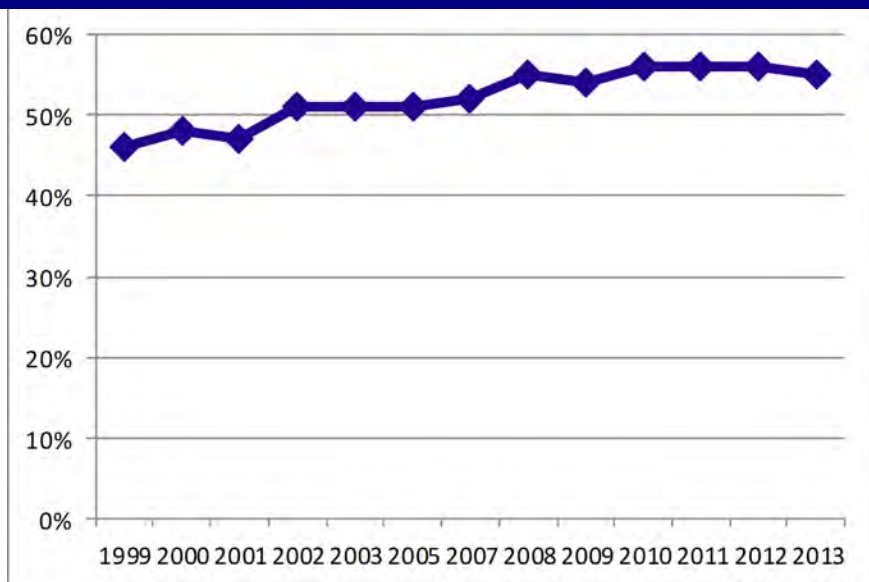
New York's Graduate Medical Education Infrastructure

New York has the largest and most well-established graduate medical education infrastructure in the United States. In 2012, there were more than 15,900 physicians training (13.8 physicians per 100,000 population) in more than 1,100 accredited residency and fellowship programs in New York.⁶ More than 6,000 physicians are training in primary care specialties (family medicine, general internal medicine, and general pediatrics) in 114 primary care training programs in the state. Other specialties with more than 600 physicians in training include general surgery (973), psychiatry (892), emergency medicine (858), anesthesiology (828), radiology (706), and obstetrics and gynecology (661). Annually, more than \$3 billion is spent on graduate medical education in New York from federal, state, and private payer sources.⁷

Each year, approximately 5,000 physicians complete training in one of these programs. In 2013, 55% of the physicians who completed a graduate medical education program in New York left the state to practice.⁸ In the past, a larger percentage of physicians who completed training in New York remained in the state to practice. Over the past decade, there has been a gradual trend toward more physicians leaving New York after training.⁹ As such, New York is an important and growing source of physicians for the nation.

Today, of the more than 980,000 active physicians in the United States, 164,421 (17%) received graduate medical training in New York. Outside of

Percentage of Physicians who Leave New York After Completing Graduate Medical Training, 1999-2013



Source: Survey of Residents and Fellows Completing Training in New York, 1999-2013. Survey was not conducted in 2004 or 2006.

New York, in 17 states, more than 10% of active physicians completed their graduate medical training in New York. In those 17 states, the percentage ranged from 10.3% in Arizona to 40.7% in New Jersey. States in the New England region, most states along the Eastern Seaboard, and states in the Pacific Southwest had the greatest concentrations of active physicians who received graduate medical training in New York.

Regional Analysis

New England: In every state in New England, more than 13% of currently active physicians received graduate medical training in New York. Connecticut had the largest percentage (27.7%), while Maine had the smallest percentage (13.6%). In sum, more than 17% of physicians in the region received graduate medical training in New York.

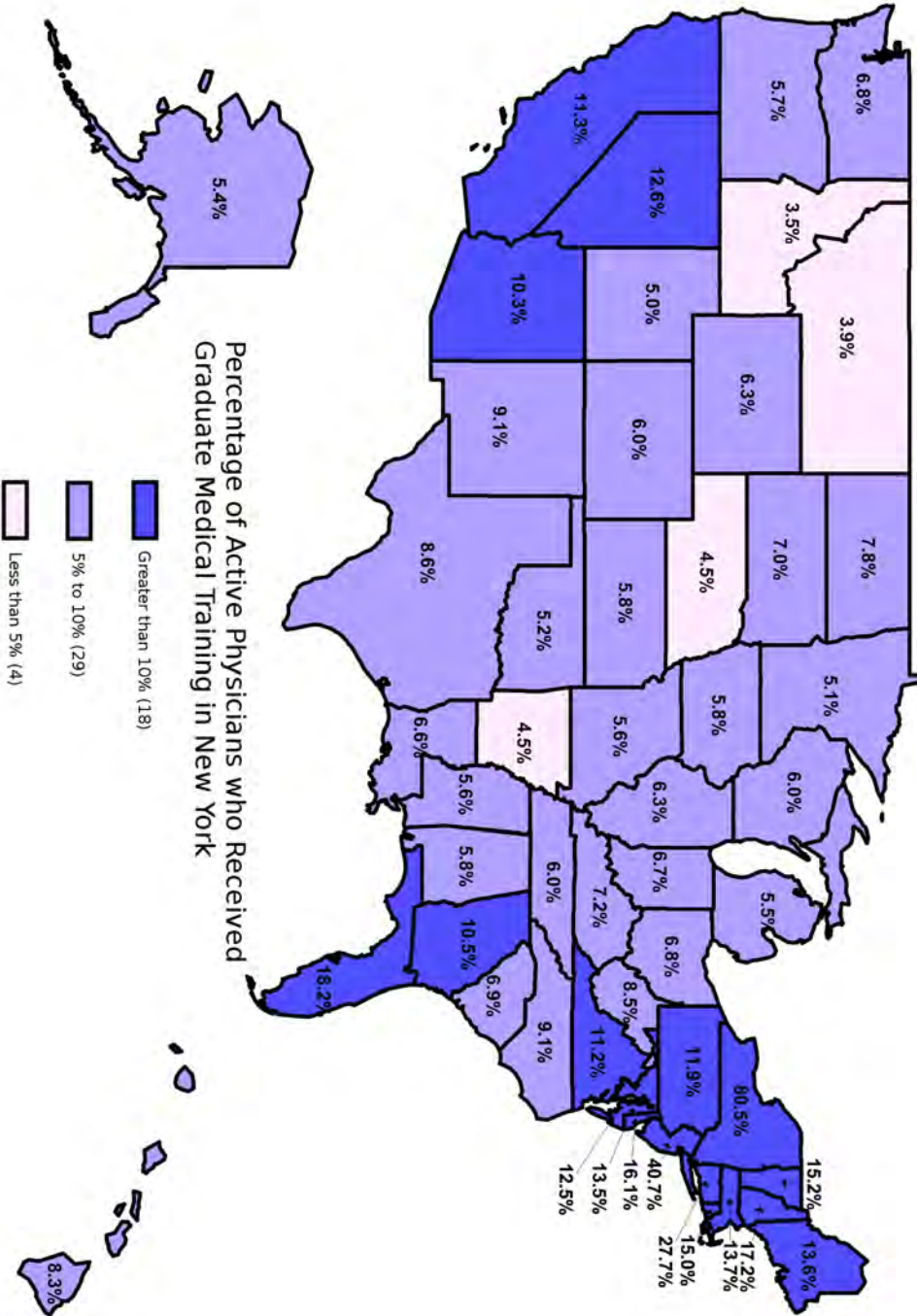
Active Physicians Trained in New York, 2014

(In states with more than 10% of active physicians who received graduate medical training in New York)

State	Active Physicians	Active Physicians who Received Graduate Medical Training	Percent that Received Graduate Medical Training
1 New York	84,083	67,680	80.5%
2 New Jersey	31,320	12,738	40.7%
3 Connecticut	14,739	4,084	27.7%
4 Florida	55,108	10,044	18.2%
5 New Hampshire	4,352	749	17.2%
6 Delaware	2,635	423	16.1%
7 Vermont	2,548	388	15.2%
8 Rhode Island	4,516	676	15.0%
9 Massachusetts	34,649	4,733	13.7%
10 Maine	4,527	614	13.6%
11 Maryland	26,536	3,574	13.5%
12 Nevada	5,937	747	12.6%
13 District of Columbia	5,467	684	12.5%
14 Pennsylvania	47,080	5,603	11.9%
15 California	112,895	12,741	11.3%
16 Virginia	24,836	2,781	11.2%
17 Georgia	24,676	2,600	10.5%
18 Arizona	17,302	1,774	10.3%

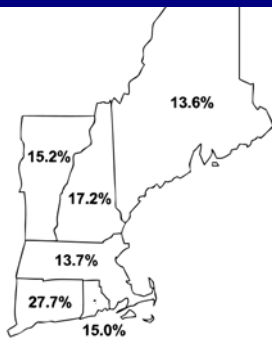
Source:AMA Masterfile of Physicians, extracted June 4, 2014.

Active Physicians Trained in New York, 2014



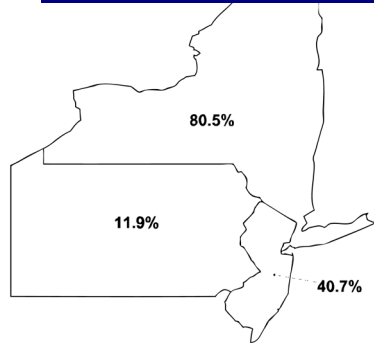
Source: AMA Masterfile of Physicians, extracted June 4, 2014.

New England



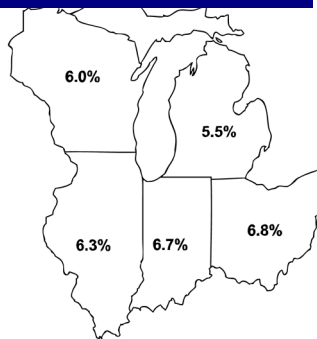
Middle Atlantic: In every state in the Middle Atlantic, more than 11% of currently active physicians received graduate medical training in New York. Unsurprisingly, New York had the largest percentage (80.5%), while Pennsylvania had the smallest percentage (11.9%). In sum, more than 50% of physicians in the region received graduate medical training in New York.

Middle Atlantic



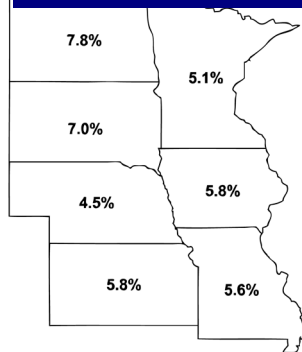
East North Central: In every state in the East North Central region, more than 5% of currently active physicians received graduate medical training in New York. Ohio had the largest percentage (6.8%), while Michigan had the smallest percentage (5.5%). In sum, approximately 6% of physicians in the region received graduate medical training in New York.

East North Central



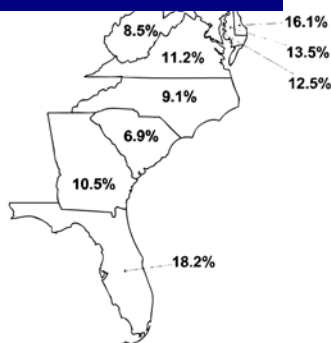
West North Central: In every state in the West North Central region, more than 4% of currently active physicians received graduate medical training in New York. North Dakota had the largest percentage (7.8%), while Nebraska had the smallest percentage (4.5%). In sum, approximately 6% of physicians in the region received graduate medical training in New York.

West North Central



South Atlantic: In every state in the South Atlantic region, more than 6% of currently active physicians received graduate medical training in New York. Florida had the largest percentage (18.2%), while South Carolina had the smallest percentage (6.9%). In sum, approximately 13% of physicians in the region received graduate medical training in New York.

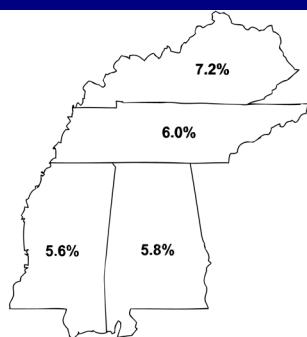
South Atlantic



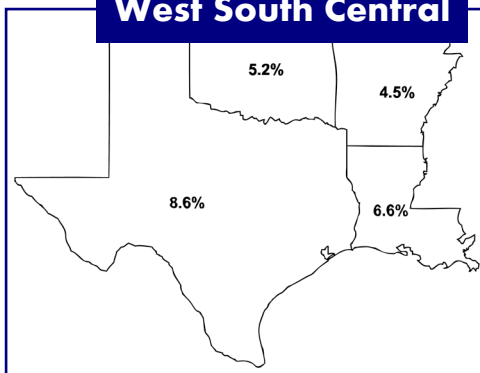
East South Central: In every state in the East South Central region, more than 5% of currently active physicians received graduate medical training in New York. Kentucky had the largest percentage (7.2%), while Mississippi had the smallest percentage (5.6%). In sum, approximately 6% of physicians in the region received graduate medical training in New York.

West South Central: In every state in the West South Central region, more than 4% of currently active physicians received graduate medical training in New York. Texas had the largest percentage (8.6%), while Arkansas had the smallest

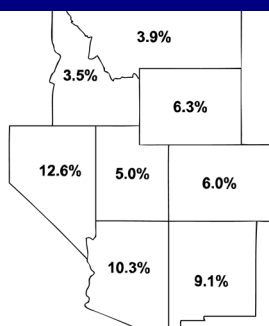
East South Central



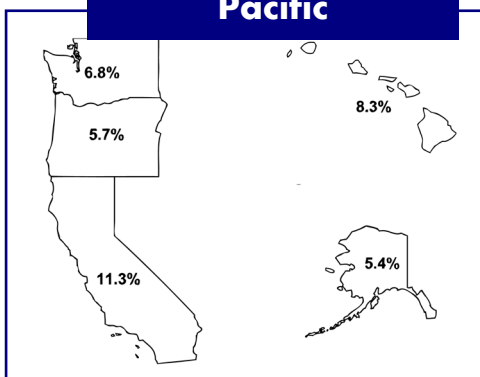
West South Central



Mountain



Pacific



percentage (4.5%). In sum, approximately 8% of physicians in the region received graduate medical training in New York.

Mountain: In every state in the Mountain region, more than 3% of currently active physicians received graduate medical training in New York. The percentages in each state varied widely. Nevada had the largest percentage (12.6%), while Idaho had the smallest percentage (3.5%). In sum, approximately 8% of physicians in the region received graduate medical training in New York.

Pacific: In every state in the Pacific region, more than 5% of currently active physicians received graduate medical training in New York. California had the largest percentage (11.3%), while Alaska had the smallest percentage (5.4%). In sum, approximately 10% of physicians in the region received graduate medical training in New York.

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Center for Health Workforce Studies

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