



Select Committee on Health Care Workforce Innovation

**Monday, March 3, 2014
4:00 PM - 6:00 PM
Morris Hall**

**Will Weatherford
Speaker**

**Jose R. Oliva
Chair**

Committee Meeting Notice

HOUSE OF REPRESENTATIVES

Select Committee on Health Care Workforce Innovation

Start Date and Time: Monday, March 03, 2014 04:00 pm
End Date and Time: Monday, March 03, 2014 06:00 pm
Location: Morris Hall (17 HOB)
Duration: 2.00 hrs

Consideration of the following bill(s):

HB 751 Telemedicine Services by Cummings, Jones, M.

Presentation of Graduate Medical Education Report by OPPAGA

Pursuant to rule 7.12, the deadline for amendments to bills on the agenda by non-appointed members is 6:00 p.m., Friday, February 28, 2014.

By request of the chair, all committee members are asked to have amendments to bills on the agenda submitted to staff by 6:00 p.m., Friday, February 28, 2014.

NOTICE FINALIZED on 02/24/2014 15:48 by Iseminger.Bobbye

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 751 Telemedicine Services

SPONSOR(S): Cummings

TIED BILLS: **IDEN./SIM. BILLS:**

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Select Committee on Health Care Workforce Innovation		McElroy <i>CM</i>	Calamas <i>CC</i>
2) Health Care Appropriations Subcommittee			
3) Health & Human Services Committee			

SUMMARY ANALYSIS

HB 751 amends ch. 456, F.S. to create s. 456.47, F.S., relating to telemedicine services.

The bill defines "telemedicine," "telemedicine provider," and "telemedicine services" in a manner which allows both in-state and out-of-state health care professionals to provide health care services through telemedicine.

The bill requires a telemedicine provider to use the same standard of care currently required to be used by a health care professional providing face-to-face health care services.

The bill requires an in-person physical examination of the patient prior to providing services through telemedicine, unless the telemedicine provider is capable of conducting a patient evaluation through telemedicine sufficient to diagnose and treat the patient.

The bill places no service location limitations on health care professionals or patients. Specifically, a patient receiving services through telemedicine may be in any location at the time the services are rendered and a telemedicine provider may be in any location when providing services through telemedicine to a patient.

The bill requires a telemedicine provider to document the telemedicine services rendered in the patient's medical records according to the same standard as that required for non-telemedicine services. The bill requires those records to be confidential in accordance with the current confidentiality requirements placed upon health care facilities and health care professionals providing in-person services.

The bill does not appear to have a fiscal impact on state or local government.

The bill provides an effective date of July 1, 2014.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Present Situation

Health Care Professional Shortage

There is currently a health care provider shortage in the U.S.¹ This shortage is predicted to continue into the foreseeable future and will likely worsen with the aging and growth of the U.S. population² and the passage of the Patient Protection and Affordable Care Act.³ Aging populations create a disproportionately higher health care demand.⁴ Additionally, as more individuals qualify for health care benefits, there will necessarily be a greater demand for more health care professionals to provide these services. There are several other factors which will likely increase the demand for a larger health care workforce. These include:⁵

- Shortage of healthcare professionals being educated, trained and licensed;
- Increasing incidence of chronic diseases around the world, including diabetes, congestive heart failure and obstructive pulmonary disease;
- Need for efficient care of the elderly, home-bound, and physically challenged patients;
- Lack of specialists and health facilities in rural areas;
- Adverse events, injuries and illness at hospitals and physician's offices; and
- Need to improve community and population health.

Florida is not immune to the national problem and is experiencing a health care shortage itself. This is evidenced by the fact that there are 908 federally designated Health Professional Shortage Areas (HPSA) within the state. For example, Florida is currently experiencing a shortage of over 900 primary care physicians⁶ and an unmet demand of over 1,500 physical therapists.⁷

Numerous solutions have been proposed to combat the health care professional shortage. These proposals seek to address both the current and future shortages. Long-term proposals include the

¹ For example, as of November 14, 2013, the U.S. Department of Health and Human Services has designated 5,800 Primary Care Health Professional Shortage Area (HPSA) (requiring 7,500 additional primary care physicians to eliminate the shortage), 4,600 Dental HPSAs (requiring 6,600 additional dentists to eliminate the shortage), and 3,700 Mental Health HPSAs (requiring 2,400 additional psychiatrists to eliminate the shortage). This information is available at the U.S. Department of Health and Human Services' Health Resources and Services Administration's website, <http://www.hrsa.gov/shortage/> (last visited on February 28, 2014).

² There will be a significant increase in the U.S. population, estimated to grow 20 percent (to 363 million) between 2008-2030.

³ *Department of Health and Human Services Strategic Plan: Goal 5: Strengthen the Nation's Health and Human Service Infrastructure and Workforce*, U.S. Department of Health and Human Services, <http://www.hhs.gov/secretary/about/goal5.html> (last visited on February 28, 2014).

⁴ One analysis measured current primary care utilization (office visits) and projected the impact of population increases, aging, and insured status changes. The study found that the total number of office visits to primary care physicians will increase from 462 million in 2008 to 565 million in 2025, and (because of aging) the average number of visits will increase from 1.60 to 1.66. The study concluded that the U.S. will require 51,880 additional primary care physicians by 2025. Petterson, Stephen M., et al., "Projecting U.S. Primary Care Physician Workforce Needs: 2010-2025", *Annals of Family Medicine*, vol. 10, No. 6, Nov./Dec. 2012, available at: <http://www.annfam.org/content/10/6/503.full.pdf+html> (last visited on February 24, 2014).

⁵ *Telemedicine: An Important Force in the Transformation of Healthcare*, Matthew A. Hein, June 25, 2009.

⁶ This information is available at the U.S. Department of Health and Human Services' Health Resources and Services Administration's website, <http://www.hrsa.gov/shortage/> (last visited on February 28, 2014).

⁷ Florida Department of Economic Opportunity's presentation to the Florida House of Representative's Select Committee on Health Care Workforce Innovation, January 15, 2014.

creation of new scholarships and residency programs for emerging health care providers.⁸ These proposals address the shortage in the future by creating new health care professionals. Short-term proposals include broadening the scope of practice for certain health care professionals⁹ and for more efficient utilization of our existing workforce through the expanded use of telemedicine.¹⁰

Telehealth

There is no universally accepted definition of telemedicine.¹¹ In broad terms telemedicine is:

The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment¹² and prevention of disease and injuries¹³, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities.¹⁴

More specific definitions vary greatly from country to country, as well as between the numerous states authorizing the use of telemedicine to deliver health care services. In fact, definitions of telemedicine occasionally differ between the various professions within a specific state.¹⁵ There are however common elements among the varied definitions of telemedicine.

Telemedicine generally consists of synchronous and/or asynchronous transmittal of information.¹⁶ Synchronous refers to the live¹⁷ transmission of information between patient and provider during the same time period.¹⁸ Asynchronous telemedicine is the transfer of data over a period of time, and typically in separate time frames.¹⁹ This is commonly referred to as “store and forward”. Definitions of telemedicine also commonly contain restrictions related to the location where telemedicine may be used. For example, the use of the hub and spoke model is a common location restriction. A hub site is the location from which specialty or consultative services originate, i.e., the provider. A spoke site is remote site where the patient is presented during telemedicine encounter. Under this model, health

⁸ U.S. Department of Health and Human Services, *supra* note 3.

⁹ *Id.*

¹⁰ *Department of Health and Human Services Strategic Plan: Goal 1: Strengthen the Nation's Health and Human Service Infrastructure and Workforce*, U.S. Department of Health and Human Services, <http://www.hhs.gov/secretary/about/goal5.html> (last visited on February 28, 2014).

¹¹ Telemedicine and telehealth are often used interchangeably.

¹² The University of Florida's Diabetes Center of Excellence utilizes telemedicine to deliver treatment to children with diabetes and other endocrine problems who live in Volusia County. This allows the children to receive specialized treatment without the necessity of traveling from Volusia County to Gainesville. The Florida Department of Health's Children's Medical Services underwrites the program. <https://ufhealth.org/diabetes-center-excellence/telemedicine> (last visited on February 28, 2014).

¹³ The University of South Florida has partnered with American Well to provide health care services to the residents of the Villages via telemedicine. The goal is to reduce hospital admissions, readmission rates, and pharmacy costs, while maintaining Medicare beneficiaries in their homes rather than long-term care settings. <http://hscweb3.hsc.usf.edu/blog/2012/06/22/usf-health-and-american-well-to-bring-telehealth-to-seniors-living-at-the-villages/> (last visited on February 28, 2014).

¹⁴ *Telemedicine: Opportunities and Developments in Member States, Global Observatory for Ehealth Series- Volume 2*, Section 1.2, page 9.

¹⁵ *State Telehealth Laws and Reimbursement Policies*, Center for Connected Health Policy, The National Telehealth Policy Resource Center, November 2013.

¹⁶ The majority of telemedicine definitions allow for both synchronous and asynchronous transmittal of information. Some definitions however omit asynchronous from the definition of telemedicine.

¹⁷ This is also referred to as “real time” or “interactive” telemedicine.

¹⁸ *Telemedicine Nomenclature*, American Telemedicine Association, located at <http://www.americantelemed.org/practice/nomenclature#.Uu1G6qNOnCs> (last visited on February 28, 2014). The use of live video to evaluate and diagnosis a patient would be considered synchronous telemedicine.

¹⁹ *Id.* A common example of synchronous telemedicine is the transfer of x-rays or MRI images from one health care provider to another health care provider for review in the future.

services may be provided through telemedicine only if the patient is located at a designated spoke site and the provider is located at a designated hub site.

Telehealth is a broader term which includes telemedicine and telemonitoring. Telemedicine is focused on the delivery of traditional clinical services, like diagnosis and treatment. Telemonitoring is the process of using audio, video, and other telecommunications and electronic information processing technologies to monitor the health status of a patient from a distance.²⁰ Telehealth more broadly includes non-clinical services, such as patient and professional health-related education, public health and health administration.²¹

Telehealth is not a type of health care service but rather is a mechanism for delivery of health care services. Health care professionals use telehealth as a platform to provide traditional health care services in a non-traditional manner. These services include, among others, primary and specialty care services and health management.

Telehealth, in its modern form,²² started in the 1960s in large part driven by the military and space technology sectors.²³ Specifically, telehealth was used to remotely monitor physiological measurements of certain military and space program personnel. As this technology became more readily available to the civilian market, telehealth began to be used for linking physicians with patients in remote, rural areas. As advancements were made in telecommunication technology, the use of telehealth became more widespread to include not only rural areas but also urban communities. Due to recent technology advancements and general accessibility, the use of telehealth has spread rapidly and is now becoming integrated into the ongoing operations of hospitals, specialty departments, home health agencies, private physician offices as well as consumer's homes and workplaces.²⁴ In fact, there are currently about 200 telemedicine networks, with 3,500 service sites in the U.S.²⁵

Telehealth is used to address several problems in the current health care system. Inadequate access to care is one of the primary obstacles to obtaining quality health care.²⁶ This occurs in both rural areas and urban communities.²⁷ Telemedicine reduces the impact of this issue by providing a mechanism to deliver quality health care, irrespective of the location of a patient or a health care professional. Cost is another barrier to obtaining quality health care.²⁸ This includes the cost of travel to and from the health care facility, as well as related loss of wages from work absences. Costs are reduced through telemedicine by decreasing the time and distance required to travel to the health care professional. Two more issues addressed through telemedicine are the reutilization of health care services and hospital readmission. These often occur due to a lack of proper follow-up care by the patient²⁹ or a chronic condition.³⁰ These issues however can potentially be avoided through the use of telemedicine and telemonitoring.

²⁰ *Glossary and Acronyms*, U.S. Department of Health and Human Services
<http://www.hrsa.gov/ruralhealth/about/telehealth/glossary.html#t> (last visited March 1, 2014).

²¹ *Id.*

²² Historically, telemedicine can be traced back to the mid to late 19th century with one of the first published accounts occurring in the early 20th century when electrocardiograph data were transmitted over telephone wires. *Telemedicine: Opportunities and Developments in Member States, Global Observatory for Ehealth Series- Volume 2*, Section 1.2, page 9.

²³ *Telemedicine: Opportunities and Developments in Member States*, *supra* note 14.

²⁴ *What is Telemedicine*, American Telemedicine Association, <http://www.americantelemed.org/learn/what-is-telemedicine#.Uu6eGqNOncs> (last visited on February 28, 2014).

²⁵ *Telemedicine Frequently Asked Questions*, American Telemedicine Association, <http://www.americantelemed.org/learn/what-is-telemedicine/faqs#.Uu5vyaNOncs> (last visited on February 22, 2014).

²⁶ U.S. Department of Health and Human Services, *supra* note 10.

²⁷ *Id.*

²⁸ *Id.*

²⁹ Post-surgical examination subsequent to a patient's release from a hospital is a prime example. Specifically, infection can occur without proper follow-up and ultimately leads to a readmission to the hospital.

³⁰ For example, diabetes is a chronic condition which can benefit by treatment through telemedicine.

Telemedicine and Federal Law

There are numerous federal laws and regulations which address the delivery of health care services through telemedicine. These include laws and regulations related to prescribing controlled substances, reimbursement guidelines for the Medicare program, and the protection of personal health information.

Prescribing Via the Internet

Federal law specifically prohibits prescribing controlled substances via the internet without an in-person evaluation. The federal regulation under 21 CFR §829 specifically states:

No controlled substance that is a prescription drug as determined under the Federal Food, Drug, and Cosmetic Act may be delivered, distributed or dispensed by means of the Internet without a valid prescription.

A valid prescription is further defined under the same regulation as one issued by a practitioner who has conducted an in-person evaluation. The in-person evaluation requires that the patient be in the physical presence of the provider without regard to the presence or conduct of other professionals.³¹ However, the Ryan Haight Online Pharmacy Consumer Protection Act,³² signed into law in October 2008, created an exception for the in-person medical evaluation for telemedicine practitioners. The practitioner is still subject to the requirement that all controlled substance prescriptions be issued for a legitimate purpose by a practitioner acting in the usual course of professional practice.

Medicare Coverage

Specific telehealth³³ services delivered at designated sites are covered under Medicare. The Federal Centers for Medicare and Medicaid Services' regulations require both a distant site and a separate originating site (hub and spoke model) under their definition of telehealth. Asynchronous (store and forward) activities are only reimbursed under Medicare in federal demonstration projects.³⁴ To qualify for Medicare reimbursement, the originating site must be:

- Located in a federally defined rural county;
- Designated rural;³⁵ or
- Identified as a participant in a federal telemedicine demonstration project as of December 21, 2000.³⁶

In addition, an originating site must be one of the following location types as further defined in federal law and regulation:

- The office of a physician or practitioner;
- A critical access hospital;
- A rural health clinic;
- A federally qualified health center;
- A hospital;

³¹ 21 CFR §829(e)(2).

³² Ryan Haight Online Consumer Protection Act of 2008, Public Law 110-425 (H.R. 6353).

³³ Medicare covers a broader set of services using the term telehealth. Medicare defines telehealth as the use of telecommunications and information technology to provide access to health assessment, diagnosis, intervention, consultation, supervision and information across distance.

³⁴ Only two states have a federal demonstration project that meets these qualifications, Hawaii and Alaska.

³⁵ The rural definition was expanded through a final federal regulation released on December 10, 2013 to include health professional shortage areas located in rural census tracts of urban areas as determined by the Office of Rural Health Policy. See 78 FR 74229, 74400-74402, 74812 (December 10, 2013).

³⁶ See 42 U.S.C. sec. 1395(m)(m)(4)(C)(i).

- A hospital-based or critical access hospital-based renal dialysis center (including satellites);
- A skilled nursing facility; or
- A community mental health center.³⁷

Protection of Personal Health Information

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) protects personal health information. Privacy rules were initially issued in 2000 by the U.S. Department of Health and Human Services and later modified in 2002. These rules address the use and disclosure of an individual's health information as well as create standards for privacy rights. Additional privacy and security measures were adopted

Only certain entities are subject to HIPAA's provisions. These "covered entities" include:

- Health plans;
- Health care providers;
- Health care clearinghouses; and
- Business associates of any of the above.

Although a patient is not a covered entity, the patient still maintains his or her privacy and confidentiality rights regardless of the method in which the medical service is delivered.

In 2009, the Health Information Technology for Economic Clinical Health (HITECH) Act was enacted as part of American Recovery and Reinvestment Act (ARRA).³⁸ The HITECH Act promoted electronic exchange and use of health information by investing \$20 billion in health information technology infrastructure and incentives to encourage doctors and hospitals to use health information technology.³⁹ HITECH was intended to strengthen existing HIPAA security and privacy rules.⁴⁰ It expanded HIPAA to entities not previously covered; specifically, "business associates" now includes Regional Health Information Organizations, and Health Information Exchanges.⁴¹ Similarly, it made changes to the privacy rule to better protect personal health information held, transferred, or used by covered entities.⁴²

Under the provisions of HIPAA and the HITECH Act, a health care provider or other covered entity participating in the electronic exchange of personal health information are subject to HIPAA and HITECH. These federal laws apply to covered entities in Florida, regardless of whether there is an express reference to them in Florida law.

Interstate Medical Licensure Compact

The Federation of State Medical Boards (FSMB), a non-profit organization representing state medical boards that license and discipline allopathic and osteopathic physicians, has drafted eight consensus principles aimed at addressing the process of licensing and regulating physicians who practice across state lines. Under an interstate compact, the participating state medical boards would retain their licensing and disciplining authority but would share essential information to streamline the process for

³⁷ See 42 U.S.C. sec. 1395(m)(m)(4)(C)(ii).

³⁸ "Complying with the Health Information Technology for Economic and Clinical Health (HITECH) Act, HIPAA, Security and Privacy, and Electronic Health Records", Deloitte, December 2009, available at https://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_lshc_LeadingPracticesandSolutionsforPrivacyandSecurityGuidelines_031710.pdf, last viewed March 1, 2014.

³⁹ Id.

⁴⁰ Id.

⁴¹ Id.

⁴² Id.

those physicians who practice across state lines, including telemedicine.⁴³ The draft of the Interstate Medical Licensure Compact, which would be voluntary on the part of both physicians and states, is expected in early Spring or Summer of 2014.⁴⁴

Telemedicine Barriers

There are several barriers which impede the use of telemedicine. These barriers include:⁴⁵

- Lack of a standard definition for telemedicine;
- Lack of standard regulations for the practice of telemedicine;
- Licensure requirements which prohibit cross-state practice; and
- Restrictions on the location where telemedicine services may be provided.

Standardized Definition

Lack of a standard definition⁴⁶ presents a barrier to the use of telemedicine. As previously noted, there is no universally accepted definition. A health care professional is left to speculate as to whether the service he or she is providing constitutes telemedicine. This can have far-reaching consequences which range from a denial of reimbursement for the services provided to an inquiry as to whether the services provided equate to the unlicensed practice of medicine. Florida law does not define telemedicine.

Standardized Regulations

The absence of a uniform regulatory structure governing the use of telemedicine presents another barrier to its use. Currently, 13 states⁴⁷ do not have a statutory structure for the delivery of health care services through telemedicine.⁴⁸ This absence places the burden upon individual professionals to determine what is appropriate, and invites health professional licensing boards to fill the regulatory gap. This can lead to an inconsistent regulation of telemedicine amongst the varying health care professions and impede the use of telemedicine.

For example, a common telemedicine regulation is the requirement that a health care professional conduct an in-person examination of the patient prior to providing services via telemedicine.⁴⁹ Many times an exception is expressly contained within the regulation which allows the in-person requirement to be met through telemedicine.⁵⁰ This exception however can vary between the differing health care professions in the absence of a uniform regulation. For example, an audiologist may be authorized to conduct the initial evaluation through telemedicine while a physical therapist is required to perform an

⁴³ Federation of State Medical Boards, *Interstate Compact for Physician Licensure Moves Forward with Consensus Principles* (October 7, 2013), http://www.fsmb.org/pdf/nr_interstate_compact.pdf (last visited February 28, 2014).

⁴⁴ Federation of State Medical Boards, *State Medical Board Effort to Streamline Medical Licensing Gains Support in U.S. Senate* (January 14, 2014), http://www.fsmb.org/pdf/interstate_compact_senators_january13C.pdf (last visited February 28, 2014).

⁴⁵ *State Telehealth Laws and Reimbursement Policies*, Center for Connected Health Policy, The National Telehealth Policy Resource Center, November 2013.

⁴⁶ No two states define telemedicine (telehealth) exactly alike, although some similarities exist between certain states. *State Telehealth Laws and Reimbursement Policies*, Center for Connected Health Policy, The National Telehealth Policy Resource Center, November 2013.

⁴⁷ This includes Florida.

⁴⁸ *State Telehealth Laws and Reimbursement Policies*, Center for Connected Health Policy, The National Telehealth Policy Resource Center, November 2013. Even amongst states with telemedicine statutory regulations, no two states regulate telemedicine in exactly the same manner.

⁴⁹ *State Telehealth Laws and Reimbursement Policies*, Center for Connected Health Policy, The National Telehealth Policy Resource Center, November 2013.

⁵⁰ *Id.*

in-person physical examination prior to providing services through telemedicine. There may not be any reasonable justification for this disparate treatment.

Licensure

Licensure requirements present one of the greatest barriers to the use of telemedicine. Currently, states (not the federal government) regulate health care professionals.

Currently, 35 states⁵¹ prohibit health care professionals from providing health care services unless he or she is licensed in the state where the patient is located. This restriction would apparently apply to services provided via telemedicine by an out-of-state provider. Most states have exceptions to this requirement, applicable only in certain limited circumstances, which include:

- Physician-to-physician consultations (not between practitioner and patient);
- Educational purposes;
- Residency training;
- U.S. Military;
- Public health services; and
- Medical emergencies (Good Samaritan) or natural disasters.⁵²

However, 9 states offer a special telemedicine license or certificate which allows an out-of-state licensed health care professional to provide health care services through telemedicine to patients located within that particular state.⁵³ Four of these states (Montana, Nevada, Tennessee and Texas) however, only offer the telemedicine license to board eligible or board certified specialists.

In the absence of a state regulation authorizing otherwise, it appears that a health care professional has to be licensed in the state where the patient is located to provide health care services through telemedicine.⁵⁴ Requiring health care professionals to obtain multiple state licenses to provide health care services through telemedicine may be burdensome and may inhibit the use of telemedicine across state borders.

Location Restrictions

Generally, there are essentially two types of location restrictions. The first restricts the use of telemedicine to certain designated areas within a state. For example, only individuals in areas designated as a rural area or a medically underserved area may be authorized to receive health care services through telemedicine.

The second restriction relates to limitations on the specific location where telemedicine services may be provided. The most common example of this type of limitation is the hub and spoke model.⁵⁵ Under this model, "hub" refers to the location to where the health care professional must be located while "spoke" refers to the location where the patient must be located. The two types of restrictions are not mutually exclusive and are commonly used in conjunction. This presents a significant obstacle to access to care by placing arbitrary restrictions on the use of telemedicine, which inhibits the effectiveness, as well as the use of telemedicine to deliver health care services.

⁵¹ Id. This includes Florida.

⁵² *Licensure and Scope of Practice FAQs*, Telehealth Resource Centers, <http://www.telehealthresourcecenter.org/toolbox-module/licensure-and-scope-practice#what-are-the-exceptions-to-state-licensure-require> (last visited on February 28, 2014).

⁵³ *State Telehealth Laws and Reimbursement Policies*, Center for Connected Health Policy, The National Telehealth Policy Resource Center, November 2013. These states are AL, LA, MN, MT, NM, NV, OH, TN and TX.

⁵⁴ Six states (HI, MD, MS, OR, PA and WA) provide exceptions to their state licensure requirements under limited circumstances, i.e. only for radiology or only for border states, or were not telemedicine specific exceptions.

⁵⁵ Florida's Department of Health's Children's Medical Services Program (CMS) currently uses the hub and spoke model to provide services via telemedicine to children enrolled in the program.

Telemedicine in Florida

Florida does not have a statutory structure for the delivery of health care services through telemedicine. The only reference to telemedicine in the Florida Statutes is contained within s. 364.0135, F.S. This statute is related to the promotion of broadband internet services by telecommunication companies and does not define or regulate telemedicine in any manner. Further, the only references to telemedicine in the Florida Administrative Code relate to the Board of Medicine, Board of Osteopathic Medicine, and the Child Protection Team Program. The Florida Medicaid program also outlines certain requirements relating to telemedicine coverage in its rules.⁵⁶

Florida Board of Medicine

In 2003, the Florida Board of Medicine (Board) adopted Rule 64B8-9.014, F.A.C., "Standards for Telemedicine Prescribing Practice" (Rule).⁵⁷ The Rule sets forth requirements and restrictions for physicians and physician assistants prescribing medications.⁵⁸ The Rule also states that telemedicine "shall include, but is not limited to, prescribing legend drugs to patients through the following modes of communication: (a) Internet; (b) Telephone; and (c) Facsimile."⁵⁹ The Rule however fails to fully define telemedicine or regulate its use in any other way. The Board of Medicine only regulates allopathic physicians, so this rule does not apply to any other profession.⁶⁰

Florida's Board of Medicine recently adopted a new rule⁶¹ setting forth standards for telemedicine.⁶² The new rule defines telemedicine as the practice of medicine by a licensed Florida physician or physician assistant where patient care, treatment, or services are provided through the use of medical information exchanged from one site to another via electronic communications.⁶³ The definition could be interpreted to limit the use of telemedicine to physicians and physician assistants; however, the Board of Medicine does not have the authority to regulate other professions.⁶⁴ The new rule provides that:

- The standard of care is the same as that required for services provided in person;
- A physician-patient relationship may be established through telemedicine;
- A physician or physician assistant is responsible for the quality and safety of the equipment and used to provide services through telemedicine; and
- The same patient confidentiality and record-keeping requirements applicable to in-person services are applicable to services provided through telemedicine.⁶⁵

The new rule however prohibits prescribing controlled substances through telemedicine.⁶⁶

⁵⁶ See Agency for Health Care Administration, Florida Medicaid, "Practitioner Services Coverage and Limitations Handbook," December 2012, pg. 2-119, available at:

http://portal.flmmis.com/FLPublic/Tab/125/content/public/handbooks/cl_12_12-12-01_practitioner_services_handbook.pdf.spage (last visited on February 28, 2014).

⁵⁷ The current telemedicine rules and regulations for the Board of Medicine and the Board of Osteopathic Medicine are virtually identical. Rules 64B8-9.014 and 64B15-14.008, F.A.C.

⁵⁸ Rule 64B8-9.014, F.A.C.

⁵⁹ Id.

⁶⁰ The Board of Osteopathic Medicine rule only applies to osteopathic physicians.

⁶¹ The Board of Medicine and the Board of Osteopathic Medicine rules for telemedicine are identical.

⁶² Rule 64B8-9.0141, F.A.C., which has an effective date of March 12, 2014.

⁶³ Rule 64B8-9.0141, F.A.C.

⁶⁴ The Board of Osteopathic Medicine definition only applies to osteopathic physicians.

⁶⁵ Id.

⁶⁶ Id.

Child Protection Teams

The Child Protection Team (CPT) program under Children's Medical Services utilizes a telemedicine network to perform child assessments. Rule 64C-8.001(9), F. A. C., relating to the Child Protection Team, defines telemedicine as "the use of telecommunication and information technology to provide clinical care to individuals at a distance and to transmit the information needed to provide that care." The CPT is a medically directed multi-disciplinary program that works with local Sheriff's offices and the Department of Children and Families in cases of child abuse and neglect to supplement investigative activities.⁶⁷ The CPT patient is seen at a remote site and a registered nurse assists with the medical exam. A physician or an advanced registered nurse practitioner is located at the hub site and has responsibility for directing the exam.

Hub sites are comprehensive medical facilities that offer a wide range of medical and interdisciplinary staff whereas the remote sites tend to be smaller facilities that may lack medical diversity. In 2013, CPT telehealth services were available at 14 sites and 437 children were provided medical or other assessments via telemedicine technology.⁶⁸

Florida Medicaid Program

Florida's Medicaid program reimburses for a limited number of services provided by designated practitioners using telemedicine.⁶⁹ Medicaid limits the use of telemedicine to behavioral health, dental, and physician services. Audio only, email messages, facsimile transmissions, or communications with an enrollee through another mechanism other than the spoke site, known as the site where the patient is located, are not covered under Florida Medicaid.

The distant or hub site, where the provider is located, is eligible for reimbursement; the spoke site, where the patient is located, is not eligible for reimbursement unless a separate service is performed on the same day. Medicaid also requires that the referring physician and the patient be present during the consultation.⁷⁰

Medicaid services are reimbursable only in the hospital outpatient, inpatient and physician office settings. During the 2013 Legislative Session, Medicaid provider enrollment requirements were revised to allow the enrollment of physicians actively licensed in Florida to interpret diagnostic testing results through telecommunications and information technology provided from a distance.⁷¹

Under the Medicaid Medical Assistance Program (MMA) enacted in 2011, the vast majority of Medicaid recipients will be covered through managed care. Newly procured Medicaid contracts contain broader allowance for telemedicine. Not only may plans use telemedicine for behavioral health, dental, and physician services as before but, upon approval by AHCA, may also use telemedicine to provide other covered services.⁷² The new contract additionally eliminates numerous prior restrictions related to types of services and the type of providers who may utilize telemedicine.⁷³

⁶⁷ Florida Department of Health, *Child Protection Teams*, http://www.floridahealth.gov/AlternateSites/CMS-Kids/families/child_protection_safety/child_protection_teams.html (last visited February 28, 2014).

⁶⁸ Florida Department of Health, *Maternal and Child Health Block Grant Narrative for 2013*, <http://www.floridahealth.gov/healthy-people-and-families/womens-health/pregnancy/mch-fl-2013-1narrative.pdf> p.21, (last visited: February 28, 2014).

⁶⁹ Agency for Health Care Administration, *Highlights of Practitioner Services Coverage and Limitations Handbook Presentation*, Bureau of Medicaid Services, Summer 2013, p.30.

⁷⁰ Id.

⁷¹ See Chapter 2013-150, L.O.F., sec. 1.

⁷² Model Agreement, Attachment II, Exhibit II A, Medicaid Managed Medical Assistance Program, Agency for Health Care Administration, February, 2014, available at http://ahca.myflorida.com/Medicaid/statewide_mc/index.shtml#mmaplans (last viewed March 1, 2014).

⁷³ Id.

Florida Emergency Trauma Telemedicine Network

Various designated trauma centers participate in the Florida Emergency Trauma Telemedicine Network (FETTN). Coordinated by the Department of Health (DOH), the FETTN, facilitates the treatment of trauma patients between trauma centers and community or rural hospitals.⁷⁴ The FETTN allows for multiple interface options and currently 7 out of 25 trauma centers are part of the network.⁷⁵ In 2011-12, the seven Level 1 or Level 2 trauma centers that participated as a hub site, known as the location where the consulting physician is delivering the services, were Holmes Regional Medical Center, Tallahassee Memorial Hospital, Sacred Heart Hospital, University of Miami, Shands-Gainesville, Shands-Jacksonville, and Orlando Health.⁷⁶

Other Department of Health Initiatives

The DOH utilizes tele-radiology through the Tuberculosis (TB) Physician's Network.⁷⁷ The ability to read electronic chest X-Rays remotely can lead to a faster diagnosis, treatment and a reduction in the spread of the disease, according to the department. This service is not currently reimbursed by Medicaid.

Effect of Proposed Changes

The bill amends ch. 456, F.S., to create s. 456.47, F.S., relating to telemedicine services.

The bill defines "telemedicine" as the use of synchronous or asynchronous telecommunications technology by a telemedicine provider to provide health care services. Thus, health care professionals can use telemedicine to provide services to patients through both "live" and "store and forward" methods. Audio-only telephone calls, e-mail messages, and facsimile transmissions are expressly excluded from the definition of telemedicine. The definition does not place any additional limitations on the type of technology that can be used in telemedicine. However, both HIPAA and HITECH continue to apply to covered entities.

The bill defines "telemedicine service" as a health care service provided by a telemedicine provider using telemedicine, including, but not limited to, a patient assessment, diagnosis, consultation, treatment, or the monitoring and transfer of medical data.

The bill defines "telemedicine provider" as a health care practitioner as defined in s. 456.001, F.S., or a health care provider as defined in s. 408.07, F.S., who is licensed in Florida or any other U.S. jurisdiction and provides telemedicine services. The term "telemedicine provider" therefore allows out-of-state-providers to treat Florida patients via telemedicine, and includes these professionals:

- Acupuncturists;
- Allopathic physicians;
- Osteopathic physicians;
- Chiropractors;
- Podiatrists;
- Naturopaths;
- Optometrists;
- Nurses;

⁷⁴ Florida Department of Health, 2014 Agency Legislative Bill Analysis of HB 167, on file with the Florida House of Representative's Select Committee on Health Care Workforce Innovation (October 21, 2013).

⁷⁵ Id.

⁷⁶ Florida Department of Health, *Long Range Program Plan* (September 28, 2012).

⁷⁷ Florida Department of Health, *supra* note 74.

- Pharmacists;
- Dentists;
- Midwives;
- Speech therapists;
- Occupational therapists;
- Radiology technician;
- Electrologists;
- Orthotist;
- Pedorthist;
- Prosthetist;
- Massage therapists;
- Opticians;
- Hearing aid specialists;
- Respiratory therapists;
- Physical therapists;
- Psychologists;
- Psychotherapists;
- Dietician/Nutritionist; and
- Athletic trainers.

The bill establishes that the standard of care for telemedicine providers is the same as the standard of care for health care practitioners or health care providers providing face-to-face health care services to patients. This ensures that a patient receives the same standard of care irrespective of the modality used by the health care professional to deliver the services.

The bill provides that a telemedicine provider is not required to research a patient's medical history or conduct a physical examination of the patient before providing telemedicine services to the patient if the telemedicine provider conducts a patient evaluation sufficient to diagnose and treat the patient. This requirement ensures that the technology utilized by the health care professional is appropriate for the health care service that he or she is providing. The bill also allows the evaluation to be performed using telemedicine.

The bill provides that a patient receiving telemedicine services may be in any location at the time that the telemedicine services are rendered and that a telemedicine provider may be in any location when providing telemedicine services to a patient.

The bill requires that a telemedicine provider document the telemedicine services rendered in the patient's medical records according to the same standard as that required for in-person services. The bill requires that such medical records be kept confidential in accordance with ss. 395.3025(4) and 456.057, F.S. Section 456.057, F.S., relates to all licensed health care professionals while s. 395.3025(4), F.S., relates to all licensed ch. 395 health care facilities (hospitals, ambulatory surgical centers, and mobile surgical centers). Thus, the same confidentiality requirements placed upon health care facilities and health care practitioners for medical records generated as part of in-person treatment apply to any medical records generated as part of treatment rendered through telemedicine.

The bill provides that a non-physician telemedicine provider using telemedicine and acting within the relevant scope of practice may not be interpreted as practicing medicine without a license.

The bill provides an effective date of July 1, 2014.

B. SECTION DIRECTORY:

Section 1: Creates s. 456.47, F.S., relating to telemedicine services.

Section 2: Provides an effective date of July 1, 2014.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

None.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

None.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

Not applicable. This bill does not appear to affect county or municipal governments.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

1 A bill to be entitled
 2 An act relating to telemedicine services; creating s.
 3 456.47, F.S.; defining terms; providing for
 4 maintenance of health records and standards of care;
 5 providing for use of telemedicine services from any
 6 location under certain conditions; providing standards
 7 for a telemedicine provider to document services in a
 8 patient's medical record; providing that a
 9 telemedicine provider using telemedicine technology is
 10 not practicing medicine without a license under
 11 certain circumstances; providing an effective date.

12
 13 Be It Enacted by the Legislature of the State of Florida:

14
 15 Section 1. Section 456.47, Florida Statutes, is created to
 16 read:

17 456.47 Telemedicine services.--

18 (1) As used in this section, the term:

19 (a) "Telemedicine" means the use of synchronous or
 20 asynchronous telecommunications technology by a telemedicine
 21 provider to provide health care services. The term does not
 22 include audio-only telephone calls, e-mail messages, or
 23 facsimile transmissions.

24 (b) "Telemedicine provider" means a health care
 25 practitioner as defined in s. 456.001, or a health care provider
 26 as defined in s. 408.07, who is licensed in this state or any

27 other United States jurisdiction and provides telemedicine
 28 services.

29 (c) "Telemedicine service" means a health care service
 30 provided by a telemedicine provider using telemedicine,
 31 including, but not limited to, a patient assessment, diagnosis,
 32 consultation, treatment, or the monitoring and transfer of
 33 medical data.

34 (2) The standard of care for telemedicine providers is the
 35 same as the standard of care for health care practitioners or
 36 health care providers providing face-to-face health care
 37 services to patients. A telemedicine provider is not required to
 38 research a patient's medical history or conduct a physical
 39 examination of the patient before providing telemedicine
 40 services to the patient if the telemedicine provider conducts a
 41 patient evaluation sufficient to diagnose and treat the patient.
 42 The evaluation may be performed using telemedicine.

43 (3) A patient receiving telemedicine services may be in
 44 any location at the time that the telemedicine services are
 45 rendered. A telemedicine provider may be in any location when
 46 providing telemedicine services to a patient.

47 (4) A telemedicine provider shall document the
 48 telemedicine services rendered in the patient's medical records
 49 according to the same standard as that required for non-
 50 telemedicine services. Medical records, including video, audio,
 51 electronic, or other records generated as a result of providing
 52 telemedicine services, are confidential in accordance with ss.

HB 751

2014

53 395.3025(4) and 456.057.

54 (5) A non-physician telemedicine provider using
55 telemedicine and acting within the relevant scope of practice
56 may not be interpreted as practicing medicine without a license.

57 Section 2. This act shall take effect July 1, 2014.

Amendment No.

COMMITTEE/SUBCOMMITTEE ACTION

ADOPTED	___	(Y/N)
ADOPTED AS AMENDED	___	(Y/N)
ADOPTED W/O OBJECTION	___	(Y/N)
FAILED TO ADOPT	___	(Y/N)
WITHDRAWN	___	(Y/N)
OTHER	_____	

1 Committee/Subcommittee hearing bill: Select Committee on Health
2 Care Workforce Innovation
3 Representative Cummings offered the following:

Amendment (with title amendment)

6 Remove everything after the enacting clause and insert:
7 Section 1. Section 456.47, Florida Statutes, is created to
8 read:

9 456.47 Use of Telehealth to Provide Services.-

10 (1) DEFINITIONS.-As used in this section, the term:

11 (a) "Telehealth" means the use of synchronous or
12 asynchronous telecommunications technology by a telehealth
13 provider to provide health care services including, but not
14 limited to, patient assessment, diagnosis, consultation,
15 treatment, monitoring and transfer of medical data, patient and
16 professional health-related education, public health and health

Amendment No.

17 administration. The term does not include audio-only telephone
18 calls, e-mail messages, or facsimile transmissions.

19 (b) "Telehealth provider" means any person who provides
20 health care related services using telehealth and who is
21 licensed under ch. 457; ch. 458; ch. 459; ch. 460; ch. 461; ch.
22 463; ch. 464; ch. 465; ch. 466; ch. 467; part I, part III, part
23 IV, part V, part X, part XIII, and part XIV, ch. 468; ch. 478;
24 ch. 480; part III, ch. 483; ch. 484; ch. 486; ch. 490; ch. 491;
25 or who is registered under subsection (4) (a).

26 (2) PRACTICE STANDARD.-

27 (a) The standard of care for telehealth providers
28 providing medical care is the same as the standard of care for
29 health care professionals providing in-person health care
30 services to patients. A telehealth provider is not required to
31 research a patient's medical history or conduct a physical
32 examination of the patient before using telehealth to provide
33 services to the patient if the telehealth provider conducts a
34 patient evaluation sufficient to diagnose and treat the patient.
35 The evaluation may be performed using telehealth.

36 (b) A telehealth provider and a patient may each be in any
37 location when telehealth is used to provide health care services
38 to a patient.

39 (c) A non-physician telehealth provider using telehealth
40 and acting within the relevant scope of practice may not be
41 interpreted as practicing medicine without a license.

Amendment No.

42 (3) RECORDS.-A telehealth provider shall document in the
43 patient's medical record the health care services rendered using
44 telehealth according to the same standard as that used for in-
45 person services. Medical records, including video, audio,
46 electronic, or other records generated as a result of providing
47 such services, are confidential pursuant to ss. 395.3025(4) and
48 456.057.

49 (4) REGISTRATION OF OUT-OF-STATE TELEHEALTH PROVIDERS.-

50 (a) A health care professional not licensed in this state
51 may provide health care services to a patient located in this
52 state using telehealth if the telehealth provider annually
53 registers with the applicable board or the department if there
54 is no board.

55 (b) The board, or department if there is no board, shall
56 register a health care professional as a telehealth provider if
57 the health care professional:

58 1. Completes an application form developed by the
59 department;

60 2. Pays a \$75 registration fee; and

61 3. Holds an active, unencumbered license for a profession
62 included in section (1)(b) issued by another state, the District
63 of Columbia, or a possession or territory of the United States,
64 of which no disciplinary action has been taken against in the 5
65 years prior to submission. The department shall use the National
66 Practitioner Data Bank to verify information submitted by the
67 applicant.

Amendment No.

68 (c) A health care professional registered under this
69 section is prohibited from opening an office in this state and
70 from providing in-person health care services to patients
71 located in Florida.

72 (d) A health care professional registered under this
73 section must immediately notify the appropriate board, or the
74 department if there is no board, of restrictions placed on, or
75 disciplinary action taken against, the health care
76 professional's license to practice in any state or jurisdiction.

77 (e) A health care professional, whose license to provide
78 health care services has been revoked in any state or
79 jurisdiction, may not register under this section.

80 (5) EXEMPTIONS.-A health care professional who is not
81 licensed to provide health care services in this state but who
82 holds an active license to provide health care services in
83 another state or jurisdiction, and who provides health care
84 services using telehealth to a patient located in this state, is
85 not subject to the registration requirement of this section if
86 the services are provided:

87 (a) In response to an emergency medical condition as
88 defined in s. 395.002;

89 (b) No more than 10 times per calendar year; or

90 (c) In consultation with a health care professional
91 licensed in this state and that health care professional retains
92 ultimate authority over the diagnosis and care of the patient.

Amendment No.

93 (6) RULEMAKING.-The applicable boards, or the department
94 if there is no board, may adopt rules to administer the
95 requirements of this section.

96 Section 2. This act shall take effect July 1, 2014.

97

98

99

T I T L E A M E N D M E N T

100

Remove everything before the enacting clause and insert:

101

An act relating to telehealth; creating s. 456.47, F.S.;

102

defining terms; providing for certain practice standards;

103

providing for the maintenance and confidentiality of medical

104

records; requiring the registration of health care professionals

105

not licensed in this state in order to use telehealth to deliver

106

health care services; providing registration requirements;

107

prohibiting registrants from opening an office or providing in-

108

person health care services in this state; requiring a

109

registrant to notify the appropriate board or the Department of

110

Health of certain actions against his or her professional

111

license; prohibiting a health care professional with a revoked

112

license from being registered as a telehealth provider;

113

providing exemptions to the registration requirement; providing

114

rulemaking authority; providing an effective date.

**Presentation of GME
Report by OPPAGA**



Florida's Graduate Medical Education System

A presentation to the House Select Committee on Health Care Workforce Innovation

Jennifer Johnson
Staff Director

March 3, 2014

Graduate Medical Education (GME)

- GME is the training completed after medical school to develop clinical and professional skills required to practice medicine
 - Residents train in a specialty or core program (e.g., general surgery, pediatrics, anesthesiology, and neurology)
 - GME also includes fellowships to subspecialize
- Length of GME programs generally range from three to seven years

GME Institutions

- Accreditation Council for Graduate Medical Education (ACGME) and American Osteopathic Association (AOA) accredit GME programs
 - Accredit both institutions and individual programs
- GME institutions include
 - Statutory teaching hospitals
 - Community hospitals
 - Colleges of medicine
- Residents also train at ‘rotating sites’ which include other hospitals and health care facilities

GME Funding in Florida

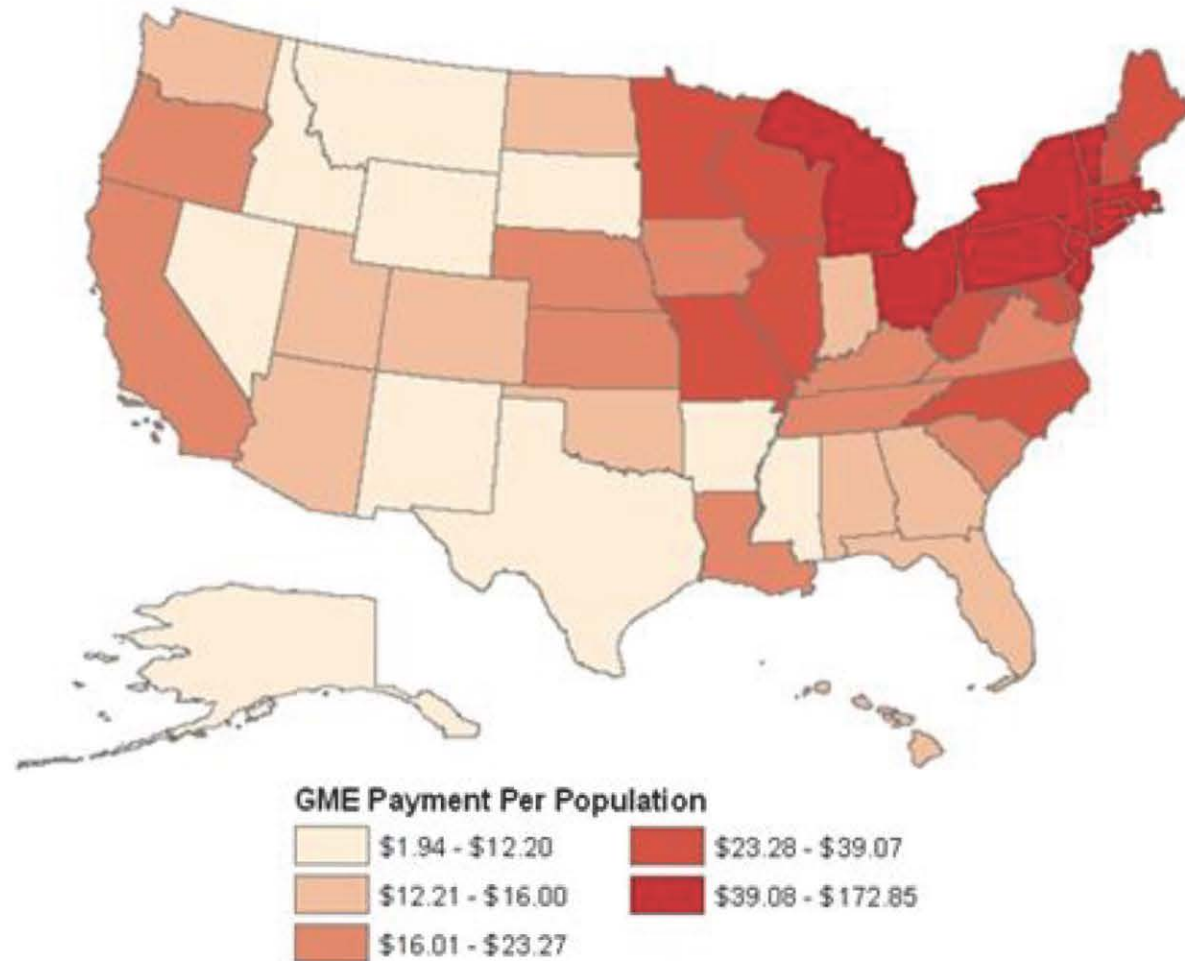
- Estimated annual funding for graduate medical education in Florida totals approximately \$540 million
 - Medicare – \$281 million
 - Medicaid – \$157 million
 - Other – \$101.9 million

GME Funding – Medicare

\$281 Million

- Reimbursements for direct and indirect medical expenses
 - \$87.8 million for direct medical expenses
 - \$193 million for indirect medical expenses
 - Based on a set number of resident positions; 1997 Balanced Budget Act capped number of positions
- PPACA directed the redistribution Medicare-funded positions
 - Florida received 225 direct residency positions
 - Requirements for primary care and general surgery positions
- Florida is 42nd among states for the number of residents funded by Medicare per capita and 29th for the average Medicare payment per resident

State Medicare Graduate Medical Education Payment per Population, 2010



Source: Mullan, F., Chen C., and Steinmetz, E., *The Geography of Graduate Medical Education: Imbalances Signal Need for New Distribution Policies*, Health Affairs, 1914-1921, November 2013.

GME Funding – Medicaid

\$157 Million

- 2013 Legislature created and appropriated \$80 million to the Statewide Medicaid Residency Program
 - AHCA allocated funds to 43 hospitals; ranges from \$26,309 to \$13.2 million
- 2013 Legislature appropriated \$77 million in Medicaid Disproportionate Share Hospital funds for GME
 - AHCA allocated funds to 21 statutory teaching hospitals, family practice statutory teaching hospitals, and hospitals that participate in GME consortium; ranges from \$476,095 to \$14.8 million

GME Funding – Other \$101.9 Million

- Additional non-Medicare and non-Medicaid sources include other federal funds, local contributions, and private funds
- \$101.9 million
 - Veteran's Affairs
 - Community Hospital Education Program
 - Funds from rotating sites

GME Costs

- Vary by type, number, and size of residency programs
- Direct costs include
 - Resident stipends and benefits
 - Teaching physicians' salaries and benefits
 - Accreditation fees
 - Administrative costs and overhead

GME Contributes to Physician Workforce

- Residents may remain in the state in which they completed GME to practice medicine
- Benefit to hospitals, health care practices, and communities
- Significant barriers to implementing and maintaining
 - Start-up costs
 - Institutional willingness
 - Resources
 - Ability to meet accreditation requirements

Florida's GME System

- There are 53 accredited GME institutions
 - 44 operating at time of review
 - 407 residency programs
 - 5,157 approved positions
- Ranges from 1 program at 17 institutions to 80 programs at Jackson Memorial Hospital
- Most institutions (31 of 44 or 70%) operate five or fewer programs
- Five institutions administer 65% (265 of 407) of Florida's GME programs

GME Programs

- Thirty-six institutions administer 96 primary care GME programs

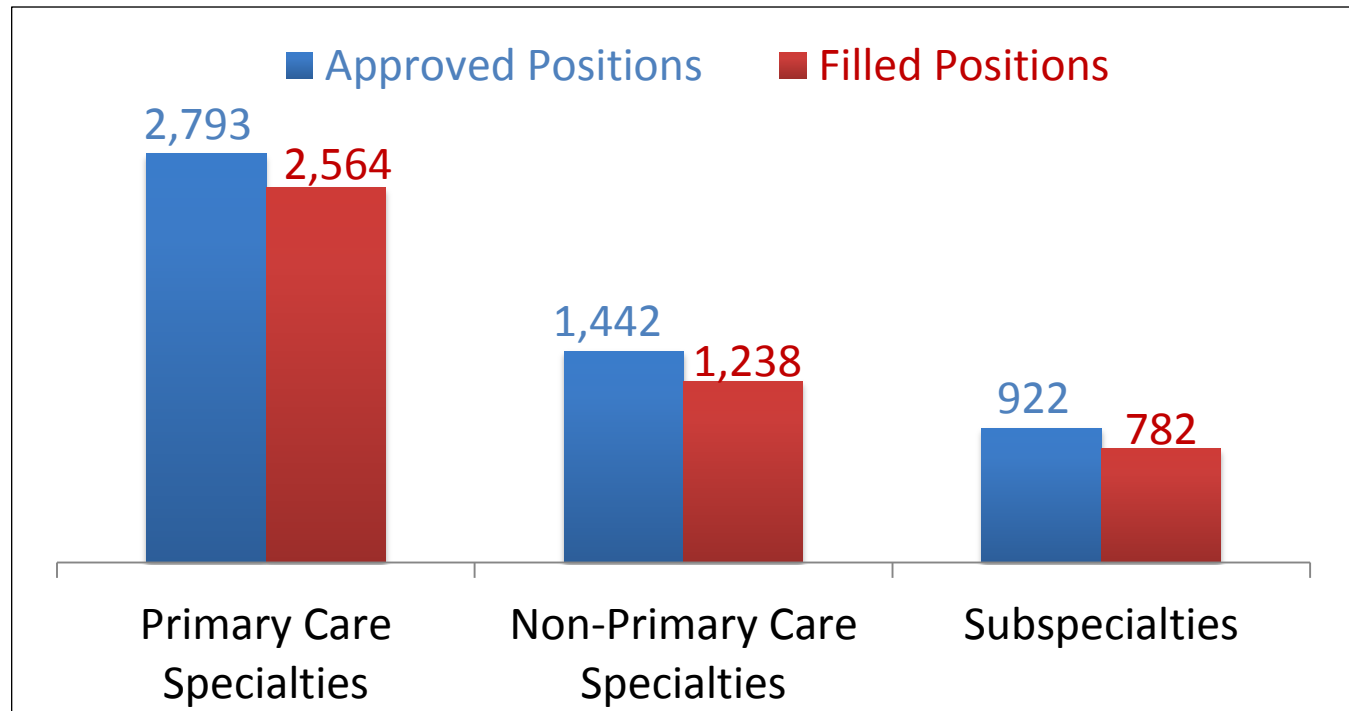
Specialty	Number of Programs	Number of Institutions with a Program
Primary Care ¹	96 (24%)	36 (82%)
Non-Primary Care	103 (25%)	22 (50%)
Subspecialty	208 (51%)	25 (57%)

¹ “Primary care” is defined in Florida law as emergency medicine, family medicine, general surgery, geriatric medicine, internal medicine, internal medicine pediatrics, obstetrics and gynecology, osteopathic general practice, pediatrics, preventive medicine, and psychiatry. ss. 381.4018 and 409.909, *F.S.*

Source: Analysis of OPPAGA GME survey responses.

GME Positions

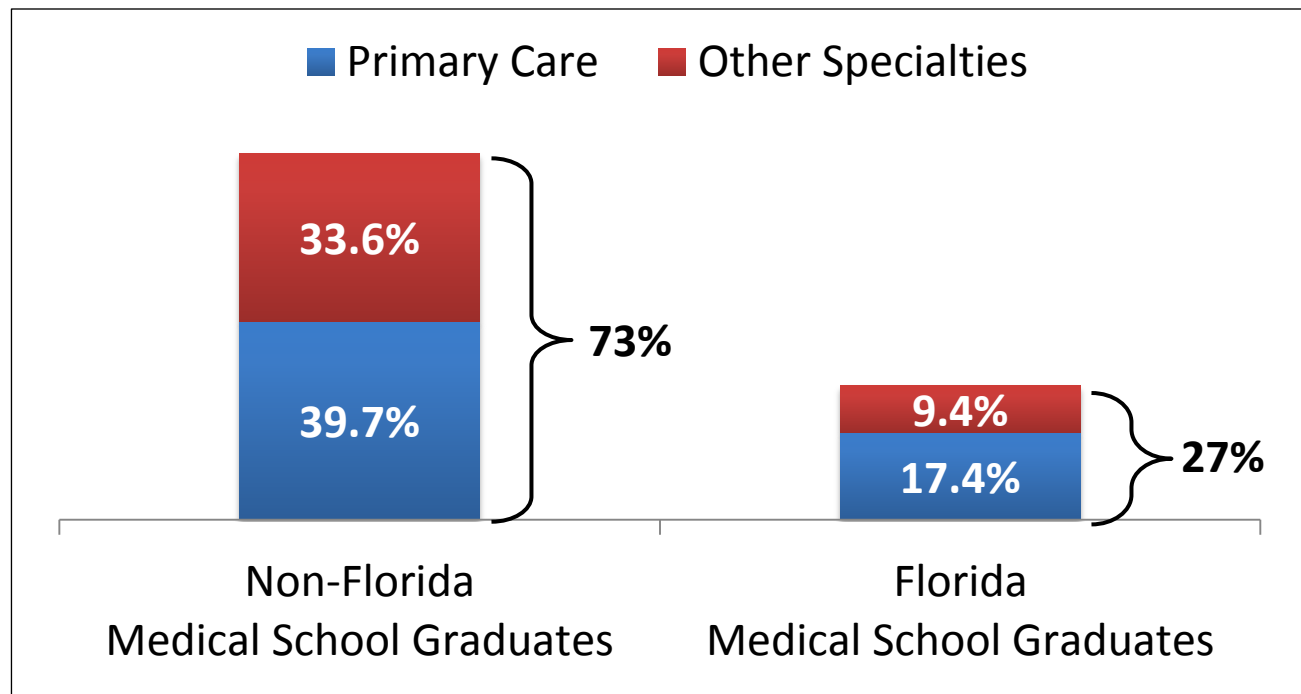
- Over 50% of Florida's GME positions are primary care of which almost 92% were filled in 2013-14



Source: Analysis of OPPAGA GME survey responses.

GME Residents

- Out-of-state medical school graduates comprise 73% of GME positions



Source: Analysis of OPPAGA GME survey responses.

Completion Rates

- Overall, 94% of GME students who started a program in 2006-07 completed the program by 2012-13

Program	Completion Rate
Dermatology, Geriatric Medicine, Neurology, Obstetrics, Gynecology, Psychiatry	100%
Pediatrics	99%
Emergency Medicine	98%
Family Medicine	93%
Internal Medicine	91%
General Surgery	80%

Medical School Graduates

- Florida has nine medical schools
 - Florida Atlantic University Charles E. Schmidt College of Medicine (2011)
 - Florida International University Herbert Wertheim College of Medicine (2006)
 - Florida State University College of Medicine (2000)
 - Lake Erie College of Osteopathic Medicine, Bradenton (2004)
 - Nova Southeastern University College of Osteopathic Medicine (1981)
 - University of Central Florida College of Medicine (2006)
 - University of Florida College of Medicine (1956)
 - University of Miami Miller School of Medicine (1952)
 - University of South Florida Morsani College of Medicine (1965)

Florida Medical School Graduates

- In 2013, Florida GME had 9% more positions than they could fill with Florida medical school graduates
 - In academic year 2012-13, approximately 980 students graduated from medical school
 - GME institutions reported 1,081 available positions for residents starting programs
- Florida medical schools project a 25% increase in graduates by 2017-18
- For GME programs, 15 institutions reported planned growth in 31 specialties with a total of 339 positions by 2018-19

Florida Medical School Graduates

- Most Florida medical students match to out-of-state residency programs

Medical School (Date Range for Graduates)	Graduates Who Matched Out-of-State	Graduates Who Matched in Florida
Florida International University Herbert Wertheim College of Medicine (2013)	65.6% (21)	34.4% (11)
Florida State University College of Medicine (2005 through 2013)	62.4% (406)	37.6% (245)
Lake Erie College of Osteopathic Medicine, Bradenton (2008 through 2013)	74.5% (580)	25.5% (199)
Nova Southeastern University College of Osteopathic Medicine (2000 through 2013)	61.9% (1226)	38.1% (756)
University of Central Florida College of Medicine (2013)	79.3% (23)	20.7% (6)
University of Florida College of Medicine (2000 through 2013)	64.5% (972)	35.5% (534)
University of Miami Miller School of Medicine (2001 through 2013)	63.5% (1183)	36.5% (680)
University of South Florida Morsani College of Medicine (2001 through 2013)	51.5% (683)	48.5% (642)
Total	62.4% (5,094)	37.6% (3,073)

Source: OPPAGA analysis of medical school match data.

Florida Medical School Graduates

- From 2000 through 2013, 69% of Florida graduates matched to a primary care residency, while 31% matched to a non-primary care residency

Match Location	Total Matches	Primary Care Matches	Non-Primary Care Matches
Florida Matches	3,073	72% (2,223)	28% (850)
Out-of-State Matches	5,094	66% (3,377)	34% (1,717)
Total¹	8,167	69% (5,600)	31% (2,567)

¹ The total number of matches excludes those who matched to a preliminary, transitional, internship, or research program for whom we do not have second year data.

Source: OPPAGA analysis of medical school match data from 2000 through 2013.

Internal Medicine and Family Medicine Comprise a Large Percentage of Primary Care Specialty Resident Matches

Program Specialty	Total Number of Residents Matched	In-State Residency (Number)	Out-of-State Residency (Number)
Emergency Medicine	737	26.9% (198)	73.1% (539)
Emergency Medicine/Family Medicine	12	0.0% (0)	100.0% (12)
Family Medicine	1,017	53.2% (541)	46.8% (476)
Family Medicine/Pediatrics	1	0.0% (0)	100.0% (1)
General Surgery	327	30.9% (101)	69.1% (226)
Geriatric Medicine/Family Medicine	1	0.0% (0)	100.0% (1)
Internal Medicine	1,747	41.8% (730)	58.2% (1,017)
Internal Medicine/Emergency Medicine	18	0.0% (0)	100.0% (18)
Internal Medicine/Pediatrics	49	34.7% (17)	65.3% (32)
Internal Medicine/Psychiatry	1	0.0% (0)	100.0% (1)
Obstetrics and Gynecology	549	33.3% (183)	66.7% (366)
Pediatrics	803	43.1% (346)	56.9% (457)
Psychiatry	338	31.7% (107)	68.3% (231)
Total	5,600	39.7% (2,223)	60.3% (3,377)

Retention of Residents

- For Florida medical school graduates from 2000 through 2013
 - Of those who did a Florida residency, an estimated 74% are practicing medicine in Florida and 5% have an active license but are not practicing medicine
 - Of those who left Florida for residency, an estimated 26% are practicing medicine in Florida and 2% have an active license but are not practicing medicine
- Of physicians estimated as having completed GME in Florida since 2000, 52% are practicing in Florida, and 7% have active Florida licenses but are not currently practicing medicine in Florida

Monitoring GME

- Coordinate systematic and routine monitoring of GME
 - Collect data to track and analyze GME statewide
 - Regularly assess priorities and challenges associated with GME
 - Evaluate effectiveness and quality of Florida's GME system

Track and Analyze GME Statewide

- Residency programs
 - Type, size, and rotation sites
 - Information about residency positions, such as approved and filled positions
 - GME institution residency completion lengths and rates
 - Use of Medicare FTEs
- Resident match data
- Information about residency choice and practice decisions

Assess Priorities and Challenges

- Identify residency programs in need of expansion and geographical areas that could benefit from programs
- Determine factors important for attracting and retaining residents
- Identify opportunities and approaches that address funding challenges and maximize state and federal funding

Evaluate Quality and Effectiveness

- Use performance and outcome-based measures
- Look to federal and national initiatives
 - Council for Graduate Medical Education creating guidelines for longitudinal evaluation
 - Medpac recommends developing standards that address educational and clinical outcomes and clinical environments

Questions?

A vertical strip on the left side of the slide shows the top of the Florida State Capitol building, featuring a white dome and classical columns, set against a blue sky with white clouds.

oppaga

THE FLORIDA LEGISLATURE'S OFFICE OF PROGRAM POLICY ANALYSIS & GOVERNMENT ACCOUNTABILITY

OPPAGA supports the Florida Legislature by providing data, evaluative research, and objective analyses that assist legislative budget and policy deliberations.



February 2014

Report No. 14-08

Florida's Graduate Medical Education System

at a glance

Graduate medical education (GME) refers to the training residents complete after medical school graduation to develop clinical and professional skills required to practice medicine. During this education, residents train in a specialty (e.g., general surgery, pediatrics, or internal medicine). There are 53 accredited GME institutions in Florida; 44 of these institutions are administering 407 residency programs with a total of 5,157 approved positions. The remaining nine institutions have recently received accreditation and are not yet training residents.

Of the 407 residency programs, 24% are primary care specialties; 25% are non-primary care specialties; and 51% are subspecialties. Approximately 54% of Florida's GME positions are primary care positions. Approximately 11% of residency positions were unfilled in academic year 2013-14. Institutions reported that residents who graduated from non-Florida medical schools comprised 73% of filled GME positions during academic year 2013-14.

Of graduates from Florida's medical schools from 2000 through 2013 who matched to a Florida residency program, 74% have an active Florida medical license and are practicing medicine in Florida. For graduates who left the state for GME, 26% have active licenses in Florida and are practicing in Florida.

Estimated annual funding for GME in Florida totals approximately \$540 million, which primarily is from Medicare and Medicaid.

Scope

As directed by the Legislature, this report presents information about graduate medical education (GME) in Florida. It describes the structure and funding of Florida's GME system, information about retention of physicians educated in Florida, and strategies for monitoring GME.

To conduct this review, we surveyed 53 accredited GME institutions to gather detailed information about residency programs and positions and input about specific issues related to GME and the health care workforce. We also surveyed Florida's nine medical schools to gather input about the specific GME and health care workforce issues included in the institution survey. In addition, we collected Florida medical school student graduate data and Florida physician licensure data in order to measure how much of Florida's physician workforce trained in Florida.

Background

GME trains physicians to practice medicine

GME refers to the training residents complete after medical school graduation to develop clinical and professional skills required to practice. During this education, residents train in a specialty or core program (e.g., general surgery, pediatrics, or internal medicine). Graduates from allopathic medical schools, referred to as medical doctors (MDs), and graduates from osteopathic medical

schools, referred to as Doctors of Osteopathic Medicine (DOs), complete GME programs.

GME program placement occurs during the final year of medical school; students participate in a process that matches them to a program based on an algorithm that accounts for candidate preference for a particular specialty, aptitude based on medical school grades and performance in rotations, and available GME positions. The content and length of GME programs vary based on the criteria required to obtain board certification; programs generally range from three to seven years.¹ Approximately 120,000 GME students are training in 10,000 GME programs in the U.S.

GME programs include residencies and fellowships. First year GME students fill categorical or preliminary resident positions. Categorical residents begin a multi-year program with a sponsoring institution during their first year of GME training. During their first year, preliminary residents receive prerequisite training.² After receiving prerequisite training, preliminary residents transfer to categorical resident programs.³ After completing a residency program, physicians may also pursue advanced GME training by completing a fellowship in a subspecialty program, such as cardiology or vascular surgery.

GME institutions and individual residency programs receive accreditation from national accrediting bodies

National bodies accredit allopathic and osteopathic GME institutions and individual

programs. These accreditations help to ensure residency quality. Accredited institutions partner with other health care entities to create rotation sites for individual GME programs.

The Accreditation Council for Graduate Medical Education accredits allopathic GME programs, and the American Osteopathic Association accredits osteopathic GME programs.⁴ The Accreditation Council for Graduate Medical Education requires all residency programs to be administered by a sponsoring institution that assumes academic and financial responsibility for residents. The sponsoring institution usually serves as the primary clinical site for training. Sponsoring institutions most often are medical schools, statutory teaching hospitals, or community hospitals.⁵

The American Osteopathic Association accredits Osteopathic Postdoctoral Training Institutions, which train residents in community-based settings. With osteopathic residency programs, a college of osteopathic medicine serves as the academic sponsor and has an agreement with a base institution. Residents in these programs train at base institutions, which are most often hospitals. The base institution maintains administrative and financial responsibility.

Non-hospital health care facilities also may be accredited GME institutions. These facilities include federally qualified health centers,

¹ Length of program varies depending on specialty choice. For example, many residency programs in primary care specialties, such as pediatrics and family medicine, are three years in length. In comparison, the typical length for a neurological surgery program is five years.

² Some preliminary programs last longer than one year. In addition to preliminary programs, first-year GME students can complete a transitional year with a broad-based curriculum in multiple disciplines to prepare for a specific specialty or to help determine specialty choice.

³ Osteopathic programs classify their preliminary resident positions as internships.

⁴ Osteopathic medical school graduates can complete GME in an allopathic or osteopathic residency program.

⁵ Statutory teaching hospitals include both statutory teaching hospitals and family practice teaching hospitals. Section 408.07, *F.S.*, defines a statutory teaching hospital as any Florida hospital officially affiliated with an accredited Florida medical school that has activities in the area of GME accredited by the Accreditation Council for Graduate Medical Education or the Accreditation Council on Postdoctoral Training of the American Osteopathic Association and the presence of 100 or more FTE resident physicians. Agency for Health Care Administration is responsible for determining which hospitals meet this definition. Section 395.805, *F.S.*, defines a family practice teaching hospital as a freestanding, community-based hospital licensed under the *Florida Statutes* that offers a three-year family practice residency program accredited through the residency review committee of the Accreditation Council for Graduate Medical Education or the Accreditation Council on Postdoctoral Training of the American Osteopathic Association.

public health departments, and other health care delivery systems. For example, in Florida, both the Palm Beach County Public Health Department and the Miami-Dade County Medical Examiner's Department are accredited as GME institutions.

Accrediting bodies also approve and evaluate individual residency programs. For example, an institution that offers residency programs in 10 specialties must individually seek and receive accreditation for each of these specialties.⁶ The accrediting bodies approve a specific number of positions for each residency program. They determine the number of approved positions based on the ability of a program to provide a sufficient educational experience and require that funding is available.

Accreditation ensures that residency programs meet quality standards. The accrediting bodies for both allopathic and osteopathic residency programs create quality standards and evaluate programs that wish to receive and maintain accreditation by reviewing documentation and making site visits to ensure compliance. Both accrediting bodies have standards for faculty, program personnel and resources, resident appointments, evaluation of residents and faculty, and resident duty hours in the learning and working environment. In addition, educational curriculum must incorporate core competencies in patient and procedural skills, medical knowledge, practice-based learning, interpersonal and communication skills, professionalism, systems-based practice, and scholarly activities for evaluation of the resident program by peer review committees. The American Osteopathic Association also incorporates osteopathic principles into core competencies.

Accredited GME institutions partner with other hospitals and other health care facilities, such as private medical practices, where residents may complete part of their training; these

⁶ An institution may administer multiple residency programs that represent a range of specialties or it may administer as few as one program.

partners are referred to as rotating sites. Residents may train between the primary clinical site and one rotating site or may rotate through several sites. The number and length of rotations depend on the ability of the primary clinical site to meet all the training needs for the residents in its program.

Federal and state sources primarily pay for GME; costs are driven by several factors

Funding sources for GME include federal and state funds, local contributions, and private funds. The reported costs of GME can vary by the type, number, and size of residency programs; their geographic locations; and the extent of rotation sites.

Medicare reimbursements for direct medical expenses partially compensate teaching programs for residency education costs. Medicare historically has been the largest payer for GME.⁷ Medicare payments are structured reimbursements made directly to hospitals for direct and indirect medical expenses, which are based on a set number of resident positions authorized by Medicare.⁸ Payments for direct medical expenses are based on a per resident amount, the number of residents a hospital trains, and the hospital's percentage of Medicare inpatient days.⁹ The federal Centers for Medicare and Medicaid Services annually updates the per resident amount by an inflation factor.

Payments for indirect medical expenses compensate hospitals for higher patient care costs due to the presence of teaching programs

⁷ Medicare, administered by the federal government, provides health insurance for Americans aged 65 and older, who have worked and paid into the system, and younger people with specified disabilities.

⁸ The hospital that receives the Medicare reimbursement is not always the institution that administers GME programs. For example, some colleges of medicine are the accredited GME institution that administers residency programs; however, the hospital where residents train receives the Medicare payment.

⁹ The reimbursement to the GME institution includes direct and indirect payments for the period of time that residents train at non-hospital sites. Institutions are compensated more for residents in primary care specialties than in non-primary care specialties due to the methodology for updating the inflation factor. Institutions receive higher reimbursement for residents in specialties than in subspecialties.

by enhancing the regular inpatient hospital Medicare reimbursement. These payments, which increase the Medicare inpatient hospital reimbursement, are based on the ratio of the number of authorized residency positions to the number of hospital beds.

While programs heavily depend on Medicare funding for upfront and ongoing costs, the 1997 Balanced Budget Act placed a cap on the number of residency positions funded under Medicare, freezing funding levels from 1996 regardless of whether institutions add new positions to specific residency programs.¹⁰ As such, only hospitals that have not previously provided GME can receive funding for new programs. The federal Centers for Medicaid and Medicare Services allowed institutions that had not developed new programs a five-year window to establish a cap. In 2012, Medicare direct payments for the 50 states and Washington, D.C., totaled \$2.7 billion, and indirect payments totaled \$6.7 billion.¹¹

Medicaid is the second largest public payer for GME. While not required to pay GME by federal guidelines, most states include GME as a Medicaid reimbursement and receive matching federal funds for such reimbursements.¹²

State reimbursement models differ; some states use a structure similar to Medicare payments with a direct and indirect component, while others have a different reimbursement mechanism. Total Medicaid payments in 2012 for the 50 states and Washington, D.C., were \$3.87 billion dollars.^{13, 14}

¹⁰ The Balanced Budget Refinement Act of 1999 (P.L. 106-113) increased the limit for rural teaching hospitals to equal 130% of 1996 counts.

¹¹ *Health Care Workforce Training Programs*, U.S. Government Accountability Office, August 2013.

¹² Medicaid is a federal-state program that provides access to health care for low-income families and individuals. Medicaid also assists aged and disabled people with the costs of nursing facility care and other medical expenses.

¹³ Of the \$3.87 billion dollars in Medicaid payments for the states and Washington, D.C., \$2.32 billion was for fee-for-service payments, \$1.29 billion was for direct managed care payments, and \$264 million was included as managed care capitation payments.

Other sources pay for GME. In addition to Medicare and Medicaid, other federal sources of GME funding include the U.S. Departments of Health and Human Services, Defense, and Veteran's Affairs. In 2012, the combined funds for GME payments from these sources totaled \$942 million.

Additional sources that pay for graduate medical education include hospital and other private foundations, university physician practice plans, county funds, and physician groups associated with institutions. The institutions that administer the programs may also use money from their general revenue funds. Private payers and insurance companies may recognize higher costs associated with teaching through enhanced reimbursements for patient care; however, these types of payers typically do not reimburse hospitals for GME. National estimates for these funding sources are not readily available.

Several factors influence the cost of GME. The reported costs of GME can vary by the type, number, and size of residency programs; their geographic locations; and the number of affiliated rotation sites. As such, cost estimates vary. The American Association of Medical Colleges and other estimates based on Medicare residency payments report average annual costs to institutions of between \$100,000 and \$143,000 per trainee; Medicare residency payments are based on a 2012 cost estimate of \$101,000 per trainee.

The direct costs associated with providing GME include

- resident stipends and benefits;
- teaching physicians' salaries and benefits;
- accreditation fees; and
- administrative costs and overhead.

Facilities that provide GME, especially large hospitals, also incur indirect costs related to the GME teaching mission. These costs include those associated with using tests and

¹⁴ *Medicaid Graduate Medical Education Study: A 50 State Survey*, American Association of Medical Colleges, June 2013.

procedures to treat medically complex cases, clinical research, and specialized services.

GME contributes to the physician workforce

GME makes an important contribution to a state's physician workforce because it trains future physicians. Research has shown that residents can have a significant impact on a state's workforce because they may remain in the state in which they completed GME to practice medicine. Residents can influence the long-term structure of a state's physician workforce, including its size, mix of specialties, and quality.

A number of physician workforce challenges emphasize the importance of GME and the retention of residents. One major challenge is having an adequate number of physicians. The American Association of Medical Colleges estimates a national shortage of 91,500 physicians by 2020, which would require an additional 15% over current training levels to address. In addition to overall need, some physician shortage estimates identify primary care and non-primary care shortages. In a 2008 report, the U.S. Health Resources and Services Administration estimated that by 2020, the U.S. will need 337,400 primary care physicians, approximately 66,000 more than projected to be available.¹⁵ Other workforce challenges include an imbalance across specializations, a lack of diversity among physicians, and an unequal distribution of physicians geographically.

In addition to addressing physician workforce challenges, research also suggests that residency programs benefit hospitals, health care practices, and their communities. Residents serve a large proportion of patients with low incomes, and residency programs bring advanced equipment, technology, and

services to communities that have historically been underserved. Research also demonstrates a modest increase in quality of care in teaching hospitals with added educational and labor benefits promoting reputation and visibility of the institution.

However, significant barriers exist to implementing and maintaining residency programs and a sufficient number of residency positions. Barriers to creating new residency programs, particularly in underserved areas, rural areas, and non-hospital settings, include substantial start-up costs and institutional willingness, resources, and ability to meet accreditation requirements. Other critical challenges include the availability of faculty to supervise and teach students, medical school graduates' desire to enter specific programs, and commitment to a teaching mission. In addition, the high cost of GME requires sustained resources over time.

Florida's GME System —

Residency Programs and Positions in Florida

There are 53 accredited GME institutions in Florida; 44 are operational, administering 407 residency programs with a total of 5,157 approved positions.¹⁶ As of January 2014, 9 of the 53 accredited institutions were not yet administering residency programs.¹⁷ Of the 44 institutions that are actively training GME students, 21 are accredited by the Accreditation Council for Graduate Medical Education, 16 by the American Osteopathic Association, and 7 have programs accredited by both.¹⁸ (See

¹⁶ OPPAGA sent surveys to 53 GME institutions requesting detailed information about the residency programs that they administer; 47 institutions submitted responses to our survey.

¹⁷ Of the nine institutions that have not begun training GME students, some will be able to accept GME students for the academic year 2014-15, while some of them have already received institutional accreditation and are awaiting accreditation for the individual residency program(s) that they plan to administer.

¹⁸ Some of these institutions administer residency programs that are accredited by both bodies, and some of the institutions administer programs that are accredited by the Accreditation Council for Graduate Medical Education and programs that are accredited by the American Osteopathic Association.

¹⁵ *The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand*, U.S. Department of Health and Human Services, Health Resources Services Administration Bureau of Health Professionals, December 2008.

Appendix A, Exhibit A-1 for a list of the residency programs offered by each institution.)

With limited exceptions, Florida's accredited institutions are statutory teaching hospitals, community hospitals, or colleges of medicine affiliated with a statutory teaching or community hospital. The hospitals range from small hospitals that focus on primary and secondary care to specialty hospitals and major medical centers that provide a significant amount of specialty and tertiary care. There also are four military hospitals that provide GME in Florida, and eight institutions are non-hospital sites; for example, the Palm Beach County Public Health Department and the Miami-Dade County Medical Examiner's Department are accredited for residency programs.

The 44 accredited institutions administer a total of 407 residency programs for which the accrediting bodies approved 5,157 resident positions in academic year 2013-14. The number of residency programs administered by each institution ranges from 1 program at 17 institutions to 80 programs at Jackson Memorial Hospital. Most institutions (31 of 44, or 70%) operate five or fewer programs. Five institutions each administer more than 30 programs. Together, these five institutions comprise 65% (265 of 407) of Florida's 2013-14 GME programs. (See Appendix A, Exhibit A-2 for a list of GME institutions and the number of residency programs and approved positions at each institution.)

Thirty-six institutions administer 96 primary care GME programs. As shown in Exhibit 1, of Florida's 407 residency programs, 24% are primary care specialties; 25% are non-primary care specialties; and 51% are subspecialties.

Primary care specialties, as defined by ss. 381.4018 and 409.909, *Florida Statutes*, include emergency medicine, family medicine, general surgery, geriatric medicine, internal medicine, internal medicine and pediatrics, obstetrics and gynecology, pediatrics, preventive medicine, and psychiatry. The

largest percentage of primary care programs administered is internal medicine; 19 of the 96 (20%) primary care programs are internal medicine. Thirty-six of the 44 (or 82%) institutions offer residency programs in primary care.

In addition, 22 (or 50%) institutions offer 103 programs in non-primary care specialties, and 25 (or 57%) institutions offer 208 subspecialty programs as well. Four specialties constitute the most commonly administered non-primary care programs; Florida institutions administer eight programs each for two of these specialties, dermatology and internship preliminary and traditional osteopathic medicine.¹⁹ Florida institutions also administer seven programs for two additional specialties, diagnostic radiology and orthopedic surgery. For subspecialty residency programs, sports medicine (eight programs) and cardiology, gastroenterology, and infectious disease (all with seven programs each) comprised the most commonly offered subspecialties. (See Appendix A, Exhibit A-3, for detailed information on the number of primary care and non-primary care specialties and subspecialties programs offered by institution.)

**Exhibit 1
Thirty-Six GME Institutions Administered
Residency Programs in Primary Care Specialties
in Academic Year 2013-14**

Specialty	Number of Programs	Number of Institutions with a Program
Primary Care	96 (24%)	36 (82%)
Non-Primary Care	103 (25%)	22 (50%)
Subspecialty	208 (51%)	25 (57%)

Source: Analysis of OPPAGA GME survey responses.

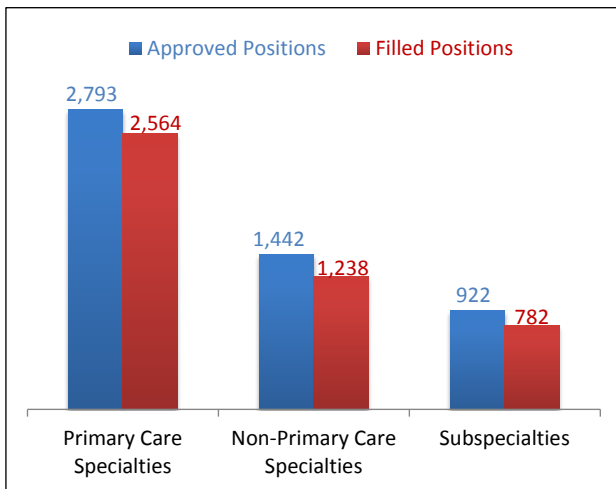
¹⁹ The osteopathic medicine preliminary and traditional internship is a residency program for graduates of osteopathic medical schools who are completing prerequisites for a different specialty or they are undecided about specialization. This is similar to the preliminary or transitional year under the Accreditation Council of Graduate Medical Education.

Over 50% of Florida’s GME positions are primary care positions, and almost 92% of the primary care positions were filled in academic year 2013-14. As shown in Exhibit 2, of the 5,157 approved resident positions, 2,793 (54%) are in primary care; 1,442 (28%) are in non-primary care, and 922 (18%) are in subspecialties.

While GME institutions are accredited and approved for a specific number of positions for each residency program, institutions do not fill all positions. Reasons for this include funding decreases, hospital needs for residents in specific specialties, it takes time to attract GME students to new programs, and some positions being held open for GME students that conduct research or otherwise take longer to complete their program.

During academic year 2013-14, 573 of the 5,157 (11%) approved positions were unfilled. Primary care positions had the highest fill rate at 92% (2,564 of 2,793).²⁰ Institutions filled 86% (1,238 of 1,442) of their non-primary care positions, and 85% (782 of 922) of their subspecialty positions. (See Appendix A, Exhibit A-4 for the number of approved programs and positions by specialty.)

**Exhibit 2
Institutions Filled 2,564 Primary Care Positions**

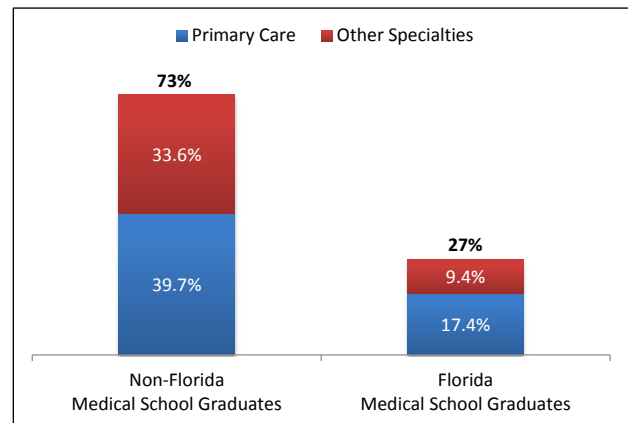


Source: Analysis of OPPAGA GME survey responses.

²⁰ Of the primary care specialty positions filled, approximately 6% were filled by GME students completing a preliminary position.

Graduates from out-of-state medical schools comprise 73% of GME positions. Institutions reported the in-state or out-of-state medical school location for 4,304 of their GME students. As shown in Exhibit 3, 39.7% (1,709 of 4,304) of GME students attended non-Florida medical schools before entering GME training in primary care programs while 33.6% (1,445 of 4,304) of GME students attended non-Florida medical schools before entering non-primary care programs. In contrast, 17.4% (747 of 4,304) of GME students graduated from Florida medical schools before pursuing primary care training in Florida, and 9.4% (403 of 4,304) of GME students graduated from Florida medical schools before pursuing non-primary care training in Florida.

**Exhibit 3
The Majority of Florida GME Students Graduated from Out-of-State Medical Schools¹**



¹ Due to rounding, subtotals do not sum to 100%.

Source: Analysis of OPPAGA GME survey responses.

The high percentage of out-of-state medical school graduates enrolled in Florida GME programs does not reflect the full effect of the four new medical schools that opened in Florida between 2004 and 2011. Medical schools generally require four years for completion, and GME programs may last seven or more years; thus, the full effect of the new Florida medical schools on Florida’s GME programs will not occur until academic year 2018-19. At that time, most GME programs will have had the opportunity to enroll graduates from the new Florida medical schools in all of their program years.

Florida GME institutions reported high completion rates. We surveyed institutions about their completion rates in 10 specialties for which a large percentage of GME institutions provide residency programs. Overall, 94% of GME students who started a program in 2006-07 completed the program by 2012-13. Institutions reported a 100% completion rate for five specialties: dermatology, geriatric medicine, neurology, obstetrics and gynecology, and psychiatry. Four specialties had completion rates over 90%: pediatrics (99%), emergency medicine (98%), family medicine (93%), and internal medicine (91%). The lowest completion rate was general surgery (80%).

Retention of Medical Graduates and Residents in Florida

Retention of medical students and residents is important for the future of the state’s physician workforce, particularly in the face of estimated physician shortages. A 2013 study estimated that approximately 47% of physicians stayed or returned to the state where they completed

their most recent graduate medical education, and 66% of physicians who completed their undergraduate and graduate medical education in the same state remained in that state to practice.²¹

As shown in Exhibit 4, Florida has nine medical schools. Of the seven allopathic medical schools, all but one (the University of Miami) are public universities. The two osteopathic medical schools—Lake Erie College of Osteopathic Medicine and Nova Southeastern University—are private institutions.

Four of the nine medical schools—Nova Southeastern University, the University of Florida, the University of Miami, and the University of South Florida—have been teaching students for more than 30 years; the remaining five institutions have been admitting students since 2001 or later. The total projected enrollment for 2013-14 in Florida’s medical schools is 4,908 students.

²¹ 2013 State Physician Workforce Data Book, Association of American Medical Colleges, 2013.

**Exhibit 4
Florida’s Nine Medical Schools Have a Projected Enrollment of 4,908 Students for Academic Year 2013-14**

Medical School	Year Established	Projected Academic Year 2013-14 Enrollment	Number of Graduates in Academic Year 2012-13
Florida Atlantic University Charles E. Schmidt College of Medicine	2011	192	0
Florida International University Herbert Wertheim College of Medicine	2006	360	33
Florida State University College of Medicine	2000	483	112
Lake Erie College of Osteopathic Medicine, Bradenton	2004	741	155
Nova Southeastern University College of Osteopathic Medicine	1981	984	224
University of Central Florida College of Medicine	2006	359	36
University of Florida College of Medicine	1956	540	131
University of Miami Miller School of Medicine	1952	769	187
University of South Florida Morsani College of Medicine	1965	480	106
Total	-	4,908	984

Source: Data from medical schools and the Florida Board of Governors’ academic year 2012-13 university work plans and annual accountability reports.

In 2013, Florida GME had 9% more positions than they could fill with Florida medical school graduates. In academic year 2012-13, approximately 980 students graduated from medical school in Florida, while GME institutions reported 1,081 available positions for residents starting primary care and non-primary care specialty programs. As of January 2014, Florida medical schools were projecting a 25% increase in graduates over the time period from academic year 2013-14 through academic year 2017-18; this increase is primarily due to enrollment increases at three of the newer state university medical schools.²² For GME institutions that responded to our survey, 15 reported that by academic year 2018-19 they plan to start new programs in a total of 31 specialties with a total of 339 positions by academic year 2018-19.

The majority of Florida medical students match to out-of-state residency programs. Residency program placement occurs during the final year of medical school. Students participate in a process that matches them to a program based on an algorithm that accounts for candidate preference for a particular specialty, aptitude based on medical school grades and performance in rotations, and available resident positions.

²² Projected enrollment increases for the state university medical schools are based on state-funded positions only.

From 2000 through 2013, 9,294 medical students graduated from Florida's medical schools. Of these students, 38% (3,073) matched to a residency program in Florida and 62% (5,094) matched to a residency program out-of-state.²³ As shown in Exhibit 5, the percentage of medical students matching to an out-of-state residency program ranged from 52% at the University of South Florida to 79% at the University of Central Florida. Of those students who matched to out-of-state programs, the top five states that students matched to were New York (11%), Pennsylvania (8%), Texas (7%), Georgia (6%), and North Carolina (6%). The state currently lacks information about factors that influence residency choice, such as why medical students choose certain specialties or why they choose specific residency programs.

²³ Some medical school graduates did not match or first matched to preliminary, transitional, internship, or research programs; they will enter a specialty in their second year or enter medical research instead of practice. The data we analyzed included students' second match. In these cases, we only included the second-year match. Residents who did a preliminary or transitional year for whom there was no second year information available were not included in our analysis. Overall, 1,127 students were removed from the analysis because they did not match, did not have match data provided, went into research, or did not have second year data for those who did a preliminary, transitional, or internship program.

Exhibit 5

From 2000 Through 2013, 62% of Florida Medical School Graduates Matched to an Out-of-State Residency

Medical School (Date Range for Graduates)	Percentage of Graduates Who Matched Out-of-State (Number)	Percentage of Graduates Who Matched in Florida (Number)
Florida International University Herbert Wertheim College of Medicine (2013)	65.6% (21)	34.4% (11)
Florida State University College of Medicine (2005 through 2013)	62.4% (406)	37.6% (245)
Lake Erie College of Osteopathic Medicine, Bradenton (2008 through 2013)	74.5% (580)	25.5% (199)
Nova Southeastern University College of Osteopathic Medicine (2000 through 2013)	61.9% (1226)	38.1% (756)
University of Central Florida College of Medicine (2013)	79.3% (23)	20.7% (6)
University of Florida College of Medicine (2000 through 2013)	64.5% (972)	35.5% (534)
University of Miami Miller School of Medicine (2001 through 2013)	63.5% (1183)	36.5% (680)
University of South Florida Morsani College of Medicine (2001 through 2013)	51.5% (683)	48.5% (642)
Total	62.4% (5,094)	37.6% (3,073)

Source: OPPAGA analysis of medical school match data.

From 2000 through 2013, 72% of Florida medical school graduates that matched in Florida were in primary care. Another important aspect of the physician workforce is the distribution of primary care physicians and non-primary care specialists. While resident match results may not be a direct link to a physician’s practice, it can be an indicator of future workforce supply.^{24, 25} Overall, 69% of

Florida graduates matched to a primary care residency, while 31% matched to a non-primary care residency.

As shown in Exhibit 6, of the graduates who matched to a Florida GME program, 72% were for primary care and 28% were for non-primary care, while the out-of state match distribution for primary care and non-primary care was 66% and 34% respectively.

²⁴ A student’s selection of a residency program does not necessarily indicate the field of medicine in which he or she may ultimately practice. For example, some physicians may transfer to a different specialty or complete additional training to subspecialize in a field. A 2012 study by West and Dupras found that approximately 80%

of graduates who choose a primary care track or internal medicine end up further specializing.

²⁵ West, C. and Dupras, D. *General Medicine Vs Subspecialty Career Plans Among Internal Medicine Residents, 22A1-22A7, JAMA 2012.*

Exhibit 6

A Higher Percentage of Florida Residency Matches Are for Primary Care Specialties Compared to Out-of-State Primary Care Matches

Match Location	Total Matches	Percentage of Primary Care Matches (Number)	Percentage of Non-Primary Care Matches (Number)
Florida Matches	3,073	72% (2,223)	28%(850)
Out-of-State Matches	5,094	66% (3,377)	34% (1,717)
Total¹	8,167	69% (5,600)	31% (2,567)

¹ The total number of matches excludes those who matched to a preliminary, transitional, internship, or research program for whom we do not have second year data.

Source: OPPAGA analysis of medical school match data from 2000 through 2013.

Exhibit 7 shows the percentage of graduates who matched to a primary care specialty. While internal medicine and general surgery often are included in definitions of primary care, including in Florida Statutes, it is

important to note that many of these residents subsequently complete a subspecialty residency or may transfer to a non-primary care specialty and thus, often do not practice primary care.

**Exhibit 7
Internal Medicine and Family Medicine Comprise a Large Percentage of Primary Care Specialty Resident Matches**

Program Specialty	Total Number of Residents Matched	In-State Residency (Number)	Out-of-State Residency (Number)
Emergency Medicine	737	26.9% (198)	73.1% (539)
Emergency Medicine/Family Medicine	12	0.0% (0)	100.0% (12)
Family Medicine	1,017	53.2% (541)	46.8% (476)
Family Medicine/Pediatrics	1	0.0% (0)	100.0% (1)
General Surgery	327	30.9% (101)	69.1% (226)
Geriatric Medicine/Family Medicine	1	0.0% (0)	100.0% (1)
Internal Medicine	1,747	41.8% (730)	58.2% (1,017)
Internal Medicine/Emergency Medicine	18	0.0% (0)	100.0% (18)
Internal Medicine/Pediatrics	49	34.7% (17)	65.3% (32)
Internal Medicine/Psychiatry	1	0.0% (0)	100.0% (1)
Obstetrics and Gynecology	549	33.3% (183)	66.7% (366)
Pediatrics	803	43.1% (346)	56.9% (457)
Psychiatry	338	31.7% (107)	68.3% (231)
Total	5,600	39.7% (2,223)	60.3% (3,377)

Source: OPPAGA analysis of medical school match data from 2000 through 2013.

As shown in Exhibit 8, of the 69% of Florida medical school graduates who matched to a primary care specialty since 2000, the

percentage by medical school ranges from 53% at the University of Miami to 84% at Florida State University.

**Exhibit 8
Florida State University Medical School Had the Highest Percentage of Students Who Matched to a Primary Care Residency**

Florida Medical School	Percentage of Students Who Match to a Primary Care Residency (Number)
Florida International University Herbert Wertheim College of Medicine	75.0% (24)
Florida State University College of Medicine	83.6% (544)
Lake Erie College of Osteopathic Medicine, Bradenton	76.6% (597)
Nova Southeastern University College of Osteopathic Medicine	77.2% (1,531)
University of Central Florida College of Medicine	65.5% (19)
University of Florida College of Medicine	66.1% (995)
University of Miami Miller School of Medicine	53.3% (993)
University of South Florida Morsani College of Medicine	67.7% (897)
Total	68.6% (5,600)

Source: OPPAGA analysis of medical school match data from 2000 through 2013.

Since 2000, over half of the physicians that completed GME in Florida have remained in the state to practice.²⁶ To estimate Florida's resident retention rate, we analyzed the percentage of Florida medical school graduates who matched to a Florida residency program and remained in the state to practice compared to the percentage of graduates who matched to an out-of-state residency but appear to practice in Florida. Of the individuals who graduated from Florida's medical schools who remained in the state for their residency from 2000 through 2013, we estimated that 2,059 graduates completed their residency by October 2013. Of these individuals, 74% have an active Florida medical license and are practicing medicine in Florida. An additional 5% have an active license but are not practicing medicine.²⁷

We identified a smaller percentage of medical students who left the state for residency but returned to Florida to practice. Of the Florida medical school graduates who left the state for their residency, we estimated that 3,046 completed their residency. Of these, 26% have active licenses in Florida and are practicing medicine in Florida. An additional 2% have an active license but are not practicing.

In addition to analyzing medical school graduate match data, we also used physician licensure data to determine whether physicians who completed a residency in Florida are currently practicing in Florida. Of the 14,280 physicians that we estimate as having completed a GME program in Florida since 2000, 52% have active licenses in Florida and are practicing in Florida. An additional 7% have active Florida licenses but are not currently practicing medicine in Florida.

GME Funding in Florida

Estimated annual funding for graduate medical education in Florida totals approximately \$540 million. This includes \$281 million in direct

and indirect Medicare funds, approximately \$157 million in Medicaid funds, and \$101.9 million from other sources. Due to the complexity of GME funding, we used multiple sources to develop an annual estimate; time frames for data sources range from Fiscal Year 2011-12 to Fiscal Year 2013-14. (See Appendix B for Medicare and Medicaid funding by institution.)

Based on Fiscal Year 2011-12 Medicare cost reports, hospitals received \$87.8 million for direct medical expenses and \$193 million in indirect medical expenses for a total of approximately \$281 million.²⁸ Medicare reimburses hospitals for residency programs by paying them on a full-time equivalent (FTE) basis. Residents are reimbursed as a full FTE for the minimum number of years required to be board eligible for the specialty in which they are training.²⁹ Subspecialty programs receive half of the reimbursement. In addition, hospitals receive a slightly higher reimbursement for primary care residents due to adjustments related to inflation.

GME institutions reported that hospitals received reimbursements for direct medical expenses based on approximately 2,456 FTEs authorized by Medicare.³⁰ Hospitals that provide GME do not receive Medicare funding for residents that exceed hospitals' authorized number of GME positions. We estimate, based on survey responses, that approximately 20% of these institutions' positions do not receive Medicare funding. A study of 2010 Medicare cost reports found that Florida ranked 42nd among the 50 states for the number of residents that Medicare funds per population

²⁸ The federal Centers for Medicare and Medicaid Services Fiscal Year 2011-12 Medicare cost reports.

²⁹ The minimum number of years required to become board eligible is referred to as the initial residency period (IRP). For example, if a medical school graduate starts a program with a three-year board eligibility period, Medicare will only pay for the first three years as one full resident.

³⁰ This figure does not include all authorized Medicare positions at hospitals that are not accredited GME institutions but serve as rotation sites for accredited GME institutions.

²⁶ Resident information was analyzed using match data obtained on graduates from Florida's medical schools, the Department of Health's Physician Workforce Survey, and the department's Division of Medical Quality Assurance physician licensure database.

²⁷ All licensure statuses are as of October 1, 2013.

and 29th for average Medicare payments per resident.^{31, 32}

In July 2011, the federal Centers for Medicare and Medicaid Services redistributed authorized Medicare positions from closed hospitals and hospitals that were not filling all of their authorized positions. Florida received 225 direct residency unused positions.^{33, 34} This redistribution required that for five years at least 75% of positions received are for primary care and general surgery. A hospital cannot reduce its primary care training positions below the average number of training positions from the previous three years.³⁵

Medicaid funds for GME include approximately \$80 million for the Statewide Medicaid Residency Program and \$77 million in Disproportionate Share Hospital funds. The 2013 Legislature created the Statewide Medicaid Residency Program and appropriated approximately \$80 million (\$33.1 million in general revenue and approximately \$47 million in federal matching funds) to

hospitals that administer accredited GME programs. Prior to 2013, Medicaid funding for GME was included in the Medicaid inpatient hospital payment, which was on a cost-based reimbursement. Hospitals reported aggregate costs based on total Medicaid costs and number of inpatient days.

The Legislature directed the Agency for Health Care Administration (AHCA) to allocate the new funds to hospitals based on a calculation that factors in the number of residents and Medicaid inpatient hospital payments. The agency calculates an allocation fraction for each participating hospital by adding the ratio of a hospital's residents to total residents for all hospitals to the ratio of a hospital's Medicaid payments to total Medicaid payments for all hospitals. The resident ratio is multiplied by 0.9, and the Medicaid payment ratio is multiplied by 0.1. Similar to Medicare reimbursements, this allocation methodology considers residents on an FTE-basis, weighting residents beyond their initial training period as 0.5 FTE unless they are primary care or general surgery residents. Regardless of the allocation fraction calculated by AHCA, no hospital can receive more than \$50,000 per FTE. AHCA distributes funding to hospitals on a quarterly basis.

AHCA considered using Medicare cost reports to determine hospital FTEs for calculating hospital allocations. However, Medicare cost reports provide the previous year's FTEs and legislation directs AHCA to use FTEs as of July 1, the beginning of the fiscal year, to calculate allocations. As such, the agency requested that hospitals report a unique resident number and the fraction of the year that the residents rotate at the hospital. AHCA's calculation resulted in 43 hospitals receiving an allocation, with the allocations ranging from \$102,984 to \$321.1 million.

In Fiscal Year 2013-14, AHCA distributed approximately \$77 million in Medicaid Disproportionate Share Hospital funds to GME. Specifically, AHCA distributed \$63.9 million for statutory teaching hospitals,

³¹ In Florida, the average Medicare payment per resident was \$101,656 and the resident cap was \$14.01 per 100,000 people.

³² Mulan, F. Chen, C., and Steinmetz, E. *The Geography of Graduate Medical Education: Imbalances Signal Need for New Distribution Policies*, 1914-1921 Health AFF, 2013.

³³ The redistribution of Medicare-funded positions under Section 5503 of the Patient Protection and Affordable Care Act (P.L. 111-148) increased the number of authorized Medicare positions at applicable hospitals on a one-time basis. The redistribution by the Centers for Medicare and Medicaid Services considered accredited rural tracks, health professional shortage areas as defined by the U.S. Health Resources and Services Administration, and the likelihood of filling additional positions within three Medicare cost reporting periods. Hospitals with low resident to population ratios received 70% of the positions. Alaska, Arizona, Florida, Georgia, Idaho, Indiana, Mississippi, Montana, Nevada, North Dakota, South Dakota, Wyoming, and Puerto Rico received positions based on low resident to population ratios.

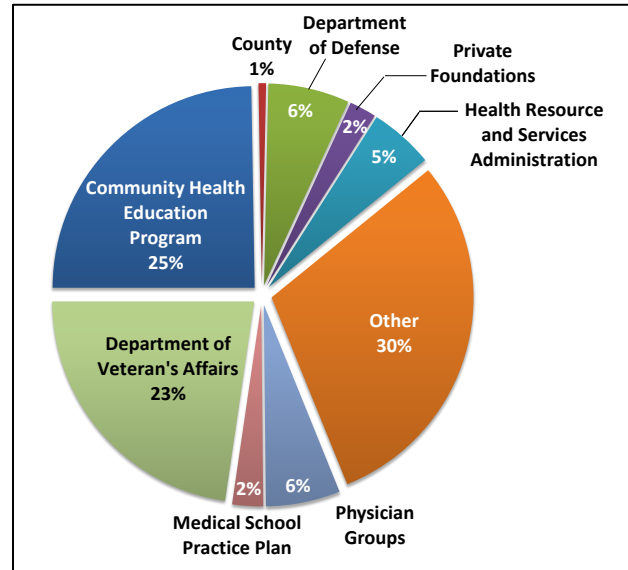
³⁴ Section 5506 of the Patient Protection and Affordable Care Act created ongoing rounds of hospital resident position redistributions from closed hospitals. There have been six rounds that redistributed 1,223 direct positions and 1,161 indirect positions. Florida has not received positions from this redistribution.

³⁵ Under the Medicare Modernization Act of 2003 (P.L. 108-173), 3,000 residency positions were redistributed, in part to train residents in primary care and rural areas. A 2013 report found that hospitals used these positions to expand their subspecialty training and some converted these to subspecialty training after receiving the positions.

\$10.9 million for family practice teaching hospitals, and \$1.9 million for hospitals participating in GME initiatives with an emphasis on consortia.^{36, 37, 38}

GME institutions reported receiving \$101.9 million in funding from other sources in Fiscal Year 2012-13. In addition to Medicare and Medicaid, GME institutions receive funding from additional sources such as the Community Health Education Program and the Veteran’s Administration. Institutions reported receiving \$101.9 million from these other sources in Fiscal Year 2012-13. A breakdown by each source is provided in Exhibit 10. The largest category was “Other,” which includes funding from an institution’s rotating sites, revenue generated by insurance payments for patient care, and “Tricare” for military hospitals. In addition to Other, the largest sources were the Community Health Education Program (25%), and the Veteran’s Administration (23%).³⁹

Exhibit 10
GME Institutions Reported Receiving \$101.9 Million from Non-Medicare and Non-Medicaid Sources in Fiscal Year 2012-13



Source: Analysis of OPPAGA GME survey responses.

Monitoring GME

GME is a key component in increasing the states’ physician workforce. Residents often remain in the state where they complete medical training to practice medicine as well as serve as an important part of the health care workforce during their training. While Florida retains approximately half of its medical residents, it has one of the lowest resident per capita rates and lowest residents reimbursed by Medicare per capita rates. Further, factors such as an increase in retirements among Florida’s physician workforce, an aging population, and projected physician shortages underscore the importance of GME for the state.

To ensure that GME supports Florida’s future health care demands and challenges and provides policymakers with comprehensive information for decision making, the state could coordinate the systematic and routine monitoring of GME. A 2013 report by the University of North Carolina’s Cecil G. Sheps Center for Health Services Research reviewed state initiatives for GME. It found that while

³⁶ Section 408.07, *F.S.*, defines a statutory teaching hospital as any Florida hospital officially affiliated with an accredited Florida medical school that has activities in the area of GME accredited by the Accreditation Council for Graduate Medical Education or the Accreditation Council on Postdoctoral Training of the American Osteopathic Association and the presence of 100 or more FTE resident physicians. AHCA is responsible for determining which hospitals meet this definition.

³⁷ Section 395.805, *F.S.*, defines a family practice teaching hospital as a freestanding, community-based hospital licensed under the *Florida Statutes*, that offers a three-year family practice residency program accredited through the residency review committee of the Accreditation Council for Graduate Medical Education or the Accreditation Council on Postdoctoral Training of the American Osteopathic Association.

³⁸ Funds are provided for initiatives, specifically for consortiums developing new programs. Consortiums consist of statutory teaching hospitals, statutory rural hospitals, Department of Veterans’ Affairs clinics, Department of Health clinics, and federally qualified health centers. Each consortium must have at least five residents per training per year and must include primary care providers and at least one hospital.

³⁹ Survey respondents reported funding from institutional sources but many respondents included Medicare and Medicaid funds as part of this total, so we did not include these funds in Exhibit 10.

some states have used workforce data to make policy decisions, decisions about expanding GME are typically made at the training institution level and that states often did not coordinate at the state level for GME decision making.

The 2010 Florida Legislature created the Physician Workforce Advisory Council to assist the Department of Health with assessing current and future health care workforce needs.⁴⁰ The council was tasked with some responsibilities related to GME, such as annually reviewing GME programs and positions and monitoring and making recommendations regarding the status of the state’s GME needs. However, the council’s efforts have not resulted in comprehensive monitoring of Florida’s GME system. To accomplish this, the state could consider

- collecting data to track and analyze GME statewide;
- regularly assessing priorities and challenges associated with GME; and
- evaluating the effectiveness and quality of Florida’s GME system.

Collect data to track and analyze GME statewide

Several kinds of data are needed to track and analyze GME statewide. Monitoring GME in Florida would require collecting both institution- and physician-level data. A key source of data is the accredited institutions that administer residency programs. Information collected from institutions could include data on residency program type, size, and rotation sites; information about residency positions, such as approved and filled positions; GME institution residency completion lengths and rates; and use of Medicare FTEs. The state could require institutions to report this information on an annual basis.

⁴⁰ Per s. 381.4018, *F.S.*, the council’s responsibilities include analyzing physician statistics from surveys and licensure data, annually reporting on physician workforce, and establishing a Community Development Program to develop a resource guide for start-up programs.

Medical school data on residency match for its graduates could also be included. In addition, surveying medical school students and residents could provide information about residency choice and practice decisions.⁴¹

Another useful source of data would be the American Medical Association, which tracks information on physician education and training from undergraduate education through residency and other post-graduate training for a large percentage of physicians. This data could be purchased; a snapshot of the approximate number of physicians that have practiced in Florida costs approximately \$4,800 with each additional year of data costing approximately \$6,000.⁴²

Assess priorities and challenges

Additional data also could be used to assess priorities and challenges associated with GME. This would help policymakers identify areas of concern and make policy decisions. The information could be used to inform decisions about residency programs and positions, resident attraction and retention, and specific funding opportunities.

Residency programs and positions. Respondents to our survey identified increasing the number of residency positions as a primary issue for GME in Florida. However, the priorities of individual institutions to fund programs and positions may differ from overall statewide needs. Some stakeholders identified a need for more primary care residency programs and positions, while others contended that the focus should be on non-primary care specialties and subspecialties. Both survey respondents and experts that we interviewed noted that determining which specialties are in high demand and how to increase the number of residency programs in these areas is important.

⁴¹ For example, Georgia’s Board for Physician Workforce conducts an exit survey for all residents; New York collects resident information as well as information about medical school faculty.

⁴² The GME institutions that responded to our survey indicated that routine reporting to a state entity would be feasible.

Assessing GME statewide would assist the Legislature in identifying residency programs in need of expansion and geographical areas that could benefit from programs. Knowing where to target growth is especially important if Florida decides to target funds. For example, Georgia uses a workforce analysis to identify physician and graduate medical education needs and to fund programs. It also provides support through contracts that specify expected outcomes and imposes penalties for not meeting them. In addition, Georgia pays a per resident capitation rate for certain designated shortage programs. It also created 400 positions at new hospitals and earmarked additional funding for primary care specifically to help programs with start-up costs; this funding is targeted to underserved areas.

Moreover, it is important to learn about institutions' plans to expand residency programs or positions. For example, one hospital system that administers GME programs in several hospitals in Florida reported that it has received institutional accreditation for new residency programs at four hospitals in September 2013 and expects to receive accreditation for an additional four hospitals by mid-2014; based on these new programs, the hospital system projects adding more than 1,200 positions by 2020.

Attraction and retention. Residency choice and long-term practice decisions are motivated by many factors. The learning environment in medical school and GME, including practice location, faculty specialization, and curriculum orientation, contribute to students' decisions to apply to particular medical schools or pursue certain specialties. A resident's personal background also is a strong predictor of his or her specialty choice and practice location. For example, physicians from minority and rural backgrounds are more likely to pursue primary care and work in underserved areas.

Assessing the GME system is important for attracting and retaining residents. However, the state currently lacks information about why medical students choose certain specialties.

Analyzing information about the locations where medical students complete residencies and why they make those choices would provide insight into whether Florida's GME system is attracting quality physicians in a balanced distribution among specialties. If such an analysis determined that the state is not attracting residents from the highest quality medical school programs or that Florida medical students leave the state for particular residencies, policymakers would have key information necessary to address potential weaknesses.

Residents trained in community-based settings are more likely to choose primary care specialties and work in underserved communities. However, most doctors receive their training in teaching hospitals. The decline in interest in primary care stems from several factors, including lower compensation, which can be 55% less than other medical specialties, high debt, and the perception that subspecialty work is more stimulating and challenging.⁴³ Analysis of institutional- and physician-level data would help develop options for addressing these types of issues. Such analysis would also help identify the faculty expertise and institutional resources necessary to meet accreditation requirements in order to expand education and training beyond hospital settings.

A tool for attracting and retaining residents is incentive programs that assist with medical school debt (i.e., loan forgiveness and repayment programs).^{44, 45} A recent Virginia study found that a loan repayment program improved retention for short-and long-term practice.⁴⁶ The majority of physicians that had

⁴³ In 2012, 87% of medical school graduates had incurred debt; the median debt was \$170,000.

⁴⁴ Approximately 70% of states offer state loan forgiveness programs through the National Health Services Corps. Florida does not offer loan forgiveness programs.

⁴⁵ Survey respondents support loan forgiveness programs as a way to promote retention; however, some respondents are doubtful that residents would stay beyond the duration of the program.

⁴⁶ *Virginia Health Care Workforce Annual Report*, Virginia Department of Health, 2010.

completed loan repayment programs had remained in Virginia. Of those who remained, 14% were practicing in the same underserved areas in which they served their service obligations and another 62% were in another underserved area.

Funding challenges and opportunities. GME is expensive. GME institutions responding to our survey emphasized the need for stability in funding. GME institutions also reported that they will not invest in new programs if they cannot guarantee funding over the length of the program. In addition, some stakeholders believe that increasing programs and positions at already established institutions is a more appropriate strategy because the established infrastructure reduces start-up and program costs. Other stakeholders advocate for creating new programs because they would qualify for Medicare funding and provide GME in communities that have problems with health care access.

Assessing GME could include identifying opportunities and approaches that address funding challenges and maximize state and federal funding. For example, a current federal initiative, the Teaching Health Center GME Training Program, focuses on establishing primary care residency programs in underserved areas and directly funds community-based health centers. In addition, federally qualified health centers that serve low-income and rural populations could be GME training sites because they are eligible to receive Medicare reimbursement for direct medical expenses.⁴⁷ States also have begun to use consortia arrangements to enhance GME. The consortia model is a group of hospitals that shares responsibilities and training rather than one institution assuming responsibility and working with affiliated rotating sites.

Finally, requiring institutions to report fiscal information could increase transparency for GME funding. While the funding process is

extremely complex, understanding it is important for facilitating policy decisions. Requiring institutions to report funding and cost information to a state-level entity would help policymakers understand GME funding. For example, New York requires hospitals to submit an annual institutional budget report to the state. Medpac, the congressional agency which advises the U.S. Congress on Medicare, recommends reporting on payment, resident count, and cost data to provide greater transparency.

Evaluate effectiveness and quality of GME in Florida

To help policymakers identify options for enhancing GME, efforts to monitor GME could include evaluating the effectiveness and quality of Florida's GME programs. This would be especially important if the state decided to dedicate more funds to GME. In evaluating quality and effectiveness, the state could use federal and national initiatives aimed at providing performance measures to assess quality and effectiveness.

For example, the Accreditation Council for Graduate Medical Education is in the process of implementing the Next Accreditation System, which emphasizes outcome-based evaluation processes.⁴⁸ This system incorporates specialty-specific achievements, called milestones, that assess resident performance and progress every six months at residents' semiannual evaluations. A key element of the new accreditation system is the measurement and reporting of outcomes around six core competencies—patient care, medical knowledge, practice-based learning and improvement, interpersonal communication and skills, professionalism, and systems-based practice. This process will include assessing quality and safety in the learning environment,

⁴⁷ These entities are not eligible to receive Medicare reimbursement for indirect medical expenses.

⁴⁸ The Next Accreditation System will be implemented in all specialties by July 2014. Milestones have been under development for several years. By 2011 milestones were developed for all specialties. Educational milestones are a result of work between the American Board of Medical Specialties, the review committees, medical specialty organizations, program director associations, and residents.

board certification pass rates, and achievement rates on training milestones. This data will provide baseline information for national comparison over time.

In addition, Title VII of the Public Health Service Act directed the Council on Graduate Medical Education to create guidelines for longitudinal evaluation of GME programs.⁴⁹ Medpac also recommends developing standards that address educational outcomes, clinical outcomes, and clinical environments, such as residency competencies and faculty

⁴⁹ The Council on Graduate Medical Education provides an assessment of physician workforce trends, training issues and financing policies, and recommends appropriate federal and private sector efforts on these issues. The Council advises and makes recommendations to the Secretary of the U.S. Department of Health and Human Services; the U.S. Senate Committee on Health, Education, Labor, and Pensions; and the U.S. House of Representatives Committee on Energy and Commerce.

support, as part of a performance measurement system for Medicare. It recommends establishing standards to specify goals around the core competencies in the Next Accreditation System. As such, Medicare's assessment system of residency programs and performance would build on the accreditation system of GME institutions.

Some of these efforts recommend assessing financial performance. For example, a recommendation by the Council on Graduate Medical Education is to tie outcomes on competency-based performance measures to increased Medicare reimbursements for indirect medical expenses. Medpac recommends eliminating Medicare reimbursements for indirect medical expenses over a specific amount and setting reimbursements above this amount based on performance.

Appendix A

Institutions' Residency Programs

There are 53 accredited GME institutions in Florida; 44 are operational, administering 407 residency programs with a total of 5,157 approved positions. As of January 2014, 9 of the 53 institutions were not yet administering residency programs. Of the 44 institutions that are actively training GME students, 21 are accredited by the Accreditation Council for Graduate Medical Education, 16 by the American Osteopathic Association, and 7 have programs accredited by both. Exhibit A-1 provides a list of the residency programs offered by each institution. Exhibit A-2, located on page 28, provides a list of GME institutions and the number of residency programs and approved positions at each institution. Exhibit A-3, located on page 31, provides detailed information on the number of primary care and non-primary care specialty and subspecialty programs offered by each institution. Exhibit A-4, located on page 34, provides the number of approved programs and positions by specialty category.

Exhibit A-1 provides a list of the residency programs offered by each institution.

Exhibit A-1

Accredited GME Institutions' Residency Programs

Accredited GME Institution and Location		Residency Programs		
Community Hospitals/	All Children's Hospital – St. Petersburg	No residents in academic year 2013-14.		
Medical Schools	Cleveland Clinic Florida – Weston	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ General Surgery ▪ Geriatric Medicine ▪ Internal Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Colon and Rectal Surgery ▪ Neurology ▪ Plastic Surgery 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Cardiology ▪ Gastroenterology ▪ Nephrology ▪ Pulmonary Critical Care
	Doctors Hospital (Baptist Health of South Florida) – Coral Gables	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ N/A 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ N/A 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Orthopedic Sports Medicine
	Florida Atlantic University – Boca Raton (Bethesda Memorial Hospital, Boca Raton Regional Hospital, and Delray Medical Center)	No residents in academic year 2013-14.		
	Florida State University College of Medicine – Tallahassee (Sacred Heart Health System and Tallahassee Memorial Healthcare)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine ▪ Internal Medicine ▪ Obstetrics and Gynecology ▪ Pediatrics 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ N/A 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Procedural Dermatology
	Kendall Regional Medical Center – Miami	No residents in academic year 2013-14.		

Accredited GME Institution and Location		Residency Programs		
Community Hospitals/ Medical Schools (continued)	Lakeside Medical Center – Belle Glade (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> ▪ Family Medicine and Osteopathic Manipulative Medicine	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ N/A
	Manatee Memorial Hospital – Bradenton (Lake Erie College of Osteopathic Medicine)	<u>Primary Care Specialties</u> ▪ Family Medicine and Osteopathic Manipulative Medicine ▪ Internal Medicine	<u>Non-Primary Care Specialties</u> ▪ Internship Preliminary and Traditional AOA Only	<u>Subspecialties</u> ▪ N/A
	Miami Children’s Hospital – Miami	<u>Primary Care Specialties</u> ▪ Pediatrics	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ Adolescent Medicine ▪ Clinical Neurophysiology ▪ Craniofacial Surgery ▪ Pediatric Cardiology ▪ Pediatric Critical Care Medicine ▪ Pediatric Emergency Medicine ▪ Pediatric Radiology ▪ Pediatric Surgery ▪ Pediatric Urology
	Northside Hospital and Heart Institute – St. Petersburg (Lake Erie College of Osteopathic Medicine)	<u>Primary Care Specialties</u> ▪ Internal Medicine	<u>Non-Primary Care Specialties</u> ▪ Internship Preliminary and Traditional AOA Only	<u>Subspecialties</u> ▪ Cardiology
	Osceola Regional Medical Center – Kissimmee (Nova Southeastern University College of Medicine)	No residents in academic year 2013-14.		
	Palm Beach Consortium for Graduate Medical Education – Palms West Hospital – West Palm Beach (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> ▪ Pediatrics	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ N/A
	Palm Beach Consortium for Graduate Medical Education – University Hospital and Medical Center – West Palm Beach (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> ▪ Psychiatry	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ N/A
	Palm Beach Consortium for Graduate Medical Education – West Palm Hospital – West Palm Beach (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> ▪ Internal Medicine	<u>Non-Primary Care Specialties</u> ▪ Dermatology	<u>Subspecialties</u> ▪ N/A
	Regional Medical Center Bayonet Point – Hudson (Nova Southeastern University College of Medicine)	No residents in academic year 2013-14.		
	Sacred Heart Health System – Pensacola (Lake Erie College of Osteopathic Medicine)	<u>Primary Care Specialties</u> ▪ Internal Medicine	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ N/A
University of Central Florida College of Medicine – Orlando (Osceola Regional Medical Center)	No residents in academic year 2013-14.			
Wellington Regional Medical Center – West Palm Beach (Lake Erie College of Osteopathic Medicine)	<u>Primary Care Specialties</u> ▪ Internal Medicine	<u>Non-Primary Care Specialties</u> ▪ Dermatology	<u>Subspecialties</u> ▪ N/A	
West Kendall Baptist Hospital – Miami	<u>Primary Care Specialties</u> ▪ Family Medicine	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ N/A	

Accredited GME Institution and Location		Residency Programs		
Community Hospitals/ Medical Schools <i>(continued)</i>	Westchester General Hospital – Miami (Lake Erie College of Osteopathic Medicine)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> Family Medicine and Osteopathic Manipulative Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> Internship Preliminary and Traditional AOA Only 	<u>Subspecialties</u> <ul style="list-style-type: none"> N/A
Statutory and Family Practice Teaching Hospitals	Bayfront Medical Center – St. Petersburg	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> Family Medicine Obstetrics and Gynecology 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> N/A 	<u>Subspecialties</u> <ul style="list-style-type: none"> Sports Medicine
	Broward Health – Ft. Lauderdale (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> Family Medicine Geriatric Medicine Internal Medicine Pediatrics 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> Dermatology Hospice and Palliative Care Multidisciplinary Internship Preliminary and Traditional AOA Only Orthopedic Surgery 	<u>Subspecialties</u> <ul style="list-style-type: none"> Cardiology
	Florida Hospital – Orlando	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> Emergency Medicine Family Medicine Family Medicine and Osteopathic Manipulative Medicine General Surgery Geriatric Medicine Internal Medicine Pediatrics 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> Colon and Rectal Surgery Diagnostic Radiology 	<u>Subspecialties</u> <ul style="list-style-type: none"> Gynecologic Oncology Neuromuscular Medicine Neuromusculoskeletal Medicine 1
	Halifax Medical Center – Daytona Beach	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> Family Medicine General Surgery 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> N/A 	<u>Subspecialties</u> <ul style="list-style-type: none"> Sports Medicine
	Jackson Memorial Hospital/Jackson Health System – Miami	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> Family Medicine General Surgery Internal Medicine Internal Medicine Pediatrics Obstetrics and Gynecology Pediatrics Psychiatry 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> Anesthesiology Colon and Rectal Surgery Dermatology Diagnostic Radiology Medical Genetics Molecular Genetic Pathology Multidisciplinary Neurological Surgery Neurology Nuclear Medicine Ophthalmology Orthopedic Surgery Otolaryngology Pain Medicine Multidisciplinary 	<u>Subspecialties</u> <ul style="list-style-type: none"> Addiction Psychiatry Adult Cardiothoracic Anesthesiology Advanced Heart Failure and Transplant Cardiology Anesthesiology Critical Care Blood Banking Transfusion Medicine Cardiovascular Disease Child and Adolescent Psychiatry Clinical Cardiac Electrophysiology Clinical Neurophysiology Complex General Surgical Oncology Critical Care Medicine Cytopathology Dermatopathology Multidisciplinary

Accredited GME Institution and Location		Residency Programs	
Statutory and Family Practice Teaching Hospitals (continued)	Jackson Memorial Hospital/Jackson Health System – Miami (continued)	<u>Non-Primary Care Specialties (continued)</u> <ul style="list-style-type: none"> ▪ Pathology - Anatomic and Clinical ▪ Physical Medicine and Rehabilitation ▪ Plastic Surgery ▪ Plastic Surgery Integrated ▪ Radiation Oncology ▪ Sleep Medicine Multidisciplinary ▪ Thoracic Surgery ▪ Urology 	<u>Subspecialties (continued)</u> <ul style="list-style-type: none"> ▪ Endocrinology, Diabetes, and Metabolism ▪ Forensic Psychiatry ▪ Gastroenterology ▪ Geriatric Psychiatry ▪ Geriatric Internal Medicine ▪ Hand Surgery ▪ Hematology ▪ Hematology and Oncology ▪ Infectious Disease ▪ Interventional Cardiology ▪ Musculoskeletal Oncology ▪ Neonatal Perinatal Medicine ▪ Nephrology ▪ Neuroradiology ▪ Neuromuscular Medicine ▪ Neurotology ▪ Obstetric Anesthesiology ▪ Orthopedic Sports Medicine ▪ Orthopedic Surgery of the Spine ▪ Orthopedic Trauma ▪ Pediatric Anesthesiology ▪ Pediatric Cardiology ▪ Pediatric Critical Care Medicine ▪ Pediatric Endocrinology ▪ Pediatric Gastroenterology ▪ Pediatric Hematology/Oncology ▪ Pediatric Infectious Disease ▪ Pediatric Nephrology ▪ Pediatric Pathology ▪ Pediatric Pulmonology ▪ Psychosomatic Medicine ▪ Pulmonary Critical Care ▪ Rheumatology ▪ Spinal Cord Injury Medicine ▪ Surgical Critical Care ▪ Transplant Hepatology ▪ Vascular and Interventional Radiology ▪ Vascular Neurology ▪ Vascular Surgery

Accredited GME Institution and Location		Residency Programs		
Statutory and Family Practice Teaching Hospitals <i>(continued)</i>	Largo Medical Center – Largo (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine and Osteopathic Manipulative Medicine ▪ General Surgery ▪ Internal Medicine ▪ Psychiatry 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Anesthesiology ▪ Dermatology ▪ Internship Preliminary and Traditional AOA Only ▪ Orthopedic Surgery 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Cardiology ▪ Gastroenterology ▪ Interventional Cardiology ▪ Pulmonary Critical Care ▪ Rheumatology
	Larkin Community Hospital – South Miami (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine ▪ Family Medicine and Osteopathic Manipulative Medicine ▪ General Surgery ▪ Internal Medicine ▪ Psychiatry 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Allergy and Immunology ▪ Anesthesiology ▪ Dermatology ▪ Diagnostic Radiology ▪ Hospice and Palliative Care Multidisciplinary ▪ Integrated Family Medicine ▪ Neuromusculoskeletal Medicine ▪ Neurology ▪ Ophthalmology ▪ Pain Medicine Multidisciplinary ▪ Physical Medicine and Rehabilitation ▪ Sleep Medicine Multidisciplinary 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Addiction Medicine ▪ Adult and Pediatric Allergy and Immunology ▪ Child and Adolescent Psychiatry ▪ Endocrinology, Diabetes, and Metabolism ▪ Forensic Psychiatry ▪ Gastroenterology ▪ Geriatric Family Medicine ▪ Geriatrics Psychiatry ▪ Geriatrics Internal Medicine ▪ Hematology and Oncology ▪ Infectious Disease ▪ Mohs Micrographic Surgery ▪ Neuromusculoskeletal Medicine 1 ▪ Rheumatology ▪ Sports Medicine
	Mayo Clinic – Jacksonville ¹	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine ▪ General Surgery ▪ Internal Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Anesthesiology ▪ Dermatology ▪ Diagnostic Radiology ▪ Hospice and Palliative Care Multidisciplinary ▪ Neurological Surgery ▪ Neurology ▪ Pain Medicine Multidisciplinary ▪ Radiation Oncology ▪ Urology 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Advanced Heart Failure and Transplant Cardiology ▪ Cardiovascular Disease ▪ Child Neurology ▪ Clinical Neurophysiology ▪ Endocrinology, Diabetes, and Metabolism ▪ Gastroenterology ▪ Hematology and Oncology ▪ Infectious Disease ▪ Nephrology ▪ Pediatric Anesthesiology ▪ Pulmonary Critical Care ▪ Rheumatology ▪ Transplant Hepatology ▪ Selective Pathology ▪ Sports Medicine ▪ Vascular and Interventional Radiology

Accredited GME Institution and Location		Residency Programs		
Statutory and Family Practice Teaching Hospitals (continued)	Mount Sinai Medical Center – Miami Beach	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Emergency Medicine ▪ General Surgery ▪ Internal Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Anesthesiology ▪ Diagnostic Radiology ▪ Pathology - Anatomic and Clinical ▪ Urology 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Cardiology ▪ Interventional Cardiology
	Orlando Health – Orlando	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Emergency Medicine ▪ General Surgery ▪ Internal Medicine ▪ Obstetrics and Gynecology ▪ Pediatrics 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Colon and Rectal Surgery ▪ Orthopedic Surgery ▪ Pathology - Anatomic and Clinical 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Critical Care Medicine ▪ Emergency Medical Services ▪ Hematology and Oncology ▪ Infectious Disease ▪ Pediatric Emergency Medicine ▪ Pediatric Gastroenterology ▪ Pediatric Orthopedics ▪ Pediatric Sports Medicine ▪ Surgical Critical Care
	Palm Beach Consortium for Graduate Medical Education – St. Lucie Medical Center – West Palm Beach (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Emergency Medicine ▪ Family Medicine and Osteopathic Manipulative Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Internship Preliminary and Traditional AOA Only 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ N/A
	Palmetto General Hospital – Hialeah (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine ▪ Internal Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Internship Preliminary and Traditional AOA Only 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Cardiology ▪ Critical Care Medicine ▪ Infectious Disease
	St. Petersburg General Hospital – St. Petersburg (Lake Erie College of Osteopathic Medicine)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine and Osteopathic Manipulative Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Internship Preliminary and Traditional AOA Only 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ N/A
	St. Vincent’s Medical Center – Jacksonville (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ N/A 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ N/A
	Tallahassee Memorial Healthcare – Tallahassee	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ N/A 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ N/A

Accredited GME Institution and Location		Residency Programs		
Statutory and Family Practice Teaching Hospitals <i>(continued)</i>	University of Florida College of Medicine – Gainesville (Shands)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Emergency Medicine ▪ Family Medicine ▪ General Surgery ▪ Internal Medicine ▪ Obstetrics and Gynecology ▪ Pediatrics ▪ Psychiatry 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Anesthesiology ▪ Dermatology ▪ Diagnostic Radiology ▪ Neurological Surgery ▪ Neurology ▪ Ophthalmology ▪ Orthopedic Surgery ▪ Otolaryngology ▪ Pain Medicine Multidisciplinary ▪ Pathology – Anatomic and Clinical ▪ Plastic Surgery ▪ Plastic Surgery Integrated ▪ Radiation Oncology ▪ Sleep Medicine Multidisciplinary ▪ Thoracic Surgery ▪ Urology 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Adult Cardiothoracic Anesthesiology ▪ Advanced Heart Failure and Transplant Cardiology ▪ Cardiovascular Disease ▪ Child Abuse Pediatrics ▪ Child and Adolescent Psychiatry ▪ Child Neurology ▪ Clinical Cardiac Electrophysiology ▪ Clinical Neurophysiology ▪ Critical Care Medicine ▪ Dermatopathology Multidisciplinary ▪ Emergency Medical Services ▪ Endocrinology, Diabetes, and Metabolism ▪ Endovascular Surgical Neuroradiology ▪ Forensic Psychiatry ▪ Gastroenterology ▪ Geriatrics Internal Medicine ▪ Hand Surgery ▪ Hematology and Oncology ▪ Infectious Disease ▪ Interventional Cardiology ▪ Musculoskeletal Oncology ▪ Neonatal Perinatal Medicine ▪ Nephrology ▪ Neuropathology ▪ Neuroradiology ▪ Pediatric Cardiology ▪ Pediatric Critical Care Medicine ▪ Pediatric Endocrinology ▪ Pediatric Gastroenterology ▪ Pediatric Hematology/Oncology ▪ Pediatric Nephrology ▪ Pediatric Pulmonology ▪ Pediatric Surgery ▪ Pulmonary Critical Care ▪ Rheumatology ▪ Sports Medicine ▪ Surgical Critical Care ▪ Transplant Hepatology ▪ Vascular and Interventional Radiology ▪ Vascular Neurology ▪ Vascular Surgery

Accredited GME Institution and Location		Residency Programs		
Statutory and Family Practice Teaching Hospitals (continued)	University of Florida College of Medicine Jacksonville – Jacksonville (Shands Jacksonville)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Emergency Medicine ▪ General Surgery ▪ Internal Medicine ▪ Obstetrics and Gynecology ▪ Pediatrics ▪ Psychiatry 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Anesthesiology ▪ Diagnostic Radiology ▪ Hospice and Palliative Care Multidisciplinary ▪ Neurology ▪ Ophthalmology ▪ Orthopedic Surgery ▪ Pathology - Anatomic and Clinical 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Blood Banking Transfusion Medicine ▪ Cardiology ▪ Child Abuse Pediatrics ▪ Clinical Cardiac Electrophysiology ▪ Cytopathology ▪ Endocrinology, Diabetes, and Metabolism ▪ Gastroenterology ▪ Infectious Disease ▪ Interventional Cardiology ▪ Nephrology ▪ Oncology ▪ Pediatric Emergency Medicine ▪ Pediatric Endocrinology ▪ Pediatric Infectious Disease ▪ Pulmonary Critical Care ▪ Rheumatology ▪ Surgical Critical Care ▪ Vascular Interventional Radiology ▪ Vascular Neurology
	University of Miami Hospital and Clinics – Miami (Cedars Medical Center)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ General Surgery ▪ Internal Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Hospice and Palliative Care Multidisciplinary 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ N/A

Accredited GME Institution and Location		Residency Programs			
Statutory and Family Practice Teaching Hospitals <i>(continued)</i>	University of South Florida Morsani College of Medicine – Tampa (H. Lee Moffitt, Morton F. Plant Hospital, and Tampa General Hospital)	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Emergency Medicine ▪ Family Medicine ▪ General Surgery ▪ Internal Medicine ▪ Internal Medicine Pediatrics ▪ Obstetrics and Gynecology ▪ Pediatrics ▪ Preventive Medicine ▪ Psychiatry 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Allergy and Immunology ▪ Colon and Rectal Surgery ▪ Dermatology ▪ Diagnostic Radiology ▪ Hospice and Palliative Care Multidisciplinary ▪ Neurological Surgery ▪ Neurology ▪ Ophthalmology ▪ Orthopedic Surgery ▪ Otolaryngology ▪ Pain Medicine Multidisciplinary ▪ Pathology - Anatomic and Clinical ▪ Physical Medicine and Rehabilitation ▪ Plastic Surgery Integrated ▪ Radiation Oncology ▪ Sleep Medicine Multidisciplinary ▪ Urology 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Addiction Psychiatry ▪ Adult and Pediatric Allergy and Immunology ▪ Cardiovascular Disease ▪ Child and Adolescent Psychiatry ▪ Clinical Cardiac Electrophysiology ▪ Clinical Neurophysiology ▪ Complex General Surgical Oncology ▪ Cytopathology ▪ Dermatopathology Multidisciplinary ▪ Endocrinology, Diabetes, and Metabolism ▪ Female Pelvic Medicine and Reconstructive Surgery ▪ Forensic Pathology ▪ Gastroenterology ▪ Geriatric Psychiatry ▪ Hematology and Oncology ▪ Infectious Disease ▪ Interventional Cardiology ▪ Musculoskeletal Oncology ▪ Neonatal Perinatal Medicine ▪ Nephrology ▪ Orthopedic Sports Medicine ▪ Pediatric Endocrinology ▪ Pulmonary Critical Care ▪ Rheumatology ▪ Spinal Cord Injury Medicine ▪ Sports Medicine ▪ Surgical Critical Care ▪ Vascular and Interventional Radiology ▪ Vascular Neurology ▪ Vascular Surgery ▪ Vascular Surgery Integrated 	
	Military Hospitals	Naval Hospital – Jacksonville	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ N/A 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ N/A
		Naval Hospital – Pensacola	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Family Medicine 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ N/A 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ Sports Medicine
	Navy Medicine Operational Training Center – Pensacola	<u>Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ N/A 	<u>Non-Primary Care Specialties</u> <ul style="list-style-type: none"> ▪ Preventive Medicine: Aerospace Medicine 	<u>Subspecialties</u> <ul style="list-style-type: none"> ▪ N/A 	

Accredited GME Institution and Location		Residency Programs		
Military Hospitals <i>(continued)</i>	U.S. Air Force Regional Hospital – Eglin Air Force Base	<u>Primary Care Specialties</u> ▪ Family Medicine	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ N/A
Other	Andrews Research and Education Institute – Gulf Breeze	<u>Primary Care Specialties</u> ▪ N/A	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ Orthopedic Sports Medicine ▪ Sports Medicine
	Broward County Medical Examiner’s Office – Ft. Lauderdale (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> ▪ N/A	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ Forensic Pathology
	Florida Department of Corrections/Nova Clinics – Orlando (Nova Southeastern University College of Medicine)	<u>Primary Care Specialties</u> ▪ Geriatric Medicine ▪ Psychiatry	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ Correctional Medicine ▪ Sports Medicine
	Florida Orthopedic Institute – Tampa	<u>Primary Care Specialties</u> ▪ N/A	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ Hand Surgery
	Florida Osteopathic Educational Institute – New Port Richey (Lake Erie College of Osteopathic Medicine)	<u>Primary Care Specialties</u> ▪ N/A	<u>Non-Primary Care Specialties</u> ▪ Ophthalmology	<u>Subspecialties</u> ▪ N/A
	Miami-Dade County Medical Examiner Department – Miami	<u>Primary Care Specialties</u> ▪ N/A	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ Forensic Pathology
	Palm Beach County Public Health Department – West Palm Beach	<u>Primary Care Specialties</u> ▪ Preventive Medicine: Public Health	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ N/A
	The Skin Institute of South Florida – Coral Springs	<u>Primary Care Specialties</u> ▪ N/A	<u>Non-Primary Care Specialties</u> ▪ N/A	<u>Subspecialties</u> ▪ Procedural Dermatology

¹ OPPAGA surveyed Florida-accredited GME institutions. We did not include Mayo Clinic’s residency programs in the totals, because the accredited sponsoring institution, the Mayo Clinic College of Medicine, is based in Minnesota.

Source: Analysis of OPPAGA GME survey responses.

The Accreditation Council for Graduate Medical Education (ACGME) accredits allopathic GME institutions, and the American Osteopathic Association (AOA) accredits osteopathic GME institutions. Some of these institutions administer residency program(s) that are dually accredited by both bodies, and some of the institutions administer program(s) that are accredited by the ACGME and program(s) that are accredited by the AOA. Exhibit A-2 provides a list of GME institutions and the number of residency programs and approved positions at each institution.

**Exhibit A-2
Residency Programs and Approved Positions at Each Accredited GME Institution**

Accredited GME Institution and Location		Number of Residency Programs	Number of Approved Residency Positions	Accrediting Body (ACGME, AOA, or Both)
Community Hospitals/ Medical Schools	All Children’s Hospital – St. Petersburg	No residents in academic year 2013-14.		ACGME
	Cleveland Clinic Florida – Weston	10	89	ACGME
	Doctors Hospital (Baptist Health of South Florida) – Coral Gables	1	3	ACGME
	Florida Atlantic University – Boca Raton (Bethesda Memorial Hospital, Boca Raton Regional Hospital, and Delray Medical Center)	No residents in academic year 2013-14.		ACGME
	Florida State University College of Medicine – Tallahassee (Sacred Heart Health System and Tallahassee Memorial Healthcare)	5	98	ACGME
	Kendall Regional Medical Center – Miami	No residents in academic year 2013-14.		ACGME
	Lakeside Medical Center – Belle Glade (Nova Southeastern University College of Medicine)	1	15	AOA
	Manatee Memorial Hospital – Bradenton (Lake Erie College of Osteopathic Medicine)	3	44	AOA
	Miami Children’s Hospital – Miami ¹	10	118	ACGME/AOA
	Northside Hospital and Heart Institute – St. Petersburg (Lake Erie College of Osteopathic Medicine)	3	63	AOA
	Osceola Regional Medical Center – Kissimmee (Nova Southeastern University College of Medicine)	No residents in academic year 2013-14.		AOA
	Palm Beach Consortium for Graduate Medical Education – Palms West Hospital – West Palm Beach (Nova Southeastern University College of Medicine)	1	21	AOA
	Palm Beach Consortium for Graduate Medical Education – University Hospital and Medical Center – West Palm Beach (Nova Southeastern University College of Medicine)	1	24	AOA
	Palm Beach Consortium for Graduate Medical Education – West Palm Hospital – West Palm Beach (Nova Southeastern University College of Medicine)	2	27	AOA
	Regional Medical Center Bayonet Point – Hudson (Nova Southeastern University College of Medicine)	No residents in academic year 2013-14.		AOA
	Sacred Heart Health System – Pensacola (Lake Erie College of Osteopathic Medicine)	1	12	AOA
	University of Central Florida College of Medicine – Orlando (Osceola Regional Medical Center)	No residents in academic year 2013-14.		ACGME
	Wellington Regional Medical Center – West Palm Beach (Lake Erie College of Osteopathic Medicine)	2	25	AOA

Accredited GME Institution and Location		Number of Residency Programs	Number of Approved Residency Positions	Accrediting Body (ACGME, AOA, or Both)
Community Hospitals/ Medical Schools <i>(continued)</i>	West Kendall Baptist Hospital – Miami	1	12	ACGME
	Westchester General Hospital – Miami (Lake Erie College of Osteopathic Medicine)	2	28	AOA
	Subtotal	43	579	
Statutory and Family Practice Teaching Hospitals ²	Bayfront Medical Center – St. Petersburg	3	14	ACGME
	Broward Health – Ft. Lauderdale (Nova Southeastern University College of Medicine)	9	123	AOA
	Florida Hospital – Orlando ³	12	189	ACGME/AOA
	Halifax Medical Center – Daytona Beach	3	35	ACGME
	Jackson Memorial Hospital/Jackson Health System – Miami	80	1,068	ACGME
	Largo Medical Center – Largo (Nova Southeastern University College of Medicine)	13	154	AOA
	Larkin Community Hospital – South Miami (Nova Southeastern University College of Medicine) ²	32	281	ACGME/AOA
	Mount Sinai Medical Center – Miami Beach ²	9	150	ACGME/AOA
	Orlando Health – Orlando	17	245	ACGME
	Palm Beach Consortium for Graduate Medical Education – St. Lucie Medical Center – West Palm Beach (Nova Southeastern University College of Medicine)	3	52	AOA
	Palmetto General Hospital – Hialeah (Nova Southeastern University College of Medicine)	6	106	AOA
	St. Petersburg General Hospital – St. Petersburg (Lake Erie College of Osteopathic Medicine)	2	46	AOA
	St. Vincent’s Medical Center – Jacksonville (Nova Southeastern University College of Medicine) ¹	1	30	ACGME/AOA
	Tallahassee Memorial Healthcare – Tallahassee	1	33	ACGME
	University of Florida College of Medicine – Gainesville (Shands)	64	758	ACGME
	University of Florida College of Medicine Jacksonville – Jacksonville (Shands Jacksonville)	32	347	ACGME
	University of Miami Hospital and Clinics – Miami (Cedars Medical Center)	3	84	ACGME
	University of South Florida Morsani College of Medicine – Tampa (H. Lee Moffitt, Morton F. Plant Hospital, and Tampa General Hospital)	57	701	ACGME
Subtotal	347	4,416		

Accredited GME Institution and Location		Number of Residency Programs	Number of Approved Residency Positions	Accrediting Body (ACGME, AOA, or Both)
Military Hospitals	Naval Hospital – Jacksonville	1	39	ACGME
	Naval Hospital – Pensacola	2	22	ACGME
	Navy Medicine Operational Training Center – Pensacola	1	34	ACGME
	U.S. Air Force Regional Hospital – Eglin Air Force Base	1	30	ACGME
	Subtotal	5	125	
Other	Andrews Research and Education Institute – Gulf Breeze	2	5	ACGME
	Broward County Medical Examiner’s Office – Ft. Lauderdale (Nova Southeastern University College of Medicine) ¹	1	1	ACGME/AOA
	Florida Department of Corrections/Nova Clinics – Orlando (Nova Southeastern University College of Medicine)	4	14	AOA
	Florida Orthopedic Institute – Tampa	1	2	ACGME
	Florida Osteopathic Educational Institute – New Port Richey (Lake Erie College of Osteopathic Medicine)	1	3	AOA
	Miami-Dade County Medical Examiner Department – Miami	1	4	ACGME
	Palm Beach County Public Health Department – West Palm Beach ¹	1	6	ACGME/AOA
	The Skin Institute of South Florida – Coral Springs	1	2	ACGME
Subtotal	12	37		
Total All Institutions		407	5,157	

¹ This institution administers residency program(s) that are dually accredited by the ACGME and the AOA.

² OPPAGA surveyed Florida-accredited GME institutions. We did not include Mayo Clinic’s residency programs in the totals, because the accredited sponsoring institution, the Mayo Clinic College of Medicine, is based in Minnesota. The Mayo Clinic administers a total of 28 residency programs with 191 approved positions and is accredited by the ACGME.

³ This institution administers residency program(s) accredited by the ACGME and program(s) accredited by the AOA.

Source: Analysis of OPPAGA GME survey responses.

Exhibit A-3 provides detailed information on the number of primary care and non-primary care specialty and subspecialty programs offered by each institution.

**Exhibit A-3
Approved Programs by Specialty Category**

Accredited GME Institution and Location		Primary Care Specialties	Non-Primary Care Specialties	Subspecialties
Community Hospitals/ Medical Schools	All Children’s Hospital – St. Petersburg	No residents in academic year 2013-14.		
	Cleveland Clinic Florida – Weston	3	3	4
	Doctors Hospital (Baptist Health of South Florida) – Coral Gables	0	0	1
	Florida Atlantic University – Boca Raton (Bethesda Memorial Hospital, Boca Raton Regional Hospital, and Delray Medical Center)	No residents in academic year 2013-14.		
	Florida State University College of Medicine – Tallahassee (Sacred Heart Health System and Tallahassee Memorial Healthcare)	4	0	1
	Kendall Regional Medical Center – Miami	No residents in academic year 2013-14.		
	Lakeside Medical Center – Belle Glade (Nova Southeastern University College of Medicine)	1	0	0
	Manatee Memorial Hospital – Bradenton (Lake Erie College of Osteopathic Medicine)	2	1	0
	Miami Children’s Hospital – Miami	1	0	9
	Northside Hospital and Heart Institute – St. Petersburg (Lake Erie College of Osteopathic Medicine)	1	1	1
	Osceola Regional Medical Center – Kissimmee (Nova Southeastern University College of Medicine)	No residents in academic year 2013-14.		
	Palm Beach Consortium for Graduate Medical Education – Palms West Hospital – West Palm Beach (Nova Southeastern University College of Medicine)	1	0	0
	Palm Beach Consortium for Graduate Medical Education – University Hospital and Medical Center – West Palm Beach (Nova Southeastern University College of Medicine)	1	0	0
	Palm Beach Consortium for Graduate Medical Education – West Palm Hospital – West Palm Beach (Nova Southeastern University College of Medicine)	1	1	0
	Regional Medical Center Bayonet Point – Hudson (Nova Southeastern University College of Medicine)	No residents in academic year 2013-14.		
	Sacred Heart Health System – Pensacola (Lake Erie College of Osteopathic Medicine)	1	0	0
	University of Central Florida College of Medicine – Orlando (Osceola Regional Medical Center)	No residents in academic year 2013-14.		
	Wellington Regional Medical Center – West Palm Beach (Lake Erie College of Osteopathic Medicine)	1	1	0
	West Kendall Baptist Hospital – Miami	1	0	0
	Westchester General Hospital – Miami (Lake Erie College of Osteopathic Medicine)	1	1	0
Subtotal		19	8	16

Accredited GME Institution and Location		Primary Care Specialties	Non-Primary Care Specialties	Subspecialties
Statutory and Family Practice Teaching Hospitals ¹	Bayfront Medical Center – St. Petersburg	2	0	1
	Broward Health – Ft. Lauderdale (Nova Southeastern University College of Medicine)	4	4	1
	Florida Hospital – Orlando	7	2	3
	Halifax Medical Center – Daytona Beach	2	0	1
	Jackson Memorial Hospital/Jackson Health System – Miami	7	21	52
	Largo Medical Center – Largo (Nova Southeastern University College of Medicine)	4	4	5
	Larkin Community Hospital – South Miami (Nova Southeastern University College of Medicine)	6	11	15
	Mount Sinai Medical Center – Miami Beach	3	4	2
	Orlando Health – Orlando	5	3	9
	Palm Beach Consortium for Graduate Medical Education – St. Lucie Medical Center – West Palm Beach (Nova Southeastern University College of Medicine)	2	1	0
	Palmetto General Hospital – Hialeah (Nova Southeastern University College of Medicine)	2	1	3
	St. Petersburg General Hospital – St. Petersburg (Lake Erie College of Osteopathic Medicine)	1	1	0
	St. Vincent’s Medical Center – Jacksonville (Nova Southeastern University College of Medicine)	1	0	0
	Tallahassee Memorial Healthcare – Tallahassee	1	0	0
	University of Florida College of Medicine – Gainesville (Shands)	7	16	41
	University of Florida College of Medicine Jacksonville – Jacksonville (Shands Jacksonville)	6	7	19
	University of Miami Hospital and Clinics – Miami (Cedars Medical Center)	2	1	0
	University of South Florida Morsani College of Medicine – Tampa (H. Lee Moffitt, Morton F. Plant Hospital, and Tampa General Hospital)	9	17	31
	Subtotal	71	93	183
Military Hospitals	Naval Hospital – Jacksonville	1	0	0
	Naval Hospital – Pensacola	1	0	1
	Navy Medicine Operational Training Center – Pensacola	0	1	0
	U.S. Air Force Regional Hospital – Eglin Air Force Base	1	0	0
	Subtotal	3	1	1

Accredited GME Institution and Location		Primary Care Specialties	Non-Primary Care Specialties	Subspecialties
Other	Andrews Research and Education Institute – Gulf Breeze	0	0	2
	Broward County Medical Examiner’s Office – Ft. Lauderdale (Nova Southeastern University College of Medicine)	0	0	1
	Florida Department of Corrections/Nova Clinics – Orlando (Nova Southeastern University College of Medicine)	2	0	2
	Florida Orthopedic Institute – Tampa	0	0	1
	Florida Osteopathic Educational Institute – New Port Richey (Lake Erie College of Osteopathic Medicine)	0	1	0
	Miami-Dade County Medical Examiner Department – Miami	0	0	1
	Palm Beach County Public Health Department – West Palm Beach	1	0	0
	The Skin Institute of South Florida – Coral Springs	0	0	1
	Subtotal	3	1	8
Total All Institutions		96	103	208

¹ OPPAGA surveyed Florida-accredited GME institutions. We did not include Mayo Clinic’s residency programs in the totals, because the accredited sponsoring institution, the Mayo Clinic College of Medicine, is based in Minnesota. The Mayo Clinic administers a total of 3 primary care specialty programs, 9 non-primary care specialty programs, and 16 subspecialty programs.

Source: Analysis of OPPAGA GME survey responses.

Exhibit A-4 provides the number of approved programs and positions by specialty category.

**Exhibit A-4
Primary Care Specialties, Non-Primary Care Specialties, and Subspecialties**

Specialty ¹		Statewide Number of Programs	Number of Approved Resident Positions	Number of Filled Resident Positions
Primary Care Specialties	Emergency Medicine	7	205	199
	Family Medicine	16	413	350
	Family Medicine and Osteopathic Manipulative Medicine	8	150	138
	General Surgery	12	281	267
	Geriatric Medicine	4	8	4
	Internal Medicine	19	899	853
	Internal Medicine Pediatrics	2	36	36
	Obstetrics and Gynecology	7	144	142
	Pediatrics	10	424	387
	Preventive Medicine	1	8	7
	Preventive Medicine: Public Health	1	6	4
	Psychiatry	9	219	180
	Subtotal		96	2,793
Non-Primary Care Specialties	Allergy and Immunology	2	8	8
	Anesthesiology	6	253	212
	Colon and Rectal Surgery	5	12	13
	Dermatology	8	85	81
	Diagnostic Radiology	7	190	175
	Hospice and Palliative Care Multidisciplinary	5	15	8
	Integrated Family Medicine Neuromusculoskeletal Medicine	1	12	11
	Internship Preliminary and Traditional AOA Only	8	128	70
	Medical Genetics	1	3	2
	Molecular Genetic Pathology Multidisciplinary	1	1	1
	Neurological Surgery	3	62	52
	Neurology	6	113	101
	Nuclear Medicine	1	4	3
	Ophthalmology	6	63	63
	Orthopedic Surgery	7	137	132
	Otolaryngology	3	40	40
	Pain Medicine Multidisciplinary	4	16	14
	Pathology - Anatomic and Clinical	6	83	77
	Physical Medicine and Rehabilitation	3	45	43
	Plastic Surgery	3	18	18
	Plastic Surgery Integrated	3	30	19

Specialty ¹	Statewide Number of Programs	Number of Approved Resident Positions	Number of Filled Resident Positions
Non-Primary Care	1	34	20
Specialties	3	29	26
<i>(continued)</i>	4	14	8
	2	7	4
	4	40	37
Subtotal	103	1,442	1,238
Subspecialties	1	6	3
	2	5	4
	1	6	2
	2	8	8
	2	4	3
	2	2	2
	1	4	3
	2	2	0
	7	60	55
	3	56	56
	2	4	0
	4	28	23
	1	1	1
	4	7	5
	4	9	6
	2	10	11
	1	2	2
	1	2	1
	4	18	17
	3	6	6
	3	4	2
	2	3	3
	5	25	26
	1	1	1
	1	3	1
	3	7	5
	3	9	4
	7	64	57
	1	3	0
	3	20	8
	3	10	3
	1	3	3

Specialty ¹	Statewide Number of Programs	Number of Approved Resident Positions	Number of Filled Resident Positions
Subspecialties (continued)			
Hand Surgery	3	7	7
Hematology	1	2	2
Hematology and Oncology	5	71	60
Infectious Disease	7	43	33
Interventional Cardiology	6	14	14
Mohs Micrographic Surgery	1	1	1
Musculoskeletal Oncology	3	5	5
Neonatal Perinatal Medicine	3	24	21
Nephrology	5	34	32
Neuromuscular Medicine	2	10	9
Neuromusculoskeletal Medicine 1	2	6	3
Neuropathology	1	1	1
Neuroradiology	2	8	8
Neurotology	1	1	1
Obstetric Anesthesiology	1	1	1
Oncology	1	3	3
Orthopedic Sports Medicine	4	10	11
Orthopedic Surgery of the Spine	1	1	1
Orthopedic Trauma	1	1	0
Pediatric Anesthesiology	1	2	2
Pediatric Cardiology	3	16	16
Pediatric Critical Care Medicine	3	20	19
Pediatric Emergency Medicine	3	21	20
Pediatric Endocrinology	4	12	10
Pediatric Gastroenterology	3	9	8
Pediatric Hematology/Oncology	2	9	7
Pediatric Infectious Diseases	2	6	5
Pediatric Nephrology	2	7	7
Pediatric Orthopedics	1	2	1
Pediatric Pathology	1	1	1
Pediatric Pulmonology	2	6	2
Pediatric Radiology	1	3	3
Pediatric Sports Medicine	1	1	1
Pediatric Surgery	2	4	4
Pediatric Urology	1	1	0
Procedural Dermatology	2	3	3
Psychosomatic Medicine	1	2	1
Pulmonary Critical Care	6	51	46
Rheumatology	6	22	19

Specialty ¹	Statewide Number of Programs	Number of Approved Resident Positions	Number of Filled Resident Positions
Subspecialties (continued)			
Spinal Cord Injury Medicine	2	3	3
Sports Medicine	8	18	13
Surgical Critical Care	5	15	14
Transplant Hepatology	2	4	3
Vascular and Interventional Radiology	4	21	22
Vascular Neurology	4	9	5
Vascular Surgery	3	9	7
Vascular Surgery Integrated	1	10	6
Subtotal	208	922	782
Total All	407	5,157	4,584

¹ Specialty type is based on the American Medical Association’s categorization of specialties. If the American Medical Association did not identify a specialty, the categorizations of the American Association of Medical Colleges, the American Board of Medical Specialties, the American Osteopathic Association, or the Accreditation Council for Graduate Medical Education were used. Primary care specialties also are based on statutory definitions of primary care in ss. 381.4018 and 409.909, *F.S.*

Source: Analysis of OPPAGA GME survey responses.

Appendix B

GME Funding

Funding sources for GME include federal and state funds, local contributions, and private funds. However, annual GME funding is primarily from Medicare and Medicaid. Estimated annual funding for graduate medical education in Florida totals approximately \$540 million. This includes approximately \$281 million in direct and indirect Medicare funds, \$80 million in Statewide Medicaid Residency funds, \$77 million in Medicaid Disproportionate Share Hospital funds, and \$101.9 million from other sources. Exhibit B-1 shows GME institutions' Medicare and Medicaid funding.

Exhibit B-1

GME Institutions' Medicare and Medicaid Funding

GME Institution ¹		Medicare Funding	Statewide Medicaid Residency Program Funding	Medicaid DSH Funding
Community Hospitals/ Medical Schools	All Children's Hospital – St. Petersburg	\$4,979	\$1,330,888	
	Cleveland Clinic Florida – Weston	1,539,240	1,592,256	
	Doctors Hospital (Baptist Health of South Florida) – Coral Gables			
	Florida Atlantic University – Boca Raton (Bethesda Memorial Hospital, Boca Raton Regional Hospital, and Delray Medical Center)	No residents in academic year 2013-14.		
	Florida State University College of Medicine – Tallahassee (Sacred Heart Health System and Tallahassee Memorial Healthcare)			
	Kendall Regional Medical Center – Miami	398,380		
	Lakeside Medical Center – Belle Glade (Nova Southeastern University College of Medicine)	46,086		\$833,864
	Manatee Memorial Hospital – Bradenton (Lake Erie College of Osteopathic Medicine)	353,290	907,263	
	Miami Children's Hospital – Miami	4,061	2,641,036	
	Northside Hospital and Heart Institute – St. Petersburg (Lake Erie College of Osteopathic Medicine)	3,330,856	629,861	
	Osceola Regional Medical Center – Kissimmee (Nova Southeastern University College of Medicine)	No residents in academic year 2013-14.		
	Palm Beach Consortium for Graduate Medical Education – Palms West Hospital – West Palm Beach (Nova Southeastern University College of Medicine)	1,184,461	428,002	
	Palm Beach Consortium for Graduate Medical Education – University Hospital and Medical Center – West Palm Beach (Nova Southeastern University College of Medicine)	76,448	229,108	
	Palm Beach Consortium for Graduate Medical Education – West Palm Hospital – West Palm Beach (Nova Southeastern University College of Medicine)	462,593		
	Regional Medical Center Bayonet Point – Hudson (Nova Southeastern University College of Medicine)	No residents in academic year 2013-14.		

GME Institution ¹		Medicare Funding	Statewide Medicaid Residency Program Funding	Medicaid DSH Funding
Community Hospitals/ Medical Schools (continued)	Sacred Heart Health System – Pensacola (Lake Erie College of Osteopathic Medicine)	\$3,143,974	\$1,116,099	\$476,095
	University of Central Florida College of Medicine – Orlando (Osceola Regional Medical Center)	No residents in academic year 2013-14.		
	Wellington Regional Medical Center – West Palm Beach (Lake Erie College of Osteopathic Medicine)	1,343,791	381,980	
	West Kendall Baptist Hospital – Miami		74,748	
	Westchester General Hospital – Miami (Lake Erie College of Osteopathic Medicine)	2,846,183	533,470	
Statutory/Family Practice Teaching Hospital	Bayfront Medical Center – St. Petersburg	4,193,997	572,644	1,088,481
	Broward Health – Ft. Lauderdale (Nova Southeastern University College of Medicine)	2,959,019	2,121,879	1,088,481
	Florida Hospital – Orlando	11,687,418	3,241,000	1,715,181
	Halifax Medical Center – Daytona Beach	3,269,687	662,264	1,088,481
	Jackson Memorial Hospital/Jackson Health System – Miami	35,165,590	13,158,393	14,814,468
	Largo Medical Center – Largo (Nova Southeastern University College of Medicine)	13,438,621	2,080,297	1,523,262
	Larkin Community Hospital – South Miami (Nova Southeastern University College of Medicine)	3,293,021	3,350,114	1,088,481
	Mayo Clinic Florida – Jacksonville ²	12,769,791	2,273,308	1,715,181
	Mount Sinai Medical Center – Miami Beach	20,717,517	2,783,643	3,314,300
	Orlando Health – Orlando	12,969,319	4,784,488	3,913,286
	Palm Beach Consortium for Graduate Medical Education – St. Lucie Medical Center – West Palm Beach (Nova Southeastern University College of Medicine)	712,352	709,034	1,088,481
	Palmetto General Hospital – Hialeah (Nova Southeastern University College of Medicine)	4,728,407	1,355,819	1,088,481
	St. Petersburg General Hospital – St. Petersburg Lake Erie College of Osteopathic Medicine)	3,178,550	780,109	1,088,481
	St. Vincent’s Medical Center – Jacksonville (Nova Southeastern University College of Medicine)	6,226,505	598,545	1,088,481
	Tallahassee Memorial Healthcare – Tallahassee	3,290,482	1,174,233	1,088,481
	University of Florida College of Medicine – Gainesville (Shands)	56,834,597	9,968,558	13,263,312
	University of Florida College of Medicine Jacksonville – Jacksonville (Shands Jacksonville)	21,234,797	5,047,419	11,590,514
	University of Miami Hospital and Clinics – Miami (Cedars Medical Center)	111,016	933,307	1,319,747
University of South Florida Morsani College of Medicine – Tampa H. Lee Moffitt, Morton F. Plant Hospital, and Tampa General Hospital)	25,929,355	7,589,072	11,806,698	

GME Institution ¹		Medicare Funding	Statewide Medicaid Residency Program Funding	Medicaid DSH Funding
Military Hospitals	Naval Hospital – Pensacola			
	Naval Hospital – Jacksonville			
	Navy Medicine Operational Training Center – Pensacola			
	U.S. Air Force Regional Hospital – Eglin Air Force Base			
Other	Andrews Research and Education Institute – Gulf Breeze			
	Broward County Medical Examiner’s Office – Ft. Lauderdale (Nova Southeastern University College of Medicine)			
	Florida Department of Corrections/Nova Clinics – Orlando (Nova Southeastern University College of Medicine)			
	Florida Orthopedic Institute – Tampa			
	Florida Osteopathic Educational Institute – New Port Richey (Lake Erie College of Osteopathic Medicine)			
	Miami-Dade County Medical Examiner Department – Miami			
	Palm Beach County Public Health Department – West Palm Beach			
	The Skin Institute of South Florida – Coral Springs			
Non-Accredited GME Institutions	Anne Bates Leach Eye Hospital	\$470,857	\$1,222,754	
	Baptist Medical Center	2,696,579	942,104	
	Bethesda Memorial Hospital	409,412		
	Cedars Medical Center, Inc.		2,364,819	
	Columbia Hospital		369,807	
	Coral Springs Medical Center	31,316		
	Florida Hospital – Carrollwood	23,373		
	JFK Medical Center	8,784,368	1,043,440	
	Lee Memorial Hospital			\$476,095
	Memorial Hospital		693,002	
	Memorial Hospital of Jacksonville	185,721		
Memorial Medical Center		60,000		

GME Institution ¹		Medicare Funding	Statewide Medicaid Residency Program Funding	Medicaid DSH Funding
Non-Accredited GME Institutions (continued)	Memorial Regional Hospital	\$513,116		
	Mercy Hospital, Inc.	399,368		
	Northeast Florida State Hospital		\$70,118	
	Northwest Medical Center	446,738		
	Plantation General Hospital	395,612		
	South Miami Hospital	533,372		
	University Community Hospital	35,596	139,455	
	University Community Hospital – Carrollwood		26,309	
	University of Miami Hospital	7,388,796		
	West Palm Hospital	462,593		
	Westside Regional Medical Center	1,116,312		
Total	\$281,337,512	\$79,980,645	\$76,558,332	

¹ Due to the complexity of GME funding, we used multiple sources to develop an annual estimate; time frames for data sources ranged from Fiscal Year 2011-12 to Fiscal Year 2013-14.

² OPPAGA surveyed Florida-accredited GME institutions. Mayo Clinic’s sponsoring institution, the Mayo Clinic College of Medicine, is based in Minnesota.

Source: OPPAGA analysis of the federal Centers for Medicare and Medicaid Services Fiscal Year 2011-12 Medicare cost reports and information from the Agency for Health Care Administration.

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