



# Graduate Medical Education Primer 2012

**Second Edition**  
(updated: April 17, 2012)

## **Key Definitions & Acronyms**

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**Fellows:** Physicians who have completed a residency and are pursuing further training in a subspecialty through a fellow-ship program accredited by the ACGME.

**International medical graduate (IMG):** An individual who graduated from a medical school outside of the United States or Puerto Rico is considered an international medical graduate (IMG). This includes U.S. citizens who completed their medical education outside the United States or Puerto Rico.

**J Visas:** J visas (J-1 or J-2) are exchange visitor visas for foreign medical graduates who wish to pursue graduate medical training in the U.S. The visas allow holders to remain in the U.S. until their studies are completed. At the end of their studies, holders are expected to return to their home countries for two years before applying for a permanent visa in the United States. A J-1 Visa Waiver waives the two year home residency requirement and allows a physician to stay in the country to practice in a federally designated Health Professional Shortage Area (HPSA) or Medically Underserved Area (MUA) if sponsored by an interested U.S. government agency. State government agencies may also sponsor J-1 physician waiver requests that are called Conrad State 30 programs.

**Medical school:** A school that confers the Doctor of Medicine (M.D.) degree and is accredited by the Liaison Committee on Medical Education.

**Osteopathic school:** A school that confers the Doctor of Osteopathy (D.O.) degree and is accredited by the American Osteopathic Association.

**Primary care physicians:** Residents and fellows are counted as primary care residents and fellows if they are in one of the following programs: family medicine, general internal medicine, general internal medicine/pediatrics, geriatrics, obstetrics and gynecology (including sub-specialists), and general pediatrics.

**Residents:** Physicians who have completed undergraduate medical education and are at any level of training in an ACGME- or AOA-accredited training program.

**Respondents:** Physicians in New Jersey who are completing a residency or fellowship training program in June.

**USMG:** Physicians who received their Doctor of Medicine (M.D.) degree from a medical school in the United States or Puerto Rico. Graduates of Canadian medical schools are also counted as USMGs.

### **Commonly Used Acronyms**

AAMC	Association of American Medical Colleges
ACGME	Accreditation Council for Graduate Medical Education
AMA	American Medical Association
AOA	American Osteopathic Association
DO	Doctor of Osteopathy
GME	Graduate Medical Education
HPSA	Health Professional Shortage Area
IMG	International Medical Graduate
MD	Doctor of Medicine
NJCTH	New Jersey Council of Teaching Hospitals
UGME	Under Graduate Medical Education

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## **Preface**

**The responsibility to produce compassionate, scientifically knowledgeable, and skillful physicians is not only the domain of the medical school and residency programs. It is also the collective responsibility of society as we actively participate in the education of future physicians through our roles as patients and concerned citizens. This rigorous and comprehensive education and training process has produced some of the world's most talented physicians. Ultimately, the quality of graduate medical education (GME) links directly to the quality of the health care delivery system. Innovation and reforms must continually be addressed within both infrastructures to ensure they continue to excel. The GME enterprise depends on society not only for financial support but also for moral support.**

**The New Jersey Council of Teaching Hospitals has created this *Graduate Medical Education Primer*, at the request of legislators and commissioners, to demystify and simply define New Jersey's medical education system. It is hoped that this will become a reference tool as debate and discussion take place on issues pertinent to GME.**

84% of New Jersey's  
'Top Docs' are on the staff of a  
teaching hospital.

Source: NJ Monthly Magazine

## **New Jersey's Medical Schools – “Creating” a Physician**

Medical education is the foundation and future of our nation's health care system. It is a complex, collaborative process that requires substantial resources – both intellectual and financial.

New Jersey's medical schools and teaching hospitals are resources that provide essential benefits to the public through four intertwined missions:

- Educating and training tomorrow's doctors
- Conducting research to find tomorrow's cures
- Providing the most advanced care for millions of New Jerseyans
- Delivering services that are vital to local communities, including serving as safety net institutions for the uninsured and underinsured

Today, to become a physician, the education and training process takes many years. A physician's education officially begins with medical school, typically four years in length. Prior to medical school the student must complete a four year bachelor's degree program at a college or university.

Since its inception in 1960, UMDNJ has trained:

11,831	Allopathic* Medical Students
<u>1,978</u>	<u>Osteopathic* Medical Students</u>
13,809	Total Medical Students

\*Definitions:

Allopathic Physician - Doctor of Medicine (M.D.)

Osteopathic Physician - Doctor of Osteopathy (D.O.)

## **Sample Residency Lengths**

Following are residency lengths for selected specialties, after eight years of college and medical school:

- Family Medicine – 3 years
- Emergency Medicine – 3 or 4 years
- General Internal Medicine – 3 years
- Internal Med. Subspecialties - 5 or 6 years
- Pediatrics – 3 years
- Pediatric Subspecialties – 6 years
- Obstetrics and Gynecology – 4 years
- Pathology – 4 years
- Anesthesiology – 4 years
- Dermatology – 4 years
- Neurology – 4 years
- Ophthalmology – 4 years
- Psychiatry – 4 years
- Radiology – 4 years
- Orthopaedic surgery – 5 years
- Otolaryngology – 5 years
- Urology 5 years
- Surgery – 5 years
- Surgical Subspecialties – 6 to 9 years

Graduate medical education (GME), the training of physicians after medical school and before independent practice, ranges in length from three years for primary care specialties, to nine years for certain surgical subspecialties.

## **Accreditation and Oversight Organizations**

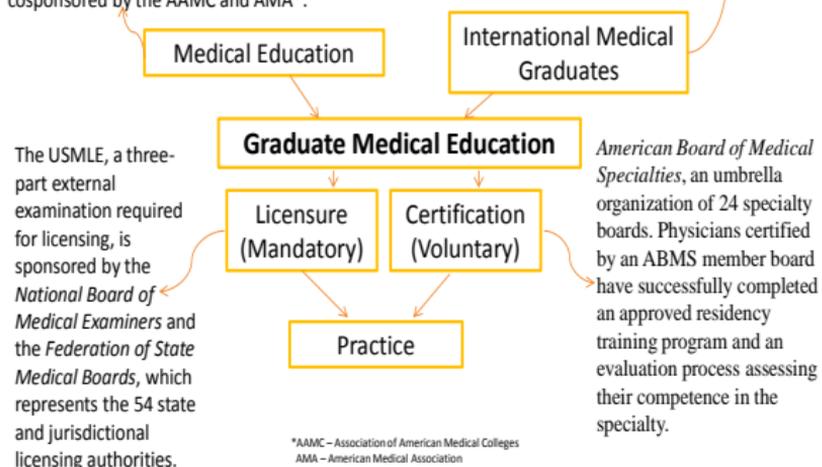
Numerous accreditation and oversight entities ensure that both the medical school and GME curriculum meet the highest standards in the world. Organizations such as the Liaison Committee on Medical Education (LCME), which accredits allopathic medical schools; and the Accreditation Council on Graduate Medical Education (ACGME), which accredits allopathic graduate training programs, publish the rules, and core competency standards, as well as the accreditation requirements which must be followed by all teaching facilities. There are separate comparable organizations that establish rules, standards, and accreditation requirements for osteopathic medical education and osteopathic GME, including the Commission on Osteopathic College Accreditation (COCA) and the American Osteopathic Association (AOA). Also, osteopathic GME is organized into Osteopathic Postdoctoral Training Institutions (OPTIs), which includes at least one osteopathic medical school and at least one hospital. Other organizations, such as the Medicare Payment Advisory Commission (MedPAC) and the Council on Graduate Medical Education (COGME) propose both operational and financial reforms, which are often used by federal agencies for policy guidance, and have significant implications for GME programs.

The following graph depicts the “medical education process” for allopathic physicians and the accreditation organizations that oversee these programs. As stated above, the osteopathic medical education process is similar, but has different accreditation organizations that direct all undergraduate and graduate programs. The other dissimilarity with osteopathic programs is that they do not admit International Medical Graduates (IMGs).

## Organizations Involved in Accreditation of Medical Educational Programs and Licensure and Certification of *Allopathic* Physicians

Four-year program offered at 131 U.S. medical schools. Medical education programs accredited by the Liaison Committee on Medical Education, cosponsored by the AAMC and AMA\*.

Certified for entrance into a U.S. residency program by the Educational Commission for Foreign Medical Graduates (ECFMG)



Before one can grasp the key components which create New Jersey’s GME structure, one must gain a basic understanding of the undergraduate medical education infrastructure in place throughout New Jersey.

### New Jersey’s Undergraduate Medical Education Infrastructure

Medical schools teach medical students a broad range of subjects (anatomy, biochemistry, genetics, etc.) while also ensuring they acquire problem-solving, multi-disciplinary teamwork, and communication skills. In the third and fourth years, students rotate through “clerkships” in both primary care and specialty medicine, applying what they have learned in the classroom to supervised experiences with real patients in hospital and outpatient settings.

## **Curriculum Highlights**

Recent educational reforms in U.S. medical schools have created an environment for positive change. Integrated curriculum structures which include; interdisciplinary teaching, interdisciplinary faculty collaboration, building curricular links and sequencing curricular content have emerged. The following outlines common topics for this training. However, there are a wide variety of course formats and approaches. The curriculum for osteopathic medical students includes content comparable to that of allopathic students, but also includes additional training in the neuro-musculoskeletal system, as well as osteopathic philosophy, principles, and practice throughout the four years of medical school.

### **Year 1 – Normal structure and function of body tissues**

- First semester – biochemistry, cell biology, medical genetics, gross anatomy
- Second semester – structure and function of human organ systems, neuroscience, immunology

### **Year 2 – Abnormal structure and function**

- First semester – infectious diseases, pharmacology, pathology
- Second semester – clinical diagnoses and therapeutics, health law

### **Year 3 and 4 – The “clerkship” years**

- Generalist core – experience in family and community medicine, general and ambulatory care, internal medicine, obstetrics and gynecology, pediatrics, psychiatry, surgery, research, and other interests
- Other requirements – neurology, psychiatry, subspecialty segment (anesthesia, dermatology, orthopaedics, urology, radiology, ophthalmology, otolaryngology), continuity of care segments and electives.

During and after their education, allopathic medical students must take the United States Medical Licensing Examination (USMLE). Two tests and an evaluation of clinical skills are phased in throughout the medical student's education. Osteopathic students take a similar series of tests: the Comprehensive Osteopathic Medical Licensing Examination (COMLEX). All medical students must pass these tests before graduating and being accepted into a residency program. A third test, which must be passed for licensure, is taken during residency.

New Jersey currently has three in-states, public medical schools which have a total class size of 1966, graduating approximately 500 per year. All three are part of UMDNJ, although this may change over the next few of years. In July 2012, a fourth medical school, Cooper Medical School of Rowan University will begin operation. In addition to the New Jersey medical schools, numerous New York, Pennsylvania, and Caribbean medical schools also send their third and fourth year medical students for clinical rotations ("clerkships") to New Jersey's teaching hospitals.

**Currently, New Jersey's medical schools include:**

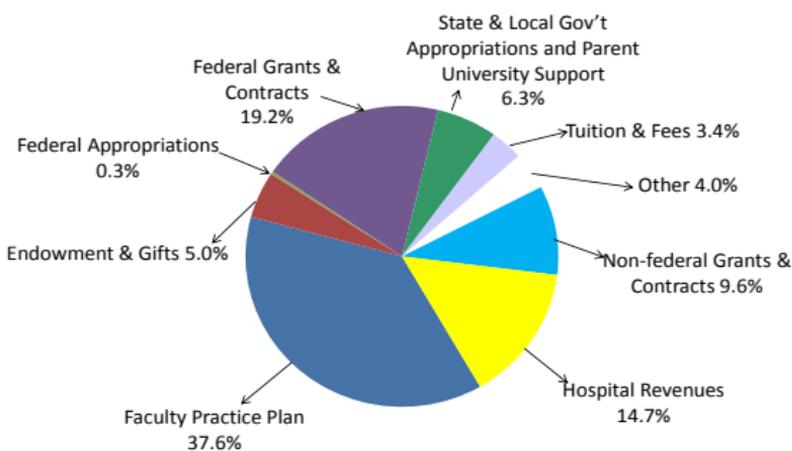
- **New Jersey Medical School in Newark (754 total medical students with 189 graduates per year)**
- **Robert Wood Johnson Medical School in New Brunswick (666 total medical students with 167 graduates per year)**
- **School of Osteopathic Medicine at Stratford (546 total medical students with 150 graduates per year)**
- **Cooper Medical School of Rowan University (50 medical students beginning 2012)**

Despite these multiple sources of future physicians, New Jersey has a lower than average training capacity when benchmarking medical school students to New Jersey's people, compared to other states. The national average is 27.8 medical students

per 100,000 people. New Jersey's ratio is 20.2 per 100,000 people. The Mid-Atlantic ratio is 40.5 per 100,000 people.

New Jersey's retention of medical student graduates that move into an in-state residency program is also lower than the U.S. average at 35%, while the national average is 39%.

## Medical School Funding



Source: LCME Part I-A Annual Financial Questionnaire, FY2008 Data, Updated 6/09

### Important to Remember:

- Medical Students pay between \$50,000 to \$65,000 annually for their tuition.
- Tuition does not cover all the costs to fund a medical degree.
- On average, tuition and fees account for only 3.4 percent of a medical school's annual revenues.
- This inherently means that medical schools must derive funds from other sources.



Source: AAMC

## The Transition from Medical Student to Resident

Medical students make important career decisions as they approach their final medical school year. There are two separate match processes, one for allopathic residency programs and one for osteopathic residency programs. Medical students choose the

specialty in which they want to practice and apply to GME programs, referred to as residencies.

Access to graduate medical training involves a competitive process known as “the Match.” Approximately 20,000 senior medical students across the U.S. begin the application process at the beginning of their fourth and final year in medical school. Medical students apply through an electronic application system to one or several of the 3,700 residency programs. Residency program directors review the numerous applications and invite selected candidates to be interviewed, usually between October and February each year. After the interview period is complete, students submit a “rank-order list” to a national centralized matching service operated by the National Residency Matching Program (NRMP) or AOA by a specified date. Similarly, the residency program directors submit a list of their preferred applicants in “rank-order choice.” The process is blinded, so neither applicant nor program director will see each other’s list. The two parties’ lists are combined by the NRMP or AOA computer programs, which creates a proxy for optimal matches of residents to programs. On the third Friday of March, the results for the allopathic (M.D.) match are announced during Match Day ceremonies at all of the nation’s 155 U.S. medical schools. By entering the NRMP Match system, applicants are contractually obligated to go to the residency program at the institution to which they were matched. The same applies to the programs.

Similarly, the osteopathic match process occurs with senior osteopathic medical students applying to osteopathic GME programs across the country. The osteopathic match results are announced in mid-February. Osteopathic medical students may also participate in the allopathic (M.D.) match.

Frequently asked questions: Why don’t New Jersey’s GME programs enroll all New Jersey’s medical school graduates into our residency programs? Wouldn’t this influence a higher in-state

retention rate after they complete their residency programs? The answers are yes and no.

The “yes” data confirms that New Jersey’s medical students who graduated from a New Jersey high school and went to a medical school and residency program within the state are 43% more likely to establish their clinical practice in New Jersey post graduation.

The “no” is outlined in the above Match description process. There are many variables that are not within a GME program director’s control as to who will be “matched” to their upcoming resident class. The medical student has much to say as to where he/she wants to continue his or her medical education journey. And, bottom-line, the number of medical students graduating annually in the state would not fill the resident positions that become available every year.

**New Jersey’s Annual Graduating  
Class of 2011 Statistics:**

- Graduating Medical Students: 506
- Graduating Residents : 820 +/-

Another issue that is frequently discussed is “Why do so many fourth year medical students choose a non-primary care specialty for their residency of choice?”

The inequity in reimbursement payments for services provided by a primary care physician versus a specialty physician can be a key influencer and major disincentive for medical students as they consider becoming a primary care physician. Primary care (family medicine, general internal medicine, pediatrics, geriatrics, and OB-Gyn) has long been at a disadvantage in relation to specialty medicine, not only because of income differentials

but also because of perceived greater professional satisfaction.

When one considers the personal cost of medical education, and the amount of debt a new physician carries, it is understandable why they choose higher paying specialties. In New Jersey, 25% of the 2011 graduating class owe from \$150,000 to \$199,999; 13% owe from \$200,000 and \$249,999; and 17% owe over \$250,000.

Beyond debt, other factors are associated with students choosing or not choosing a career in primary care. In medical school, exposure to rural or inner-city training experiences, positive primary care role models, and participation in primary care interest group events provides affirmative influences on a medical student's choice of a career in primary care. Although more education is occurring in outpatient settings, historically the education of most medical students has taken place in hospitals where they are more likely to interact with specialists who will discuss the rewards of that particular specialty versus the value of a primary care physician. Additional factors relate to the criteria used in a medical school's admission process. For example, rural birth and interest in serving underserved or minority populations may not be considered, but significantly increases the likelihood of a student choosing primary care.

### **New Jersey's Graduate Medical Education Programs**

Residency is the next level of training after medical school, which provides in-depth training within a specific branch of medicine. During this phase of training, called GME, a resident practices medicine under the supervision of fully licensed, teaching physicians, usually in a hospital or an outpatient setting. Supervising physicians train and oversee residents by providing class room discussions, making rounds in inpatient units and outpatient clinics, examining specific patients and discussing their course of treatment, and guiding residents

through simple and complex procedures. Completion of a residency leads to eligibility for board certification.

## ACGME Required Competencies

*(Allopathic Physicians – M.D.)*

- **Patient Care** that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health
- **Medical Knowledge** about established and evolving biomedical, clinical, and cognate (e.g., epidemiological and social-behavioral) sciences and the application of this knowledge to patient care
- **Practice-Based Learning and Improvement** that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care
- **Interpersonal and Communication Skills** that result in effective information exchange and teaming with patients, their families, and other health professionals
- **Professionalism**, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population
- **Systems-Based Practice**, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Source: AAMC

## AOA Core Competencies

*(Osteopathic Physicians – D.O.)*

In addition to the above Allopathic core competencies, osteopathic physicians must achieve:

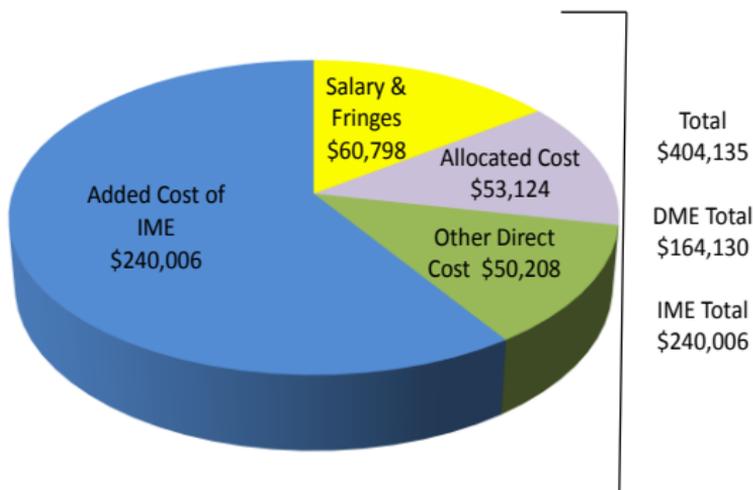
- **Osteopathic Philosophy, Principles and Manipulative Treatment** appropriate to their specialty. The educational goal is to train a skilled and competent osteopathic practitioner who remains dedicated to life-long learning and to practice habits in osteopathic philosophy and manipulative medicine.
- **Medical Knowledge and its Application into Osteopathic Medical Practice** Residents are expected to demonstrate and apply knowledge of accepted standards of clinical medicine in their respective specialty area, remain current with new developments in medicine, and participate in life-long learning activities, including research
- **Osteopathic Patient Care** Residents must demonstrate the ability to effectively treat patients, provide medical care that incorporates the osteopathic philosophy, patient empathy, awareness of behavioral issues, the incorporation of preventive medicine, and health promotion.

Source: American College of Osteopathic Internists (ACOI)

New Jersey's 40 academic medical centers and teaching hospitals operate 200 allopathic (M.D.) programs which have 2687 resident and fellow positions. There are 55 primary care programs with 1432 primary care resident positions, and 145 specialty programs with 1286 specialists' resident positions. Six (6) of the forty (40) academic medical centers also partner with the School of Osteopathic Medicine (SOM) supporting 35 osteopathic programs: 9 primary care and 26 specialty care programs training a total of 315 residents. New

Jersey's allopathic and osteopathic GME programs graduate from 816 to 825 physicians each year.

### Average Cost Per Resident in New Jersey



### GME Changes



- More inpatients with severe illness
- More ambulatory experience
- More emphasis on evidence-based medicine
- More emphasis on decision-making skills
- Impact of information technology
- National limits on residents' hours
- More emphasis on professionalism
- More emphasis on patient safety and systems in practice

Source: AAMC

As with the medical school ratios, New Jersey's resident training capacity lags behind the national and mid-Atlantic ratios. New Jersey's ratio is 31 residents to 100,000 people. The U.S. and mid-Atlantic ratios are 36 and 63 to 100,000 people respectively.

After completion of a residency program, many residents seek additional sub-specialty training through “fellowship” programs. During this time this licensed physician is known as a “fellow”. Fellows are capable of acting as an attending physician or consultant physician in the specialty field they have completed. However, they must have direct supervision by an attending, teaching physician in the sub-specialty field in which they are training. As an example, a vascular surgery fellow could perform general surgery without supervision, but not vascular surgery.

This phase of training includes not only the rigorous clinical training in their sub-specialty area, but often includes research as well. Because of this partial “non-clinical” research focus; Medicare does not fully reimburse a hospital for that trainee, making supporting/funding fellowship positions challenging for teaching institutions.

### **Examples of Fellowship Programs**

1. Cardiology
2. Critical care medicine
3. Endocrinology
4. Gastroenterology
5. Geriatrics
6. Hematology
7. Hospice
8. Immunology
9. Infectious disease
10. Nephrology
11. Neurosurgery
12. Oncology
13. Orthopaedic Surgery
14. Pulmonology
15. Rheumatology
16. Traumatology
17. Vascular Surgery

## **Lack of Fellowships Impacts Retention**

As with medical students, the retention of graduating residents in New Jersey is lower than the national average. New Jersey's retention in 2010 and 2011 was 36% and 33% respectively, while the national average is 48%. (See page 23 for more detailed discussion.)

One factor that impacts resident retention in New Jersey is the low number of fellowship training programs and positions compared to New York and Pennsylvania. This is the primary reason retention statistics are so low for physicians seeking sub-specialty training. Additionally, this fact may also "limit" the quality of those applying to New Jersey's resident programs. Medical students who know their career path and are very focused on a particular sub-specialty will gravitate to residency programs that also offer fellowship training programs.

Bottom line, it is very difficult to recruit a resident/fellow back to New Jersey, once they have left the state to pursue additional training. They most often stay in the geographic location where this final training occurred.

## **The Diversity within New Jersey's Programs**

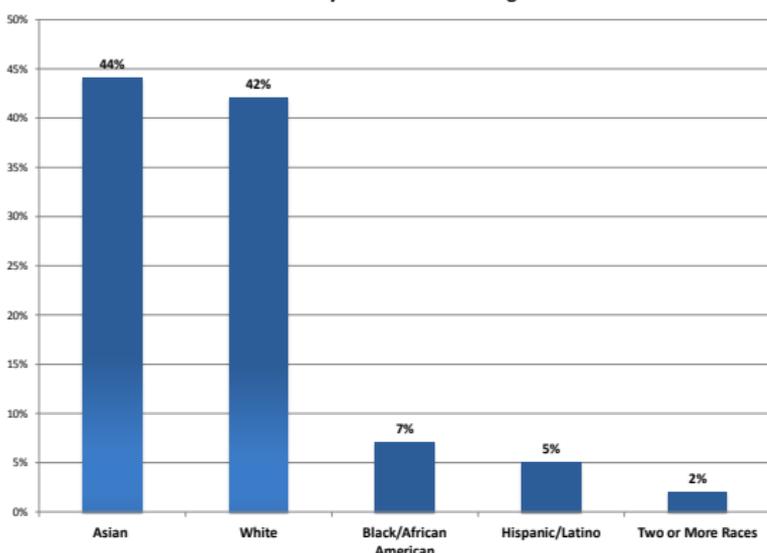
New Jersey citizens have a rich ethnic and cultural diversity which is also reflected in the medical and osteopathic physicians-in-training entering the 2010 and 2011 classes. Fifty eight percent (58%) report a non-white or Hispanic racial background and 49% are female.

The diversity of New Jersey's citizens and its physicians-in-training is much higher than most states and the national average. This diversity is reflected in the percentage of New Jersey medical residents who are classified as International Medical Graduates (IMGs). Fifty nine percent (59%) of the 2011 graduating residents attended a foreign medical school. However, almost three quarters (73%) of these medical students were native-born U.S. citizens, naturalized U.S. citizens, or a permanent resident of the U.S. Thirty percent (30%) graduated

from a Caribbean medical school and, of these, 88% graduated from a U.S. high school (24% were New Jersey high school graduates).

Medical students and residents must not only learn the required core competencies and clinical skills, they must also learn how to communicate effectively with patients and families. This is particularly complicated in New Jersey where we speak almost 100 different languages.

Race and Ethnicity of 2011 Graduating Residents



Source: 2011 Resident Exit Survey

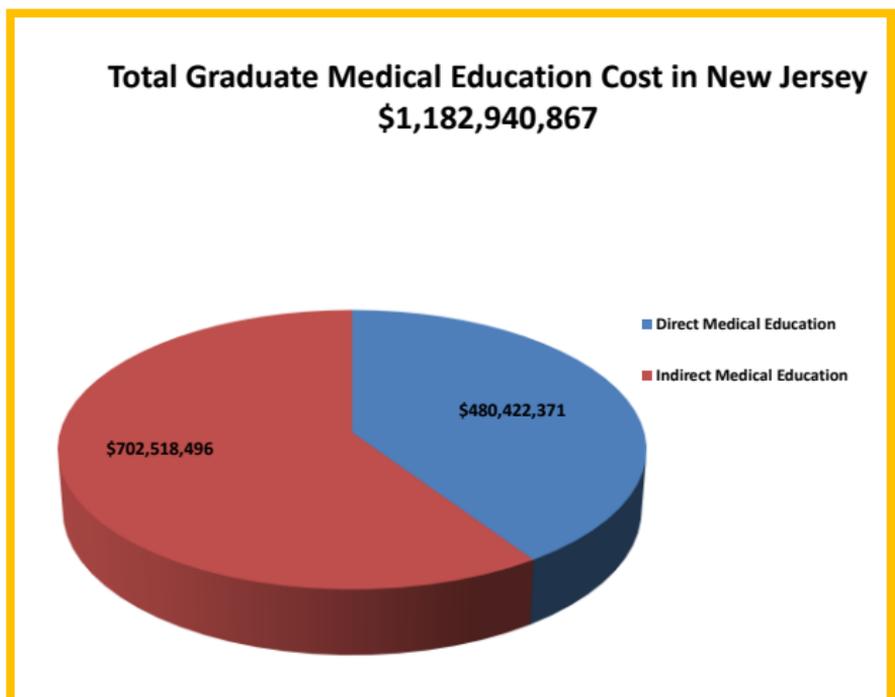
## International Medical Graduates

Graduates of international medical schools may participate in a residency program within the U.S., but only after completing the requirements set by the Educational Commission for Foreign Medical Graduates (ECFMG). Through this testing and certification process, the ECFMG assesses the readiness of an IMG to enter U.S. residency or fellowship programs that are accredited by the Accreditation Council for Graduate Medical Education (ACGME). Only graduates of U.S. colleges of osteopathic medicine are accepted into AOA accredited GME programs. No IMGs attend osteopathic residencies.

Historically, New Jersey's GME programs, with a higher IMG ratio, have been questioned as to whether this implies a lesser quality curriculum. Recently this question was evaluated by researchers who published their findings in *Health Affairs*, a multidisciplinary, peer reviewed journal dedicated to the serious exploration of domestic health policy issues. This observational study found no difference in mortality and length of stay in patients treated by IMG's compared to those treated by a U.S. graduate. Additionally, in other clinical indicators their outcomes were better than U.S. graduates, which refutes the belief that the quality and excellence of New Jersey's GME curriculum is substandard. It is believed the ECFMG testing selects out the best and brightest students from international medical schools.

### **Who Pays for Graduate Medical Education?**

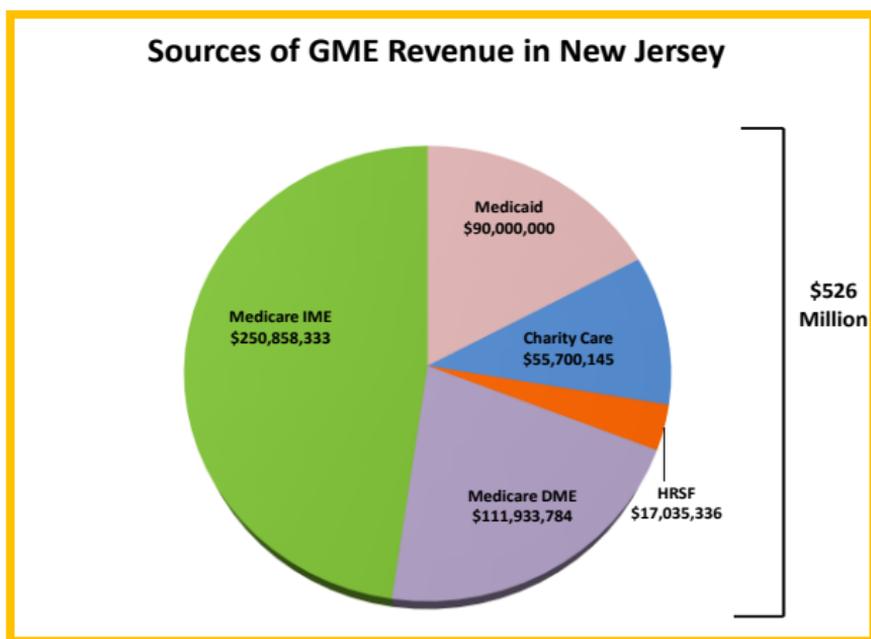
The bulk of New Jersey's GME financing comes from sources that are exclusively public and tax-based; Medicare, Medicaid, the Department of Defense and Veterans' Affairs. Medicare funds approximately one-third of New Jersey's GME expense, providing \$341M in funding. This compensation is divided into two categories, direct GME (DGME) costs and indirect GME (IME) costs.



## Direct Graduate Medical Education (DGME) Payments

DGME payments reimburse hospitals for the costs of training physicians; including resident stipends and fringe benefits, faculty salaries, supervisory physician compensation, malpractice insurance, program administration, and overhead costs such as maintenance and electricity. The DGME formula also calculates the payer utilization rate (i.e. percentage of Medicare or Medicaid patients treated in the hospital's case mix) and the number of full time equivalent (FTE) residents.

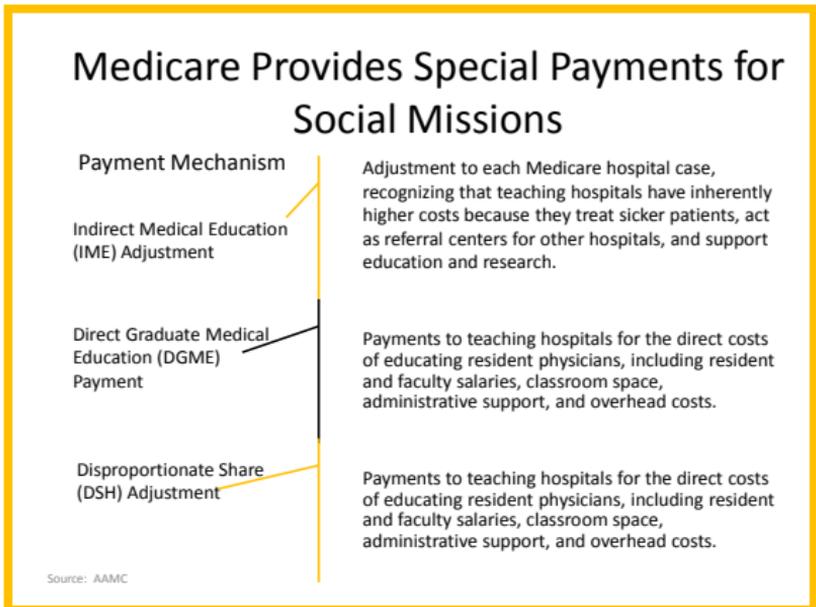
Most of these expenses are paid by the teaching hospitals or clinics employing or utilizing the resident from funds received from Medicare, Medicaid, or private sources. As the resident completes his/her post graduate year residency, his/her stipend increases.



## Indirect Medical Education (IME) Payments

Indirect medical education (IME) represents another significant, but less easily defined cost factor in training residents. In many cases, IME costs are difficult to quantify because they are associated with a teaching hospital's mission and case mix. These payments recognize that a teaching hospital has higher patient care costs due to the fact they treat sicker patients and offer, a broader range of complex services and technology.

Additionally, these expenses cover the training of residents who may order more tests and are somewhat less efficient in providing patient care, especially in their first 18 months of training. In addition, this payment recognizes that teaching hospitals serve as linchpins for their local health care systems, and that many contribute to stunning advances in medical science through their research initiatives.



## **Are other payers, such as Managed Care Organizations, paying their fair share?**

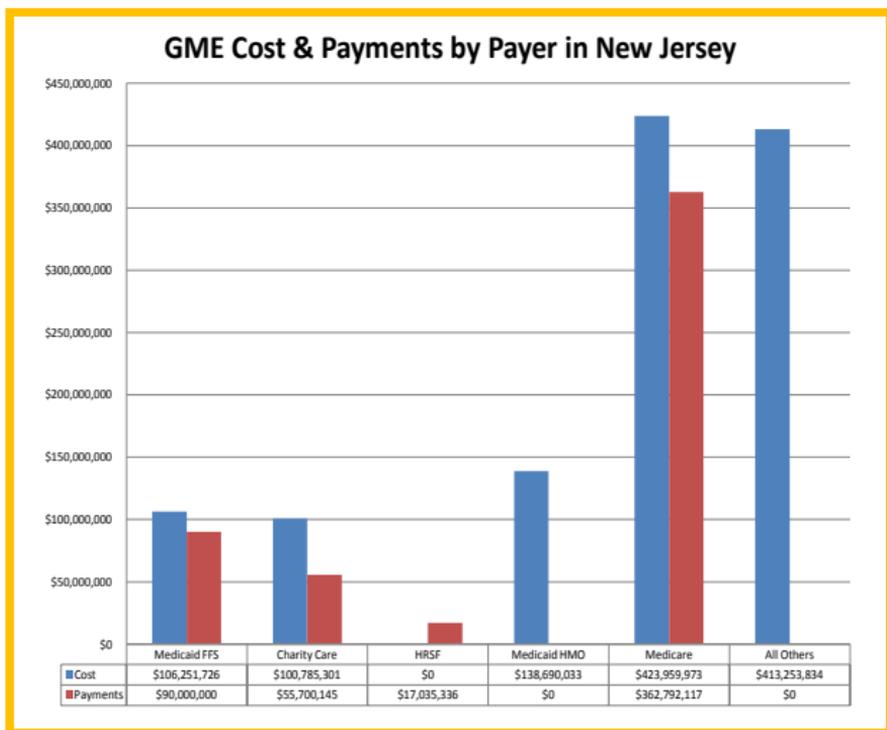
Prior to the 1997 budget reconciliation agreement, Medicare paid Managed Care Organizations (MCOs) who care for Medicare fee-for-service beneficiaries over \$400 million in GME payments, based on an adjusted average per capita cost. This funding was eliminated with the passage of the Balanced Budget Act.

Since that time, there is no mechanism to track MCO payments for GME services, despite a large percentage of their beneficiaries being helped by the care provided by residents and faculty physicians. In 1999, the U. S. House of Representatives and U.S. Senate introduced bills that would establish an “All Payer Graduate Medical Education Act” requiring both public and private insurers to pay into a GME trust fund, hoping to ease the burden on

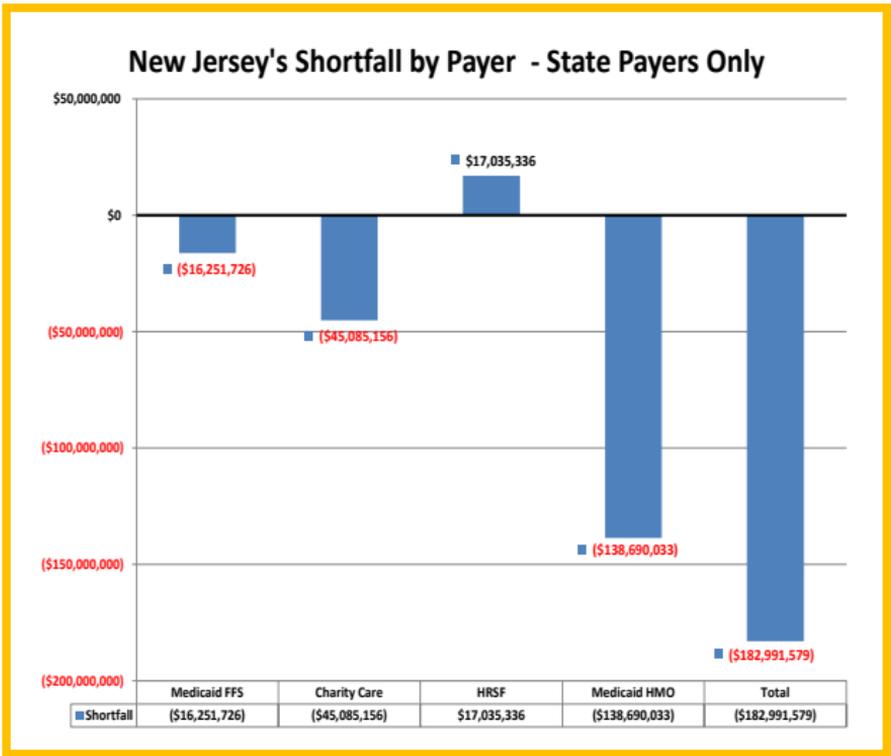
Medicare. Although these bills failed to pass, several states have implemented similar GME all payer systems.

## How does Medicare and Medicaid calculate payments for GME?

In New Jersey, there are two primary governmental payers that fund GME; Medicare and Medicaid. New Jersey’s Medicaid payments are further broken down into four funds: Medicaid Fee-for-Service (FFS), Medicaid HMO (managed care), Charity Care, and Hospital Relief Subsidy Fund (HRSF). Each payer has developed a formula to calculate their payment for GME. Each payer determines their share of the total GME “pie” and only pays for their share of overall cost. The payment formulas for each fund are different, and can either be more than or less than the cost of GME for that payer.



Due to budget constraints, neither Medicare nor Medicaid pay for their full share of GME costs. Medicare, for example, pays only 75% or \$341,207,601 of their \$452,485,755 share of the \$1,180,609,949 total GME costs. As the following chart illustrates, there is a Medicaid shortfall as well.



### Federally Mandated Cap on Resident Slots

In 1997, under the Balanced Budget Act, a freeze or cap was placed on the number of residents in existing residency program. This cap established a limit on the number of full time equivalent resident positions Medicare will pay for at an institution. In 1997, it was generally believed teaching hospitals and medical schools were producing too many physicians based on population needs. Within five years, the same experts reversed that opinion and began publishing new statistics describing future physician shortages. Despite the federal government recognizing the current and future physician shortages faced by every state, this federal cap has not been lifted.

The only mechanism to obtain additional Medicare funding for resident positions is for a non-teaching hospital to gain ACGME or AOA approval and begin new residency programs. This only pertains to hospitals with GME programs established on or after January 1, 1995.

This “new” teaching hospital’s final Medicare cap is set at the highest number of residents in all of their programs by the third year. In New Jersey, South Jersey Healthcare System gained approval from

AOA for several new osteopathic resident programs. They began their first year classes in July, 2011, with a goal of 125 new osteopathic residency positions over the first three years of the program.

It should be noted, ACGME and AOA are the accreditation organizations that determine the number of resident slots a program is allotted, but have no role in what number of slots Medicare will fund. Thus, many hospitals are approved for more slots than Medicare funds support. These slots are considered “over the cap” and are most often directly paid for by the teaching hospital.

<b># of Residents*</b>		<b>Teaching Institution</b>
<b>Medicare Approved FTEs Funded</b>	<b>FTEs over Medicare Cap</b>	
<b>269.49</b>	<b>33.58</b>	<b>The University Hospital - UMDNJ</b>
<b>163.98</b>	<b>100.26</b>	<b>Cooper University Hospital</b>
<b>147.89</b>	<b>21.23</b>	<b>St. Joseph's Regional Medical Center</b>
<b>141.22</b>	<b>15.47</b>	<b>Newark Beth Israel Medical Center</b>
<b>143.10</b>	<b>0.57</b>	<b>Saint Barnabas Medical Center</b>
<b>112.15</b>	<b>3.73</b>	<b>Hackensack University Medical Center</b>
<b>82.91</b>	<b>20.32</b>	<b>Jersey Shore University Medical Center</b>
<b>92.92</b>		<b>Monmouth Medical Center</b>
150.71	87.86	Robert Wood Johnson University Hospital
121.40	44.66	Morristown Medical Center
138.03	16.82	Kennedy University Hospitals
98.05	3.35	Saint Peter's University Hospital
81.68	13.56	Saint Michael's Medical Center
72.28	2.8	Overlook Medical Center
73.88		Jersey City Medical Center
48.95		Englewood Hospital and Medical Center
45.31		Mountainside Hospital
41.41	3.34	AtlantiCare Regional Medical Center
41.41		JFK Medical Center / Anthony M. Yelencsics
30.69	12.71	Our Lady of Lourdes Medical Center
35.66	4.63	Capital Health Regional Medical Center
29.87	9.39	University Medical Center at Princeton
32.34		Saint Francis Medical Center (T)
25.19		Virtua Marlton
27.68	20.59	Trinitas Regional Medical Center
27.00		Raritan Bay Medical Center
24.91		Hoboken University Medical Center
25.76	1.32	Bergen Regional Medical Center
17.59		Warren Hospital
20.15	0.15	Somerset Medical Center
17.67	10.67	Deborah Heart and Lung Center
18.71	0.22	CentraState Medical Center
16.93		Hunterdon Medical Center
13.61		Christ Hospital
14.05	1.5	Underwood Memorial Hosp
12.31	3.39	Virtua Memorial
0.39	9.58	Lourdes Medical Center of Burlington County
2.68		Capital Health Mercer Campus
2.10		South Jersey Healthcare Regional MC
0.84	1.02	St. Mary's Hospital (P)
	<b>442.72</b>	<b>Total FTEs over Medicare Cap</b>

Source: Worksheet E-3 Part 4- 2010 Medicare Cost Report (except UMDNJ)

Worksheet E-3 Part 4- 2009 Medicare Cost Report (UMDNJ)

Column #1 - Approved FTEs: Medicare Funded = Line 3.16 + 3.22

Column #2 - Actual FTEs over Medicare Cap: FTEs NOT funded by Medicare = line 3.05

**Bold indicates NJCTH Member**

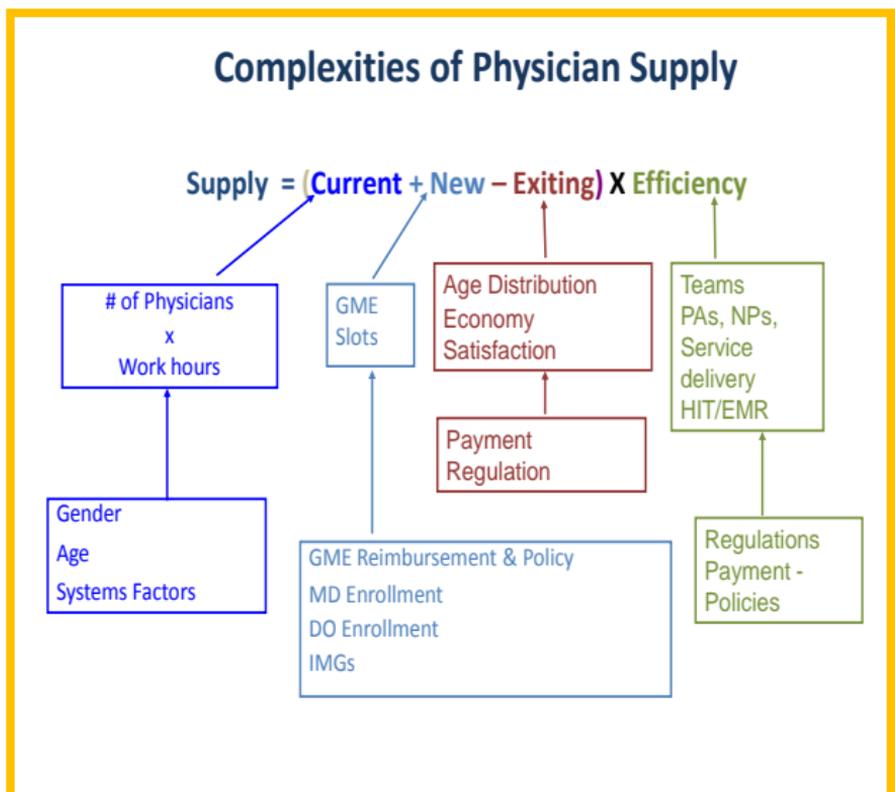
New Jersey teaching hospitals support 443 resident positions over the cap. The DGME cost for these residents translates to \$73M directly from these institution's general funds.

## Quantifying Physician Workforce Needs

Widespread concerns about physician shortages have resulted in many states working to retain doctors trained in their state's medical schools and residency programs after graduation.

Physician shortages nationwide are projected to reach 62,900 doctors in 2015 and 91,500 by 2020. Determining shortages by specialty is a complex process.

In 2009, the New Jersey Council of Teaching Hospitals (NJCTH) published "*Too Many? Too Few?*" a comprehensive physician workforce report which detailed the current and pending physician shortage by specialty throughout the State of New Jersey. The task force utilized a national workforce modeling tool to quantify New Jersey's physician supply and current/future demand. This analysis showed a significant primary care and specialist physician shortage of over 2,600 by 2020.



MedPAC, in a June 2010 report to congress entitled “*Aligning Incentives in Medicare – Graduate Medical Education financing: Focusing on educational priorities,*” recommended that the Secretary of Health and Human Services conduct a workforce analysis to determine the number of residency positions needed in the U.S. in total and by specialty. Unfortunately, it is unlikely in the current economic and political environment that this recommendation will be acted upon. Unless resident positions are uncapped this looming shortage will go unabated.

One question often raised in New Jersey is “With the increase of medical schools and medical student enrollment, won’t this help New Jersey’s physician shortage?” The answer is no. This increase does little to solve the state’s problem. As outlined earlier in the Primer, medical students must enroll in and complete a residency program before they are eligible to set up their clinical practice. So generally speaking, unless resident slots are also increased, more medical students does not result in more practicing physicians in New Jersey. However, a focus on admitting New Jersey populace to the state’s medical schools, and offering high-quality residency programs in an array of specialties, could be useful strategies in addressing New Jersey’s physician supply, especially in conjunction with an increase in the number of residency positions.

Additionally, retention of physicians completing residency or fellowship training also has major implications on the volume of physicians practicing in New Jersey. Unfortunately, our shortage has grown even more as the retention rates of graduating residents (new physicians) choosing to establish their practice in New Jersey has gone from 48% in 2008 to 35% in 2011. Since 2009, the annual decline in retention rates has increased the projected primary care shortage by an additional 400 physicians.

## Staying or Leaving?

2011 Resident Exit Survey Respondents  
(409 responded to this question)

Staying in New Jersey = 141

Leaving New Jersey = 268

Why is this happening? The answer is twofold.

First, in the annual *Resident Exit Survey*, administered by NJCTH, graduating residents have detailed their reasons for leaving the state to practice medicine. Over the last three years, the top four reasons besides “proximity to family” have been constant and all economic in nature:

- Cost of living in N.J.
- Better salary offered outside N.J.
- Taxes in N.J.
- Better jobs in desired locations outside N.J.

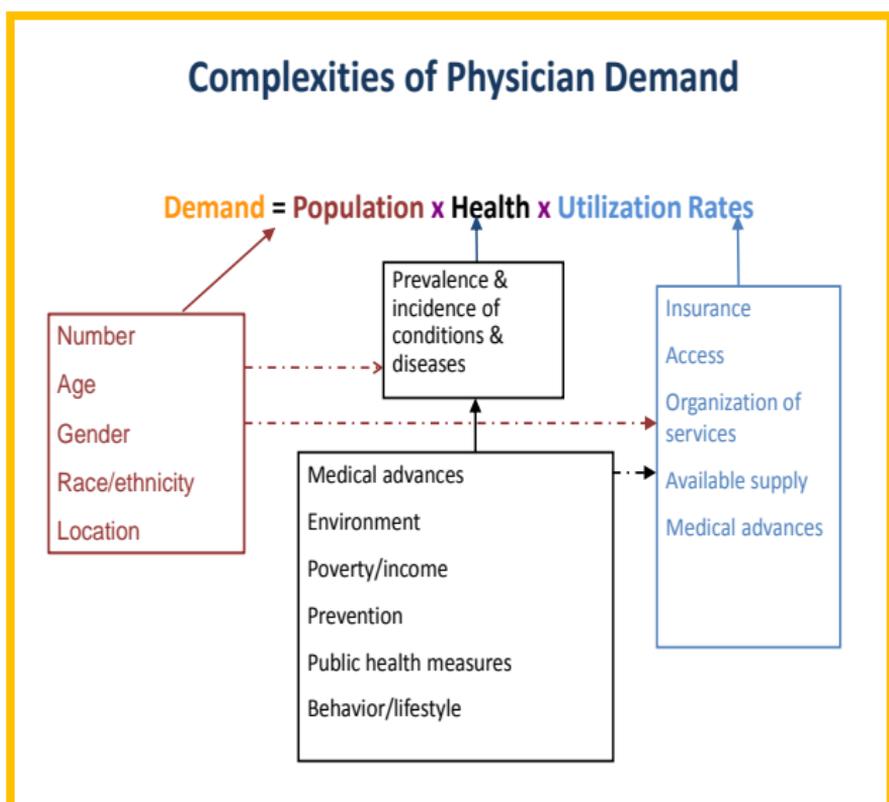
Secondly, New Jersey is one of 27 other states with documented shortages. These states have become very aggressive in recruiting new physicians post graduation. In a study released on December 2, 2011, the Association of American Medical College’s Center for Workforce Studies outlined the numerous recruitment programs other states have implemented to lure these new graduates to establish their clinical practice in their state. Scholarships, rich loan repayment programs, mentoring programs, and databases to stay connected with physicians continuing their specialty education are among the top methods to make their state more attractive.

Currently, New Jersey has no recruitment and retention programs in place. In the past there was a modest loan repayment program; however, New Jersey’s loan repayment program has not been funded in recent years.

NJCTH recently presented to the governor's health policy and treasury offices a unique concept, a "Tax Credit" program, which is being vetted by those officials.

Managing physician demand can be one component in the toolkit to address supply shortages, but is only a small element in this complicated problem. New Jersey's size and composition (age, gender, insurance status and location) of its population, as well as their "appetite" for specialty services, makes changing this demand cycle challenging at best.

The table below helps detail the "demand dilemma."



## **In Conclusion**

As detailed in this Primer, New Jersey's physician shortage is not just the result of low retention, it is a multi-faceted problem. We are not alone; most other states face the same problem. Graduating residents attempt to find the optimal balance between a reasonable take home salary and family/lifestyle. The shortage in New Jersey and elsewhere has more to do with Congress', 15 years ago capping the number of resident slots that Medicare funds. As a result, the nation is not producing enough physicians to meet demand.

If other payers, such as MCOs and commercial insurers, had to reimburse for their fair share and pay into a GME trust fund, the Medicare cap could be neutralized and support improvements in the physician supply pipeline. Without additional funds, even though medical schools are graduating more M.D.'s and D.O.'s, the number of residency positions supported by federal dollars will not meet demand.

New Jersey is still searching for a solution. What is not a prudent idea is to reduce the amount of state support for GME. Reducing the number of residents trained in the state would be counter-productive. Not only would the retention rate drop even further, the considerable value they provide in caring for uninsured and under-insured patients would be lost.

**Why are they leaving?  
Verbatim comments from 2011 graduating  
residents, who's original intent was to stay in  
New Jersey.**

“The reimbursement in NJ for primary care is horrendous. For me to make a reasonable living in this state I would have to see 40 to 50 patients a day. I am not willing to sacrifice patient care for economic benefits when I can go elsewhere and spend sufficient time with a patient and make a decent living.”

“I really like the state and what it has to offer. I am disappointed because I really wanted to find something competitive here.”

“I love NJ and have been here for over 10 years. It is a shame no one was able to help me with a J-1 visa waiver position. I spent many hours and lots of money in hopes that an underserved area in NJ would meet the J-1 waiver criteria. But, the road blocks were ridiculous and the lack of support was defeating.”

“Malpractice for an OB-Gyn is a big deciding factor. Malpractice offered is usually claims made, with little or no help for payment of a tail, in case things did not work out as expected. If it was not for that, I would definitely stay in NJ.”

“The lack of availability of J-1 waiver jobs in NJ, as compared to other states is the main factor J-1 physicians' move out of state after graduation.”

“I have lived all my 32 years in NJ and love this state. I want to live in a rural area. Although NJ has rural areas, I just cannot afford to buy property in this state, and then pay high taxes / insurance. It made much more sense for me to move to North Carolina. This is sad. I went to K – 12, college, grad school, med school and residency in NJ.”

“The J-1 visa waiver opportunities in NJ are few and by the time we are notified of a job opening it is already December prior to the June graduation. For foreign physicians this does not leave enough time to process the paperwork for the visa and medical license for starting work in July. Medical licensing in Jersey takes at least 6 months.”

“Malpractices insurance prices, no tort reform. Only promises, promises....high taxes, tolls everywhere, no incentives to stay here. I love NJ but I’m forced to leave due to house prices, property taxes, etc. Very frustrating!”

“I was looking for a specific geographic area in the NJ/NY border. I had 2 offers, one job in NJ and one in NY. Although the job in NJ was in a “better” hospital, I chose the job in NY because the compensation was more, and my hours were less.”

## Small Victories

Section 5506 of the ACA directed CMS to permanently preserve the Medicare funded resident slots when a teaching hospital closes. Many New Jersey teaching hospitals applied for the Muhlenberg Medical Center and St. Francis Medical Center (Staten Island) resident positions. On **January 31, 2012**, the following hospitals increased their Medicare funded cap, based on this CMS decision.

		DGME	IME
310001	HACKENSACK UNIVERSITY MEDICAL CENTER	18.29	15.65
310002	NEWARK BETH ISRAEL MEDICAL CENTER	4.34	4.07
310015	MORRISTOWN MEMORIAL HOSPITAL	32.69	21.54
310019	ST. JOSEPH S HOSPITAL & MEDICAL CENT	4.00	4.00
310027	TRINITAS REGIONAL MED CENTER	1.46	1.23
310038	ROBERT WOOD JOHNSON UNIVERSITY HOSP	9.16	7.82
310058	BERGEN REGIONAL MEDICAL CENTER	0.00	9.12
310064	ATLANTICARE REGIONAL MEDICAL CENTER	1.99	1.99
310070	ST. PETER S UNIVERSITY HOSPITAL	14.25	12.49
310073	MH- JERSEY SHORE UNIVERSITY MED CTR	5.67	5.27
310075	MONMOUTH MEDICAL CENTER	9.40	8.04
310076	SAINT BARNABAS MEDICAL CENTER	2.99	2.55
310108	JFK MEDICAL CENTER	6.00	6.00

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