

# Florida Physician Workforce Analysis:

## Forecasting Supply and Demand



A study commissioned by the Teaching Hospital Council of Florida and the Safety Net Hospital Alliance of Florida in cooperation with IHS Global, Inc.

## Overview

# The Implications of Projected Supply and Demand for Graduate Medical Education

*Graduate medical education has the single-most direct impact on the availability and quality of physicians who care for Florida's citizens. The Teaching Hospital Council of Florida understands that obtaining an accurate picture of the current and projected future adequacy of physician supply to meet demand in Florida is essential to inform policy and planning initiatives; guide medical school and graduate medical education training priorities and ensure that Florida has a future physician workforce that can provide access to high quality and affordable care.*

The Teaching Hospital Council of Florida, along with the Safety Net Hospital Alliance of Florida, engaged IHS Global, Inc. to take a close look at projected supply and demand by physician specialty and by region within Florida in order to identify physician supply surpluses and deficits. The final report can serve as a planning tool for Florida's graduate medical education policy leaders.

The questions guiding the research study included:

- » Are there specialties where supply and demand currently are not in balance in Florida? If so, which specialties and what is the estimated gap between supply and demand?
- » To what extent will the future projected supply of physicians be adequate to meet projected statewide population services demand?
- » What are the potential implications of the Affordable Care Act (ACA), emerging care delivery models and other market factors on Florida's physician workforce supply and demand?

## Study Methods

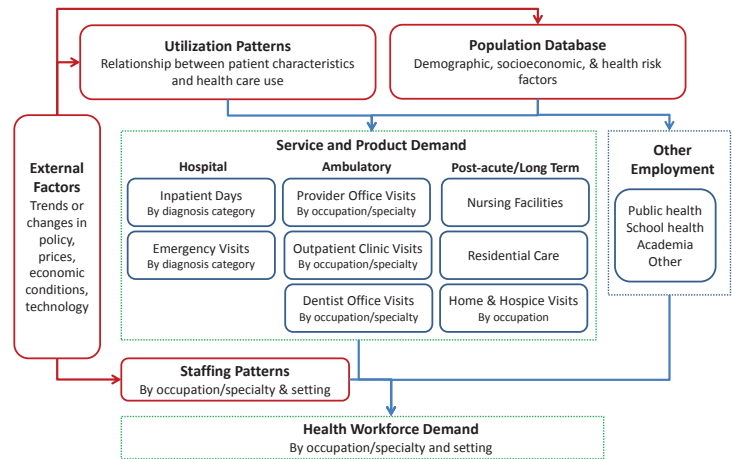
# Calculating Physician Supply and Demand

**DATA.** The study combined data from a variety of sources to take a comprehensive look at the issues, pulling from:

- » Data on the physician workforce in Florida
- » Data on the demographics, socioeconomic, and health risk factors of the population in Florida
- » Data on health care use and delivery patterns from national sources
- » Computer simulation models: the Healthcare Demand Microsimulation Model and Health Workforce Supply Model

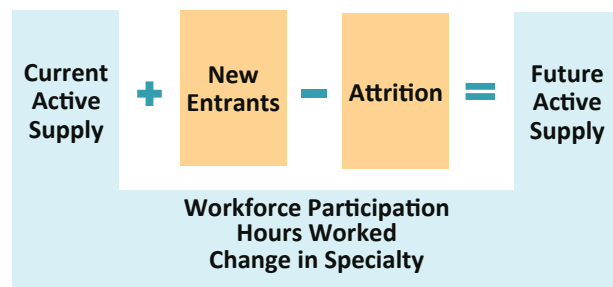
**DEMAND.** The demand model applies national health care use and delivery patterns to a population database that contains a representative sample of Florida’s population. The demand estimates and projections take into consideration current and projected future demographics, presence of disease and other health risk factors among the population, and medical insurance coverage changes associated with the ACA.

### Conceptual Model for Projecting Physician Demand



**SUPPLY.** The supply model uses a microsimulation approach to model the likely career decisions of physicians taking into consideration the number, specialty mix and demographics of new entrants to Florida’s physician workforce, and patterns of out-of-state migration, retirement patterns and hours worked. Supply data and inputs come primarily from the AMA Master File and the 2012 and 2013 biannual Physician Workforce Licensure Surveys administered by the Florida Department of Health.

### Conceptual Model for Projecting Physician Supply



**Microsimulation model. Individual physicians are unit of analysis**

Primary data source: Combined 2009-2013 Physician Workforce Licensure Surveys administered by Florida Dept. of Health

**ANALYSIS.** The analysis compares current and projected future supply to the number of physicians required to provide a level of care consist with the national average, and taking into consideration national shortages for primary care, psychiatrists and select other specialties.

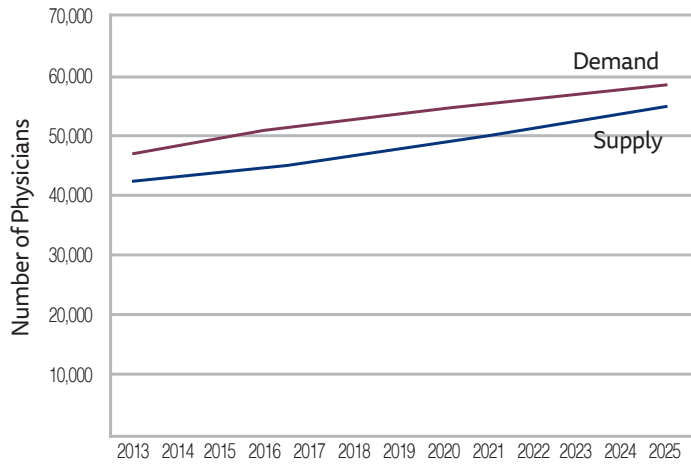
## Statewide Findings

### Shortfalls and Surpluses by Specialty

The IHS study made a number of key findings regarding Florida's ability to meet projected demand in some areas of practice into 2025 as well as the practice areas where a surplus of physicians is projected in the same timeframe. This report outlines the highlights.

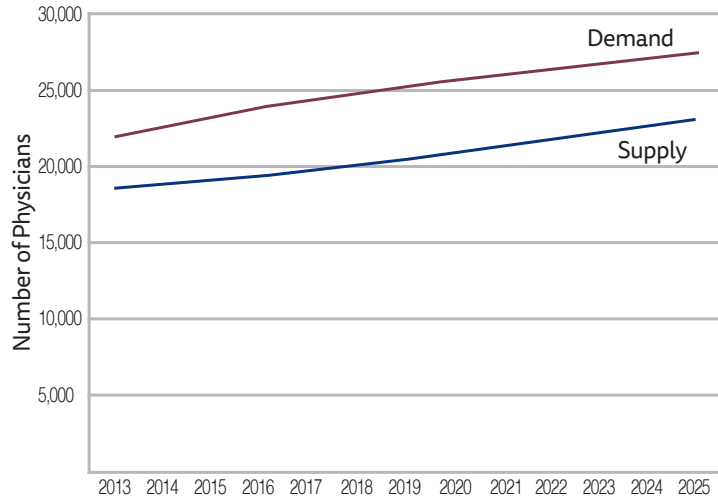
#### Moderate Overall Shortfall of Physicians

Florida has an estimated 11% shortfall of physicians. Supply is growing at a slightly higher rate than demand (29% vs 24%). By 2025, a 7% shortfall is projected.



#### Critical Shortfall of Physician Specialties

The supply of specialists in Florida is insufficient to provide a level of care consistent with the national average, after taking into consideration differences in the demographics and health risk factors between Florida and the nation. The current 18% shortfall is likely to persist. By 2025, a 19% shortfall is projected.



#### Severe Shortfall in Some Physician Specialties

Specialties where the state's supply of physicians is projected to be much smaller than required to provide a level of care consistent with the national average include psychiatry, general surgery, rheumatology, thoracic surgery, hematology/oncology, and pulmonology/critical care.

## Statewide Findings

### Moderate to Severe Shortfall For Some Physician Specialties

Specialty In Deficit	2025 Supply	2025 Demand	2025 Deficit	Physician Gap / Supply
Psychiatry	2,150	3,340	(1,190)	-55%
General Surgery	1,450	2,170	(720)	-50%
Rheumatology	280	400	(120)	-43%
Thoracic Surgery	260	360	(100)	-38%
Hematology & Oncology	1,010	1,370	(360)	-36%
Pulmonology & Critical Care	950	1,250	(300)	-32%
Radiology	2,450	3,150	(700)	-29%
Cardiology	1,930	2,420	(490)	-25%
Anesthesiology	2,790	3,440	(650)	-23%
Endocrinology	570	680	(110)	-19%
Obstetrics / Gynecology	2,510	2,960	(450)	-18%
Orthopedic Surgery	1,630	1,900	(270)	-17%
Allergy, Immunology, & Infectious Disease	830	970	(140)	-17%
Ophthalmology	1,240	1,420	(180)	-15%
Urology	710	820	(110)	-15%
Otolaryngology	610	700	(90)	-15%
General / Family Practice	7,180	8,100	(920)	-13%
Neurology	1,320	1,370	(50)	-4%
Nephrology	700	730	(30)	-4%
	<b>30,570</b>	<b>37,550</b>	<b>(6,980)</b>	<b>-23%</b>

### Abundance of Some Specialties

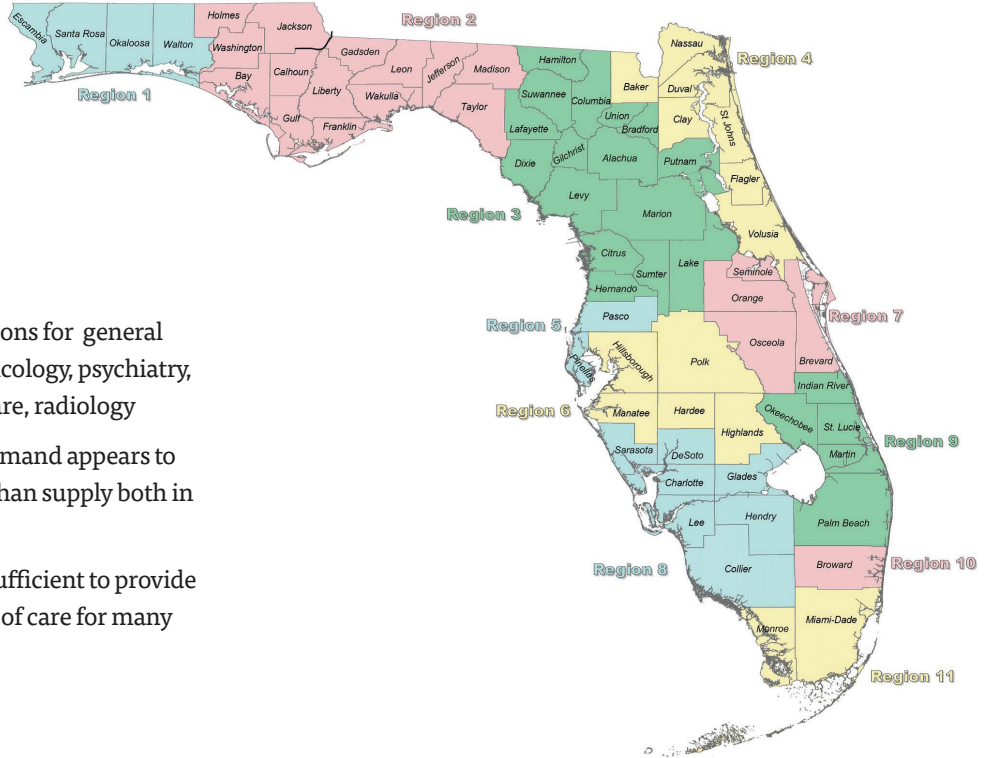
Florida will likely have more than sufficient plastic surgeons and pediatricians to provide a level of care consistent with the national average, though there may be factors in Florida that increase demand for these specialties beyond those characteristics used in the demand model.

Specialty In Surplus	2025 Supply	2025 Demand	2025 Surplus	Physician Gap / Supply
Geriatric Medicine	610	410	200	33%
Pediatrics	4,680	3,440	1,240	26%
Dermatology	1,140	880	260	23%
Emergency Medicine	3,220	2,520	700	22%
Plastic Surgery	720	590	130	18%
Neurological Surgery	460	420	40	9%
Other Specialties	2,650	2,490	160	6%
General Internal Medicine	9,530	8,990	540	6%
Vascular Surgery	290	280	10	3%
Gastroenterology	1,100	1,090	10	1%
	<b>24,400</b>	<b>21,110</b>	<b>3,290</b>	<b>13%</b>

Source: IHS projections Prepared October 30, 2014

## Regional Findings

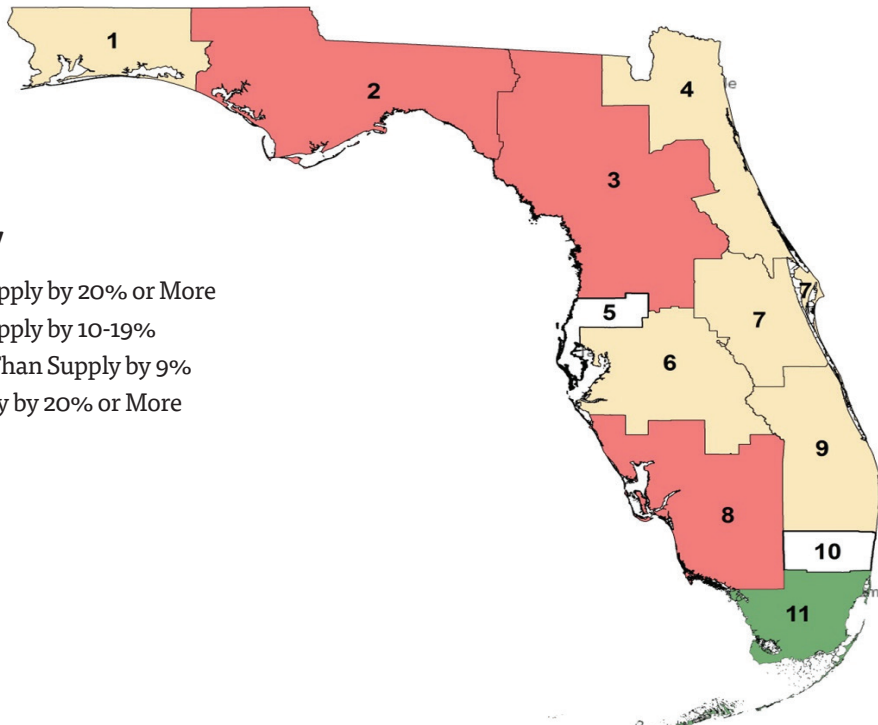
### Adequacy of Physician Supply Varies by Medicaid Region



#### 11 Medicaid Regions

- » Shortfalls across all regions for general surgery, hematology/oncology, psychiatry, pulmonology/critical care, radiology
- » In Regions 2, 3 and 8, demand appears to be consistently higher than supply both in 2013 and 2025
- » In Region 11, supply is sufficient to provide a national average level of care for many specialties

### 2025 Physician Shortfalls in Most Medicaid Regions



#### 2025 Total Adequacy of Supply

- Demand is Greater Than Supply by 20% or More
- Demand is Greater Than Supply by 10-19%
- Demand is Greater or Less Than Supply by 9%
- Demand is Less Than Supply by 20% or More

## Regional Findings

### 2025 Physician Deficits by Specialty & Region (Percentages)

Specialty	Medicaid Region											State
	1	2	3	4	5	6	7	8	9	10	11	
Psychiatry	-51%	-46%	-34%	-108%	-47%	-38%	-122%	-65%	-56%	-61%	-22%	-55%
General Surgery	-17%	-14%	-75%	-46%	-70%	-22%	-47%	-107%	-73%	-74%	-26%	-50%
Rheumatology	0%	-225%	-131%	-139%	-24%	-60%	-153%	-32%	2%	-32%	10%	-43%
Allergy, Immunology, & Infectious Diseases	-32%	-78%	-71%	-5%	-3%	2%	1%	-51%	-63%	-33%	15%	-17%
Thoracic Surgery	-333%	-33%	-6%	-86%	-4%	-29%	-55%	-57%	-30%	-88%	-13%	-38%
Hematology & Oncology	-79%	-214%	-11%	-35%	-40%	-11%	-73%	-97%	-54%	-8%	-5%	-36%
Pulmonology & Critical Care	-68%	-185%	-37%	-36%	-44%	-67%	-84%	-63%	-2%	16%	-1%	-32%
Radiology	-61%	-71%	-40%	-14%	-24%	-13%	-37%	-97%	-35%	-7%	-3%	-29%
Cardiology	-81%	-100%	-47%	-39%	-14%	-43%	-33%	-34%	-15%	-10%	10%	-25%
Anesthesiology	-3%	-113%	-35%	-20%	-47%	-14%	-42%	-107%	-22%	20%	-4%	-23%
Endocrinology	-229%	-340%	-67%	-7%	0%	-91%	-8%	-94%	6%	15%	13%	-19%
Obstetrics/Gynecology	-13%	-44%	-90%	-18%	-26%	-16%	-34%	-57%	-6%	17%	4%	-18%
Orthopedic Surgery	6%	-25%	-78%	-47%	-8%	-21%	-32%	-27%	8%	7%	1%	-17%
Ophthalmology	-96%	-58%	-43%	-50%	4%	-7%	-41%	8%	6%	-5%	-2%	-15%
Otolaryngology	0%	-26%	-55%	-21%	-9%	-26%	-28%	-14%	16%	-28%	-5%	-15%
Urology	-20%	-17%	-21%	-48%	-17%	-4%	-12%	-21%	-3%	-15%	-10%	-15%
General/Family Practice	7%	7%	-29%	10%	15%	-37%	-7%	-54%	-56%	-17%	1%	-13%
Nephrology	-257%	-29%	7%	15%	13%	-4%	4%	-27%	-42%	25%	-17%	-4%
Neurology	-17%	-42%	-21%	11%	-22%	-1%	-18%	-18%	-12%	4%	24%	-4%

■ Demand is Greater Than Supply by 20% or More    
 ■ Demand is Greater Than Supply by 10-19%    
 ■ Demand is Greater or Less Than Supply by 9%    
 ■ Demand is Less Than Supply by 20% or More

### 2025 Physician Deficits by Specialty & Region (Numbers)

Specialty	Medicaid Region											State
	1	2	3	4	5	6	7	8	9	10	11	
Psychiatry	(40)	(36)	(70)	(183)	(72)	(115)	(235)	(115)	(128)	(112)	(84)	(1,190)
General/Family Practice	23	22	(177)	100	103	(268)	(64)	(263)	(312)	(98)	15	(920)
General Surgery	(11)	(9)	(91)	(73)	(65)	(47)	(80)	(109)	(101)	(77)	(56)	(720)
Radiology	(42)	(39)	(83)	(43)	(51)	(45)	(100)	(173)	(97)	(16)	(8)	(700)
Anesthesiology	(3)	(60)	(81)	(63)	(84)	(51)	(121)	(177)	(69)	74	(17)	(650)
Cardiology	(38)	(40)	(80)	(73)	(22)	(86)	(66)	(62)	(36)	(18)	31	(490)
Obstetrics/Gynecology	(12)	(33)	(121)	(47)	(41)	(51)	(103)	(94)	(17)	51	17	(450)
Hematology & Oncology	(22)	(30)	(14)	(39)	(31)	(17)	(66)	(71)	(55)	(8)	(7)	(360)
Pulmonology & Critical Care	(18)	(28)	(34)	(35)	(28)	(60)	(65)	(47)	(3)	19	(1)	(300)
Orthopedic Surgery	4	(13)	(79)	(66)	(10)	(41)	(55)	(39)	17	12	2	(270)
Ophthalmology	(25)	(18)	(39)	(51)	4	(12)	(51)	11	9	(6)	(3)	(180)
Rheumatology	-	(9)	(21)	(25)	(6)	(18)	(29)	(10)	1	(8)	5	(120)
Endocrinology	(16)	(17)	(24)	(5)	-	(39)	(6)	(31)	5	11	13	(110)
Urology	(5)	(4)	(14)	(29)	(9)	(4)	(10)	(14)	(3)	(9)	(9)	(110)
Thoracic Surgery	(10)	(3)	(2)	(18)	(1)	(10)	(16)	(12)	(9)	(14)	(5)	(100)
Allergy, Immunology & Infectious Disease	(8)	(14)	(39)	(5)	(2)	2	1	(31)	(41)	(20)	22	(140)
Otolaryngology	-	(5)	(22)	(13)	(4)	(18)	(19)	(8)	15	(13)	(4)	(90)
Neurology	(7)	(14)	(23)	19	(18)	(2)	(25)	(20)	(16)	5	51	(50)
Nephrology	(18)	(6)	6	14	7	(3)	3	(14)	(23)	21	(15)	(30)

## Other Impacts on Physician Supply and Demand

Emerging care delivery models will continue to affect care use and delivery patterns, which in turn will affect demand for physicians. As Florida works to attract, train and retain physicians to care for its growing, diverse and aging population, the state will face increased competition from other states who are dealing with similar trends.

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### Conclusions

- » **Demand for physicians in Florida exceeds supply** for many medical specialties.
  - » **The shortfall of primary care physicians is small**, and if current trends continue, this shortfall will disappear within the next decade.
  - » There is an overall shortfall of specialists **with some specialties in a severe deficit** that is projected to persist for the foreseeable future.
  - » While supply might be adequate to provide a national average level of care for some specialties, **there is substantial variation across the state** in access to care as evidenced by the application of this data across Florida's 11 Medicaid Managed Assistance regions and the large number of areas and communities designated as Health Profession Shortage Areas.
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## Study Sponsors

**The Teaching Hospital Council of Florida** was founded in 1989, and includes Florida's first teaching hospital that has been training physicians for almost 100 years. Last year, Council member hospitals trained 3,392 medical residents in 268 accredited programs around the state, accounting for 66 percent of Florida's graduate medical education (GME) programs.

***Broward Health | Jackson Health System | Mount Sinai Medical Center | Orlando Health  
UF Health Shands Hospital | UF Health Jacksonville | Tampa General Hospital***

**The Safety Net Hospital Alliance of Florida** includes all members of the Teaching Hospital Council of Florida, and advocates on behalf of its 14 members that are teaching, public, children's and regional perinatal intensive care hospitals. The Alliance members provide the most highly specialized medical care in Florida. Last year, the Safety Net Alliance member hospitals trained 3,646 medical residents in 292 accredited programs around the state, accounting for 72 percent of Florida's graduate medical education programs.

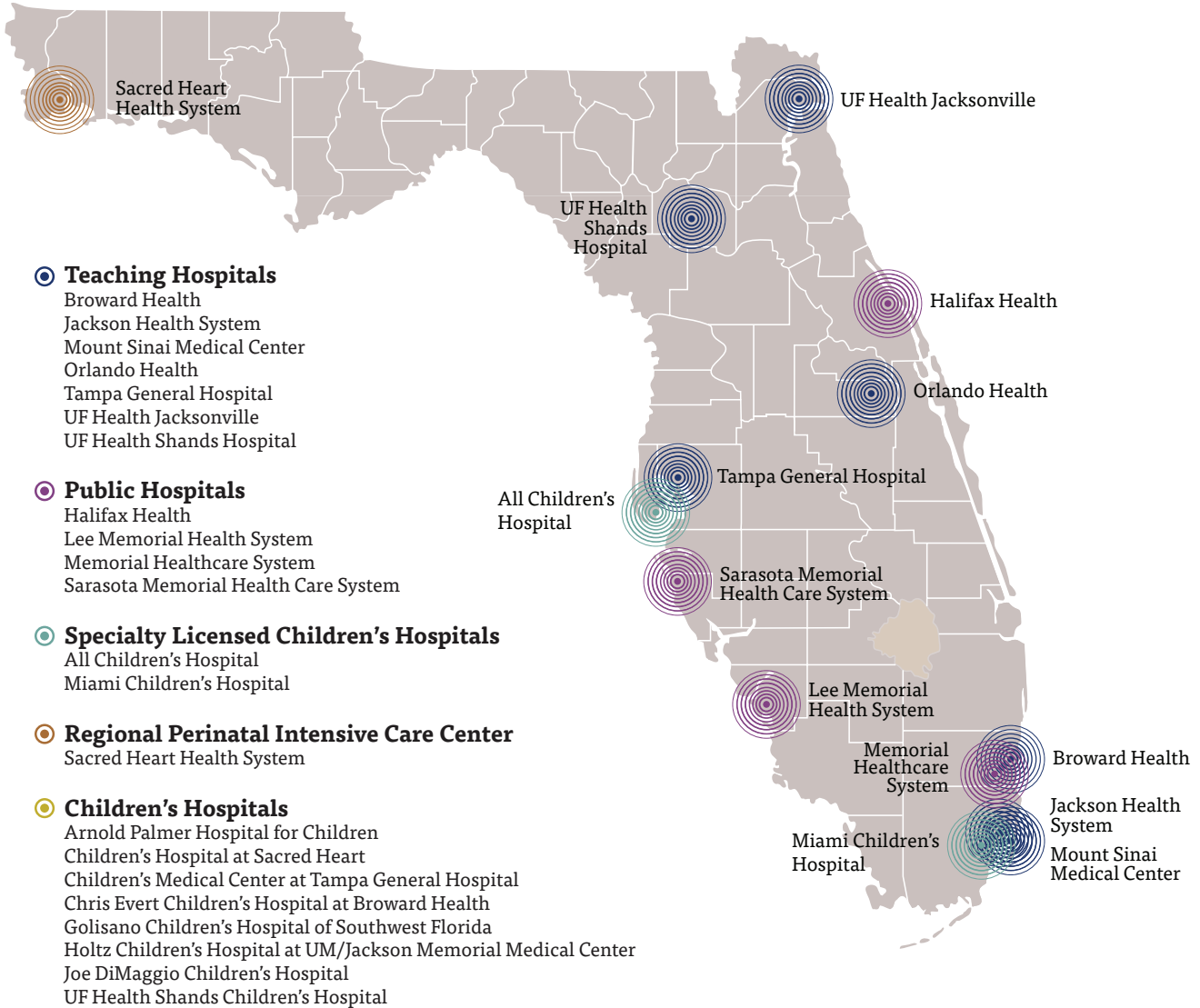
***All Children's Hospital | Broward Health  
Halifax Health | Jackson Health System | Lee Memorial Health System  
Memorial Healthcare System | Miami Children's Hospital | Mount Sinai Medical Center  
Orlando Health | Sacred Heart Health System | Sarasota Memorial Health Care System  
Tampa General Hospital | UF Health Jacksonville | UF Health Shands Hospital***

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## The Research Organization



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